

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3218577

|                              |                |
|------------------------------|----------------|
| <b>SUBMISSION TYPE:</b>      | NEW ASSIGNMENT |
| <b>NATURE OF CONVEYANCE:</b> | ASSIGNMENT     |

**CONVEYING PARTY DATA**

| Name                           | Execution Date |
|--------------------------------|----------------|
| ROCKSTAR CONSORTIUM US LP      | 01/28/2015     |
| ROCKSTAR CONSORTIUM LLC        | 01/28/2015     |
| BOCKSTAR TECHNOLOGIES LLC      | 01/28/2015     |
| CONSTELLATION TECHNOLOGIES LLC | 01/28/2015     |
| MOBILESTAR TECHNOLOGIES LLC    | 01/28/2015     |
| NETSTAR TECHNOLOGIES LLC       | 01/28/2015     |

**RECEIVING PARTY DATA**

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Name:</b>             | RPX CLEARINGHOUSE LLC           |
| <b>Street Address:</b>   | ONE MARKET PLAZA, STEUART TOWER |
| <b>Internal Address:</b> | SUITE 800                       |
| <b>City:</b>             | SAN FRANCISCO                   |
| <b>State/Country:</b>    | CALIFORNIA                      |
| <b>Postal Code:</b>      | 94105                           |

**PROPERTY NUMBERS Total: 2651**

| Property Type       | Number   |
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| Application Number: | 09604807 |
| Application Number: | 13297575 |
| Application Number: | 09783002 |
| Application Number: | 10181288 |
| Application Number: | 12241539 |
| Application Number: | 10196825 |
| Application Number: | 10170149 |
| Application Number: | 10077987 |
| Application Number: | 10301713 |
| Application Number: | 10185097 |
| Application Number: | 10435326 |
| Application Number: | 11488799 |
| Application Number: | 10410949 |
| Application Number: | 13405846 |

| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 10784743      |
| <b>Application Number:</b> | 10747967      |
| <b>Application Number:</b> | 10748938      |
| <b>Application Number:</b> | 13226872      |
| <b>Application Number:</b> | 13334979      |
| <b>Application Number:</b> | 10941201      |
| <b>Application Number:</b> | 10813230      |
| <b>Application Number:</b> | 12540030      |
| <b>Application Number:</b> | 13416142      |
| <b>Application Number:</b> | 11032632      |
| <b>Application Number:</b> | 13252595      |
| <b>Application Number:</b> | 10890043      |
| <b>Application Number:</b> | 10880199      |
| <b>Application Number:</b> | 13289126      |
| <b>Application Number:</b> | 10956323      |
| <b>Application Number:</b> | 10922709      |
| <b>Application Number:</b> | 11040684      |
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| <b>Application Number:</b> | 11364251      |
| <b>Application Number:</b> | 11316000      |
| <b>Application Number:</b> | 13531678      |
| <b>Application Number:</b> | 11270319      |
| <b>Application Number:</b> | 12094623      |
| <b>Application Number:</b> | 11268887      |
| <b>Application Number:</b> | 12966733      |
| <b>Application Number:</b> | 11268419      |
| <b>Application Number:</b> | 11214394      |
| <b>Application Number:</b> | 13167251      |
| <b>Application Number:</b> | 13713548      |
| <b>Application Number:</b> | 11251252      |
| <b>Application Number:</b> | 13680391      |
| <b>Application Number:</b> | 11615249      |
| <b>Application Number:</b> | 11471872      |
| <b>Application Number:</b> | 11321207      |
| <b>Application Number:</b> | 12064477      |
| <b>Application Number:</b> | 12886630      |
| <b>Application Number:</b> | 11312675      |
| <b>Application Number:</b> | 11469395      |

| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 11469422      |
| <b>Application Number:</b> | 12096238      |
| <b>Application Number:</b> | 12096229      |
| <b>Application Number:</b> | 11457649      |
| <b>Application Number:</b> | 11502570      |
| <b>Application Number:</b> | 11475524      |
| <b>Application Number:</b> | 11419875      |
| <b>Application Number:</b> | 11529221      |
| <b>Application Number:</b> | 11480316      |
| <b>Application Number:</b> | 11429564      |
| <b>Application Number:</b> | 11536304      |
| <b>Application Number:</b> | 13276833      |
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| <b>Application Number:</b> | 12299719      |
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| <b>Application Number:</b> | 11766271      |
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| <b>Application Number:</b> | 11600492      |
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| <b>Application Number:</b> | 11617189      |
| <b>Application Number:</b> | 11944814      |
| <b>Application Number:</b> | 11960317      |
| <b>Application Number:</b> | 11964753      |
| <b>Application Number:</b> | 11610878      |
| <b>Application Number:</b> | 11960341      |
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| <b>Application Number:</b> | 11732381      |
| <b>Application Number:</b> | 11961833      |
| <b>Application Number:</b> | 11724981      |
| <b>Application Number:</b> | 13301142      |
| <b>Application Number:</b> | 12002361      |
| <b>Application Number:</b> | 11773745      |
| <b>Application Number:</b> | 11964534      |
| <b>Application Number:</b> | 12183616      |
| <b>Application Number:</b> | 13358852      |
| <b>Application Number:</b> | 12334202      |

| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 12210047      |
| <b>Application Number:</b> | 11954097      |
| <b>Application Number:</b> | 11850340      |
| <b>Application Number:</b> | 12179289      |
| <b>Application Number:</b> | 11932487      |
| <b>Application Number:</b> | 12167460      |
| <b>Application Number:</b> | 11955950      |
| <b>Application Number:</b> | 12151682      |
| <b>Application Number:</b> | 12262200      |
| <b>Application Number:</b> | 12196523      |
| <b>Application Number:</b> | 13561040      |
| <b>Application Number:</b> | 13446469      |
| <b>Application Number:</b> | 12341335      |
| <b>Application Number:</b> | 12493620      |
| <b>Application Number:</b> | 12343999      |
| <b>Application Number:</b> | 12347212      |
| <b>Application Number:</b> | 12190209      |
| <b>Application Number:</b> | 12344529      |
| <b>Application Number:</b> | 12394093      |
| <b>Application Number:</b> | 12259560      |
| <b>Application Number:</b> | 12169189      |
| <b>Application Number:</b> | 12390971      |
| <b>Application Number:</b> | 12267571      |
| <b>Application Number:</b> | 12342174      |
| <b>Application Number:</b> | 12168678      |
| <b>Application Number:</b> | 12626975      |
| <b>Application Number:</b> | 12458108      |
| <b>Application Number:</b> | 13132464      |
| <b>Application Number:</b> | 12341845      |
| <b>Application Number:</b> | 13277781      |
| <b>Application Number:</b> | 12494594      |
| <b>Application Number:</b> | 12323002      |
| <b>Application Number:</b> | 13119630      |
| <b>Application Number:</b> | 13547326      |
| <b>Application Number:</b> | 09460589      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 14324787      |
| <b>Application Number:</b> | 14333538      |
| <b>Application Number:</b> | 09731399      |
| <b>Application Number:</b> | 14133936      |
| <b>Application Number:</b> | 14134230      |
| <b>Application Number:</b> | 14336116      |
| <b>Application Number:</b> | 13872458      |
| <b>Application Number:</b> | 14287762      |
| <b>Application Number:</b> | 14257256      |
| <b>Application Number:</b> | 14194933      |
| <b>Application Number:</b> | 13892562      |
| <b>Application Number:</b> | 14335330      |
| <b>Application Number:</b> | 13848578      |
| <b>Application Number:</b> | 13652109      |
| <b>Application Number:</b> | 14291150      |
| <b>Application Number:</b> | 14087211      |
| <b>Application Number:</b> | 13867237      |
| <b>Application Number:</b> | 13896810      |
| <b>Application Number:</b> | 14252474      |
| <b>Application Number:</b> | 13971469      |
| <b>Application Number:</b> | 13896762      |
| <b>Application Number:</b> | 14030642      |
| <b>Application Number:</b> | 14187862      |
| <b>Application Number:</b> | 13715437      |
| <b>Application Number:</b> | 14340916      |
| <b>Application Number:</b> | 14286235      |
| <b>Application Number:</b> | 14165791      |
| <b>Application Number:</b> | 14245168      |
| <b>Application Number:</b> | 14034187      |
| <b>Application Number:</b> | 14291121      |
| <b>Application Number:</b> | 14298487      |
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| <b>Property Type</b> | <b>Number</b> |
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| Application Number:  | 13797226      |
| Application Number:  | 13797255      |
| Application Number:  | 12982542      |
| Application Number:  | 13168802      |
| Application Number:  | 09557890      |
| Application Number:  | 13958806      |
| Application Number:  | 13183732      |
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| Application Number:  | 14024829      |
| Application Number:  | 14025004      |
| Application Number:  | 14026237      |
| Application Number:  | 14026357      |
| Application Number:  | 14035002      |
| Application Number:  | 09716408      |
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| Application Number:  | 10023169      |
| Application Number:  | 09981444      |
| Application Number:  | 13936506      |
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| Application Number:  | 12883996      |
| Application Number:  | 10106366      |
| Application Number:  | 12850896      |
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| Application Number:  | 10813003      |
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| Application Number:  | 14029342      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 13932602      |
| <b>Application Number:</b> | 13931085      |
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| <b>Application Number:</b> | 14093900      |
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| <b>Application Number:</b> | 13683668      |
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| <b>Application Number:</b> | 12081684      |
| <b>Application Number:</b> | 14030403      |
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| <b>Application Number:</b> | 14021063      |
| <b>Application Number:</b> | 11298673      |
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| <b>Application Number:</b> | 14341287      |
| <b>Application Number:</b> | 11369460      |
| <b>Application Number:</b> | 11357090      |
| <b>Application Number:</b> | 11469416      |
| <b>Application Number:</b> | 13947217      |
| <b>Application Number:</b> | 13947288      |
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| <b>Application Number:</b> | 13306417      |
| <b>Application Number:</b> | 11556898      |
| <b>Application Number:</b> | 11502571      |
| <b>Application Number:</b> | 13337769      |
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| <b>Application Number:</b> | 14258238      |
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| <b>Application Number:</b> | 13416161      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 14487728      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 09513244      |
| <b>Application Number:</b> | 09436991      |
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| <b>Application Number:</b> | 09603355      |
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| <b>Application Number:</b> | 09559459      |
| <b>Application Number:</b> | 09589414      |
| <b>Application Number:</b> | 09517432      |
| <b>Application Number:</b> | 09468977      |
| <b>Application Number:</b> | 09595551      |
| <b>Application Number:</b> | 09434954      |
| <b>Application Number:</b> | 09431566      |
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| <b>Application Number:</b> | 09459548      |
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| <b>Application Number:</b> | 09695108      |
| <b>Application Number:</b> | 09466663      |
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| <b>Application Number:</b> | 09472643      |
| <b>Application Number:</b> | 09428808      |
| <b>Application Number:</b> | 09492046      |
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| <b>Application Number:</b> | 09540362      |
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| <b>Application Number:</b> | 09661112      |
| <b>Application Number:</b> | 09417769      |
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| <b>Application Number:</b> | 09466619      |
| <b>Application Number:</b> | 09514932      |
| <b>Application Number:</b> | 09453282      |
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| <b>Application Number:</b> | 09420295      |
| <b>Application Number:</b> | 09587036      |
| <b>Application Number:</b> | 09414762      |
| <b>Application Number:</b> | 11301746      |
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| <b>Application Number:</b> | 09436563      |
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| <b>Application Number:</b> | 09688289      |
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| <b>Application Number:</b> | 09546092      |
| <b>Application Number:</b> | 09595937      |
| <b>Application Number:</b> | 09577292      |
| <b>Application Number:</b> | 09645186      |
| <b>Application Number:</b> | 09473726      |
| <b>Application Number:</b> | 09539123      |
| <b>Application Number:</b> | 09707987      |
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| <b>Property Type</b> | <b>Number</b> |
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| Application Number:  | 09672821      |
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| Application Number:  | 09579501      |
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| <b>Application Number:</b> | 09695969      |
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| <b>Application Number:</b> | 09696125      |
| <b>Application Number:</b> | 09726029      |
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| <b>Application Number:</b> | 10126700      |
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| <b>Application Number:</b> | 09726758      |
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| <b>Application Number:</b> | 09735537      |
| <b>Application Number:</b> | 09648767      |
| <b>Application Number:</b> | 09736210      |
| <b>Application Number:</b> | 09711056      |
| <b>Application Number:</b> | 09223047      |
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| <b>Application Number:</b> | 09709576      |
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| Application Number:  | 10431388      |
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| Application Number:  | 09732259      |
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| Application Number:  | 09731420      |
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| Application Number:  | 09693191      |
| Application Number:  | 10939023      |
| Application Number:  | 09517151      |
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| Application Number:  | 09724322      |



| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 10420734      |
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| <b>Application Number:</b> | 09707015      |
| <b>Application Number:</b> | 10036125      |
| <b>Application Number:</b> | 09746423      |
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| <b>Application Number:</b> | 09161588      |
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| <b>Application Number:</b> | 09893493      |
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| Application Number:  | 11601394      |
| Application Number:  | 11788581      |
| Application Number:  | 13584105      |
| Application Number:  | 10012339      |
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| Application Number:  | 09993271      |
| Application Number:  | 09991386      |
| Application Number:  | 09973656      |
| Application Number:  | 10081987      |
| Application Number:  | 10013677      |
| Application Number:  | 10177998      |
| Application Number:  | 10180050      |
| Application Number:  | 10326123      |
| Application Number:  | 10178131      |
| Application Number:  | 10172547      |
| Application Number:  | 10224417      |
| Application Number:  | 13334375      |
| Application Number:  | 13724017      |
| Application Number:  | 10172981      |
| Application Number:  | 10076415      |
| Application Number:  | 10054509      |
| Application Number:  | 10054362      |
| Application Number:  | 11696213      |
| Application Number:  | 10037043      |
| Application Number:  | 13325278      |
| Application Number:  | 13325290      |
| Application Number:  | 10054207      |
| Application Number:  | 10139928      |
| Application Number:  | 10101211      |
| Application Number:  | 10079237      |
| Application Number:  | 10185113      |
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| Application Number:  | 10264060      |
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| Application Number:  | 09930375      |
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| <b>Application Number:</b> | 10113696      |
| <b>Application Number:</b> | 10232063      |
| <b>Application Number:</b> | 10106339      |
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| <b>Application Number:</b> | 10225541      |
| <b>Application Number:</b> | 10316557      |
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| <b>Application Number:</b> | 13413171      |
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| <b>Application Number:</b> | 10212408      |
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| <b>Application Number:</b> | 10194329      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 09167811      |
| <b>Application Number:</b> | 09167916      |
| <b>Application Number:</b> | 09167839      |
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| <b>Property Type</b> | <b>Number</b> |
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| Application Number:  | 10771201      |
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| Application Number:  | 09460321      |
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| <b>Application Number:</b> | 09049708      |
| <b>Application Number:</b> | 09028540      |
| <b>Application Number:</b> | 09143466      |
| <b>Application Number:</b> | 10233183      |
| <b>Application Number:</b> | 09143465      |
| <b>Application Number:</b> | 10230050      |
| <b>Application Number:</b> | 09072811      |
| <b>Application Number:</b> | 09010475      |
| <b>Application Number:</b> | 09165053      |
| <b>Application Number:</b> | 09157234      |
| <b>Application Number:</b> | 09135967      |
| <b>Application Number:</b> | 09396987      |
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| <b>Application Number:</b> | 09346323      |
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| <b>Application Number:</b> | 08948034      |
| <b>Application Number:</b> | 08595116      |
| <b>Application Number:</b> | 08743898      |
| <b>Application Number:</b> | 08691056      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 09153021      |
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| <b>Property Type</b>       | <b>Number</b> |
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| <b>Application Number:</b> | 08767499      |
| <b>Application Number:</b> | 08929404      |
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| Application Number:  | 08997778      |
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| Application Number:  | 09080189      |
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**CORRESPONDENCE DATA**

**Fax Number:** (919)238-2301

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

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**Address Line 4:** CARY, NORTH CAROLINA 27518

|  |                    |
|--|--------------------|
| <b>ATTORNEY DOCKET NUMBER:</b>                             | 7000-000           |
| <b>NAME OF SUBMITTER:</b>                                  | JOHN M. JIMERSON   |
| <b>SIGNATURE:</b>  | /John M. Jimerson/ |
| <b>DATE SIGNED:</b>  | 02/09/2015         |
| This document serves as an Oath/Declaration (37 CFR 1.63). |                    |

**Total Attachments: 75**

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**Patent Assignment**

This patent assignment ("Assignment") is entered into as of January 28, 2015 (the "Effective Date"), by and between, on the one hand, Rockstar Consortium US LP, a Delaware limited partnership ("Rockstar LP"), Rockstar Consortium LLC, a Delaware limited liability company ("Rockstar LLC"), Bockstar Technologies LLC, a Delaware limited liability company ("Bockstar"), Constellation Technologies LLC, a Delaware limited liability company ("Constellation"), MobileStar Technologies LLC, a Delaware limited liability company ("MobileStar"), and NetStar Technologies LLC, a Delaware limited liability company ("NetStar", and together with Rockstar LP, Rockstar LLC, Bockstar, Constellation and MobileStar, "Sellers", and each of them, a "Seller"), and, on the other hand, RPX Clearinghouse LLC, a Delaware limited liability company, with principal place of business at One Market Plaza, Steuart Tower, Suite 800, San Francisco, CA 94105 ("Buyer").

WHEREAS, Sellers and Buyer are parties to an Asset Purchase Agreement dated December 22, 2014 (the "Asset Purchase Agreement");

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, Sellers hereby irrevocably assign, sell, grant, transfer and convey and agree to assign, sell, grant, transfer, and convey to Buyer, and Buyer hereby accepts and receives, all right, title, and interest throughout the world in and to:

- (a) the Assigned Patents (as hereinafter defined);
- (b) all causes of action (whether known or unknown or whether currently pending, filed or otherwise) and other enforcement rights under or on account of the Assigned Patents, including without limitation all causes of action and other enforcement rights for damages, injunctive relief, and any other remedies of any kind for past, current and future infringement; and
- (c) all rights to collect royalties or other payments under or on account of the Assigned Patents and the foregoing subcategory (b).

"Assigned Patents" means (a) subject to the existing encumbrances, all right, title, and interest throughout the world in and to all patents and patent applications owned by any Seller or its Subsidiaries as of December 22, 2014, including the issued patents and patent applications identified on Schedule 1 attached hereto; (b) all of Sellers' right, title, and interest, as of December 22, 2014 or any time thereafter, throughout the world in and to (i) any and all patents that have issued or may issue from any of the patents or patent applications described in (a) of this definition; (ii) any and all patents and patent applications that, in whole or in part, claim priority to (directly or indirectly), or the benefit of the filing date of (directly or indirectly), any of the patents or patent applications described in (a) or (b)(i) of this definition, including any and all child, continuation, continuation-in-part, continuing prosecution, divisional, provisional, non-provisional, reissue, reexamination, post-grant review, inter partes review, substitution, extension and counterpart patents and patent applications of any of the patents or patents applications described in (a) or (b)(i) of this definition; and (iii) any and all patents and patent applications from which any of the patents or patent applications described in (a) or (b)(i) of this definition, in whole or in part, claim the benefit of priority (directly or indirectly) or otherwise claim the benefit of the filing date (directly or indirectly), including any and all parent patents or patent applications of any of the patents or patent applications described in (a) or (b)(i) of this definition; and (c) any and all extensions or renewals of any of the patents or patent applications described in this definition.

Each Seller agrees that upon request (at the expense of Buyer) Seller will execute and file any document reasonably required to further the purposes of this Assignment (including securing and enforcing Buyer's rights related to this Assignment), provided that each Seller shall be entitled to decline any request that is

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not reasonably required to further the purposes of this Assignment (including securing and enforcing Buyer's rights related to this Assignment), and Seller shall promptly file such documents (at Buyer's expense). In the event that Seller is unable or unwilling to do so as reasonably required for the purposes of this Assignment (e.g., because it has liquidated or dissolved or declined a request reasonably required to further the purposes of this Assignment (including securing and enforcing Buyer's rights related to this Assignment)), Seller hereby irrevocably designates, appoints and authorizes Buyer and its duly authorized officers and agents as such Seller's agents and attorneys-in-fact to act for and on its behalf and instead of it to execute and file any such document to further the purposes of this Assignment (including securing and enforcing Buyer's rights related to this Assignment) as provided in the first sentence of this paragraph with the same legal force and effect as if executed by such Seller. Buyer shall be solely responsible for all actions and all costs whatsoever, including but not limited to taxes, attorneys' fees and patent office fees in any jurisdiction, associated with the perfection of Buyer's right, title, and interest in and to the Assigned Patents and recordation and/or registration of this Assignment or any other document evidencing the assignment to Buyer of the Assigned Patents. Each Seller hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any applicable foreign agency to record this Assignment and issue the Assigned Patents to Buyer and its successors, assigns and other legal representatives.

The terms and conditions of this Assignment will inure to the benefit of Buyer, its successors, assigns, and other legal representatives and will be binding upon each Seller, its successors, assigns, and other legal representatives. In the event of any conflict between the terms of this Assignment and the terms of the Asset Purchase Agreement, the terms of the Asset Purchase Agreement shall govern and prevail.


This Assignment shall be governed by and construed in accordance with the domestic laws of the State of Delaware, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Delaware.

IN WITNESS WHEREOF, the parties hereto have caused this Assignment to be executed as of the Effective Date. The individuals signing for the parties represent and warrant that he or she has authority to sign for and enter into this Assignment on behalf of the respective parties.

**SELLERS**


**ROCKSTAR CONSORTIUM US LP**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Chief Corporate Counsel and Secretary  
**Date:** January 28, 2015


**ROCKSTAR CONSORTIUM LLC**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Corporate Secretary  
**Date:** January 28, 2015


**BOCKSTAR TECHNOLOGIES LLC**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Vice President and Corporate Secretary  
**Date:** January 28, 2015


**CONSTELLATION TECHNOLOGIES LLC**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Corporate Secretary  
**Date:** January 28, 2015


**MOBILESTAR TECHNOLOGIES LLC**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Corporate Secretary  
**Date:** January 28, 2015

**NETSTAR TECHNOLOGIES LLC**

**Notary Seal:**

By:   
**Name:** Michael Dunleavy  
**Title:** Corporate Secretary  
**Date:** January 28, 2015

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**Buyer:**

**RPX CLEARINGHOUSE LLC**

**By:** *Martin Roberts*

**Name:** Martin Roberts

**Title:** Secretary

**Date:** January 28, 2015

| Pub No. | App No./Pub No. | App Title | App Status | App Filed Date | App Exam Date | App Title   |
|---------|-----------------|-----------|------------|----------------|---------------|---|
| 10823RO | US 09/604,807   | #EMPTY    | Filed      | 28-Jun-00      | #EMPTY        | METHOD AND SYSTEM FOR DISPLAYING AND PROVIDING COMMUNICATION OPTIONS  |
| 11033RR | US 13/297,575   | #EMPTY    | Filed      | 16-Nov-11      | #EMPTY        | SESSION INITIATION PROTOCOL ENABLED SET-TOP DEVICE  |
| 12660RO | US 09/783,002   | #EMPTY    | Filed      | 15-Feb-01      | #EMPTY        | PHOTONIC NETWORK NODE   |
| 13543RO | US 10/181,288   | #EMPTY    | Filed      | 12-Jul-02      | #EMPTY        | SYSTEM AND METHOD FOR INTERCEPTING TELECOMMUNICATIONS   |
| 137678A | US 12/241,539   | #EMPTY    | Filed      | 30-Sep-08      | #EMPTY        | SYSTEM, DEVICE, AND METHOD FOR MANAGING ALTERNATE SITE SWITCHING IN AN OPTICAL COMMUNICATION SYSTEM             |
| 14172RG | US 10/196,825   | #EMPTY    | Filed      | 17-Jul-02      | #EMPTY        | RECOVERY METHOD FOR CABLE MODEMS  |
| 14673AL | US 10/170,149   | #EMPTY    | Filed      | 11-Jun-02      | #EMPTY        | A METHOD AND APPARATUS FOR OPTIMIZED PATTERN MATCHING   |
| 149788A | US 10/677,987   | #EMPTY    | Filed      | 20-Feb-02      | #EMPTY        | TECHNIQUE FOR EXCHANGING RECEIVER INFORMATION IN A PROTOCOL INDEPENDENT MULTICAST-SPARE MODE ENVIRONMENT        |
| 152788A | US 10/301,713   | #EMPTY    | Filed      | 22-Nov-02      | #EMPTY        | TECHNIQUE FOR EVACUATING DIGITAL DATA OVER OPTICAL NETWORKS   |
| 15409ID | US 10/185,097   | #EMPTY    | Filed      | 28-Jun-02      | #EMPTY        | OPTICAL COMMUNICATIONS SYSTEM   |
| 15702RO | US 10/435,326   | #EMPTY    | Filed      | 9-May-03       | #EMPTY        | METHOD AND APPARATUS FOR ALLOCATING NETWORK RESOURCES FOR GRID APPLICATIONS                                     |
| 15725RO | US 11/488,799   | #EMPTY    | Filed      | 19-Jul-06      | #EMPTY        | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE                         |
| 15782RO | US 10/410,949   | #EMPTY    | Filed      | 10-Apr-03      | #EMPTY        | INTEGRATING TELEPHONE LINES WITH PACKET CONNECTIONS   |
| 15901RO | US 13/405,846   | #EMPTY    | Filed      | 27-Feb-12      | #EMPTY        | REDUCED CIRCUIT TRACE ROUGHNESS FOR IMPROVED SIGNAL PERFORMANCE   |
| 16093RO | US 10/784,743   | #EMPTY    | Filed      | 23-Feb-04      | #EMPTY        | HANDOFF FROM CELLULAR NETWORK TO WLAN NETWORK   |
| 16129RO | US 10/747,967   | #EMPTY    | Filed      | 29-Dec-03      | #EMPTY        | APPARATUS AND METHOD FOR MULTIHOP MPLS/IP/ATM/FRAME RELAY/ETHERNET PSEUDO-WIRE                                  |
| 16419RR | US 10/748,938   | #EMPTY    | Filed      | 30-Dec-03      | #EMPTY        | FLEXIBLE CONTROL FOR MEDIA SERVICES   |
| 16484RN | US 13/226,872   | #EMPTY    | Filed      | 7-Sep-11       | #EMPTY        | AUTODISCOVERY FOR VIRTUAL NETWORKS  |
| 16520RN | US 13/334,979   | #EMPTY    | Filed      | 22-Dec-11      | #EMPTY        | BUDDY LISTS FOR INFORMATION VEHICLES  |
| 16597RO | US 10/941,201   | #EMPTY    | Filed      | 15-Sep-04      | #EMPTY        | NETWORK MEDIA GATEWAY   |
| 16673RO | US 10/813,230   | #EMPTY    | Filed      | 31-Mar-04      | #EMPTY        | INTEGRATED AND SECURE ARCHITECTURE FOR DELIVERY OF COMMUNICATIONS SERVICES IN A HOSPITAL                        |
| 16691RN | US 12/540,030   | #EMPTY    | Filed      | 12-Aug-09      | #EMPTY        | AUTOMATED SESSION ADMISSION   |
| 16692RO | US 13/416,142   | #EMPTY    | Filed      | 9-Mar-12       | #EMPTY        | METHOD AND APPARATUS FOR ENABLING ENHANCED CONTROL OF TRAFFIC PROPAGATION THROUGH A NETWORK FIREWALL            |
| 16772RN | US 11/032,632   | #EMPTY    | Filed      | 10-Jan-05      | #EMPTY        | AUTOMATED FEATURE INVOKING  |
| 167835C | US 13/252,595   | #EMPTY    | Filed      | 4-Oct-11       | #EMPTY        | METHOD AND APPARATUS FOR INTERFACING A CUSTOMER WITH A CALL CENTER  |
| 16798RO | US 10/890,043   | #EMPTY    | Filed      | 13-Jul-04      | #EMPTY        | SERVICE INSTANCE REGISTRY   |
| 16805RO | US 10/880,199   | #EMPTY    | Filed      | 30-Jun-04      | #EMPTY        | TECHNIQUE FOR COOPERATIVE DISTRIBUTION OF VIDEO CONTENT   |
| 16840RO | US 13/289,126   | #EMPTY    | Filed      | 4-Nov-11       | #EMPTY        | METRO ETHERNET SERVICE ENHANCEMENTS   |
| 17064ID | US 10/956,323   | #EMPTY    | Filed      | 1-Oct-04       | #EMPTY        | SENSOR NETWORK  |
| 170758A | US 10/922,709   | #EMPTY    | Filed      | 20-Aug-04      | #EMPTY        | METHOD AND APPARATUS FOR MANAGING INTERFACES ON A NETWORK ELEMENT   |
| 17103RN | US 11/040,684   | #EMPTY    | Filed      | 20-Jan-05      | #EMPTY        | DYNAMIC CALL PROCESSING CONTROL FROM A TELEPHONY TERMINAL   |
| 17131SS | US 12/577,639   | #EMPTY    | Filed      | 12-Oct-09      | #EMPTY        | SWITCHING DEVICE, METHOD, AND COMPUTER PROGRAM FOR MONITORING FLOW TRAFFIC                                      |
| 17307AB | US 11/364,251   | #EMPTY    | Filed      | 28-Feb-06      | #EMPTY        | SPEECH QUALITY MEASUREMENT BASED ON CLASSIFICATION-ESTIMATION   |
| 17371AB | US 11/316,000   | #EMPTY    | Filed      | 22-Dec-05      | #EMPTY        | METHOD AND SYSTEM FOR DYNAMIC SERVICES DISCOVERY WITH DYNAMIC DNS FOR PEER TO PEER TELEPHONY SERVICES           |
| 17386RO | US 13/531,678   | #EMPTY    | Filed      | 25-Jun-12      | #EMPTY        | SECURE, DIFFERENTIATED READING OF SENSORS AND RFID TAGS   |
| 17460FR | US 11/270,319   | #EMPTY    | Filed      | 9-Nov-05       | #EMPTY        | ATM OVER ETHERNET SCHEDULER   |
| 17462RO | US 12/094,623   | #EMPTY    | Filed      | 22-May-08      | #EMPTY        | SESSION INITIATION PROTOCOL (SIP) MULTICAST MANAGEMENT METHOD   |
| 17559RN | US 11/268,887   | #EMPTY    | Filed      | 8-Nov-05       | #EMPTY        | USING COOKIES WITH INTERACTIVE COMMUNICATION SESSIONS AND WEB SESSIONS  |
| 176208A | US 12/966,733   | #EMPTY    | Filed      | 13-Dec-10      | #EMPTY        | METHOD AND APPARATUS FOR SPECIFYING IP TERMINATION IN A NETWORK ELEMENT   |
| 176975S | US 11/268,419   | #EMPTY    | Filed      | 7-Nov-05       | #EMPTY        | DETERMINING TRANSMISSION LATENCY IN NETWORK DEVICES   |
| 17698RR | US 11/214,394   | #EMPTY    | Filed      | 29-Aug-05      | #EMPTY        | SEPARATION OF SESSION AND SESSION CONTROL   |
| 17717RO | US 13/167,251   | #EMPTY    | Filed      | 23-Jun-11      | #EMPTY        | VIRTUAL ROUTERS FOR GMPLS NETWORKS  |
| 17743HU | US 13/713,548   | #EMPTY    | Filed      | 13-Dec-12      | #EMPTY        | DYNAMIC HIERARCHICAL ADDRESS RESOURCE MANAGEMENT ARCHITECTURE, METHOD AND APPARATUS                             |
| 17780RO | US 11/251,252   | #EMPTY    | Filed      | 14-Oct-05      | #EMPTY        | METHOD AND APPARATUS FOR PRESERVING PACKETS DURING NETWORK CONGESTION   |
| 17789RO | US 13/680,391   | #EMPTY    | Filed      | 19-Nov-12      | #EMPTY        | SYSTEM AND METHOD FOR TRANSPARENT SINGLE SIGN-ON  |
| 17793RO | US 11/615,249   | #EMPTY    | Filed      | 22-Dec-06      | #EMPTY        | TECHNIQUE FOR DYNAMICALLY CONTROLLING DELIVERY OF CONTENT   |
| 17800RR | US 11/471,872   | #EMPTY    | Filed      | 21-Jun-06      | #EMPTY        | SYSTEM AND METHOD FOR SECURE DIGITAL VIDEO  |
| 17820RN | US 11/321,207   | #EMPTY    | Filed      | 29-Dec-05      | #EMPTY        | INTERACTIVE TELEVISION SERVICES   |
| 17927RO | US 12/064,477   | #EMPTY    | Filed      | 22-Feb-08      | #EMPTY        | METHOD FOR ESTABLISHING MULTI SEGMENT PSEUDOWIRE ACROSS DOMAINS HAVING DIFFERENT PSEUDOWIRE SIGNALING PROTOCOL  |
| 17935RO | US 12/886,630   | #EMPTY    | Filed      | 21-Sep-10      | #EMPTY        | FORWARDING PLANE DATA COMMUNICATIONS CHANNEL FOR ETHERNET TRANSPORT NETWORKS                                    |
| 17939RO | US 11/312,675   | #EMPTY    | Filed      | 20-Dec-05      | #EMPTY        | FACILITATING INTEGRATED WEB AND TELECOMMUNICATION SERVICES WITH COLLABORATING WEB AND TELECOMMUNICATION CLIENTS |
| 179658A | US 11/469,395   | #EMPTY    | Filed      | 31-Aug-06      | #EMPTY        | TENDER-BID METHOD AND ARCHITECTURE FOR INTELLIGENT NETWORK RESOURCE DEPLOYMENT                                  |
| 179658A | US 11/469,422   | #EMPTY    | Filed      | 31-Aug-06      | #EMPTY        | WORKFLOW LOCKED LOOPS TO ENABLE ADAPTIVE NETWORKS   |
| 180478A | US 12/096,238   | #EMPTY    | Filed      | 5-Jun-08       | #EMPTY        | DYNAMIC SENSOR NETWORK REGISTRY   |

| Pub No  | App No | Pub No     | App No | Pub No | App No | Pub No    | App No | Pub No | App No | Pub No | App No   |
|---------|--------|------------|--------|--------|--------|-----------|--------|--------|--------|--------|--|
| Pub No  | Pub No | Pub No     | Pub No | Pub No | Pub No | Pub No    | Pub No | Pub No | Pub No | Pub No | Pub No   |
| 18052BA | US     | 12/096,229 | #EMPTY | Filed  |        | 5-Jun-08  | #EMPTY |        |        |        | SELECTIVE MULTICASTING OF SENSOR DATA FOR RELIABLE DELIVERY  |
| 18053RO | US     | 11/457,649 | #EMPTY | Filed  |        | 14-Jul-06 | #EMPTY |        |        |        | CONFIGURATION REPLICATION ACROSS SYSTEMS   |
| 18082RO | US     | 11/502,570 | #EMPTY | Filed  |        | 11-Aug-06 | #EMPTY |        |        |        | SYSTEM AND METHOD FOR DYNAMICALLY RE-DIRECTING COMMUNICATIONS SESSIONS BASED ON LOCATION-ENHANCED INFORMATION                          |
| 18096RO | US     | 11/475,524 | #EMPTY | Filed  |        | 27-Jun-06 | #EMPTY |        |        |        | CALLER-CONTROLLED ALERTING SIGNALS   |
| 18114RO | US     | 11/419,875 | #EMPTY | Filed  |        | 23-May-06 | #EMPTY |        |        |        | METHOD AND SYSTEM FOR INDICATING PRIVACY FOR AUDIO COMMUNICATIONS  |
| 18122RO | US     | 11/529,221 | #EMPTY | Filed  |        | 29-Sep-06 | #EMPTY |        |        |        | METHOD AND SYSTEM FOR PREDICTING THE ADOPTION OF SERVICES, SUCH AS TELECOMMUNICATION SERVICES  |
| 18131SS | US     | 11/480,316 | #EMPTY | Filed  |        | 30-Jun-06 | #EMPTY |        |        |        | METHOD AND APPARATUS FOR USER REGISTRATION INFORMATION CACHING IN A NETWORK DEVICE   |
| 18140RO | US     | 11/429,564 | #EMPTY | Filed  |        | 5-May-06  | #EMPTY |        |        |        | BUSINESS PRESENCE INFORMATION  |
| 18189RO | US     | 11/536,304 | #EMPTY | Filed  |        | 28-Sep-06 | #EMPTY |        |        |        | SYSTEM AND METHOD FOR JOINING A CONFERENCE CALL OR MULTIMEDIA CONFERENCE   |
| 18206RN | US     | 13/276,833 | #EMPTY | Filed  |        | 19-Oct-11 | #EMPTY |        |        |        | CLOSED CAPTIONING LANGUAGE TRANSLATION   |
| 18213RO | US     | 11/531,993 | #EMPTY | Filed  |        | 14-Sep-06 | #EMPTY |        |        |        | DIGITAL MEDIA RECORDER BASED ADVERTISING   |
| 18219RO | US     | 11/761,339 | #EMPTY | Filed  |        | 11-Jun-07 | #EMPTY |        |        |        | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS   |
| 18317RR | US     | 11/963,322 | #EMPTY | Filed  |        | 12-Dec-07 | #EMPTY |        |        |        | CONVERGED NETWORK REAL-TIME MONITORING FOR LAWFUL CALL INTERCEPT   |
| 18341RO | US     | 12/299,719 | #EMPTY | Filed  |        | 5-Nov-08  | #EMPTY |        |        |        | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK           |
| 18352RO | US     | 11/535,677 | #EMPTY | Filed  |        | 27-Sep-06 | #EMPTY |        |        |        | ACTIVE SOURCE IDENTIFICATION FOR CONFERENCE CALLS  |
| 18458RO | US     | 11/766,271 | #EMPTY | Filed  |        | 21-Jun-07 | #EMPTY |        |        |        | ADAPTIVE RESPONSE SYSTEM FOR EVENT DRIVEN NETWORKS   |
| 18471RO | US     | 13/465,648 | #EMPTY | Filed  |        | 7-May-12  | #EMPTY |        |        |        | METHOD AND APPARATUS FOR ESTABLISHING FORWARDING STATE USING PATH STATE ADVERTISEMENTS   |
| 18474RO | US     | 11/600,492 | #EMPTY | Filed  |        | 16-Nov-06 | #EMPTY |        |        |        | SYSTEM AND METHOD FOR DELIVERING PACKET DATA OVER A MULTIPLICITY OF COMMUNICATION LINKS  |
| 18483RO | US     | 11/867,288 | #EMPTY | Filed  |        | 5-Jul-07  | #EMPTY |        |        |        | SYSTEM AND METHOD FOR PROVIDING NETWORK APPLICATION PERFORMANCE MANAGEMENT IN A NETWORK  |
| 18487RO | US     | 11/617,189 | #EMPTY | Filed  |        | 28-Dec-06 | #EMPTY |        |        |        | LOAD BALANCING FOR MULTICAST STREAM PROCESSORS   |
| 18560ID | US     | 11/944,814 | #EMPTY | Filed  |        | 26-Nov-07 | #EMPTY |        |        |        | APPARATUS AND METHOD FOR MANAGING COMMUNICATION BETWEEN PARTIES  |
| 18562RO | US     | 11/960,317 | #EMPTY | Filed  |        | 19-Dec-07 | #EMPTY |        |        |        | REAL TIME COMMUNICATION BETWEEN WEB AND SIP END POINTS   |
| 18572ID | US     | 11/964,753 | #EMPTY | Filed  |        | 27-Dec-07 | #EMPTY |        |        |        | METHOD AND APPARATUS FOR THE CONTROL AND ANALYSIS OF ACTIVITY IN A TELECOMMUNICATIONS NETWORK  |
| 18579RN | US     | 11/610,878 | #EMPTY | Filed  |        | 14-Dec-06 | #EMPTY |        |        |        | MEDIA CONTEXT INFORMATION  |
| 18611RO | US     | 11/960,341 | #EMPTY | Filed  |        | 19-Dec-07 | #EMPTY |        |        |        | DELAYED MULTIMEDIA SESSION   |
| 18620ID | US     | 11/755,205 | #EMPTY | Filed  |        | 30-May-07 | #EMPTY |        |        |        | MULTI-LINGUAL CONFERENCE CALL  |
| 18654RO | US     | 11/732,381 | #EMPTY | Filed  |        | 3-Apr-07  | #EMPTY |        |        |        | ENGINEERED PATHS IN A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK  |
| 18656RO | US     | 11/961,833 | #EMPTY | Filed  |        | 20-Dec-07 | #EMPTY |        |        |        | PROVIDING PRESENCE INFORMATION ACROSS DISPARATE DOMAINS  |
| 18666RO | US     | 11/724,981 | #EMPTY | Filed  |        | 16-Mar-07 | #EMPTY |        |        |        | ETHERNET OAM AT INTERMEDIATE NODES IN A PBT NETWORK  |
| 18669RO | US     | 13/301,142 | #EMPTY | Filed  |        | 21-Nov-11 | #EMPTY |        |        |        | ROLE BASED SERVICES  |
| 18670SS | US     | 12/002,361 | #EMPTY | Filed  |        | 17-Dec-07 | #EMPTY |        |        |        | CIRCUIT BOARD WITH SIGNAL LAYERS OF DIFFERENT DIMENSIONS TO COMMUNICATE SIGNALS OF DIFFERENT FREQUENCIES                               |
| 18682RO | US     | 11/773,745 | #EMPTY | Filed  |        | 5-Jul-07  | #EMPTY |        |        |        | FACILITATING AUTOMATIC PROTECTION SWITCHING FOR PROVIDER BACKBONE NETWORK  |
| 18695ID | US     | 11/964,534 | #EMPTY | Filed  |        | 26-Dec-07 | #EMPTY |        |        |        | REDUCING CONFIGURATION OF OAM SIGNALING DATA   |
| 18698RN | US     | 12/183,616 | #EMPTY | Filed  |        | 31-Jul-08 | #EMPTY |        |        |        | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 18755RO | US     | 13/358,852 | #EMPTY | Filed  |        | 26-Jan-12 | #EMPTY |        |        |        | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER 2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 18766RO | US     | 12/334,202 | #EMPTY | Filed  |        | 12-Dec-08 | #EMPTY |        |        |        | SHARING EXPRESSION INFORMATION AMONG CONFERENCE PARTICIPANTS   |
| 18823RN | US     | 12/151,684 | #EMPTY | Filed  |        | 8-May-08  | #EMPTY |        |        |        | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 18850RO | US     | 12/210,047 | #EMPTY | Filed  |        | 12-Sep-08 | #EMPTY |        |        |        | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 18864AB | US     | 11/954,097 | #EMPTY | Filed  |        | 11-Dec-07 | #EMPTY |        |        |        | INTEGRATING NON-XML PROTOCOLS INTO WEB BROWSING APPLICATIONS   |
| 18870RO | US     | 11/850,340 | #EMPTY | Filed  |        | 5-Sep-07  | #EMPTY |        |        |        | SYSTEM AND METHODS FOR DETECTING MALICIOUS MAIL FROM SPAM ZOMBIES  |
| 18941RO | US     | 12/179,289 | #EMPTY | Filed  |        | 24-Jul-08 | #EMPTY |        |        |        | URL STORAGE IN ASSOCIATION WITH DELIVERY OF VIDEO CONTENT  |
| 18942RR | US     | 11/932,487 | #EMPTY | Filed  |        | 31-Oct-07 | #EMPTY |        |        |        | MULTI-MEDIA SUBSYSTEM REGISTRATION BASED ON CIRCUIT-SWITCHED SUBSYSTEM REGISTRATION  |
| 18967RO | US     | 12/167,460 | #EMPTY | Filed  |        | 3-Jul-08  | #EMPTY |        |        |        | PLAYLIST EXECUTION IN A SCHEDULED PROGRAMMING ENVIRONMENT  |
| 18996RO | US     | 11/955,950 | #EMPTY | Filed  |        | 13-Dec-07 | #EMPTY |        |        |        | METHOD AND SYSTEM FOR USING PROTOCOL CHECKSUMS TO CONVEY DATA  |
| 19012RN | US     | 12/151,682 | #EMPTY | Filed  |        | 8-May-08  | #EMPTY |        |        |        | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK  |
| 19051BA | US     | 12/262,200 | #EMPTY | Filed  |        | 31-Oct-08 | #EMPTY |        |        |        | INTERNAL MAINTENANCE ASSOCIATION END POINT (IMEP) FOR SHARING STATE INFORMATION  |
| 19085RO | US     | 12/196,523 | #EMPTY | Filed  |        | 22-Aug-08 | #EMPTY |        |        |        | METHOD AND SYSTEM FOR LOCATION-BASED ADVERTISING INTELLIGENCE AGGREGATION  |
| 19097RO | US     | 13/561,040 | #EMPTY | Filed  |        | 29-Jul-12 | #EMPTY |        |        |        | CONTINUITY CHECK MANAGEMENT IN A LINK STATE CONTROLLED ETHERNET NETWORK  |
| 19098RO | US     | 13/446,469 | #EMPTY | Filed  |        | 13-Apr-12 | #EMPTY |        |        |        | MULTI-POINT AND ROOTED MULTI-POINT PROTECTION SWITCHING  |
| 19116RO | US     | 12/341,335 | #EMPTY | Filed  |        | 22-Dec-08 | #EMPTY |        |        |        | TARGETED ADVERTISING SYSTEM AND METHOD   |
| 19143RO | US     | 12/493,620 | #EMPTY | Filed  |        | 29-Jun-09 | #EMPTY |        |        |        | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO IN DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 19144RO | US     | 12/343,999 | #EMPTY | Filed  |        | 24-Dec-08 | #EMPTY |        |        |        | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT   |
| 19170RO | US     | 12/347,212 | #EMPTY | Filed  |        | 31-Dec-08 | #EMPTY |        |        |        | A METHOD AND APPARATUS TO SECURELY EMBED VOIP AND MULTIMEDIA STREAM SESSION KEYS TO ENABLE LAWFUL INTERCEPT AND SESSION RECORDING      |
| 19217ID | US     | 12/190,209 | #EMPTY | Filed  |        | 12-Aug-08 | #EMPTY |        |        |        | VIDEO HEAD-END   |

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| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) |   |
| 19296RO  | US            | 12/344,529    | #EMPTY        | Filed         | 28-Dec-08     | #EMPTY        | METHOD AND APPARATUS FOR DISSEMINATING INFORMATION IN AN ENTERPRISE ENVIRONMENT   |
| 19302RO  | US            | 12/394,093    | #EMPTY        | Filed         | 27-Feb-09     | #EMPTY        | USING RUNTIME GOVERNANCE FEEDBACK TO DYNAMICALLY ADJUST PERFORMANCE AND AVAILABILITY MODEL OF SERVICE ORIENTED ARCHITECTURE APPLICATION |
| 19324RO  | US            | 12/259,560    | #EMPTY        | Filed         | 28-Oct-08     | #EMPTY        | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 19341RO  | US            | 12/169,189    | #EMPTY        | Filed         | 8-Jul-08      | #EMPTY        | METHOD AND SYSTEM FOR ROUTE SYNCHRONIZATION USING TIME SYNCHRONIZATION  |
| 19350RO  | US            | 12/390,971    | #EMPTY        | Filed         | 23-Feb-09     | #EMPTY        | NETWORK PERFORMABILITY  |
| 19354RR  | US            | 12/267,571    | #EMPTY        | Filed         | 8-Nov-08      | #EMPTY        | METHOD AND APPARATUS FOR IMPLEMENTING CONTEXTUAL NETWORK USAGE MONITORING   |
| 19400RO  | US            | 12/342,174    | #EMPTY        | Filed         | 23-Dec-08     | #EMPTY        | MULTISEGMENT LOSS PROTECTION  |
| 19405RO  | US            | 12/168,678    | #EMPTY        | Filed         | 7-Jul-08      | #EMPTY        | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 19551RO  | US            | 12/626,975    | #EMPTY        | Filed         | 30-Nov-09     | #EMPTY        | IN-BAND SIGNALLING FOR POINT-POINT PACKET PROTECTION SWITCHING  |
| 19587D   | US            | 12/458,108    | #EMPTY        | Filed         | 30-Jun-09     | #EMPTY        | PERSONAL STATUS COMMUNICATIONS MANAGER  |
| 19597RO  | US            | 13/132,464    | #EMPTY        | Filed         | 2-Jun-11      | #EMPTY        | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM  |
| 19657RR  | US            | 12/341,845    | #EMPTY        | Filed         | 22-Dec-08     | #EMPTY        | SELECTIVE DATABASE REPLICATION  |
| 19670RR  | US            | 13/277,781    | #EMPTY        | Filed         | 20-Oct-11     | #EMPTY        | COLLABORATION AGENT   |
| 19728ID  | US            | 12/494,594    | #EMPTY        | Filed         | 30-Jun-09     | #EMPTY        | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 19762Y   | US            | 12/323,002    | #EMPTY        | Filed         | 25-Nov-08     | #EMPTY        | CONTEXT-BASED NETWORK SECURITY  |
| 19792RO  | US            | 13/119,630    | #EMPTY        | Filed         | 17-Mar-11     | #EMPTY        | METHOD AND SYSTEM FOR SPACE COCE TRANSMIT DIVERSITY OF PUCCH  |
| 19847RO  | US            | 13/547,326    | #EMPTY        | Filed         | 12-Jul-12     | #EMPTY        | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESSES  |
| BA0415   | US            | 09/460,589    | #EMPTY        | Filed         | 14-Dec-99     | #EMPTY        | USING DISTANCE-VECTOR INFORMATION TO COMPUTE NON-SHORTEST-PATH ROUTES FOR A LINK-STATE ROUTING PROTOCOL                                 |
| ID0532   | US            | 11/759,461    | #EMPTY        | Filed         | 7-Jun-07      | #EMPTY        | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| ID0532   | US            | 11/759,508    | #EMPTY        | Filed         | 7-Jun-07      | #EMPTY        | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| ID0532   | US            | 12/632,400    | #EMPTY        | Filed         | 7-Dec-09      | #EMPTY        | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| 11310BA  | US            | 14/230,279    | #EMPTY        | Filed         | 31-Mar-14     | #EMPTY        | MULTI-MODE ENDPPOINT IN A COMMUNICATION NETWORK SYSTEM AND METHODS THEREOF  |
| 11925DM  | US            | 14/324,787    | #EMPTY        | Filed         | 7-Jul-14      | #EMPTY        | METHOD TO PROCESS A CALL REQUEST  |
| 122788A  | US            | 14/333,538    | #EMPTY        | Filed         | 17-Jul-14     | #EMPTY        | TELEVISION DELIVERY SYSTEM  |
| 13033ID  | US            | 09/731,399    | 6,519,390     | Granted       | 6-Dec-00      | 11-Feb-03     | CHIRPED BRAGG GRATING REFLECTORS AND ADJUSTABLE DISPERSION APPARATUS INCORPORATING SUCH GRATINGS  |
| 13218SS  | US            | 14/133,936    | #EMPTY        | Filed         | 19-Dec-13     | #EMPTY        | DYNAMIC ASSIGNMENT OF TRAFFIC CLASSES TO A PRIORITY QUEUE IN A PACKET FORWARDING DEVICE   |
| 13218SS  | US            | 14/134,230    | #EMPTY        | Filed         | 19-Dec-13     | #EMPTY        | DYNAMIC ASSIGNMENT OF TRAFFIC CLASSES TO A PRIORITY QUEUE IN A PACKET FORWARDING DEVICE   |
| 13317SS  | US            | 14/336,116    | #EMPTY        | Filed         | 21-Jul-14     | #EMPTY        | DISTRIBUTED NETWORK ADDRESS TRANSLATION CONTROL   |
| 14830RO  | US            | 13/872,458    | #EMPTY        | Filed         | 29-Apr-13     | #EMPTY        | FRAMEWORK FOR SERVICE PERSONALIZATION   |
| 14845SS  | US            | 14/287,762    | #EMPTY        | Filed         | 27-May-14     | #EMPTY        | PASSIVE OPTICAL LOOPBACK  |
| 14869RO  | US            | 14/257,256    | #EMPTY        | Filed         | 14-Apr-14     | #EMPTY        | TECHNIQUE FOR ENABLING A PLURALITY OF SOFTWARE COMPONENTS TO COMMUNICATE IN A SOFTWARE COMPONENT MATRIX ENVIRONMENT                     |
| 16015BA  | US            | 14/194,933    | #EMPTY        | Filed         | 3-Mar-14      | #EMPTY        | PROVIDING-RELAY PROTECTION IN SYSTEMS USING GROUP SECURITY ASSOCIATIONS   |
| 16346BA  | US            | 13/892,562    | #EMPTY        | Filed         | 13-May-13     | #EMPTY        | SYSTEM FOR MANAGING SESSIONS AND CONNECTION IN A NETWORK  |
| 16604RO  | US            | 14/335,330    | #EMPTY        | Filed         | 18-Jul-14     | #EMPTY        | TECHNIQUE FOR END-TO-END ADMISSION CONTROL OF REAL-TIME PACKET FLOWS  |
| 16670ID  | US            | 13/848,578    | #EMPTY        | Filed         | 21-Mar-13     | #EMPTY        | VLAN SUPPORT OF DIFFERENTIATED SERVICES   |
| 16991ID  | US            | 13/652,109    | #EMPTY        | Filed         | 15-Oct-12     | #EMPTY        | BROKERING NETWORK RESOURCES   |
| 17095RN  | US            | 14/291,150    | #EMPTY        | Filed         | 30-May-14     | #EMPTY        | GENERIC SNMP INFORMATION COLLECTION   |
| 17161RO  | US            | 14/087,211    | #EMPTY        | Filed         | 22-Nov-13     | #EMPTY        | LAYER-2 TO MPLS SERVICE MEDIATION ARCHITECTURE  |
| 17396RO  | US            | 13/867,237    | #EMPTY        | Filed         | 22-Apr-13     | #EMPTY        | #EMPTY  |
| 17474RO  | US            | 13/896,810    | #EMPTY        | Filed         | 17-May-13     | #EMPTY        | RESOURCE CONSERVATION FOR PACKET TELEVISION SERVICES  |
| 17659SS  | US            | 14/252,474    | #EMPTY        | Filed         | 14-Apr-14     | #EMPTY        | METHOD AND APPARATUS FOR DETECTING A FAULT ON AN OPTICAL FIBER  |
| 17829RO  | US            | 13/971,469    | #EMPTY        | Filed         | 20-Aug-13     | #EMPTY        | METHOD AND APPARATUS FOR PROVIDING AVAILABILITY METRICS FOR MEASUREMENT AND MANAGEMENT OF ETHERNET SERVICES                             |
| 18017SS  | US            | 13/896,762    | #EMPTY        | Filed         | 17-May-13     | #EMPTY        | METHOD AND APPARATUS FOR DETECTING UNSOLICITED MULTIMEDIA COMMUNICATIONS  |
| 18082RO  | US            | 14/030,642    | #EMPTY        | Filed         | 18-Sep-13     | #EMPTY        | SYSTEM AND METHOD FOR DYNAMICALLY RE-CONFIGURING COMMUNICATIONS SESSION ROUTING BASED ON LOCATION INFORMATION                           |
| 18134RO  | US            | 14/187,862    | #EMPTY        | Filed         | 24-Feb-14     | #EMPTY        | METHOD AND APPARATUS FOR ENABLING COMMUTER GROUPS   |
| 18320RO  | US            | 13/715,437    | #EMPTY        | Filed         | 14-Dec-12     | #EMPTY        | MULTICAST IMPLEMENTATION IN A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 18414RO  | US            | 14/340,916    | #EMPTY        | Filed         | 25-Jul-14     | #EMPTY        | CALL SERVER SELECTION   |
| 18564RO  | US            | 14/286,235    | #EMPTY        | Filed         | 23-May-14     | #EMPTY        | INTERGRATED WEB PORTAL FOR FACILITATING COMMUNICATIONS WITH AN INTENDED PARTY   |
| 18593SS  | US            | 14/165,791    | #EMPTY        | Filed         | 28-Jan-14     | #EMPTY        | BIFURCATED CONFERENCING FUNCTIONS   |
| 18593SS  | US            | 14/245,168    | #EMPTY        | Filed         | 4-Apr-14      | #EMPTY        | BIFURCATED CONFERENCING FUNCTIONS   |
| 18685RO  | US            | 14/034,187    | #EMPTY        | Filed         | 23-Sep-13     | #EMPTY        | METHOD AND SYSTEM FOR CLIENT CONTEXT DISSEMINATION FOR WEB-BASED APPLICATIONS   |
| 18738RO  | US            | 14/291,121    | #EMPTY        | Filed         | 30-May-14     | #EMPTY        | FAILURE NOTIFICATION IN A NETWORK HAVING SERIALY CONNECTED NODES  |
| 18833RO  | US            | 14/298,487    | #EMPTY        | Filed         | 6-Jun-14      | #EMPTY        | DISTRIBUTED CONNECTION ESTABLISHMENT AND RESTORATION  |
| 18923RO  | US            | 14/075,365    | #EMPTY        | Filed         | 8-Nov-13      | #EMPTY        | TIE-BREAKING IN SHORTEST PATH DETERMINATION   |



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| Pub No. | Pub No. | Pub No.     | Pub No.   | Pub No. | Pub No.   | Pub No. | Pub No.  | Pub No. | Pub No.  |
| 18923RO | US      | 14/136,806  | #EMPTY    | Filed   | 20-Dec-13 | HEMPTY  |          |         | TIE-BREAKING IN SHORTEST PATH DETERMINATION  |
| 19277RO | US      | 14/134,856  | #EMPTY    | Filed   | 14-Jan-14 | HEMPTY  |          |         | BREAK BEFORE MAKE FORWARDING INFORMATION BASE (FIB) POPULATION FOR MULTICAST                                     |
| 19363RO | US      | 14/084,376  | #EMPTY    | Filed   | 19-Nov-13 | HEMPTY  |          |         | LINK BUNDLE CO-ROUTED VCAT VIA RSVP MESSAGE BUNDLING   |
| 19422RO | US      | 13/897,812  | #EMPTY    | Filed   | 20-May-13 | HEMPTY  |          |         | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL      |
| 19679RO | US      | 14/094,266  | #EMPTY    | Filed   | 2-Dec-13  | HEMPTY  |          |         | MOBILE FAST ALERTING   |
| 19699RO | US      | 14/216,278  | #EMPTY    | Filed   | 17-Mar-14 | HEMPTY  |          |         | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |
| 19702RO | US      | 14/176,223  | #EMPTY    | Filed   | 10-Feb-14 | HEMPTY  |          |         | METHOD AND APPARATUS FOR IMPLEMENTING CONTROL OF MULTIPLE PHYSICALLY DUAL HOMED DEVICES                          |
| 19802Y  | US      | 14/311,434  | #EMPTY    | Filed   | 23-Jun-14 | HEMPTY  |          |         | DISTRIBUTED AUTHENTICATION, AUTHORIZATION AND ACCOUNTING   |
| 19941RO | US      | 14/299,118  | #EMPTY    | Filed   | 9-Jun-14  | HEMPTY  |          |         | METHOD AND APPARATUS FOR SELECTING BETWEEN MULTIPLE EQUAL COST PATHS   |
| BA040B  | US      | 14/313,261  | #EMPTY    | Filed   | 24-Jun-14 | HEMPTY  |          |         | SYSTEM, DEVICE AND METHOD FOR DISTRIBUTING LINK STATE INFORMATION IN A COMMUNICATION NETWORK                     |
| 10391RO | US      | 13/797,226  | #EMPTY    | Filed   | 12-Mar-13 | HEMPTY  |          |         | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH   |
| 10391RO | US      | 13/797,255  | #EMPTY    | Filed   | 12-Mar-13 | HEMPTY  |          |         | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH   |
| 10628RO | US      | 12/982,542  | #EMPTY    | Filed   | 30-Dec-10 | HEMPTY  |          |         | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM   |
| 11259RO | US      | 13/168,802  | #EMPTY    | Filed   | 24-Jun-11 | HEMPTY  |          |         | METHOD, APPARATUS, PROCESSOR-READABLE MEDIA AND SIGNALS FOR ACQUIRING AND PRESENTING ACQUIRED MULTIMEDIA CONTENT |
| 11801D  | US      | 09/557,890  | #EMPTY    | Filed   | 21-Apr-00 | HEMPTY  |          |         | OPTICAL COMMUNICATIONS NETWORK   |
| 11965RO | US      | 13/958,806  | #EMPTY    | Filed   | 5-Aug-13  | HEMPTY  |          |         | OPTICAL SWITCH WITH POWER EQUALIZATION   |
| 11992RO | US      | 13/183,732  | #EMPTY    | Filed   | 15-Jul-11 | HEMPTY  |          |         | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS   |
| 12230RN | US      | 13/755,320  | #EMPTY    | Filed   | 31-Jan-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12230RN | US      | 14/024,829  | #EMPTY    | Filed   | 12-Sep-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12230RN | US      | 14/025,004  | #EMPTY    | Filed   | 12-Sep-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12230RN | US      | 14/026,237  | #EMPTY    | Filed   | 13-Sep-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12230RN | US      | 14/026,357  | #EMPTY    | Filed   | 13-Sep-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12230RN | US      | 14/035,002  | #EMPTY    | Filed   | 24-Sep-13 | HEMPTY  |          |         | FAST LIVENESS PROTOCOL (FLIP)  |
| 12878RO | US      | 09/7716,408 | #EMPTY    | Filed   | 21-Nov-00 | HEMPTY  |          |         | SYSTEM AND METHOD FOR AUTHORIZING SOFTWARE USE OVER A NETWORK  |
| 12975RN | US      | 10/034,431  | #EMPTY    | Filed   | 27-Dec-01 | HEMPTY  |          |         | DYNAMIC PRESENCE MANAGEMENT  |
| 14077D  | US      | 10/023,169  | #EMPTY    | Filed   | 17-Dec-01 | HEMPTY  |          |         | INTERNET CONTENT DELIVERY  |
| 14222D  | US      | 09/981,444  | #EMPTY    | Filed   | 17-Oct-01 | HEMPTY  |          |         | ADAPTIVE SOFTWARE INTERFACE  |
| 14529RR | US      | 11/601,394  | #EMPTY    | Filed   | 17-Nov-06 | HEMPTY  |          |         | PROVIDING TELEPHONY SERVICES TO TERMINALS BEHIND A FIREWALL AND/OR A NETWORK ADDRESS TRANSLATOR                  |
| 14529RR | US      | 13/936,506  | #EMPTY    | Filed   | 8-Jul-13  | HEMPTY  |          |         | PROVIDING TELEPHONY SERVICES TO TERMINALS BEHIND A FIREWALL AND/OR A NETWORK ADDRESS TRANSLATOR                  |
| 14529RR | US      | 13/936,547  | #EMPTY    | Filed   | 8-Jul-13  | HEMPTY  |          |         | PROVIDING TELEPHONY SERVICES TO TERMINALS BEHIND A FIREWALL AND/OR A NETWORK ADDRESS TRANSLATOR                  |
| 14538RO | US      | 12/883,996  | #EMPTY    | Filed   | 16-Sep-10 | HEMPTY  |          |         | OVERLAY VIEW METHOD AND SYSTEM FOR REPRESENTING NETWORK TOPOLOGY   |
| 14541RO | US      | 10/106,366  | 7,173,937 | Granted | 27-Mar-02 |         | 6-Feb-07 |         | INTELLECTUAL ADDRESS REGISTRATION FOR OPTICAL USER-NETWORK INTERFACE   |
| 14779RO | US      | 12/850,896  | #EMPTY    | Filed   | 5-Aug-10  | HEMPTY  |          |         | TECHNIQUE FOR DELIVERING AND ENFORCING NETWORK QUALITY OF SERVICE TO MULTIPLE OUTSTATIONS                        |
| 14796RO | US      | 14/317,489  | #EMPTY    | Filed   | 27-Jun-14 | HEMPTY  |          |         | RATE-CONTROLLED OPTICAL BURST SWITCHING  |
| 14945RN | US      | 14/142,303  | #EMPTY    | Filed   | 27-Dec-13 | HEMPTY  |          |         | TELEPHONY USAGE DERIVED PRESENCE INFORMATION   |
| 15179BA | US      | 13/645,137  | #EMPTY    | Filed   | 1-Oct-13  | HEMPTY  |          |         | SECURE GROUP COMMUNICATIONS  |
| 15580RO | US      | 10/658,701  | #EMPTY    | Filed   | 9-Sep-03  | HEMPTY  |          |         | SVC-L2 VPNS: FLEXIBLE ON DEMAND SWITCHED MPLS/IP LAYER-2 VPNS FOR ETHERNET SVC, ATM, AND FRAME RELAY             |
| 15791RO | US      | 13/164,227  | #EMPTY    | Filed   | 20-Jun-11 | HEMPTY  |          |         | MULTI-STAGED SERVICES POLICING   |
| 15923RO | US      | 10/813,003  | #EMPTY    | Filed   | 31-Mar-04 | HEMPTY  |          |         | MEMORY PROTECTION SYSTEMS AND METHODS FOR WRITABLE MEMORY  |
| 15965RN | US      | 14/169,646  | #EMPTY    | Filed   | 31-Jan-14 | HEMPTY  |          |         | AUTO-COMPRESSION FOR MEDIA OVER IP   |
| 15990SS | US      | 13/442,191  | #EMPTY    | Filed   | 9-Apr-12  | HEMPTY  |          |         | METHOD AND APPARATUS FOR INTELLIGENT MANAGEMENT OF A NETWORK ELEMENT   |
| 15996RR | US      | 14/029,342  | #EMPTY    | Filed   | 17-Sep-13 | HEMPTY  |          |         | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD                   |
| 16021D  | US      | 13/195,948  | #EMPTY    | Filed   | 2-Aug-11  | HEMPTY  |          |         | MANAGEMENT OF QUEUES IN CONTACT CENTRES  |
| 16063SS | US      | 10/750,531  | #EMPTY    | Filed   | 31-Dec-03 | HEMPTY  |          |         | PHOTONIC LINE SHARING FOR HIGH-SPEED ROUTERS   |
| 16066RO | US      | 12/623,563  | #EMPTY    | Filed   | 23-Nov-09 | HEMPTY  |          |         | MULTIMODAL DATA SWITCH   |
| 16083RO | US      | 13/228,598  | #EMPTY    | Filed   | 9-Sep-11  | HEMPTY  |          |         | ZONING FOR DISTANCE PRICING AND NETWORK ENGINEERING IN CONNECTIONLESS AND CONNECTION-ORIENTED NETWORKS           |
| 16367RO | US      | 13/330,361  | #EMPTY    | Filed   | 19-Dec-11 | HEMPTY  |          |         | METHOD AND APPARATUS FOR INDICATING CONGESTION IN A SOURCE ROUTED NETWORK  |
| 16397RO | US      | 13/932,602  | #EMPTY    | Filed   | 1-Jul-13  | HEMPTY  |          |         | FLEXIBLE CHANNEL BONDING   |
| 16404RO | US      | 13/931,085  | #EMPTY    | Filed   | 28-Jun-13 | HEMPTY  |          |         | PARALLELIZABLE INTEGRITY-AWARE ENCRYPTION TECHNIQUE  |
| 16439RO | US      | 13/888,822  | #EMPTY    | Filed   | 7-May-13  | HEMPTY  |          |         | TRAFFIC ENGINEERING AND BANDWIDTH MANAGEMENT OF BUNDLED LINKS  |
| 16444SS | US      | 12/286,894  | #EMPTY    | Filed   | 2-Oct-08  | HEMPTY  |          |         | CONNECTOR MODULE WITH REMOVABLE POWER-OVER-ETHERNET MANAGEMENT LOGIC AND METHOD                                  |
| 16482RO | US      | 13/300,824  | #EMPTY    | Filed   | 21-Nov-11 | HEMPTY  |          |         | TEMPORAL-SPATIAL BURST SWITCHING   |
| 16572RO | US      | 14/093,900  | #EMPTY    | Filed   | 2-Dec-13  | HEMPTY  |          |         | ETHERNET DIFFERENTIATED SERVICES ARCHITECTURE  |
| 16631RN | US      | 13/887,744  | #EMPTY    | Filed   | 6-May-13  | HEMPTY  |          |         | PROVIDING ADDITIONAL INFORMATION WITH SESSION REQUESTS   |

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| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)   |
| 16670ID  | US            | 13/683,668    | #EMPTY        | Filed         | 21-Nov-12     | HEMPTY        | TRAFFIC ENGINEERING IN FRAME-BASED CARRIER NETWORKS   |
| 16672RO  | US            | 14/093,976    | #EMPTY        | Filed         | 2-Dec-13      | HEMPTY        | SELECTIVE INTERNET PRIORITY SERVICE   |
| 16673RO  | US            | 12/081,684    | #EMPTY        | Filed         | 18-Apr-08     | HEMPTY        | SYSTEMS AND METHODS FOR PREVENTING AN ATTACK ON HEALTHCARE DATA PROCESSING RESOURCES IN A HOSPITAL INFORMATION SYSTEM         |
| 16678RO  | US            | 14/030,403    | #EMPTY        | Filed         | 18-Sep-13     | HEMPTY        | ETHERNET OAM PERFORMANCE MANAGEMENT   |
| 16716RO  | US            | 14/053,058    | #EMPTY        | Filed         | 14-Oct-13     | HEMPTY        | METHOD AND APPARATUS FOR ASSIGNING AND ALLOCATING NETWORK RESOURCES TO LAYER 1 VIRTUAL PRIVATE NETWORKS                       |
| 16747BA  | US            | 14/147,896    | #EMPTY        | Filed         | 6-Jan-14      | HEMPTY        | METHOD FOR ACCELERATING FAILOVER OF VPN TRAFFIC IN AN MPLS PROVIDER NETWORK   |
| 16770BA  | US            | 14/054,378    | #EMPTY        | Filed         | 15-Oct-13     | HEMPTY        | METHOD AND APPARATUS FOR GENERATING LARGE NUMBERS OF ENCRYPTION KEYS  |
| 16774RN  | US            | 10/970,975    | #EMPTY        | Filed         | 22-Oct-04     | HEMPTY        | REMOTE TELEPHONY SERVICE MANAGEMENT   |
| 16797RO  | US            | 10/890,007    | #EMPTY        | Filed         | 13-Jul-04     | HEMPTY        | SERVICE CAPABILITY REGISTRY   |
| 16889RO  | US            | 13/726,894    | #EMPTY        | Filed         | 26-Dec-12     | HEMPTY        | SECURITY BRIDGING   |
| 16905RO  | US            | 14/100,129    | #EMPTY        | Filed         | 9-Dec-13      | HEMPTY        | TWO-DIMENSIONAL CIRCULATING SWITCH  |
| 16921RO  | US            | 10/946,982    | #EMPTY        | Filed         | 22-Sep-04     | HEMPTY        | USE OF EXTENSIBLE PROPERTIES THAT ENABLES ADAPTIVE NETWORKS AND SERVICES  |
| 16966RO  | US            | 13/482,010    | #EMPTY        | Filed         | 29-May-12     | HEMPTY        | METHOD AND APPARATUS FOR RESTORING SERVICE LABEL INFORMATION  |
| 16967RR  | US            | 11/053,044    | #EMPTY        | Filed         | 8-Feb-05      | HEMPTY        | SUPPORTING SERVICES FOR PEER-TO-PEER COMMUNICATION SESSIONS   |
| 17024MD  | US            | 12/512,363    | #EMPTY        | Filed         | 30-Jul-09     | HEMPTY        | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK   |
| 17040RO  | US            | 11/008,999    | #EMPTY        | Filed         | 13-Dec-04     | HEMPTY        | NETWORK MANAGEMENT SYSTEM AND METHOD FOR ADAPTIVE PASTING OF CONFIGURATION INFORMATION  |
| 17164RR  | US            | 13/928,602    | #EMPTY        | Filed         | 27-Jun-13     | HEMPTY        | PREVENTING ILLICIT COMMUNICATIONS   |
| 17173AB  | US            | 13/899,113    | #EMPTY        | Filed         | 21-May-13     | HEMPTY        | SOFTWARE DEVELOPMENT AND TESTING ENVIRONMENT  |
| 17274RN  | US            | 11/316,061    | #EMPTY        | Filed         | 22-Dec-05     | HEMPTY        | MULTIPLE CALL ORIGINATION   |
| 17277RO  | US            | 13/493,248    | #EMPTY        | Filed         | 11-Jun-12     | HEMPTY        | METHOD AND APPARATUS FOR ASSIGNING AND ALLOCATING NETWORK RESOURCES TO PACKET-BASED VIRTUAL PRIVATE NETWORKS                  |
| 17330RO  | US            | 13/858,446    | #EMPTY        | Filed         | 8-Apr-13      | HEMPTY        | METHOD AND APPARATUS ENABLING IMPROVED PROTECTION OF CONSUMER INFORMATION IN ELECTRONIC TRANSACTIONS                          |
| 17376RO  | US            | 13/668,649    | #EMPTY        | Filed         | 5-Nov-12      | HEMPTY        | PSEUDO WIRE MERGE FOR IPTV  |
| 17471AU  | US            | 11/304,071    | #EMPTY        | Filed         | 15-Dec-05     | HEMPTY        | SHARING OF AUTHENTICATED DATA   |
| 17478RO  | US            | 11/170,211    | #EMPTY        | Filed         | 29-Jun-05     | HEMPTY        | TIMELY RECOVERY FOR MEDIA ON DEMAND STREAMING   |
| 17510SS  | US            | 13/932,841    | #EMPTY        | Filed         | 1-Jul-13      | HEMPTY        | METHOD AND ARCHITECTURE FOR A SCALABLE APPLICATION AND SECURITY SWITCH USING MULTI-LEVEL LOAD BALANCING                       |
| 17559RN  | US            | 11/269,219    | #EMPTY        | Filed         | 8-Nov-05      | HEMPTY        | INTERACTIVE COMMUNICATION SESSION COOKIES   |
| 17593RR  | US            | 11/313,309    | #EMPTY        | Filed         | 21-Dec-05     | HEMPTY        | PRESENCE NOTIFICATION   |
| 17685SS  | US            | 13/720,188    | #EMPTY        | Filed         | 19-Dec-12     | HEMPTY        | INTERFACING BETWEEN A COMMAND LINE INTERFACE-BASED APPLICATION PROGRAM AND A REMOTE NETWORK DEVICE                            |
| 17735RO  | US            | 13/678,719    | #EMPTY        | Filed         | 16-Nov-12     | HEMPTY        | METHOD AND APPARATUS FOR LAYER 2 FAST RE-CONFIGURATION IN A ROUTING BRIDGE NETWORK  |
| 17775ID  | US            | 13/925,196    | #EMPTY        | Filed         | 24-Jun-13     | HEMPTY        | FORWARDING TABLE MINIMISATION IN ETHERNET SWITCHES  |
| 17833RO  | US            | 14/021,063    | #EMPTY        | Filed         | 9-Sep-13      | HEMPTY        | PROVIDER BACKBONE BRIDGING-PROVIDER BACKBONE TRANSPORT INTERNET WORKING   |
| 17856RO  | US            | 11/298,673    | 7,747,019     | Granted       | 12-Dec-05     | 29-Jun-10     | METHODS AND SYSTEMS FOR COMMUNICATING OVER A QUANTUM CHANNEL  |
| 17902RR  | US            | 11/755,190    | #EMPTY        | Filed         | 30-May-07     | HEMPTY        | LOCAL INSERTION OF ADVERTISEMENT CONTENT  |
| 17932RO  | US            | 13/051,030    | #EMPTY        | Filed         | 18-Mar-11     | HEMPTY        | METHOD AND SYSTEM FOR CONFIGURING A CONNECTION-ORIENTED PACKET NETWORK OVER A WAVELENGTH DIVISION MULTIPLEXED OPTICAL NETWORK |
| 17932RO  | US            | 14/341,287    | #EMPTY        | Filed         | 25-Jul-14     | HEMPTY        | METHOD AND SYSTEM FOR CONFIGURING A CONNECTION-ORIENTED PACKET NETWORK OVER A WAVELENGTH DIVISION MULTIPLEXED OPTICAL NETWORK |
| 17944RO  | US            | 11/369,460    | #EMPTY        | Filed         | 7-Mar-06      | HEMPTY        | PROVIDING MEDIA INSERTS DURING GAPS IN STREAMING CONTENT DELIVERY   |
| 17961RO  | US            | 11/357,090    | #EMPTY        | Filed         | 21-Feb-06     | HEMPTY        | ADAPTIVE CALL ROUTING IN IP NETWORKS  |
| 17965BA  | US            | 11/469,416    | #EMPTY        | Filed         | 31-Aug-06     | HEMPTY        | MISSION GOAL STATEMENT TO POLICY STATEMENT TRANSLATIONS   |
| 18000RO  | US            | 13/947,217    | #EMPTY        | Filed         | 22-Jul-13     | HEMPTY        | METHOD AND APPARATUS FOR CONTROLLING CALLING-PARTY IDENTIFICATION   |
| 18000RO  | US            | 13/947,288    | #EMPTY        | Filed         | 22-Jul-13     | HEMPTY        | METHOD AND APPARATUS FOR CONTROLLING CALLING-PARTY IDENTIFICATION   |
| 18042RO  | US            | 13/588,126    | #EMPTY        | Filed         | 17-Aug-12     | HEMPTY        | METHOD AND APPARATUS FOR SELECTING BETWEEN AVAILABLE NEIGHBORS IN A RAPID ALTERNATE PATH CALCULATION                          |
| 18044RO  | US            | 13/595,011    | #EMPTY        | Filed         | 27-Aug-12     | HEMPTY        | METHOD AND APPARATUS FOR SIMPLIFYING THE COMPUTATION OF ALTERNATE NETWORK PATHS   |
| 18059RO  | US            | 13/306,417    | #EMPTY        | Filed         | 29-Nov-11     | HEMPTY        | METHOD AND APPARATUS FOR AUTHENTICATING USERS OF AN EMERGENCY COMMUNICATION NETWORK   |
| 18069RO  | US            | 11/556,898    | #EMPTY        | Filed         | 6-Nov-06      | HEMPTY        | TIME-SHIFTED BROADCAST DELIVERY   |
| 18082RO  | US            | 11/502,571    | #EMPTY        | Filed         | 11-Aug-06     | HEMPTY        | SYSTEM AND METHOD FOR DYNAMICALLY RE-CONFIGURING COMMUNICATIONS SESSION ROUTING BASED ON LOCATION INFORMATION                 |
| 18089ID  | US            | 13/337,769    | #EMPTY        | Filed         | 27-Dec-11     | HEMPTY        | SYSTEM AND METHOD FOR AUTOMATICALLY MANAGING PARTICIPATION AT A MEETING OR CONFERENCE   |
| 18095RO  | US            | 14/185,248    | #EMPTY        | Filed         | 20-Feb-14     | HEMPTY        | METHOD AND APPARATUS FOR DOCUMENT MATCHING  |
| 18121RO  | US            | 11/433,940    | #EMPTY        | Filed         | 15-May-06     | HEMPTY        | SYSTEM AND METHODS FOR FILTERING ELECTRONIC COMMUNICATIONS  |
| 18123RO  | US            | 13/275,896    | #EMPTY        | Filed         | 18-Oct-11     | HEMPTY        | EXPEDITED RESOURCE NEGOTIATION IN SIP   |
| 18174RN  | US            | 11/536,414    | #EMPTY        | Filed         | 28-Sep-06     | HEMPTY        | PRESENCE INFORMATION DELIVERY BASED ON SESSION PARTICIPATION  |
| 18179RO  | US            | 11/477,975    | #EMPTY        | Filed         | 29-Jun-06     | HEMPTY        | Q-IN-Q ETHERNET RINGS   |
| 18201HU  | US            | 13/452,983    | #EMPTY        | Filed         | 23-Apr-12     | HEMPTY        | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |
| 18207FR  | US            | 13/469,662    | #EMPTY        | Filed         | 11-May-12     | HEMPTY        | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |
| 18243RO  | US            | 11/679,897    | #EMPTY        | Filed         | 28-Feb-07     | HEMPTY        | COMPLETELY DRY PSEUDOWIRES  |

| Pub. No. | App. No.      | Pub. Date   | Pub. Status | Pub. Title | Pub. No.  | Pub. Date | Pub. Status | Pub. Title  |
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| 18284RR  | US 13/629,863 | #EMPTY      | Filed       |            | 28-Sep-12 | #EMPTY    |             | MESSAGE MAPPING FOR FORCED HOLD CALL HANDLING IN A VOP ENVIRONMENT  |
| 18288RO  | US 13/936,340 | #EMPTY      | Filed       |            | 8-Jul-13  | #EMPTY    |             | POINT-TO-MULTIPOINT (P2MP) RESILIENCE FOR GMPLS CONTROL OF ETHERNET   |
| 18320RO  | US 13/302,704 | #EMPTY      | Filed       |            | 22-Nov-11 | #EMPTY    |             | MULTICAST IMPLEMENTATION IN A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 18351RO  | US 11/546,170 | #EMPTY      | Filed       |            | 11-Oct-06 | #EMPTY    |             | METHOD AND SYSTEM FOR PROTECTING A SUB-DOMAIN WITHIN A BROADCAST DOMAIN   |
| 18358RO  | US 14/290,266 | #EMPTY      | Filed       |            | 29-May-14 | #EMPTY    |             | PROTOCOL FOR CLOCK DISTRIBUTION AND LOOP RESOLUTION   |
| 18364RO  | US 11/621,280 | #EMPTY      | Filed       |            | 9-Jan-07  | #EMPTY    |             | METHOD AND APPARATUS FOR MANAGING BUFFERS DURING TRANSITIONS BETWEEN HETEROGENOUS NETWORKS  |
| 18377ID  | US 13/934,506 | #EMPTY      | Filed       |            | 3-Jul-13  | #EMPTY    |             | APPLICATION SERVER BILLING  |
| 18418RO  | US 11/616,685 | #EMPTY      | Filed       |            | 27-Dec-06 | #EMPTY    |             | USING TELECOM DATA TO ENHANCE WEB INTERACTION   |
| 18455RO  | US 13/439,987 | #EMPTY      | Filed       |            | 5-Apr-12  | #EMPTY    |             | PERSONALIZED CONFERENCE BRIDGE  |
| 184638A  | US 13/928,053 | #EMPTY      | Filed       |            | 26-Jun-13 | #EMPTY    |             | COMMUNICATING DATA UNITS IN A COMMUNICATIONS NETWORK THAT PROVIDES FAILURE PROTECTION   |
| 18480RO  | US 11/963,172 | #EMPTY      | Filed       |            | 21-Dec-07 | #EMPTY    |             | ETHERNET RESOURCE MANAGEMENT  |
| 18493RO  | US 11/613,493 | #EMPTY      | Filed       |            | 20-Dec-06 | #EMPTY    |             | AUTOMATIC CONFIGURATION OF TELECOMMUNICATION STATION SETS   |
| 18501RN  | US 11/615,338 | #EMPTY      | Filed       |            | 22-Dec-06 | #EMPTY    |             | METHOD AND SYSTEM TO CONTROL ADVERTISING  |
| 18523RO  | US 14/444,116 | #EMPTY      | Filed       |            | 28-Jul-14 | #EMPTY    |             | METHOD AND SYSTEM FOR SYNCHRONIZATION BETWEEN NETWORK ELEMENTS  |
| 18566RR  | US 13/281,533 | #EMPTY      | Filed       |            | 26-Oct-11 | #EMPTY    |             | SYSTEM AND METHOD FOR PROVIDING POWER MANAGEMENT IN A SENSOR NETWORK  |
| 18694RO  | US 14/258,238 | #EMPTY      | Filed       |            | 22-Apr-14 | #EMPTY    |             | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS           |
| 18710RN  | US 12/326,646 | #EMPTY      | Filed       |            | 2-Dec-08  | #EMPTY    |             | ENHANCED CHANNEL SURFING  |
| 18853RX  | US 13/093,312 | #EMPTY      | Filed       |            | 4-Dec-12  | #EMPTY    |             | METHOD AND APPARATUS FOR INCREASING THE OUTPUT OF A CRYPTOGRAPHIC SYSTEM  |
| 18872RO  | US 14/043,013 | #EMPTY      | Filed       |            | 1-Oct-13  | #EMPTY    |             | COMMUNICATING TIME INFORMATION IN A NETWORK TO ENABLE SYNCHRONIZATION   |
| 18898RO  | US 13/752,015 | #EMPTY      | Filed       |            | 28-Jan-13 | #EMPTY    |             | METHOD AND APPARATUS FOR OVERLAYING WHISPERED AUDIO ONTO A TELEPHONE CALL   |
| 18905RO  | US 13/416,161 | #EMPTY      | Filed       |            | 9-Mar-12  | #EMPTY    |             | METHOD AND APPARATUS FOR INTERWORKING VPLS AND ETHERNET NETWORKS  |
| 18938RO  | US 13/110,970 | #EMPTY      | Filed       |            | 19-May-11 | #EMPTY    |             | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT               |
| 189558A  | US 13/546,144 | #EMPTY      | Filed       |            | 11-Jul-12 | #EMPTY    |             | METRO ETHERNET CONNECTIVITY FAULT MANAGEMENT ACCELERATION   |
| 18970RO  | US 14/093,977 | #EMPTY      | Filed       |            | 2-Dec-13  | #EMPTY    |             | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUING   |
| 19040RO  | US 13/873,623 | #EMPTY      | Filed       |            | 30-Apr-13 | #EMPTY    |             | DIFFERENTIAL TIMING TRANSFER OVER SYNCHRONOUS ETHERNET USING DIGITAL FREQUENCY GENERATORS AND CONTROL WORD SIGNALING                  |
| 19041RO  | US 13/226,601 | #EMPTY      | Filed       |            | 7-Sep-11  | #EMPTY    |             | EXTENDED PRIVATE LAN  |
| 19078RO  | US 11/961,806 | #EMPTY      | Filed       |            | 20-Dec-07 | #EMPTY    |             | RELATIONSHIP NETWORKS   |
| 191378A  | US 12/129,373 | #EMPTY      | Filed       |            | 29-May-08 | #EMPTY    |             | METHOD AND SYSTEM FOR AUTOMATIC DIRECTORY ENTRY FOR TELECOMMUNICATIONS DEVICES  |
| 19142RO  | US 12/741,774 | #EMPTY      | Filed       |            | 10-Oct-10 | #EMPTY    |             | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (IOT) LOAD CONTROL  |
| 19318RO  | US 14/109,021 | #EMPTY      | Filed       |            | 17-Dec-13 | #EMPTY    |             | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 19329ID  | US 14/034,698 | #EMPTY      | Filed       |            | 24-Sep-13 | #EMPTY    |             | RESILIENT PROVIDER LINK STATE BRIDGING (PLSB) VIRTUAL PRIVATE LAN SERVICE (VPLS) INTERWORKING   |
| 193378A  | US 13/783,710 | #EMPTY      | Filed       |            | 4-Mar-13  | #EMPTY    |             | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 19352RR  | US 12/991,837 | #EMPTY      | Filed       |            | 9-Nov-10  | #EMPTY    |             | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK                                      |
| 19459RN  | US 13/451,276 | #EMPTY      | Filed       |            | 20-Apr-12 | #EMPTY    |             | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 19466RO  | US 14/099,717 | #EMPTY      | Filed       |            | 6-Dec-13  | #EMPTY    |             | PROVIDER LINK STATE BRIDGING (PLSB) COMPUTATION METHOD  |
| 19486RO  | US 12/992,122 | #EMPTY      | Filed       |            | 9-Feb-11  | #EMPTY    |             | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 19513ID  | US 13/044,905 | #EMPTY      | Filed       |            | 10-Mar-11 | #EMPTY    |             | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 19558RM  | US 13/453,011 | #EMPTY      | Filed       |            | 23-Apr-12 | #EMPTY    |             | DYNAMIC NETWORKING OF VIRTUAL MACHINES  |
| 19567ID  | US 14/031,601 | #EMPTY      | Filed       |            | 19-Sep-13 | #EMPTY    |             | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE   |
| 19570RR  | US 12/993,322 | #EMPTY      | Filed       |            | 18-Nov-10 | #EMPTY    |             | CONTROLLING ALLOCATION OF A PORTION OF A SHARED CHANNEL TO USE FOR CONTROL INFORMATION  |
| 19600RO  | US 14/078,068 | #EMPTY      | Filed       |            | 12-Nov-13 | #EMPTY    |             | UTILIZING BETWEENNESS TO DETERMINE FORWARDING STATE IN A ROUTED NETWORK   |
| 196778A  | US 13/680,840 | #EMPTY      | Filed       |            | 19-Nov-12 | #EMPTY    |             | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK   |
| 19700RO  | US 12/420,976 | #EMPTY      | Filed       |            | 9-Apr-09  | #EMPTY    |             | ENHANCED COMMUNICATION BRIDGE   |
| 19743RO  | US 13/123,077 | #EMPTY      | Filed       |            | 7-Apr-11  | #EMPTY    |             | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                              |
| 197478A  | US 14/296,077 | #EMPTY      | Filed       |            | 4-Jun-14  | #EMPTY    |             | SERVICE INSTANCE APPLIED TO MPLS NETWORKS   |
| 19769RO  | US 13/754,177 | #EMPTY      | Filed       |            | 30-Jan-13 | #EMPTY    |             | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 198011Y  | US 11/996,735 | #EMPTY      | Filed       |            | 31-Jan-08 | #EMPTY    |             | SEGMENTED NETWORK IDENTITY MANAGEMENT   |
| 198388A  | US 14/246,649 | #EMPTY      | Filed       |            | 7-Apr-14  | #EMPTY    |             | METHOD AND APPARATUS FOR SIMULATING IP MULTINETTING   |
| 19923RO  | US 13/813,008 | #EMPTY      | Filed       |            | 29-Jan-13 | #EMPTY    |             | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOICEMAIL   |
| 19953RR  | US 13/261,253 | #EMPTY      | Filed       |            | 5-Apr-12  | #EMPTY    |             | INTER-MAG BIDIRECTIONAL IP TUNNELING FOR PMIP-6-FAST HANDOFF  |
| 19983RO  | US 14/109,281 | #EMPTY      | Filed       |            | 17-Dec-13 | #EMPTY    |             | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS  |
| 19990RO  | US 13/914,680 | #EMPTY      | Filed       |            | 11-Jun-13 | #EMPTY    |             | NEXT HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTI-PATH PACKET SWITCHING NETWORKS  |
| BA0091   | US 90/007,192 | RE5,732,080 | Granted     |            | 15-Jan-98 |           | 9-Nov-99    | METHOD AND APPARATUS FOR CONTROLLING DATA FLOW WITHIN A SWITCHING DEVICE  |
| BA0307   | US 14/179,981 | #EMPTY      | Filed       |            | 13-Feb-14 | #EMPTY    |             | NON-BROADCAST MULTIPLE ACCESS INVERSE NEXT HOP RESOLUTION PROTOCOL (INHRRP)   |

| Pub No  | Pub No | Pub No      | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |   |
|---------|--------|-------------|-----------|---------|--------|-----------|-----------|---|
| Pub No  | Pub No | Pub No      | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |   |
| HQ0045  | US     | 11/767,598  | #EMPTY    | Filed   |        | 25-Jun-07 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/031,478  | #EMPTY    | Filed   |        | 21-Feb-11 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/723,642  | #EMPTY    | Filed   |        | 21-Dec-12 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/723,670  | #EMPTY    | Filed   |        | 21-Dec-12 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/724,032  | #EMPTY    | Filed   |        | 21-Dec-12 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/724,369  | #EMPTY    | Filed   |        | 21-Dec-12 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/724,495  | #EMPTY    | Filed   |        | 21-Dec-12 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045  | US     | 13/845,955  | #EMPTY    | Filed   |        | 18-Mar-13 | EMPTY     | ASSOCIATIVE SEARCH ENGINE   |
| 18647RO | US     | 14/093,479  | #EMPTY    | Filed   |        | 1-Dec-13  | EMPTY     | METHOD AND APPARATUS FOR ENCODING VIDEO TO PLAY AT MULTIPLE SPEEDS  |
| 19822RO | US     | 14/131,155  | #EMPTY    | Filed   |        | 6-Jan-14  | EMPTY     | BROADBAND DOHERTY AMPLIFIER USING BROADBAND TRANSFORMER   |
| 19903RO | US     | 14/093,477  | #EMPTY    | Filed   |        | 1-Dec-13  | EMPTY     | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION   |
| 19950RO | US     | 14/131,131  | #EMPTY    | Filed   |        | 6-Jan-14  | EMPTY     | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK   |
| 10212BA | US     | 14/299,585  | #EMPTY    | Filed   |        | 9-Jun-14  | EMPTY     | MULTICAST-ENABLED ADDRESS RESOLUTION PROTOCOL (ME-ARP)  |
| 10391RO | US     | 14/139,145  | #EMPTY    | Filed   |        | 23-Dec-13 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10391RO | US     | 14/225,093  | #EMPTY    | Filed   |        | 25-Mar-14 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10391RO | US     | 14/225,120  | #EMPTY    | Filed   |        | 25-Mar-14 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10391RO | US     | 14/225,149  | #EMPTY    | Filed   |        | 25-Mar-14 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10391RO | US     | 14/225,180  | #EMPTY    | Filed   |        | 25-Mar-14 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10391RO | US     | 14/225,194  | #EMPTY    | Filed   |        | 25-Mar-14 | EMPTY     | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10645HU | US     | 09/600,054  | 6,952,728 | Granted |        | 19-Nov-00 | 4-Oct-05  | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10832ID | US     | 09/375,710  | 7,012,922 | Granted |        | 17-Aug-99 | 14-Mar-06 | PACKET COMMUNICATIONS SYSTEM AND METHOD   |
| 11157SS | US     | 09/414,589  | #EMPTY    | Filed   |        | 8-Oct-99  | EMPTY     | METHOD, APPARATUS AND ARTICLE OF MANUFACTURE FOR WEB-BASED CONTROL OF A CALL SERVER   |
| 11157SS | US     | 14/313,625  | #EMPTY    | Filed   |        | 24-Jun-14 | EMPTY     | METHOD, APPARATUS AND ARTICLE OF MANUFACTURE FOR WEB-BASED CONTROL OF A CALL SERVER   |
| 11306RO | US     | 09/511,065  | 6,606,427 | Granted |        | 23-Feb-00 | 12-Aug-03 | SWITCH FOR OPTICAL SIGNALS  |
| 11339ID | US     | 09/471,443  | 6,301,409 | Granted |        | 23-Dec-99 | 9-Oct-01  | OPTICAL COMB FILTER   |
| 12010SS | US     | 14/528,612  | #EMPTY    | Filed   |        | 30-Oct-14 | EMPTY     | AUTOMATIC REMOTE COMMUNICATION USING NETWORK TELEPHONY  |
| 12230RN | US     | 14/023,832  | #EMPTY    | Filed   |        | 11-Sep-13 | EMPTY     | FAST LIVENESS PROTOCOL (FLIP)   |
| 12678HU | US     | 14/330,846  | #EMPTY    | Filed   |        | 14-Jul-14 | EMPTY     | METHOD AND APPARATUS FOR USING A COMMAND DESIGN PATTERN TO ACCESS AND CONFIGURE NETWORK ELEMENTS  |
| 12791RO | US     | 09/749,758  | 6,941,380 | Granted |        | 28-Dec-00 | 6-Sep-05  | BANDWIDTH ALLOCATION IN ETHERNET NETWORKS   |
| 13149CK | US     | 09/189,619  | 6,310,315 | Granted |        | 9-Nov-98  | 30-Oct-01 | REWORKABLE LASER WELDING PROCESS  |
| 13184CK | US     | 10/167,378  | 6,591,032 | Granted |        | 11-Jun-02 | 8-Jul-03  | OPTICAL SWITCHING AND ATTENUATION SYSTEMS AND METHODS THEREFORE   |
| 13194CK | US     | 09/526,580  | #EMPTY    | Filed   |        | 16-Mar-00 | EMPTY     | DEVICE FOR SPONTANEOUS NOISE REDUCTION IN AMPLIFIED WDM SYSTEMS   |
| 13767BA | US     | 14/195,188  | #EMPTY    | Filed   |        | 3-Mar-14  | EMPTY     | SYSTEM, DEVICE, AND METHOD FOR MANAGING ALTERNATE SITE SWITCHING IN AN OPTICAL COMMUNICATION SYSTEM   |
| 14054ID | US     | 09/827,086  | 6,618,535 | Granted |        | 5-Apr-01  | 9-Sep-03  | PHOTONIC BANDGAP DEVICE USING COUPLED DEFECTS   |
| 14124RG | US     | 14/329,456  | #EMPTY    | Filed   |        | 11-Jul-14 | EMPTY     | PACKET HANDLER FOR HIGH SPEED DATA NETWORKS   |
| 14673AL | US     | 14/302,067  | #EMPTY    | Filed   |        | 11-Jun-14 | EMPTY     | A METHOD AND APPARATUS FOR OPTIMIZED PATTERN MATCHING   |
| 14698RO | US     | 114/317,401 | #EMPTY    | Filed   |        | 27-Jun-14 | EMPTY     | MODULAR HIGH-CAPACITY SWITCH  |
| 14715SS | US     | 14/223,550  | #EMPTY    | Filed   |        | 24-Mar-14 | EMPTY     | METHOD AND APPARATUS FOR DIRECT FRAME SWITCHING USING FRAME CONTAINED DESTINATION INFORMATION   |
| 14807ID | US     | 14/319,551  | #EMPTY    | Filed   |        | 30-Jun-14 | EMPTY     | ALLOCATING INTERNET PROTOCOL (IP) ADDRESSES TO NODES IN COMMUNICATIONS NETWORKS WHICH USE INTEGRATED IS-IS  |
| 14829RO | US     | 13/860,092  | #EMPTY    | Filed   |        | 10-Apr-13 | EMPTY     | CONTENT REQUEST ROUTING METHOD  |
| 14903ID | US     | 13/934,873  | #EMPTY    | Filed   |        | 3-Jul-13  | EMPTY     | MIDDLEBOX CONTROL   |
| 14904FR | US     | 14/219,222  | #EMPTY    | Filed   |        | 19-Mar-14 | EMPTY     | METHODS OF ESTABLISHING VIRTUAL CIRCUITS AND OF PROVIDING A VIRTUAL PRIVATE NETWORK SERVICE THROUGH A SHARED NETWORK, AND PROVIDER EDGE DEVICE FOR SUCH NETWORK |
| 14904FR | US     | 14/219,796  | #EMPTY    | Filed   |        | 19-Mar-14 | EMPTY     | METHODS OF ESTABLISHING VIRTUAL CIRCUITS AND OF PROVIDING A VIRTUAL PRIVATE NETWORK SERVICE THROUGH A SHARED NETWORK, AND PROVIDER EDGE DEVICE FOR SUCH NETWORK |
| 15130RO | US     | 13/908,189  | #EMPTY    | Filed   |        | 3-Jun-13  | EMPTY     | HITLESS SWITCHOVER AND BANDWIDTH SHARING IN A COMMUNICATION NETWORK   |
| 15155AB | US     | 14/078,029  | #EMPTY    | Filed   |        | 12-Nov-13 | EMPTY     | NON-INTRUSIVE MONITORING OF QUALITY LEVELS FOR VOICE COMMUNICATIONS OVER A PACKET-BASED NETWORK   |
| 15312RO | US     | 14/497,485  | #EMPTY    | Filed   |        | 26-Sep-14 | EMPTY     | AUTOMATED ATTENDANT MULTIMEDIA SESSION  |
| 15313RO | US     | 14/282,695  | #EMPTY    | Filed   |        | 20-May-14 | EMPTY     | MONITORING PHASE NON-LINEARITIES IN AN OPTICAL COMMUNICATIONS SYSTEM  |
| 15313RO | US     | 14/293,482  | #EMPTY    | Filed   |        | 2-Jun-14  | EMPTY     | MONITORING PHASE NON-LINEARITIES IN AN OPTICAL COMMUNICATIONS SYSTEM  |
| 15450RO | US     | 14/302,267  | #EMPTY    | Filed   |        | 11-Jun-14 | EMPTY     | TECHNIQUE FOR IMPLEMENTING AN OPTICAL/TDM VIRTUAL PRIVATE NETWORK   |
| 15499RR | US     | 14/070,959  | #EMPTY    | Filed   |        | 4-Nov-13  | EMPTY     | GEOGRAPHIC REDUNDANCY FOR CALL SERVERS IN A CELLULAR SYSTEMBASED ON A BEARER-INDEPENDENT CORE NETWORK   |
| 15606BA | US     | 14/293,201  | #EMPTY    | Filed   |        | EMPTY     | EMPTY     | METHOD AND APPARATUS FOR PRESERVING DATA IN A SYSTEM IMPLEMENTING DIFFSERV AND IPSEC PROTOCOL   |
| 15668ID | US     | 14/159,935  | #EMPTY    | Filed   |        | 21-Jan-14 | EMPTY     | TELECOMMUNICATIONS NETWORK  |

| Pub No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)  | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) |
|---------|---------------|---------------|---------------|---------------|---------------|---------------|--|---------------|---------------|---------------|
| 15689RN | US            | 14/534,321    | #EMPTY        | Filed         | 6-Nov-14      | #EMPTY        | METHOD AND APPARATUS FOR CONTENT PROCESSING APPLICATION ACCELERATION   |               |               |               |
| 15790ID | US            | 14/453,954    | #EMPTY        | Filed         | 7-Aug-14      | #EMPTY        | MULTI-HOP WIRELESS COMMUNICATIONS SYSTEM AND METHOD  |               |               |               |
| 15873RO | US            | 14/045,238    | #EMPTY        | Filed         | 3-Oct-13      | #EMPTY        | VERIFICATION OF CONFIGURATION INFORMATION IN BGP VPNS  |               |               |               |
| 15890RO | US            | 14/470,390    | #EMPTY        | Filed         | 27-Aug-14     | #EMPTY        | METHOD AND APPARATUS FOR SECURELY SYNCHRONIZING PASSWORD SYSTEMS   |               |               |               |
| 15996RR | US            | 14/1029,319   | #EMPTY        | Filed         | 17-Sep-13     | #EMPTY        | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD                             |               |               |               |
| 16021ID | US            | 14/057,555    | #EMPTY        | Filed         | 18-Oct-13     | #EMPTY        | MANAGEMENT OF QUEUES IN CONTACT CENTRES  |               |               |               |
| 16205RN | US            | 13/909,606    | #EMPTY        | Filed         | 4-Jun-13      | #EMPTY        | #EMPTY   |               |               |               |
| 16213RO | US            | 14/265,528    | #EMPTY        | Filed         | 30-Apr-14     | #EMPTY        | MPLS/IP PSEUDO-WIRE AND LAYER-2 VIRTUAL PRIVATE NETWORK RESILIENCY   |               |               |               |
| 16248RN | US            | 14/268,044    | #EMPTY        | Filed         | 2-May-14      | #EMPTY        | EMERGENCY SERVICES FOR PACKET NETWORKS   |               |               |               |
| 16285SS | US            | 13/547,310    | #EMPTY        | Filed         | 12-Jul-12     | #EMPTY        | ULTRA LOW COST ETHERNET ARCHITECTURE   |               |               |               |
| 16365RN | US            | 14/211,236    | #EMPTY        | Filed         | 14-Mar-14     | #EMPTY        | SELECTIVE PROCESSING OF A DAMAGED PACKETS  |               |               |               |
| 16404RO | US            | 12/750,086    | #EMPTY        | Filed         | 30-Mar-10     | #EMPTY        | PARALLELIZABLE INTEGRITY-AWARE ENCRYPTION TECHNIQUE  |               |               |               |
| 16438RO | US            | 14/454,804    | #EMPTY        | Filed         | 8-Aug-14      | #EMPTY        | MANAGING FLOW CONTROL BUFFER   |               |               |               |
| 16471RO | US            | 14/133,012    | #EMPTY        | Filed         | 18-Dec-13     | #EMPTY        | HITLESS MANUAL CRYPTOGRAPHIC KEY REFRESH IN SECURE PACKET NETWORKS   |               |               |               |
| 16483BA | US            | 14/290,404    | #EMPTY        | Filed         | 29-May-14     | #EMPTY        | TECHNIQUE FOR MAINTAINING SECURE NETWORK CONNECTIONS   |               |               |               |
| 16521RN | US            | 14/508,220    | #EMPTY        | Filed         | 7-Oct-14      | #EMPTY        | TELEPHONE TO COMPUTATIONAL DEVICE ASSOCIATION  |               |               |               |
| 16572RO | US            | 14/302,995    | #EMPTY        | Filed         | 12-Jun-14     | #EMPTY        | ETHERNET DIFFERENTIATED SERVICES ARCHITECTURE  |               |               |               |
| 16582RO | US            | 13/668,818    | #EMPTY        | Filed         | 5-Nov-12      | #EMPTY        | COMBINED USER AGENT FOR PACKET-BASED COMMUNICATION CLIENTS   |               |               |               |
| 16670ID | US            | 14/478,001    | #EMPTY        | Filed         | 5-Sep-14      | #EMPTY        | DIFFERENTIAL FORWARDING IN ADDRESS-BASED CARRIER NETWORKS  |               |               |               |
| 16788RO | US            | 14/493,761    | #EMPTY        | Filed         | 23-Sep-14     | #EMPTY        | METHOD AND APPARATUS FOR OPEN MANAGEMENT OF MULTI-MEDIA SERVICES   |               |               |               |
| 16889RO | US            | 14/487,728    | #EMPTY        | Filed         | 16-Sep-14     | #EMPTY        | SECURITY BRIDGING  |               |               |               |
| 16891RR | US            | 14/105,639    | #EMPTY        | Filed         | 13-Dec-13     | #EMPTY        | IDENTIFYING AND CONTROLLING NETWORK SESSIONS VIA AN ACCESS CONCENTRATION POINT   |               |               |               |
| 16904RO | US            | 14/502,176    | #EMPTY        | Filed         | 30-Sep-14     | #EMPTY        | CONNECTIVITY FAULT NOTIFICATION  |               |               |               |
| 16989RO | US            | 14/171,009    | #EMPTY        | Filed         | #EMPTY        | #EMPTY        | METHOD AND SYSTEM FOR QUALITY OF SERVICE SUPPORT FOR ETHERNET MULTISERVICE INTERWORKING OVER MULTIPROTOCOL LABEL SWITCHING |               |               |               |
| 16991ID | US            | 14/285,830    | #EMPTY        | Filed         | 23-May-14     | #EMPTY        | BROKERING NETWORK RESOURCES  |               |               |               |
| 17028RR | US            | 14/280,155    | #EMPTY        | Filed         | 16-May-14     | #EMPTY        | OPTIMIZED SCHEDULING METHOD FOR DELAY-SENSITIVE TRAFFIC ON HIGH SPEED SHARED PACKET DATA CHANNELS                          |               |               |               |
| 17034SS | US            | 14/291,291    | #EMPTY        | Filed         | 30-May-14     | #EMPTY        | CROSS-CONNECT USING ETHERNET MULTIPLEXORS FOR A SIMPLE METRO ETHERNET NETWORK  |               |               |               |
| 17078SC | US            | 14/515,711    | #EMPTY        | Filed         | 16-Oct-14     | #EMPTY        | ENHANCED CALLER IDENTIFICATION USING CALLER READABLE DEVICES   |               |               |               |
| 17134SS | US            | 14/489,625    | #EMPTY        | Filed         | 18-Sep-14     | #EMPTY        | BACKBONE PROVIDER BRIDGING NETWORKS  |               |               |               |
| 17163RO | US            | 14/245,525    | #EMPTY        | Filed         | 4-Apr-14      | #EMPTY        | ETHERNET LAN SERVICE ENHANCEMENTS  |               |               |               |
| 17268ID | US            | 14/324,754    | #EMPTY        | Filed         | 7-Jul-14      | #EMPTY        | IMPROVEMENTS IN OR RELATING TO CALL PRIORITISATION METHODS IN A CALL CENTER  |               |               |               |
| 17518RO | US            | 14/319,920    | #EMPTY        | Filed         | 30-Jun-14     | #EMPTY        | DYNAMIC ESTABLISHMENT OF VIRTUAL CIRCUITS USING MULTI-SEGMENT PSEUDOWIRES  |               |               |               |
| 17624RO | US            | 13/915,683    | #EMPTY        | Filed         | 12-Jun-13     | #EMPTY        | COVERAGE IMPROVEMENT IN WIRELESS SYSTEMS WITH FIXED INFRASTRUCTURE BASED RELAYS  |               |               |               |
| 17692RR | US            | 14/322,332    | #EMPTY        | Filed         | 2-Jul-14      | #EMPTY        | PROVIDING IMPROVED POST-DIAL DELAY AT AN ORIGINATING TERMINAL  |               |               |               |
| 17692RR | US            | 14/527,958    | #EMPTY        | Filed         | 30-Oct-14     | #EMPTY        | GENERATING A COMFORT INDICATOR AT AN ORIGINATING TERMINAL  |               |               |               |
| 17700RR | US            | 14/448,129    | #EMPTY        | Filed         | 31-Jul-14     | #EMPTY        | GEOGRAPHIC REDUNDANCY IN COMMUNICATION NETWORKS  |               |               |               |
| 17792RO | US            | 14/505,119    | #EMPTY        | Filed         | 2-Oct-14      | #EMPTY        | METHOD FOR DEFENDING AGAINST DENIAL-OF-SERVICE ATTACK ON THE IPV6 NEIGHBOR CACHE   |               |               |               |
| 17796RO | US            | 14/322,166    | #EMPTY        | Filed         | 2-Jul-14      | #EMPTY        | SYSTEM AND METHOD FOR VALIDATION AND ENFORCEMENT OF APPLICATION SECURITY   |               |               |               |
| 17816RO | US            | 14/500,008    | #EMPTY        | Filed         | 29-Sep-14     | #EMPTY        | PROTECTION SWITCHING WITH TRANSMITTER COMPENSATION FUNCTION  |               |               |               |
| 17910RN | US            | 14/211,390    | #EMPTY        | Filed         | 14-Mar-14     | #EMPTY        | FORCED HOLD CALL HANDLING IN A VOP ENVIRONMENT   |               |               |               |
| 17961RO | US            | 14/341,611    | #EMPTY        | Filed         | 25-Jul-14     | #EMPTY        | ADAPTIVE CALL ROUTING IN IP NETWORKS   |               |               |               |
| 18000RO | US            | 13/947,324    | #EMPTY        | Filed         | 22-Jul-13     | #EMPTY        | METHOD AND APPARATUS FOR CONTROLLING CALLING-PARTY IDENTIFICATION  |               |               |               |
| 18020RO | US            | 13/909,635    | #EMPTY        | Filed         | 4-Jun-13      | #EMPTY        | METHOD AND APPARATUS FOR TRANSPORTING ETHERNET SERVICE   |               |               |               |
| 18020RO | US            | 14/032,294    | #EMPTY        | Filed         | 20-Sep-13     | #EMPTY        | #EMPTY   |               |               |               |
| 18020RO | US            | 14/032,312    | #EMPTY        | Filed         | 20-Sep-13     | #EMPTY        | #EMPTY   |               |               |               |
| 18114RO | US            | 14/485,130    | #EMPTY        | Filed         | 12-Sep-14     | #EMPTY        | METHOD AND SYSTEM FOR INDICATING PRIVACY FOR AUDIO COMMUNICATIONS  |               |               |               |
| 18120ID | US            | 14/492,808    | #EMPTY        | Filed         | 22-Sep-14     | #EMPTY        | SYSTEM AND METHOD FOR NOTIFYING PARTICIPANTS OF TOPICS IN AN ONGOING MEETING OR CONFERENCE                                 |               |               |               |
| 18165ID | US            | 14/485,739    | #EMPTY        | Filed         | 14-Sep-14     | #EMPTY        | SCALING OAM FOR POINT-TO-POINT TRUNKING  |               |               |               |
| 18179RO | US            | 14/251,999    | #EMPTY        | Filed         | 14-Apr-14     | #EMPTY        | Q-IN-Q ETHERNET RINGS  |               |               |               |
| 18195SS | US            | 13/632,350    | #EMPTY        | Filed         | 1-Oct-12      | #EMPTY        | METHOD AND SYSTEM FOR AUTOMATED CALL TROUBLESHOOTING AND RESOLUTION  |               |               |               |
| 18216RO | US            | #EMPTY        | #EMPTY        | Docteted      | #EMPTY        | #EMPTY        | MULTI-PROTOCOL SUPPORT OVER ETHERNET PACKET-SWITCHED NETWORKS  |               |               |               |
| 18255RN | US            | 14/486,606    | #EMPTY        | Filed         | 15-Sep-14     | #EMPTY        | SYSTEM AND METHOD FOR RESPONDING TO FAILURE OF A HARDWARE LOCUS AT A COMMUNICATION INSTALLATION                            |               |               |               |
| 18340RO | US            | 14/508,226    | #EMPTY        | Filed         | 7-Oct-14      | #EMPTY        | SOURCE SELECTION FOR CONFERENCE BRIDGES  |               |               |               |
| 18385ID | US            | 14/921,228    | #EMPTY        | Filed         | 1-Jul-14      | #EMPTY        | WEB SERVICES INTERFACE   |               |               |               |



| Pub No  | Pub No | Pub No     | Pub No    | Pub No   | Pub No    | Pub No    | Pub No  |
|---------|--------|------------|-----------|----------|-----------|-----------|---|
| Pub No  | Pub No | Pub No     | Pub No    | Pub No   | Pub No    | Pub No    | Pub No  |
| ID0901  | US     | 29/099,452 | D424,066  | Inactive | 12-Jun-98 | 2-May-00  | A CONTAINER FOR ELECTRICAL ELECTRONIC EQUIPMENT   |
| ID0943  | US     | 29/090,556 | D413,021  | Inactive | 9-Jul-98  | 24-Aug-99 | A CONTAINER FOR ELECTRICAL ELECTRONIC EQUIPMENT   |
| ID0962  | US     | 29/090,414 | D418,074  | Inactive | 8-Jul-98  | 28-Dec-99 | SIGNAL COUPLER UNIT   |
| ID1001  | US     | 29/090,872 | D408,400  | Inactive | 17-Jul-98 | 20-Apr-99 | MOBILE COMMUNICATIONS DEVICE  |
| MO0098  | US     | 08/137,453 | 5,394,000 | Inactive | 7-Oct-93  | 28-Feb-95 | METHOD OF FORMING SELFALIGNED INTERPOLYSILICON CAPACITOR  |
| MO0112  | US     | 08/041,378 | 5,296,726 | Inactive | 1-Apr-93  | 22-Mar-94 | HIGH RESISTIVE LOAD FOR AN INTEGRATED CIRCUIT   |
| MO0121  | US     | 08/080,544 | 5,362,669 | Inactive | 24-Jun-93 | 8-Nov-94  | METHOD OF MAKING INTEGRATED CIRCUITS  |
| MO0121  | US     | 08/638,084 | 5,773,871 | Inactive | 25-Apr-96 | 30-Jun-98 | METHOD OF MAKING INTEGRATED CIRCUITS  |
| RM1053  | US     | 08/080,543 | 5,515,475 | Inactive | 24-Jun-93 | 7-May-96  | SPEECH RECOGNITION METHOD USING A TWO PASS SEARCH   |
| RO2524  | US     | 08/205,333 | 5,485,593 | Inactive | 3-Mar-94  | 16-Jan-96 | SHARED MEMORY ACCESS AND DATA STRUCTURE ACCESS CONTROL  |
| RO2554  | US     | 07/858,293 | 5,241,265 | Inactive | 26-Mar-92 | 31-Aug-93 | LOGIC FUNCTION CIRCUIT WITH AN ARRAY OF DATA STORES AND THEIR CIRCUIT TESTING   |
| RO2614  | US     | 08/033,227 | 5,353,282 | Inactive | 18-Mar-93 | 4-Oct-94  | LOCAL AREA NETWORK EMBEDDED IN THE COMMUNICATION SWITCH CORE  |
| RO2621  | US     | 07/868,941 | 5,274,702 | Inactive | 16-Apr-92 | 28-Dec-93 | WIDEBAND TELEPHONE LINE INTERFACE CIRCUIT   |
| RO2661  | US     | 08/104,265 | 5,471,650 | Inactive | 7-Jan-93  | 28-Nov-95 | RADIO LINK PARAMETER CONTROL IN WIRELESS PERSONAL COMMUNICATIONS SYSTEM   |
| RO2687  | US     | 07/858,377 | 5,349,587 | Inactive | 26-Mar-92 | 20-Sep-94 | METHOD AND APPARATUS FOR TESTING DIGITAL SYSTEMS  |
| RO2716  | US     | 07/868,940 | 5,258,713 | Inactive | 16-Apr-92 | 2-Nov-93  | IMPEDANCE GENERATOR FOR A TELEPHONE LINE INTERFACE CIRCUIT  |
| RO2743  | US     | 07/906,192 | 5,363,425 | Inactive | 29-Jun-92 | 8-Nov-94  | METHOD AND APPARATUS FOR PROVIDING A PERSONAL LOCATOR, ACCESS CONTROL AND ASSET TRACKING SERVICE USING AN IN-BUILDING TEL NETWORK |
| RO2764  | US     | 08/426,438 | 5,511,118 | Inactive | 21-Apr-95 | 23-Apr-96 | METHOD OF PROVIDING DC FEED TO A TELEPHONE LINE   |
| RO2765  | US     | 07/921,671 | 5,285,164 | Inactive | 30-Jul-92 | 8-Feb-94  | ELECTROMAGNETIC RADIATION MEASUREMENT APPARATUS   |
| RO2793  | US     | 08/013,560 | 5,353,025 | Inactive | 4-Feb-93  | 4-Oct-94  | METHODS AND APPARATUS FOR DIGITALLY ENCODING REPETITIVE ANALOG WAVEFORMS  |
| RO2794  | US     | 08/013,711 | 5,406,209 | Inactive | 4-Feb-93  | 11-Apr-95 | METHODS AND APPARATUS FOR TESTING CIRCUIT BOARDS  |
| RO2812  | US     | 08/041,377 | 5,390,231 | Inactive | 1-Apr-93  | 14-Feb-95 | PROTECTION AND RECOVERY OF TELEPHONE LINE INTERFACE CIRCUITS  |
| RO2877  | US     | 08/246,207 | 5,420,529 | Inactive | 19-May-94 | 30-May-95 | CURRENT STEERING SWITCH AND HYBRID BICMOS MULTIPLEXER WITHCMOS COMMUTATION SIGNAL AND CML/ECL DATA SIGNALS                        |
| RO2885  | US     | 08/180,155 | 5,408,260 | Inactive | 11-Jan-94 | 18-Apr-95 | CUSTOMER PREMISES ADSL SIGNAL DISTRIBUTION ARRANGEMENT  |
| RO3031  | US     | 29/044,661 | D395,653  | Inactive | 28-Sep-95 | 30-Jun-98 | TELEPHONE NECK SET  |
| RO3032  | US     | 29/044,814 | D398,927  | Inactive | 28-Sep-95 | 29-Sep-98 | SOUNDBEAM TELEPHONE BASE STATION  |
| RO3191  | US     | 29/061,305 | D386,493  | Inactive | 21-Nov-96 | 18-Nov-97 | TELEPHONE   |
| RO3446  | US     | 29/064,889 | D396,041  | Inactive | 13-Jan-97 | 14-Jul-98 | WIRELESS ANTENNA STAND  |
| 10003D  | US     | 09/338,693 | 6,438,287 | Granted  | 23-Jun-99 | 20-Aug-02 | DISPERSION COMPENSATION   |
| 10128RR | US     | 09/473,746 | 6,539,221 | Granted  | 28-Dec-99 | 25-Mar-03 | AUTOMATIC WIRELESS NETWORK DESIGN   |
| 10130RO | US     | 09/663,568 | 6,898,794 | Granted  | 15-Sep-00 | 24-May-05 | METHOD AND SYSTEM FOR FORMING SKELETONS FOR GENERATING VERIFICATION SYSTEMS   |
| 10152RO | US     | 09/333,269 | 6,922,390 | Granted  | 15-Jun-99 | 26-Jul-05 | METHOD AND APPARATUS FOR FORECASTING AND CONTROLLING CONGESTION IN A DATA TRANSPORT NETWORK                                       |
| 10159RR | US     | 09/369,944 | 6,578,085 | Granted  | 6-Aug-99  | 10-Jun-03 | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10172ST | US     | 09/465,645 | 6,816,468 | Granted  | 16-Dec-99 | 9-Nov-04  | CAPTIONING FOR TELE-CONFERENCE  |
| 10173ST | US     | 09/417,047 | 6,704,294 | Granted  | 13-Oct-99 | 9-Mar-04  | ESTABLISHMENT OF A PSTN AND INTERNET MULTIMEDIA COLLABORATION SESSION   |
| 10177SC | US     | 09/404,043 | 6,744,867 | Granted  | 23-Sep-99 | 1-Jun-04  | REMOTE CONTROL OF CPE-BASED SERVICE LOGIC   |
| 10177SC | US     | 10/856,163 | 7,933,396 | Granted  | 28-May-04 | 26-Apr-11 | REMOTE CONTROL OF CPE-BASED SERVICE LOGIC   |
| 10181RO | US     | 09/390,214 | 6,178,001 | Granted  | 8-Sep-99  | 23-Jan-01 | METHOD AND APPARATUS FOR OPTICAL FREQUENCY MODULATION CHARACTERIZATION OF LASER SOURCES   |
| 10201RO | US     | 09/401,919 | 6,530,032 | Granted  | 23-Sep-99 | 4-Mar-03  | NETWORK FAULT RECOVERY METHOD AND APPARATUS   |
| 10202RO | US     | 09/522,096 | 6,490,244 | Granted  | 9-Mar-00  | 3-Dec-02  | LAYER 3 ROUTING IN SELF-HEALING NETWORKS  |
| 10204RR | US     | 09/351,342 | 6,480,718 | Granted  | 12-Jul-99 | 12-Nov-02 | AUTOMATIC FREQUENCY PLANNING FOR A WIRELESS NETWORK   |
| 10207RR | US     | 09/455,090 | 6,647,059 | Granted  | 6-Dec-99  | 11-Nov-03 | CODE DIVISION MULTIPLE ACCESS CABLE MODEM   |
| 10212BA | US     | 09/398,370 | 6,640,251 | Granted  | 17-Sep-99 | 28-Oct-03 | MULTICAST-ENABLED ADDRESS RESOLUTION PROTOCOL (ME-ARP)  |
| 10212BA | US     | 10/444,397 | 7,702,808 | Granted  | 23-May-03 | 20-Apr-10 | MULTICAST-ENABLED ADDRESS RESOLUTION PROTOCOL (ME-ARP)  |
| 10212BA | US     | 12/661,895 | 8,024,474 | Granted  | 24-Mar-10 | 20-Sep-11 | MULTICAST-ENABLED ADDRESS RESOLUTION PROTOCOL (ME-ARP)  |
| 10212BA | US     | 13/222,900 | 8,782,288 | Granted  | 31-Aug-11 | 15-Jul-14 | MULTICAST-ENABLED ADDRESS RESOLUTION PROTOCOL (ME-ARP)  |
| 10223D  | US     | 09/472,449 | 6,671,510 | Granted  | 27-Dec-99 | 30-Dec-03 | WIRELESS TELEPHONE SYSTEM AND OPERATION METHOD THEREFOR   |
| 10225RR | US     | 09/358,994 | 6,690,651 | Granted  | 22-Jul-99 | 10-Feb-04 | METHOD AND APPARATUS FOR AUTOMATIC TRANSFER OF A CALL IN A COMMUNICATIONS SYSTEM IN RESPONSE TO CHANGES IN QUALITY OF SERVICE     |
| 10232RO | US     | 09/519,668 | 6,760,383 | Granted  | 6-Mar-00  | 6-Jul-04  | LONG REACH SDSL SYSTEM SPECTRALLY COMPATIBLE WITH ADSL SYSTEMS  |
| 10247SR | US     | 09/359,538 | 6,674,746 | Granted  | 22-Jul-99 | 6-Jan-04  | METHOD AND APPARATUS FOR VOICE OVER INTERNET PROTOCOL SWAPPING IN A COMMUNICATIONS SYSTEM   |
| 10254RO | US     | 09/465,340 | 6,714,560 | Granted  | 17-Dec-99 | 30-Mar-04 | SS7 SIGNALLING TRANSPORT OVER ATM   |
| 10256RO | US     | 09/335,836 | 6,259,391 | Granted  | 18-Jun-99 | 10-Jul-01 | ANALOG GAIN CONTROL ADJUSTMENT USING A PROBABILISTIC ALGORITHM  |
| 10258RN | US     | 09/354,372 | 6,584,193 | Granted  | 14-Jul-99 | 24-Jun-03 | SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR NETWORK TELEPHONE QUEUING  |
| 10282RO | US     | 09/356,041 | 6,788,785 | Granted  | 16-Jul-99 | 7-Sep-04  | STABLE ADAPTIVE FILTER AND METHOD   |





| Pub. No. | App. No.      | Pub. Date | Pub. Title | Pub. Status | Pub. Date | Pub. Title   | Pub. Status |
|----------|---------------|-----------|------------|-------------|-----------|--|-------------|
| 10695RM  | US 09/559,459 | 6,502,070 | Granted    | 28-Apr-00   | 31-Dec-02 | METHOD AND APPARATUS FOR NORMALIZING CHANNEL SPECIFIC SPEECH FEATURE ELEMENTS  |             |
| 10717RN  | US 09/589,414 | 6,938,080 | Granted    | 7-Jun-00    | 30-Aug-05 | METHOD AND COMPUTER SYSTEM FOR MANAGING DATA EXCHANGES AMONG A PLURALITY OF NETWORK NODES IN A MANAGED PACKET NETWORK    |             |
| 10722RO  | US 09/517,432 | 6,704,307 | Granted    | 2-Mar-00    | 9-Mar-04  | COMPACT HIGH CAPACITY SWITCH   |             |
| 10725RR  | US 09/468,977 | 6,823,364 | Granted    | 21-Dec-99   | 23-Nov-04 | DISTRIBUTION OF LOCATION INFORMATION IN IP NETWORKS BY INTELLIGENT ENDPOINTS   |             |
| 10726RR  | US 09/595,551 | 7,174,018 | Granted    | 16-Jun-00   | 6-Feb-07  | SECURITY FRAMEWORK FOR AN IP MOBILITY SYSTEMS USING VARIABLE-BASED SECURITY ASSOCIATIONS AND BROKER REDIRECTION          |             |
| 10728ID  | US 09/434,954 | 6,594,354 | Granted    | 5-Nov-99    | 15-Jul-03 | METHOD AND APPARATUS FOR ALERT CONTROL ON A COMMUNICATION SYSTEM   |             |
| 10745RN  | US 09/431,566 | 7,308,462 | Granted    | 29-Oct-99   | 11-Dec-07 | METHODS AND SYSTEMS FOR BUILDING AND DISTRIBUTING AUDIO PACKAGES   |             |
| 10753ID  | US 09/474,540 | 6,626,589 | Granted    | 29-Dec-99   | 30-Sep-03 | OPTICAL PACKET SWITCHING   |             |
| 10797RN  | US 09/430,045 | 7,376,710 | Granted    | 29-Oct-99   | 20-May-08 | METHODS AND SYSTEMS FOR PROVIDING ACCESS TO STORED AUDIO DATA OVER A NETWORK   |             |
| 10804RO  | US 09/401,955 | 6,680,933 | Granted    | 23-Sep-99   | 20-Jan-04 | TELECOMMUNICATIONS SWITCHES AND METHODS FOR THEIR OPERATION  |             |
| 10809ID  | US 09/460,781 | 7,603,411 | Granted    | 14-Dec-99   | 13-Oct-05 | PRESENCE MANAGEMENT SYSTEM   |             |
| 10810ID  | US 09/461,654 | 6,853,634 | Granted    | 14-Dec-99   | 8-Feb-05  | ANONYMITY IN A PRESENCE MANAGEMENT SYSTEM  |             |
| 10818RO  | US 09/461,023 | 6,718,036 | Granted    | 15-Dec-99   | 6-Apr-04  | LINEAR PREDICTIVE CODING BASED ACOUSTIC ECHO CANCELLATION  |             |
| 10822RO  | US 09/466,640 | 7,092,934 | Granted    | 20-Dec-99   | 15-Aug-06 | METHOD AND APPARATUS FOR ASSOCIATING INFORMATION WITH AN OBJECT IN A FILE  |             |
| 10845RO  | US 09/471,136 | 6,741,559 | Granted    | 23-Dec-99   | 25-May-04 | METHOD AND DEVICE FOR PROVIDING PRIORITY ACCESS TO A SHARED ACCESS NETWORK   |             |
| 10849ID  | US 09/374,805 | 6,272,209 | Granted    | 16-Aug-99   | 7-Aug-01  | LIFELINE TELEPHONY PROVISION FOR VOICE OVER DIGITAL SUBSCRIBER LINE  |             |
| 10850ID  | US 09/375,759 | 6,522,647 | Granted    | 18-Aug-99   | 18-Feb-03 | ENHANCED VODSL SERVICE PROVISION   |             |
| 10868ID  | US 09/375,758 | 6,526,058 | Granted    | 18-Aug-99   | 25-Feb-03 | VODSL SERVICE PROVISION  |             |
| 10871RM  | US 09/432,697 | 6,549,883 | Granted    | 2-Nov-99    | 15-Apr-03 | METHOD AND APPARATUS FOR GENERATING MULTILINGUAL TRANSCRIPTION GROUPS  |             |
| 10872ID  | US 09/354,651 | 6,882,643 | Granted    | 16-Jul-99   | 19-Apr-05 | SUPPORTING MULTIPLE SERVICES IN LABEL SWITCHED NETWORKS  |             |
| 10890ID  | US 09/374,806 | 6,647,117 | Granted    | 16-Aug-99   | 11-Nov-03 | CONTINUITY OF VOICE CARRIED OVER DSL DURING POWER FAILURE  |             |
| 10909ID  | US 09/408,960 | 6,813,271 | Granted    | 30-Sep-99   | 2-Nov-04  | SATELLITE COMMUNICATIONS SYSTEM AND METHOD OF SUPPORTING ATM CELL TRANSMISSIONS IN A DVB ENVIRONMENT                     |             |
| 10915ID  | US 09/474,542 | 6,901,653 | Granted    | 29-Dec-99   | 31-May-05 | CONNECTIONLESS NETWORK EXPRESS ROUTE   |             |
| 10936ID  | US 09/368,276 | 6,628,612 | Granted    | 3-Aug-99    | 30-Sep-03 | DERIVATION OF EQUIVALENT BANDWIDTH OF AN INFORMATION FLOW  |             |
| 10942ID  | US 09/480,509 | 6,362,917 | Granted    | 10-Jan-00   | 26-Mar-02 | OPTICAL AMPLIFIER  |             |
| 10943ID  | US 10/825,541 | 7,394,811 | Granted    | 15-Apr-04   | 1-Jul-08  | ESTABLISHING CONNECTIONS ACROSS A COMMUNICATIONS NETWORK   |             |
| 10944ID  | US 09/470,630 | 6,396,969 | Granted    | 22-Dec-99   | 28-May-02 | DISTRIBUTED OPTICAL SWITCHING DEVICE   |             |
| 10972ID  | US 09/410,317 | 6,680,943 | Granted    | 1-Oct-99    | 20-Jan-04 | ESTABLISHING BI-DIRECTIONAL COMMUNICATION SESSIONS ACROSS A COMMUNICATIONS NETWORK                                       |             |
| 10997ID  | US 09/459,548 | 6,795,653 | Granted    | 13-Dec-99   | 21-Sep-04 | APPARATUS FOR RESHAPING OPTICAL PULSES   |             |
| 11003RO  | US 09/639,075 | 6,528,737 | Granted    | 16-Aug-00   | 4-Mar-03  | MIDPLANE CONFIGURATION FEATURING SURFACE CONTACT CONNECTORS  |             |
| 11009ID  | US 09/459,546 | 6,694,098 | Granted    | 13-Dec-99   | 17-Feb-04 | APPARATUS AND METHOD FOR READING DATA FROM AN OPTICAL PACKET HEADER  |             |
| 11013RO  | US 09/471,141 | 6,616,350 | Granted    | 23-Dec-99   | 9-Sep-03  | METHOD AND APPARATUS FOR PROVIDING A MORE EFFICIENT USE OF THE TOTAL BANDWIDTH CAPACITY IN A SYNCHRONOUS OPTICAL NETWORK |             |
| 11026ID  | US 09/474,541 | 6,347,806 | Granted    | 29-Dec-99   | 12-Feb-02 | CONTROL FOR PERIODIC OPTICAL FILTER  |             |
| 11032RR  | US 10/199,797 | 7,149,506 | Granted    | 19-Jul-02   | 12-Dec-06 | PORTABLE CALL MANAGEMENT SYSTEM  |             |
| 11033RR  | US 09/561,834 | 7,024,461 | Granted    | 28-Apr-00   | 4-Apr-06  | SESSION INITIATION PROTOCOL ENABLED SET-TOP DEVICE   |             |
| 11033RR  | US 11/394,693 | 8,069,252 | Granted    | 31-Mar-06   | 29-Nov-11 | SESSION INITIATION PROTOCOL ENABLED SET-TOP DEVICE   |             |
| 11033RR  | US 11/395,929 | 7,617,298 | Granted    | 31-Mar-06   | 10-Nov-09 | SESSION INITIATION PROTOCOL ENABLED SET-TOP DEVICE   |             |
| 11034BA  | US 09/545,660 | 6,609,226 | Granted    | 10-Apr-00   | 19-Aug-03 | NETWORKING DEVICE AND METHOD FOR MAKING CYCLIC REDUNDANCY CHECK (CRC) IMMUNE TO SCRAMBLER ERROR DUPLICATION              |             |
| 11044HU  | US 09/474,125 | 6,701,350 | Granted    | 29-Dec-99   | 2-Mar-04  | SYSTEM AND METHOD FOR WEB PAGE FILTERING   |             |
| 11051RO  | US 09/695,108 | 7,761,541 | Granted    | 25-Oct-00   | 20-Jul-10 | SERVICE ENABLING TECHNOLOGY  |             |
| 11052RO  | US 09/466,663 | 6,681,012 | Granted    | 17-Dec-99   | 20-Jan-04 | DIRECTIONAL RECEIVER COUPLING ARRANGEMENT WITH FREQUENCY SELECTIVITY AND GAIN CONTROL FOR DSL                            |             |
| 11052RO  | US 10/751,635 | 7,123,897 | Granted    | 6-Jan-04    | 17-Oct-06 | DIRECTIONAL RECEIVER COUPLING ARRANGEMENT WITH FREQUENCY SELECTIVITY AND GAIN CONTROL FOR DSL                            |             |
| 11055RO  | US 09/475,044 | 6,795,355 | Granted    | 30-Dec-99   | 21-Sep-04 | ENCRYPTION KEY EXCHANGE PROTOCOL   |             |
| 11117RO  | US 09/472,643 | 6,542,586 | Granted    | 27-Dec-99   | 1-Apr-03  | TEXT MESSAGING WITH EMBEDDED TELEPHONY ACTION KEYS   |             |
| 11118RR  | US 09/428,808 | 6,968,395 | Granted    | 28-Oct-99   | 22-Nov-05 | PARSING MESSAGES COMMUNICATED OVER A DATA NETWORK  |             |
| 11119RR  | US 09/492,046 | 6,678,735 | Granted    | 26-Jan-00   | 13-Jan-04 | METHOD AND APPARATUS FOR A SIP CLIENT MANAGER  |             |
| 11119RR  | US 10/718,098 | 7,496,672 | Granted    | 20-Nov-03   | 24-Feb-09 | METHOD AND APPARATUS FOR A SIP CLIENT MANAGER  |             |
| 11122RR  | US 09/431,994 | 6,438,555 | Granted    | 2-Nov-99    | 20-Aug-02 | METHOD AND APPARATUS FOR ACCESSING AN ORDERED ARRAY STRUCTURE  |             |
| 11125RO  | US 09/566,391 | 6,894,974 | Granted    | 8-May-00    | 17-May-05 | METHOD, APPARATUS, MEDIA, AND SIGNALS FOR CONTROLLING PACKET TRANSMISSION RATE FROM A PACKET SOURCE                      |             |
| 11153RR  | US 09/540,362 | 7,173,917 | Granted    | 31-Mar-00   | 6-Feb-07  | UNICAST AGENT ADVERTISEMENT BASED ON LAYER 2 AND LAYER 3 MOTION DETECTION  |             |
| 11159RO  | US 09/414,590 | 7,111,056 | Granted    | 8-Oct-99    | 19-Sep-06 | METHOD, APPARATUS, AND ARTICLE OF MANUFACTURE FOR WEB-BASED CONTROL OF A UNIFIED MULTI-SERVICE COMMUNICATION SYSTEM      |             |
| 11192RR  | US 09/661,112 | 6,708,034 | Granted    | 13-Sep-00   | 16-Mar-04 | END-TO-END QUALITY OF SERVICE GUARANTEE IN A WIRELESS ENVIRONMENT  |             |
| 11197RO  | US 09/417,769 | 6,646,986 | Granted    | 14-Oct-99   | 11-Nov-03 | SCHEDULING OF VARIABLE SIZED PACKET DATA UNDER TRANSFER RATE CONTROL   |             |
| 11207RR  | US 09/472,627 | 6,625,258 | Granted    | 27-Dec-99   | 23-Sep-03 | SYSTEM AND METHOD FOR PROVIDING UNIFIED COMMUNICATION SERVICES SUPPORT   |             |



| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No | Pub No     | Pub No    |  |
|---------|--------|------------|-----------|---------|--------|------------|-----------|--|
| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No | Pub No     | Pub No    |  |
| 11893RO | US     | 09/739,066 | 7,337,231 | Granted |        | 18-Dec-00  | 26-Feb-08 | PROVIDING MEDIA ON DEMAND  |
| 11897RO | US     | 09/696,957 | 6,751,711 | Granted |        | 27-Oct-00  | 15-Jun-04 | METHODS AND SYSTEMS FOR PROCESS ROLLBACK IN A SHARED MEMORY-PARALLEL PROCESSOR-COMPUTING ENVIRONMENT                             |
| 11899RO | US     | 09/571,160 | 6,917,588 | Granted |        | 16-May-00  | 12-Jul-05 | APPARATUS AND METHOD FOR CLASSIFYING DATA PACKET FLOWS   |
| 11918RN | US     | 09/567,630 | 6,731,640 | Granted |        | 9-May-00   | 4-May-04  | FRAME SYNCHRONIZATION OVER MULTIPLE NETWORKS   |
| 11925DM | US     | 09/589,326 | 6,870,848 | Granted |        | 7-Jun-00   | 22-Mar-05 | METHOD AND APPARATUS FOR CALL PROCESSING   |
| 11925DM | US     | 10/980,095 | 8,355,393 | Granted |        | 3-Nov-04   | 15-Jan-13 | METHOD AND APPARATUS TO PROCESS A CALL REQUEST BY ESTABLISHING CALLS AMONG DEVICES   |
| 11925DM | US     | 13/740,759 | #EMPTY    | Filed   |        | 14-Jan-13  | #EMPTY    | METHOD TO PROCESS A CALL REQUEST   |
| 11927D  | US     | 09/545,545 | 6,574,384 | Granted |        | 7-Apr-00   | 3-Jun-03  | TESTING OPERATION OF A PHOTONIC SWITCH   |
| 11930RO | US     | 09/584,363 | 7,106,966 | Granted |        | 1-Jun-00   | 12-Sep-06 | INTEGRATED PHOTONIC SWITCH   |
| 11944RR | US     | 09/644,400 | 6,807,173 | Granted |        | 23-Aug-00  | 19-Oct-04 | METHOD AND SYSTEM FOR IMPROVING BANDWIDTH AVAILABILITY IN A DATA COMMUNICATION NETWORK BY TOKENIZING MESSAGES                    |
| 11947RO | US     | 09/742,419 | 7,079,640 | Granted |        | 22-Dec-00  | 18-Jul-06 | METHOD AND APPARATUS FOR IMPLEMENTING AN EXTENSIBLE RANGE OF COMMUNICATIONS SERVICES IN TELEPHONE NETWORKS                       |
| 11959D  | US     | 09/645,661 | 6,829,717 | Granted |        | 24-Aug-00  | 7-Dec-04  | METHOD AND APPARATUS FOR GENERATING TIMING INFORMATION   |
| 11965RO | US     | 09/580,495 | 7,542,675 | Granted |        | 30-May-00  | 2-Jun-09  | OPTICAL SWITCH WITH POWER EQUALIZATION   |
| 11965RO | US     | 12/476,693 | 7,995,919 | Granted |        | 2-Jun-09   | 9-Aug-11  | OPTICAL SWITCH WITH POWER EQUALIZATION   |
| 11965RO | US     | 13/205,115 | #EMPTY    | Filed   |        | 8-Aug-11   | #EMPTY    | OPTICAL SWITCH WITH POWER EQUALIZATION   |
| 11966RO | US     | 09/859,544 | 6,871,021 | Granted |        | 18-May-01  | 22-Mar-05 | OPTICAL SWITCH WITH CONNECTION VERIFICATION  |
| 11992RO | US     | 09/750,015 | 6,956,828 | Granted |        | 29-Dec-00  | 18-Oct-05 | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS   |
| 11992RO | US     | 11/113,050 | 7,983,206 | Granted |        | 12/29/2000 | 7/19/2011 | Apparatus and method for packet-based media communications   |
| 11998RO | US     | 09/617,232 | 6,842,463 | Granted |        | 14-Jul-00  | 11-Jan-05 | AUTOMATED AND ADAPTIVE MANAGEMENT OF BANDWIDTH CAPACITY IN TELECOMMUNICATIONS NETWORKS   |
| 12003RR | US     | 09/640,009 | 6,309,117 | Granted |        | 17-Aug-00  | 30-Oct-01 | SYSTEM AND METHOD FOR ADJUSTMENT OF COLOR PRESENTATION IN NETWORKED MEDIA  |
| 12007RO | US     | 09/537,721 | 6,323,733 | Granted |        | 30-Mar-00  | 27-Nov-01 | HIGH EFFICIENCY DUAL SUPPLY POWER AMPLIFIER  |
| 12010SS | US     | 09/522,325 | 7,890,117 | Granted |        | 9-Mar-00   | 15-Feb-11 | AUTOMATIC REMOTE COMMUNICATION USING NETWORK TELEPHONY   |
| 12010SS | US     | 13/007,576 | 8,265,653 | Granted |        | 14-Jan-11  | 11-Sep-12 | AUTOMATIC REMOTE COMMUNICATION USING NETWORK TELEPHONY   |
| 12010SS | US     | 13/566,156 | 8,478,296 | Granted |        | 3-Aug-12   | 2-Jul-13  | AUTOMATIC REMOTE COMMUNICATION USING NETWORK TELEPHONY   |
| 12010SS | US     | 13/929,508 | 8,886,159 | Granted |        | 27-Jun-13  | 11-Nov-14 | AUTOMATIC REMOTE COMMUNICATION USING NETWORK TELEPHONY   |
| 12014D  | US     | 09/585,669 | 7,653,613 | Granted |        | 1-Jun-00   | 26-Jan-10 | CONFERENCING SYSTEMS WITH ENHANCED CAPABILITIES  |
| 12022RN | US     | 09/598,867 | 6,799,210 | Granted |        | 21-Jun-00  | 28-Sep-04 | DYNAMIC ASSOCIATION OF ENDPPOINTS TO MEDIA GATEWAY CONTROLLERS   |
| 12024BA | US     | 09/679,461 | 7,007,151 | Granted |        | 4-Oct-00   | 28-Feb-06 | SYSTEM, DEVICE, AND METHOD FOR CONTROLLING ACCESS TO A MEMORY  |
| 12027SS | US     | 09/572,384 | 6,920,425 | Granted |        | 16-May-00  | 19-Jul-05 | VISUAL INTERACTIVE RESPONSE SYSTEM AND METHOD FOR TRANSLATED FROM INTERACTIVE VOICE RESPONSE FOR TELEPHONE UTILITY               |
| 12035RO | US     | 09/507,080 | 6,738,354 | Granted |        | 18-Feb-00  | 18-May-04 | LABEL SELECTION FOR END-TO-END LABEL SWITCHED TRAFFIC THROUGH A COMMUNICATIONS NETWORK   |
| 12035RO | US     | 10/806,083 | 7,319,672 | Granted |        | 22-Mar-04  | 15-Jan-08 | LABEL SELECTION FOR END-TO-END LABEL SWITCHED TRAFFIC THROUGH A COMMUNICATIONS NETWORK   |
| 12038D  | US     | 09/502,699 | 7,142,503 | Granted |        | 11-Feb-00  | 28-Nov-06 | COMMUNICATION SYSTEM ARCHITECTURE AND OPERATING METHODOLOGY PROVIDING A VIRTUAL NEIGHBORHOOD NETWORK                             |
| 12053D  | US     | 09/603,080 | 6,459,533 | Granted |        | 26-Jun-00  | 1-Oct-02  | TUNEABLE OPTICAL FILTERS   |
| 12054DM | US     | 09/578,627 | 7,463,619 | Granted |        | 25-May-00  | 9-Dec-08  | LAUNCHING A WEB BROWSER IN RESPONSE TO A MESSAGE RELATING TO COMMUNICATIONS SESSIONS   |
| 12069D  | US     | 09/512,910 | 7,142,863 | Granted |        | 25-Feb-00  | 28-Nov-06 | METHOD OF DEPLOYING A FIXED WIRELESS ACCESS COMMUNICATIONS NETWORK SUCH THAT A SPECIFIED LEVEL OF LINK PERFORMANCE IS MAINTAINED |
| 12065RN | US     | 09/637,744 | 6,724,880 | Granted |        | 11-Aug-00  | 20-Apr-04 | METHOD AND APPARATUS FOR SPARING COMMUNICATIONS CIRCUITS   |
| 12070RO | US     | 09/740,932 | 6,996,102 | Granted |        | 21-Dec-00  | 7-Feb-06  | METHOD AND APPARATUS FOR ROUTING DATA TRAFFIC ACROSS A MULTICAST-CAPABLE FABRIC  |
| 12078BA | US     | 09/747,239 | 6,725,315 | Granted |        | 22-Dec-00  | 20-Apr-04 | SYSTEM AND METHOD TO EFFICIENTLY MOVE DATA FROM ONE DATA BUS TO ANOTHER DATA BUS IN A NETWORK SWITCH                             |
| 12079BA | US     | 09/746,999 | 6,701,478 | Granted |        | 22-Dec-00  | 2-Mar-04  | SYSTEM AND METHOD TO GENERATE A CRC (CYCLIC REDUNDANCY CHECK) VALUE USING A PLURALITY OF CRC GENERATORS OPERATING IN PARALLEL    |
| 12085BA | US     | 09/607,007 | 8,230,010 | Granted |        | 29-Jun-00  | 24-Jul-12 | SYSTEM, DEVICE AND METHOD FOR CONTROLLING ACCESS IN A MULTICAST COMMUNICATION NETWORK  |
| 12086BA | US     | 09/697,221 | 6,819,750 | Granted |        | 26-Oct-00  | 16-Nov-04 | APPARATUS AND METHOD OF ESTABLISHING A FACSIMILE TRANSMISSION ACROSS A PACKET BASED NETWORK                                      |
| 12092D  | US     | 09/750,868 | 6,845,400 | Granted |        | 28-Dec-00  | 18-Jan-05 | STORING SUBSCRIBER LOCATION INDICATION AT DNS, TO ENABLE LOCATION SPECIFIC PROVISION OF INTERNET CONTENT                         |
| 12106RR | US     | 09/812,975 | 6,917,621 | Granted |        | 20-Mar-01  | 12-Jul-05 | ENHANCED EMULATION SYSTEM ON A COMMUNICATION NETWORK   |
| 12144RO | US     | 09/603,354 | 6,920,108 | Granted |        | 26-Jun-00  | 19-Jul-05 | METHOD AND APPARATUS FOR COLLISION AVOIDANCE IN BUFFERLESS NETWORKS  |
| 12162RN | US     | 09/638,580 | 6,735,621 | Granted |        | 15-Aug-00  | 11-May-04 | METHOD AND APPARATUS FOR MESSAGING BETWEEN DISPARATE NETWORKS  |
| 12170D  | US     | 09/606,053 | 7,050,861 | Granted |        | 28-Jun-00  | 23-May-06 | CONTROLLING A DESTINATION TERMINAL FROM AN ORIGINATING TERMINAL  |
| 12172RO | US     | 09/625,175 | 6,396,632 | Granted |        | 25-Jul-00  | 28-May-02 | TUNEABLE OPTICAL FILTER AND OPTICAL MODULATOR  |
| 12174RR | US     | 09/752,838 | 6,581,075 | Granted |        | 28-Dec-00  | 17-Jun-03 | SYSTEM AND METHOD FOR DATABASE SYNCHRONIZATION   |
| 12178RO | US     | 09/624,029 | 6,380,828 | Granted |        | 24-Jul-00  | 30-Apr-02 | SURFACE WAVE DEVICES WITH STATIC ELECTRIC FIELD  |
| 12183D  | US     | 09/545,547 | 6,483,479 | Granted |        | 7-Apr-00   | 10-Dec-02 | CROSSPOINT SWITCH PROTECTION USING ADDITIONAL SWITCHING ELEMENTS TO PROVIDE ALTERNATE PATHS                                      |
| 12186RG | US     | 09/604,770 | 6,865,151 | Granted |        | 28-Jun-00  | 8-Mar-05  | METHODS AND SYSTEMS FOR OPTIMIZING DATA TRANSMISSION IN NETWORKS   |
| 12188BA | US     | 09/724,488 | 6,914,881 | Granted |        | 28-Nov-00  | 5-Jul-05  | PRIORITIZED CONTINUOUS-DEFICIT ROUND ROBIN SCHEDULING  |
| 12199D  | US     | 09/539,124 | 6,366,395 | Granted |        | 30-Mar-00  | 2-Apr-02  | OPTICAL AMPLIFIER GAIN CONTROL   |
| 12200D  | US     | 09/539,126 | 6,501,595 | Granted |        | 30-Mar-00  | 31-Dec-02 | OPTICAL AMPLIFIER PUMP CONTROL   |

| Pub No  | Pub Title     | Pub No    | Pub Title | Pub No    | Pub Title | Pub No | Pub Title   |
|---------|---------------|-----------|-----------|-----------|-----------|--------|---|
| 12226HU | US 09/574,011 | 7,024,472 | Granted   | 19-May-00 | 4-Apr-06  |        | SCALABLE PROCESSING OF NETWORK ACCOUNTING DATA  |
| 12227RN | US 09/685,279 | 6,522,735 | Granted   | 10-Oct-00 | 18-Feb-03 |        | NETWORK SELECTION SUPPORT IN A COMMUNICATIONS SERVICE BIDDING EXCHANGE  |
| 12230RN | US 09/794,317 | 8,396,950 | Granted   | 27-Feb-01 | 12-Mar-13 |        | METHOD AND APPARATUS FOR THE FAST DETECTION OF CONNECTIVITY LOSS BETWEEN DEVICES IN A NETWORK   |
| 122445S | US 09/982,677 | 6,928,463 | Granted   | 18-Oct-01 | 9-Aug-05  |        | BROADBAND CONTENT DELIVERY VIA PERSONAL CONTENT TUNNEL  |
| 122451D | US 09/545,546 | 6,628,952 | Granted   | 7-Apr-00  | 30-Sep-03 |        | METHOD OF INCREASING CAPACITY IN A FIXED WIRELESS ACCESS NETWORK IN WHICH SUBSCRIBERS COMMUNICATE WITH BASE STATIONS VIA DIRECTIONAL ANTENNAS |
| 122471D | US 09/538,573 | 6,795,394 | Granted   | 26-Apr-00 | 21-Sep-04 |        | DATA NETWORK HAVING ENHANCED AVAILABILITY OF EXTRA TRAFFIC  |
| 122501D | US 09/653,984 | 6,381,388 | Granted   | 1-Sep-00  | 30-Apr-02 |        | CHROMATIC DISPERSION COMPENSATION   |
| 12251RR | US 11/031,715 | 7,649,847 | Granted   | 7-Jan-05  | 19-Jan-10 |        | ARCHITECTURES FOR EVOLVING TRADITIONAL SERVICE PROVIDER NETWORKS AND METHODS OF OPTIMIZATION THEREFOR   |
| 12252RO | US 10/246,408 | 7,020,791 | Granted   | 19-Sep-02 | 28-Mar-06 |        | CLOCK RECOVERY USING A DOUBLE-EXPONENTIAL SMOOTHING PROCESS   |
| 122601D | US 09/629,785 | 6,978,090 | Granted   | 31-Jul-00 | 20-Dec-05 |        | OPTICAL NETWORK ARCHITECTURE  |
| 122625S | US 09/527,060 | 6,769,025 | Granted   | 16-Mar-00 | 27-Jul-04 |        | FLEXIBLE EXTERNAL CONTROL OF UNSOLICITED WEB PAGES SENT TO A USER ACCESSING THE INTERNET  |
| 122768A | US 09/660,688 | 6,963,573 | Granted   | 13-Sep-00 | 8-Nov-05  |        | SYSTEM, DEVICE, AND METHOD FOR RECEIVER ACCESS CONTROL INFORMATION IN A MULTICAST COMMUNICATION SYSTEM  |
| 122768A | US 11/205,577 | 7,573,881 | Granted   | 17-Aug-05 | 11-Aug-09 |        | SYSTEM, DEVICE, AND METHOD FOR RECEIVER ACCESS CONTROL INFORMATION IN A MULTICAST COMMUNICATION SYSTEM  |
| 122778A | US 09/660,143 | #EMPTY    | Filed     | 13-Sep-00 | #EMPTY    |        | SYSTEM, DEVICE, AND METHOD FOR DISTRIBUTING ACCESS CONTROL INFORMATION IN A COMMUNICATION SYSTEM  |
| 122788A | US 09/661,273 | 8,370,507 | Granted   | 13-Sep-00 | 5-Feb-13  |        | SYSTEM, DEVICE, AND METHOD FOR RECEIVER ACCESS CONTROL IN AN INTERNET TELEVISION SYSTEM   |
| 122788A | US 13/727,800 | 8,789,087 | Granted   | 27-Dec-12 | 22-Jul-14 |        | SYSTEM, DEVICE, AND METHOD FOR RECEIVER ACCESS CONTROL IN AN INTERNET TELEVISION SYSTEM   |
| 12279RO | US 09/636,594 | 6,445,591 | Granted   | 10-Aug-00 | 3-Sep-02  |        | MULTILAYER CIRCUIT BOARD  |
| 12283RO | US 09/685,090 | 7,054,557 | Granted   | 11-Oct-00 | 30-May-06 |        | TECHNIQUE FOR ROUTING DATA WITHIN AN OPTICAL NETWORK  |
| 12285RR | US 09/634,101 | 6,765,912 | Granted   | 8-Aug-00  | 20-Jul-04 |        | NETWORK RESOURCE USAGE IN CALL SESSIONS   |
| 12286RR | US 09/697,822 | 7,283,521 | Granted   | 26-Oct-00 | 16-Oct-07 |        | SYSTEM AND METHOD FOR REPORTING COMMUNICATION RELATED INFORMATION IN A PACKET MODE COMMUNICATION  |
| 12293RG | US 09/630,942 | 6,771,672 | Granted   | 3-Aug-00  | 3-Aug-04  |        | SIGNALING BIT SUPPRESSION SYSTEM  |
| 12312RO | US 09/635,898 | 6,788,697 | Granted   | 11-Aug-00 | 7-Sep-04  |        | IMPROVED BUFFER MANAGEMENT SCHEME EMPLOYING DYNAMIC THRESHOLDS  |
| 12317RO | US 09/636,595 | 6,487,083 | Granted   | 10-Aug-00 | 26-Nov-02 |        | MULTILAYER CIRCUIT BOARD  |
| 123415S | US 09/566,603 | 6,963,563 | Granted   | 8-May-00  | 8-Nov-05  |        | METHOD AND APPARATUS FOR TRANSMITTING CELLS ACROSS A SWITCH IN UNICAST AND MULTICAST MODES  |
| 123435S | US 09/566,602 | 6,754,216 | Granted   | 8-May-00  | 22-Jun-04 |        | METHOD AND APPARATUS FOR DETECTING CONGESTION AND CONTROLLING THE TRANSMISSION OF CELLS ACROSS A DATA PACKET SWITCH                           |
| 123455S | US 09/566,604 | 6,865,155 | Granted   | 8-May-00  | 8-Mar-05  |        | METHOD AND APPARATUS FOR TRANSMITTING DATA THROUGH A SWITCH FABRIC ACCORDING TO DETECTED CONGESTION   |
| 12354RO | US 10/240,212 | 7,245,612 | Granted   | 30-Sep-02 | 17-Jul-07 |        | INTERNET CALL WAITING WITH VOICEMAIL SYSTEM THAT PROVIDES MONITORING DURING RECORDING   |
| 12376RO | US 09/624,239 | 7,107,496 | Granted   | 24-Jul-00 | 12-Sep-06 |        | METHOD, APPARATUS, COMPUTER-READABLE MEDIA AND USER INTERFACE FOR ANNUNCIATING PROBLEMS IN A SYSTEM   |
| 12384RO | US 09/666,299 | 6,696,917 | Granted   | 21-Sep-00 | 24-Feb-04 |        | FOLDED CLOS ARCHITECTURE SWITCHING  |
| 12385RO | US 09/741,257 | 6,538,525 | Granted   | 19-Dec-00 | 25-Mar-03 |        | VOLTAGE BIASED SECTION OF NON-LINEAR TRANSMISSION LINE  |
| 12389RR | US 09/745,812 | 6,640,294 | Granted   | 21-Dec-00 | 28-Oct-03 |        | SYSTEM AND METHOD OF DYNAMIC ONLINE SESSION CACHING   |
| 124011D | US 09/735,035 | 6,792,560 | Granted   | 12-Dec-00 | 14-Sep-04 |        | RELIABLE HARDWARE SUPPORT FOR THE USE OF FORMAL LANGUAGES IN HIGH ASSURANCE SYSTEMS   |
| 12406RR | US 09/745,746 | 6,845,389 | Granted   | 21-Dec-00 | 18-Jan-05 |        | SYSTEM AND METHOD FOR BROADBAND MULTI-USER COMMUNICATION SESSIONS   |
| 12414RO | US 09/628,332 | 6,854,091 | Granted   | 28-Jul-00 | 8-Feb-05  |        | METHOD OF DISPLAYING NODES AND LINKS  |
| 12414RO | US 11/024,910 | 7,855,978 | Granted   | 30-Dec-04 | 21-Dec-10 |        | METHOD OF DISPLAYING NODES AND LINKS  |
| 124288A | US 09/591,756 | 6,751,220 | Granted   | 12-Jun-00 | 15-Jun-04 |        | APPARATUS AND METHOD OF MANAGING VIRTUAL PRIVATE NETWORK ROUTING DATA   |
| 12437HU | US 09/686,186 | 6,842,788 | Granted   | 11-Oct-00 | 11-Jan-05 |        | COMPUTING AND USING RESOURCE COLORS FOR COMPOSITE LINKS   |
| 12453RO | US 09/833,837 | 6,493,328 | Granted   | 12-Apr-01 | 10-Dec-02 |        | ACTIVE SET MANAGEMENT IN A CELLULAR WIRELESS NETWORK THAT SUPPORTS HIGH DATA RATE FORWARD LINK TRANSMISSIONS                                  |
| 12459AB | US 09/672,821 | 7,533,174 | Granted   | 29-Sep-00 | 12-May-09 |        | MEDIA GATEWAY CONNECTION INFORMATION RECOVERY   |
| 124691D | US 09/580,865 | 6,915,079 | Granted   | 30-May-00 | 5-Jul-05  |        | NON-RETURN OPTICAL STAR COUPLER   |
| 12470RO | US 09/717,292 | 6,975,592 | Granted   | 22-Nov-00 | 13-Dec-05 |        | CONFIGURABLE RULE ENGINE FOR LAYER-7 AND TRAFFIC CHARACTERISTIC-BASED CLASSIFICATION  |
| 124761D | US 09/723,018 | 6,526,208 | Granted   | 27-Nov-00 | 25-Feb-03 |        | DISPERSION MANAGED FIBER OPTICAL CABLE AND SYSTEM   |
| 124771D | US 09/584,330 | 7,218,854 | Granted   | 30-May-00 | 15-May-07 |        | HIGH CAPACITY PASSIVE OPTICAL NETWORK   |
| 12481RO | US 09/741,041 | 6,819,678 | Granted   | 21-Dec-00 | 16-Nov-04 |        | INTERWORKING OF DISSIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS   |
| 12481RO | US 10/963,262 | 7,675,934 | Granted   | 12-Oct-04 | 9-Mar-10  |        | INTERWORKING OF DISSIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS   |
| 12483RO | US 09/664,373 | 6,546,235 | Granted   | 18-Sep-00 | 8-Apr-03  |        | SYSTEM FOR CANCELLING DISTORTION IN AN ELECTRONIC CIRCUIT   |
| 12494RO | US 09/672,979 | 6,741,556 | Granted   | 29-Sep-00 | 25-May-04 |        | METHOD FOR CLASSIFYING PERSISTENT TCP FLOWS   |
| 12514RX | US 09/714,082 | 6,976,071 | Granted   | 16-Nov-00 | 13-Dec-05 |        | DETECTING IF A SECURE LINK IS ALIVE   |
| 12518RN | US 10/275,392 | 7,826,384 | Granted   | 4-Nov-02  | 2-Nov-10  |        | METHOD AND APPARATUS FOR NEGOTIATING BEARER CONTROL PARAMETERS USING PROPERTYSETS   |
| 125208A | US 09/692,949 | 7,313,608 | Granted   | 20-Oct-00 | 25-Dec-07 |        | METHOD AND APPARATUS FOR USING DOCUMENTS WRITTEN IN A MARKUP LANGUAGE TO ACCESS AND CONFIGURE NETWORK ELEMENTS                                |
| 125231D | US 09/676,316 | 6,643,429 | Granted   | 7-Jun-01  | 4-Nov-03  |        | DISPERSION COMPENSATION APPARATUS AND METHOD UTILISING SAMPLED BRAGG GRATINGS   |
| 12534RN | US 09/666,583 | 6,976,094 | Granted   | 21-Sep-00 | 13-Dec-05 |        | AUTOMATED WEB BROWSER SYNCHRONIZATION BY USING SESSION INITIATION PROTOCOL DURING A REAL-TIME SESSION   |
| 125401D | US 09/862,861 | 7,269,185 | Granted   | 22-May-01 | 11-Sep-07 |        | MANAGEMENT AND CONTROL OF MULTI-LAYER NETWORKS  |
| 125418A | US 09/859,702 | 7,181,532 | Granted   | 17-May-01 | 20-Feb-07 |        | SCALABLE POLICY SERVER  |

| Pub No  | Pub Title     | Pub Date  | Pub Status | Pub Title | Pub Date  | Pub Status |  |
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| 125475S | US 09/753,080 | 7,237,012 | Granted    |           | 29-Dec-00 | 26-Jun-07  | METHOD AND APPARATUS FOR CLASSIFYING JAVA REMOTE METHOD INVOCATION TRANSPORT TRAFFIC   |
| 125601D | US 09/739,528 | 6,636,662 | Granted    |           | 15-Dec-00 | 21-Oct-03  | PLANAR WAVEGUIDE DISPERSION COMPENSATOR  |
| 125601D | US 09/902,362 | 6,690,855 | Granted    |           | 10-Jul-01 | 10-Feb-04  | PLANAR WAVEGUIDE DISPERSION COMPENSATOR  |
| 12562R0 | US 09/672,816 | 6,771,651 | Granted    |           | 29-Sep-00 | 3-Aug-04   | PROVIDING ACCESS TO A HIGH-CAPACITY PACKET NETWORK   |
| 12562R0 | US 10/872,434 | 6,947,424 | Granted    |           | 22-Jun-04 | 20-Sep-05  | PROVIDING ACCESS TO A HIGH-CAPACITY PACKET NETWORK   |
| 12572R0 | US 09/579,501 | 6,606,667 | Granted    |           | 30-May-00 | 12-Aug-03  | BALANCED NETWORKS  |
| 125895T | US 09/588,699 | 6,785,325 | Granted    |           | 7-Jun-00  | 31-Aug-04  | DSL SPLITTER PROVIDING TEST ACCESS TO AN INTERCONNECTED SUBSCRIBER LOOP AND METHOD   |
| 125951D | US 09/693,132 | 7,249,197 | Granted    |           | 20-Oct-00 | 24-Jul-07  | SYSTEM, APPARATUS AND METHOD FOR PERSONALISING WEB CONTENT   |
| 125991D | US 09/750,903 | 7,363,371 | Granted    |           | 28-Dec-00 | 22-Apr-08  | TRAFFIC FLOW MANAGEMENT IN A COMMUNICATIONS NETWORK  |
| 12602R0 | US 09/695,969 | 6,725,401 | Granted    |           | 26-Oct-00 | 20-Apr-04  | OPTIMIZED FAULT NOTIFICATION IN AN OVERLAY MESH NETWORK VIA NETWORK KNOWLEDGE CORRELATION  |
| 12608RX | US 09/728,418 | 6,862,267 | Granted    |           | 28-Nov-00 | 1-Mar-05   | DETERMINING NETWORK ADDRESSES AND PORTS USING TABLE FROM A DESCRIPTION FILE  |
| 126111D | US 09/605,236 | 6,765,921 | Granted    |           | 28-Jun-00 | 20-Jul-04  | COMMUNICATIONS NETWORK   |
| 12620RN | US 09/696,125 | 6,826,270 | Granted    |           | 25-Oct-00 | 30-Nov-04  | CALLING NAME AND CUSTOMIZATION IN A TELECOMMUNICATIONS ENVIRONMENT   |
| 12622R0 | US 09/726,029 | 6,832,051 | Granted    |           | 30-Nov-00 | 14-Dec-04  | DISPERSION MANAGED OPTICAL TRANSMISSION LINKS FOR WAVELENGTH DIVISION MULTIPLEXED SYSTEMS  |
| 12623R0 | US 09/651,188 | 6,388,890 | Granted    |           | 30-Aug-00 | 14-May-02  | TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERCIRCUIT BOARD   |
| 12623R0 | US 10/126,700 | 6,545,876 | Granted    |           | 22-Apr-02 | 8-Apr-03   | TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERCIRCUIT BOARD   |
| 12625R0 | US 09/593,697 | 6,366,716 | Granted    |           | 15-Jun-00 | 2-Apr-02   | OPTICAL SWITCHING DEVICE   |
| 12633R0 | US 09/735,471 | 6,888,848 | Granted    |           | 14-Dec-00 | 3-May-05   | COMPACT SEGMENTATION OF VARIABLE-SIZE-PACKETS STREAMS  |
| 126441D | US 09/867,173 | 7,154,879 | Granted    |           | 29-May-01 | 26-Dec-06  | POINT TO MULTIPOINT NETWORK  |
| 12652R0 | US 09/746,421 | 6,754,288 | Granted    |           | 26-Dec-00 | 22-Jun-04  | LINE RECEIVER WITH IMPROVED DYNAMIC RANGE  |
| 12653R0 | US 09/671,140 | 6,882,799 | Granted    |           | 28-Sep-00 | 19-Apr-05  | MULTI-GRAINED NETWORK  |
| 12653R0 | US 10/983,497 | 7,684,388 | Granted    |           | 8-Nov-04  | 23-Mar-10  | MULTI-GRAINED NETWORK  |
| 12657RR | US 09/748,076 | 6,763,233 | Granted    |           | 22-Dec-00 | 13-Jul-04  | TERMINAL ROAMING OPERATIONS BETWEEN INTERGENERATIONAL WIRELESS NETWORKS  |
| 12659R0 | US 09/954,192 | 7,184,431 | Granted    |           | 18-Sep-01 | 27-Feb-07  | ROTATOR COMMUNICATION SWITCH HAVING REDUNDANT ELEMENTS   |
| 126671D | US 09/640,701 | 7,007,098 | Granted    |           | 17-Aug-00 | 28-Feb-06  | METHODS OF CONTROLLING VIDEO SIGNALS IN A VIDEO CONFERENCE   |
| 12678HU | US 09/726,758 | 8,782,230 | Granted    |           | 29-Nov-00 | 15-Jul-14  | METHOD AND APPARATUS FOR USING A COMMAND DESIGN PATTERN TO ACCESS AND CONFIGURE NETWORK ELEMENTS   |
| 12683R0 | US 09/660,196 | 6,399,898 | Granted    |           | 12-Sep-00 | 4-Jun-02   | TECHNIQUE FOR COUPLING SIGNALS BETWEEN CIRCUIT BOARDS  |
| 12689R0 | US 10/014,805 | 6,823,104 | Granted    |           | 14-Dec-01 | 23-Nov-04  | CONTROLLING MESSAGING IN AN OPTICAL NETWORK  |
| 12690R0 | US 09/735,537 | 7,120,356 | Granted    |           | 14-Dec-00 | 10-Oct-06  | CONNECTION VERIFICATION FOR OPTICAL SWITCHES   |
| 12691R0 | US 09/648,767 | 7,043,160 | Granted    |           | 28-Aug-00 | 9-May-06   | METHOD, SYSTEM AND SIGNAL FOR CARRYING OVERHEAD INFORMATION IN A TRANSPORT NETWORK EMPLOYING PHOTONIC SWITCHING NODES  |
| 12693RX | US 09/736,210 | 7,246,171 | Granted    |           | 15-Dec-00 | 17-Jul-07  | SYSTEM AND METHOD FOR MANAGING DATA TRANSMISSIONS FROM A TFTP SERVER BYSPECIFYING A MAXIMUM BANDWIDTH  |
| 12694RR | US 09/711,056 | 7,136,631 | Granted    |           | 9-Nov-00  | 14-Nov-06  | APPARATUS AND METHOD TO PROVIDE ONE-CLICK LOGON SERVICE FOR WIRELESS DEVICES   |
| 12695RX | US 09/223,047 | 6,597,689 | Granted    |           | 30-Dec-98 | 22-Jul-03  | SVC SIGNALING SYSTEM AND METHOD  |
| 12695RX | US 10/435,316 | 7,295,566 | Granted    |           | 9-May-03  | 13-Nov-07  | SVC SIGNALING SYSTEM AND METHOD  |
| 12700R0 | US 10/969,748 | 7,684,389 | Granted    |           | 20-Oct-04 | 23-Mar-10  | MULTI-DIMENSIONAL LATTICE NETWORK  |
| 127065T | US 09/667,667 | 6,888,936 | Granted    |           | 22-Sep-00 | 3-May-05   | USER CONTROLLED LOCATION SHARING DURING A COMMUNICATION  |
| 12710R0 | US 09/687,358 | 6,701,150 | Granted    |           | 13-Oct-00 | 2-Mar-04   | NETWORK DRIVEN CELL SWITCHING AND HANDOFF WITH LOAD BALANCING FOR WIRELESS SYSTEMS   |
| 12711R0 | US 09/648,622 | 6,697,970 | Granted    |           | 28-Aug-00 | 24-Feb-04  | GENERIC FAULT MANAGEMENT METHOD AND SYSTEM   |
| 12713AB | US 09/738,983 | 6,839,344 | Granted    |           | 19-Dec-00 | 4-Jan-05   | TRANSPORT MECHANISM FOR ISDN BACKHAUL OVER IP  |
| 127231D | US 09/852,995 | 7,162,474 | Granted    |           | 10-May-01 | 9-Jan-07   | RECIPIENT CONTROLLED CONTACT DIRECTORIES   |
| 12726R0 | US 09/850,130 | 6,643,423 | Granted    |           | 8-May-01  | 4-Nov-03   | SYSTEM AND METHOD FOR BRIDGE AND ROLL IN A PHOTONIC SWITCH   |
| 12728R0 | US 09/726,027 | 6,999,677 | Granted    |           | 30-Nov-00 | 14-Feb-06  | PROTECTION SWITCHING ARRANGEMENT FOR AN OPTICAL SWITCHING SYSTEM   |
| 12728R0 | US 11/287,259 | 7,212,739 | Granted    |           | 28-Nov-05 | 1-May-07   | PROTECTION SWITCHING ARRANGEMENT FOR AN OPTICAL SWITCHING SYSTEM   |
| 12743MD | US 09/709,576 | 6,888,794 | Granted    |           | 13-Nov-00 | 3-May-05   | METHOD OF DATA RATE EXCHANGE FOR TRANSMISSIONS ACROSS A PACKET-BASED NETWORK   |
| 12748R0 | US 10/659,320 | 7,545,804 | Granted    |           | 11-Sep-03 | 9-Jun-09   | HIGH THROUGHPUT ROTATOR SWITCH HAVING EXCESS TANDEM BUFFERS  |
| 12753R0 | US 09/713,292 | 7,099,933 | Granted    |           | 16-Nov-00 | 29-Aug-06  | SYSTEM AND METHOD FOR REGULATING WEB SITE ACCESS   |
| 127571D | US 09/708,381 | 6,819,878 | Granted    |           | 8-Nov-00  | 16-Nov-04  | PACKET-BASED OPTICAL COMMUNICATIONS NETWORKS   |
| 127591D | US 09/693,100 | 6,782,200 | Granted    |           | 20-Oct-00 | 24-Aug-04  | PACKET-BASED OPTICAL COMMUNICATIONS NETWORKS   |
| 12771R0 | US 09/749,435 | 6,621,384 | Granted    |           | 28-Dec-00 | 16-Sep-03  | TECHNOLOGY IMPLEMENTATION OF SUSPENDED STRIPLINE WITHIN MULTI-LAYER SUBSTRATEUSED TO VARY TIME DELAY AND TO MAXIMIZE THE REACH OF SIGNALS WITH HIGH DATA RATES OR HIGH FREQUENCIES |
| 12777R0 | US 09/749,470 | 6,441,319 | Granted    |           | 28-Dec-00 | 27-Aug-02  | INSERTED COMPONENTS FOR VIA CONNECTION OF SIGNAL TRACKS TO ACHIEVE CONTINUOUS IMPEDANCE MATCHING IN MULTI-LAYER SUBSTRATE  |
| 12805RN | US 09/752,143 | 6,771,173 | Granted    |           | 29-Dec-00 | 3-Aug-04   | SYSTEM AND DEVICE FOR MONITORING AND SIGNALING PERSONNEL PRESENCE  |
| 128391D | US 09/888,889 | 6,958,978 | Granted    |           | 25-Jun-01 | 25-Oct-05  | DIFFERENTIATED SERVICES IN PACKET-SWITCHED NETWORKS  |
| 12845R0 | US 09/750,174 | 6,973,035 | Granted    |           | 29-Dec-00 | 6-Dec-05   | METHOD AND SYSTEM FOR A ROUTING MECHANISM TO SUPPORT TWO-WAY RSVP RESERVATIONS   |

| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No. | Pub. No.  | Pub. No.  |   |
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| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No. | Pub. No.  | Pub. No.  |   |
| 1285RR   | US       | 09/898,205 | 7,193,980 | Granted  |          | 3-Jul-01  | 20-Mar-07 | CONTINUATION SESSION ATTRIBUTE  |
| 12855RO  | US       | 09/739,902 | 7,234,001 | Granted  |          | 20-Dec-00 | 19-Jun-07 | DORMANT BACKUP LINE FOR OSPF NETWORK PROTECTION   |
| 12862RN  | US       | 09/730,505 | 6,590,493 | Granted  |          | 5-Dec-00  | 8-Jul-03  | SYSTEM, DEVICE AND METHOD FOR ISOLATING SIGNALING ENVIRONMENTS IN A POWER LINE COMMUNICATION SYSTEM   |
| 12864RO  | US       | 09/742,139 | 6,826,147 | Granted  |          | 19-Dec-00 | 30-Nov-04 | METHOD AND APPARATUS FOR AGGREGATE FLOW CONTROL IN A DIFFERENTIATED SERVICES NETWORK  |
| 12866RO  | US       | 09/708,662 | 6,940,979 | Granted  |          | 9-Nov-00  | 6-Sep-05  | MANAGEMENT OF CERTIFICATES FOR PUBLIC KEY INFRASTRUCTURE  |
| 12867RO  | US       | 09/750,304 | 6,999,682 | Granted  |          | 29-Dec-00 | 14-Feb-06 | TECHNIQUE FOR OPTICALLY CONVERTING WAVELENGTHS IN A MULTI-WAVELENGTH SYSTEM   |
| 12896RO  | US       | 09/739,977 | 6,459,593 | Granted  |          | 20-Dec-00 | 1-Oct-02  | ELECTRONIC CIRCUIT BOARD  |
| 12908AB  | US       | 09/739,714 | 7,110,417 | Granted  |          | 20-Dec-00 | 19-Sep-06 | INSTANCE MEMORY HANDOFF IN MULTI-PROCESSOR SYSTEMS  |
| 12911RO  | US       | 09/739,882 | 6,462,957 | Granted  |          | 20-Dec-00 | 8-Oct-02  | HIGH PERFORMANCE ORTHOGONAL INTERCONNECT ARCHITECTURE WITHOUT MIDPLANE  |
| 12915SS  | US       | 09/753,229 | 7,039,190 | Granted  |          | 28-Dec-00 | 2-May-06  | WIRELESS LAN WEP INITIALIZATION VECTOR PARTITIONING SCHEME  |
| 12919RO  | US       | 10/431,388 | 7,051,433 | Granted  |          | 8-May-03  | 30-May-06 | MULTILAYER CIRCUIT BOARD  |
| 12920QT  | US       | 09/193,753 | 6,337,753 | Granted  |          | 17-Nov-98 | 8-Jan-02  | POLARIZATION INDEPENDENT ALL-OPTICAL REGENERATORS   |
| 12933QT  | US       | 09/250,879 | 6,385,217 | Granted  |          | 16-Feb-99 | 7-May-02  | COMPACT WAVELENGTH-INDEPENDENT WAVELENGTH-LOCKER FOR ABSOLUTE WAVELENGTH STABILITY OF A LASER DIODE   |
| 12942RR  | US       | 09/732,259 | 6,944,175 | Granted  |          | 7-Dec-00  | 13-Sep-05 | METHOD AND APPARATUS FOR SCHEDULING FORWARD LINK DATA TRANSMISSIONS IN CDMA/HDR NETWORKS  |
| 12946RO  | US       | 09/749,946 | 7,010,225 | Granted  |          | 29-Dec-00 | 7-Mar-06  | TECHNIQUE FOR INTERCHANGING WAVELENGTHS IN A MULTI-WAVELENGTH SYSTEM  |
| 12956FR  | US       | 10/297,775 | 6,785,535 | Granted  |          | 18-May-01 | 31-Aug-04 | METHOD FOR MONITORING COMMUNICATIONS IN A CELLULAR RADIOCOMMUNICATION SYSTEM, AND NETWORK CORE THEREFOR   |
| 12962FR  | US       | 10/182,360 | 7,379,830 | Granted  |          | 1-Feb-01  | 27-May-08 | DUAL BAND UNIDIRECTIONAL SCHEME IN A CELLULAR MOBILE RADIO TELECOMMUNICATIONS SYSTEM  |
| 12974RN  | US       | 09/748,757 | 7,177,953 | Granted  |          | 22-Dec-00 | 13-Feb-07 | DEVICE AND METHOD FOR DATA STORAGE  |
| 12978RO  | US       | 09/749,406 | 6,591,399 | Granted  |          | 28-Dec-00 | 8-Jul-03  | TECHNIQUE FOR FACILITATING CIRCUITRY DESIGN   |
| 12979RO  | US       | 09/739,277 | 7,209,659 | Granted  |          | 19-Dec-00 | 24-Apr-07 | MODULAR HIGH CAPACITY NETWORK   |
| 12985ID  | US       | 09/727,644 | 6,778,541 | Granted  |          | 1-Dec-00  | 17-Aug-04 | DYNAMIC DATA TUNNELING  |
| 12988ID  | US       | 09/708,383 | 6,795,544 | Granted  |          | 8-Nov-00  | 21-Sep-04 | METHOD FOR PUBLIC CONVERSATION INDICATION IN A TELEPHONY EXCHANGE   |
| 12993RO  | US       | 09/749,411 | 6,603,376 | Granted  |          | 28-Dec-00 | 5-Aug-03  | SUSPENDED STRIPLINE STRUCTURES TO REDUCE SKIN EFFECT AND DIELECTRIC LOSS TO PROVIDE LOW LOSS TRANSMISSION OF SIGNALS WITH HIGH DATA RATES OR HIGH FREQUENCIES |
| 12996QT  | US       | 09/326,079 | 6,295,396 | Granted  |          | 4-Jun-99  | 25-Sep-01 | METHOD AND APPARATUS FOR HIGHER-ORDER CHROMATIC DISPERSION COMPENSATION   |
| 12997SS  | US       | 09/731,420 | 6,766,165 | Granted  |          | 5-Dec-00  | 20-Jul-04 | METHOD AND SYSTEM FOR REMOTE AND LOCAL MOBILE NETWORK MANAGEMENT  |
| 13002RO  | US       | 09/746,578 | 6,754,662 | Granted  |          | 20-Dec-00 | 22-Jun-04 | METHOD AND APPARATUS FOR FAST AND CONSISTENT PACKET CLASSIFICATION VIA EFFICIENT HASH-CACHING   |
| 13003RO  | US       | 09/693,191 | 6,801,947 | Granted  |          | 20-Oct-00 | 5-Oct-04  | METHOD AND APPARATUS FOR BROADCASTING MEDIA OBJECTS WITH GUARANTEED QUALITY OFSERVICE   |
| 13003RO  | US       | 10/939,023 | 7,047,307 | Granted  |          | 10-Sep-04 | 16-May-06 | METHOD AND APPARATUS FOR BROADCASTING MEDIA OBJECTS WITH GUARANTEED QUALITY OFSERVICE   |
| 13008QT  | US       | 09/517,151 | 6,721,512 | Granted  |          | 2-Mar-00  | 13-Apr-04 | FORMAT  |
| 13012ID  | US       | 09/750,873 | 6,967,997 | Granted  |          | 28-Dec-00 | 22-Nov-05 | MULTI-CARRIER CONNECTION INITIALIZATION AND SYMBOL TRANSMISSION   |
| 13014DE  | US       | 09/724,322 | 6,850,758 | Granted  |          | 28-Nov-00 | 1-Feb-05  | METHOD AND SYSTEM FOR INTEGRATING FIXED TERMINALS IN A MOBILE TELECOMMUNICATION NETWORK   |
| 13021RO  | US       | 10/420,733 | 6,972,647 | Granted  |          | 23-Apr-03 | 6-Dec-05  | EMBEDDED SHIELDED STRIPLINE (ESS) STRUCTURE USING AIR CHANNELS WITHIN THE ESS STRUCTURE   |
| 13021RO  | US       | 10/420,734 | 6,949,991 | Granted  |          | 23-Apr-03 | 27-Sep-05 | EMBEDDED SHIELDED STRIPLINE (ESS) STRUCTURE USING AIR CHANNELS WITHIN THE ESS STRUCTURE   |
| 13029QT  | US       | 09/518,448 | 6,731,877 | Granted  |          | 3-Mar-00  | 4-May-04  | HIGH CAPACITY ULTRA-LONG HAUL DISPERSION AND NONLINEARITY MANAGED LIGHTWAVE COMMUNICATION SYSTEMS   |
| 13031QT  | US       | 09/272,112 | 6,384,978 | Granted  |          | 19-Mar-99 | 7-May-02  | TEMPERATURE-COMPENSATED OPTICAL FILTER ASSEMBLIES AND RELATED METHODS   |
| 13038RR  | US       | 09/742,049 | 6,870,817 | Granted  |          | 20-Dec-00 | 22-Mar-05 | METHOD AND APPARATUS FOR MONITORING CALLS OVER A SESSION INITIATION PROTOCOL NETWORK  |
| 13058ID  | US       | 09/716,594 | 6,804,196 | Granted  |          | 20-Nov-00 | 12-Oct-04 | DETERMINING TRAFFIC INFORMATION IN A COMMUNICATIONS NETWORK   |
| 13071BA  | US       | 09/931,643 | 7,283,747 | Granted  |          | 15-Aug-01 | 16-Oct-07 | OPTICAL SWITCH ROUTER   |
| 13091ID  | US       | 09/707,015 | 7,613,824 | Granted  |          | 6-Nov-00  | 3-Nov-09  | METHOD OF USING A WEB-BROWSER TO PASS INFORMATION FROM A FIRST WEB-ENTITY TO ONE OF A PLURALITY OF SECOND WEB-ENTITIES  |
| 13105CK  | US       | 10/036,125 | 6,819,466 | Granted  |          | 26-Dec-01 | 16-Nov-04 | ASYMMETRIC FABRY-PEROT MODULATORS WITH A MICROMECHANICAL PHASE COMPENSATING CAVITY  |
| 13138RO  | US       | 09/746,423 | 6,885,696 | Granted  |          | 26-Dec-00 | 26-Apr-05 | NOTIFYING BIT ALLOCATION CHANGES IN A MULTICARRIER MODULATION COMMUNICATIONS SYSTEM   |
| 13152RN  | US       | 09/691,347 | 7,571,238 | Granted  |          | 18-Oct-00 | 4-Aug-09  | AUTHORIZING COMMUNICATION SERVICES  |
| 13156ID  | US       | 09/747,697 | 6,757,494 | Granted  |          | 22-Dec-00 | 29-Jun-04 | WAVELENGTH ROUTING IN A PHOTONIC NETWORK  |
| 13184CK  | US       | 09/281,406 | 6,404,969 | Granted  |          | 30-Mar-99 | 11-Jun-02 | OPTICAL SWITCHING AND ATTENUATION SYSTEMS AND METHODS THEREFOR  |
| 13188CK  | US       | 09/281,404 | 6,301,274 | Granted  |          | 30-Mar-99 | 9-Oct-01  | TUNABLE EXTERNAL CAVITY LASER   |
| 13191CK  | US       | 10/357,637 | 6,788,408 | Granted  |          | 4-Feb-03  | 7-Sep-04  | WAVELENGTH MONITORING SYSTEM  |
| 13196CK  | US       | 09/636,806 | 6,546,828 | Granted  |          | 10-Aug-00 | 8-Apr-03  | OPTICAL FIBER WAVELENGTH REFERENCE DEVICE   |
| 13204CK  | US       | 10/827,715 | 6,996,144 | Granted  |          | 20-Apr-04 | 7-Feb-06  | WAVELENGTH STABILIZATION OF TUNABLE LASERS BY CURRENT MODULATION  |
| 13205CK  | US       | 09/761,054 | 6,970,653 | Granted  |          | 15-Jan-01 | 29-Nov-05 | FIBEROPTIC SYSTEM FOR COMMUNICATING BETWEEN A CENTRAL OFFICE AND A DOWNSTREAM STATION   |
| 13206ID  | US       | 09/671,863 | 6,466,363 | Granted  |          | 27-Sep-00 | 15-Oct-02 | BROADBAND AMPLIFICATION WITH FIRST AND SECOND AMPLIFIERS HAVING DIFFERENT PUMP WAVELENGTH REQUIREMENTS  |
| 13208RN  | US       | 09/802,195 | 6,937,563 | Granted  |          | 8-Mar-01  | 30-Aug-05 | HOMING AND CONTROLLING IP TELEPHONES  |
| 13215RO  | US       | 09/708,782 | 7,092,727 | Granted  |          | 8-Nov-00  | 15-Aug-06 | APPARATUS AND METHOD FOR SUPPORTING DIFFERENTIATED PACKET DATA SERVICES WITHIN A WIRELESS NETWORK   |
| 13218SS  | US       | 09/747,296 | 8,619,793 | Granted  |          | 22-Dec-00 | 31-Dec-13 | DYNAMIC ASSIGNMENT OF TRAFFIC CLASSES TO A PRIORITY QUEUE IN A PACKET FORWARDING DEVICE   |

| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    |  |
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| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    |  |
| 13229RR | US     | 09/757,904 | 7,152,103 | Granted | 10-Jan-01 | 19-Dec-06 | LAWFUL COMMUNICATION INTERCEPTION - INTERCEPTING COMMUNICATION ASSOCIATED INFORMATION                            |
| 13241AU | US     | 09/772,968 | 6,807,371 | Granted | 27-Nov-00 | 19-Oct-04 | RECONFIGURABLE ADD-DROP MULTIPLEXER  |
| 13244RO | US     | 09/750,071 | 6,907,002 | Granted | 29-Dec-00 | 14-Jun-05 | BURST SWITCHING IN A HIGH CAPACITY NETWORK   |
| 13245AB | US     | 09/745,202 | 6,958,980 | Granted | 20-Dec-00 | 25-Oct-05 | ESTABLISHING CALL SESSIONS BETWEEN TERMINALS THROUGH PLURAL SWITCH SYSTEMS                                       |
| 13249RO | US     | 09/749,945 | 6,563,751 | Granted | 29-Dec-00 | 13-May-03 | SYSTEM AND METHOD FOR TESTING TDM SRAMS  |
| 13250BA | US     | 09/740,706 | 7,079,770 | Granted | 19-Dec-00 | 18-Jul-06 | SYSTEM AND APPARATUS FOR DROPPING AND ADDING OPTICAL DATA STREAMS IN AN OPTICAL COMMUNICATION NETWORK            |
| 13251CK | US     | 10/017,521 | 6,847,753 | Granted | 14-Dec-01 | 25-Jan-05 | SWITCH-VARIABLE OPTICAL ATTENUATOR AND SWITCH ARRAYS   |
| 13264ID | US     | 09/723,019 | 7,161,897 | Granted | 27-Nov-00 | 9-Jan-07  | COMMUNICATIONS SYSTEM, APPARATUS AND METHOD THEREFOR   |
| 13291RO | US     | 09/865,667 | 7,516,485 | Granted | 29-May-01 | 7-Apr-09  | METHOD AND APPARATUS FOR SECURELY TRANSMITTING ENCRYPTED DATA THROUGH A FIREWALL AND FOR MONITORING USER TRAFFIC |
| 13294ID | US     | 09/767,098 | 6,526,195 | Granted | 22-Jan-01 | 25-Feb-03 | PROTECTING OPTICAL SWITCHES  |
| 13295ID | US     | 09/751,060 | 7,103,003 | Granted | 29-Dec-00 | 5-Sep-06  | NETWORK PLANNING TOOL  |
| 13301RO | US     | 09/750,766 | 7,787,447 | Granted | 28-Dec-00 | 31-Aug-10 | VOICE OPTIMIZATION IN A NETWORK HAVING VOICE OVER THE INTERNET PROTOCOL COMMUNICATION DEVICES                    |
| 13301RO | US     | 12/749,270 | 8,451,835 | Granted | 29-Mar-10 | 28-May-13 | VOICE OPTIMIZATION IN A NETWORK HAVING VOICE OVER INTERNET PROTOCOL COMMUNICATION DEVICES                        |
| 13301RO | US     | 13/901,107 | #EMPTY    | Filed   | 23-May-13 | #EMPTY    | VOICE OPTIMIZATION IN A NETWORK HAVING VOICE OVER INTERNET PROTOCOL COMMUNICATION DEVICES                        |
| 13313ID | US     | 09/785,340 | 6,868,116 | Granted | 16-Feb-01 | 15-Mar-05 | UNIVERSAL TELEPHONY TONES DETECTOR   |
| 13314RO | US     | 09/751,289 | 7,114,003 | Granted | 29-Dec-00 | 26-Sep-06 | CONTENT NETWORKS   |
| 13317SS | US     | 09/742,683 | 8,112,545 | Granted | 19-Dec-00 | 7-Feb-12  | DISTRIBUTED NETWORK ADDRESS TRANSLATION CONTROL  |
| 13317SS | US     | 13/363,786 | 8,788,709 | Granted | 1-Feb-12  | 22-Jul-14 | DISTRIBUTED NETWORK ADDRESS TRANSLATION CONTROL  |
| 13330RX | US     | 09/750,062 | 6,481,844 | Granted | 29-Dec-00 | 19-Nov-02 | APPARATUS, METHOD AND MEDIUM FOR PROVIDING AN OPTICAL EFFECT   |
| 13335CK | US     | 09/750,204 | 6,394,033 | Granted | 28-Dec-00 | 23-Aug-03 | SINGLE ETALON, MULTI-POINT WAVELENGTH CALIBRATION REFERENCE  |
| 13336RO | US     | 09/704,291 | 6,985,959 | Granted | 1-Nov-00  | 10-Jan-06 | CONSTRAINT ROUTE DISSEMINATION USING DISTRIBUTED ROUTE EXCHANGERS  |
| 13342XR | US     | 09/234,177 | 6,272,907 | Granted | 19-Jan-99 | 14-Aug-01 | INTEGRATED SILICON PROFILOMETER AND AFM HEAD   |
| 13351XR | US     | 09/446,540 | 6,445,844 | Granted | 21-Dec-99 | 3-Sep-02  | FLEXIBLE, MODULAR, COMPACT FIBER OPTIC SWITCH  |
| 13353XR | US     | 09/704,439 | 6,650,803 | Granted | 1-Nov-00  | 18-Nov-03 | METHOD AND APPARATUS FOR OPTICAL TO ELECTRICAL TO OPTICAL CONVERSION IN AN OPTICAL CROSS-CONNECT SWITCH          |
| 13353XR | US     | 10/648,025 | 6,813,407 | Granted | 27-Aug-03 | 2-Nov-04  | METHOD AND APPARATUS FOR BRIDGING OPTICAL SIGNALS IN AN OPTICAL NETWORK  |
| 13353XR | US     | 10/648,956 | 6,944,264 | Granted | 27-Aug-03 | 13-Sep-05 | METHOD AND APPARATUS FOR REGENERATING OPTICAL SIGNALS IN AN ALL-OPTICAL CROSS-CONNECT SWITCH                     |
| 13353XR | US     | 10/650,543 | 6,947,623 | Granted | 28-Aug-03 | 20-Sep-05 | SIGNALS AND METHODS FOR INCREASING RELIABILITY IN OPTICAL NETWORK EQUIPMENT                                      |
| 13354XR | US     | 10/157,354 | 6,744,550 | Granted | 28-May-02 | 1-Jun-04  | TWO-DIMENSIONAL MICRO-MIRROR ARRAY ENHANCEMENTS  |
| 13354XR | US     | 10/695,109 | 7,031,045 | Granted | 28-Oct-03 | 18-Apr-06 | TWO-DIMENSIONAL MICRO-MIRROR ARRAY ENHANCEMENTS  |
| 13357XR | US     | 09/704,444 | 6,597,826 | Granted | 1-Nov-00  | 22-Jul-03 | OPTICAL CROSS-CONNECT SWITCHING SYSTEM WITH BRIDGING, TEST ACCESS AND REDUNDANCY                                 |
| 13371XR | US     | 10/221,867 | 6,961,506 | Granted | 14-Sep-02 | 1-Nov-05  | VARIABLE ATTENUATION OF FREE-SPACE LIGHT BEAMS   |
| 13375XR | US     | 09/704,445 | 6,792,174 | Granted | 1-Nov-00  | 14-Sep-04 | METHOD AND APPARATUS FOR SIGNALING BETWEEN AN OPTICAL CROSS-CONNECT SWITCH AND ATTACHED EQUIPMENT                |
| 13387XR | US     | 08/855,883 | 6,044,705 | Granted | 12-May-97 | 4-Apr-00  | MICROMACHINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSION BARS  |
| 13387XR | US     | 09/518,364 | 6,467,345 | Granted | 3-Mar-00  | 22-Oct-02 | METHOD OF OPERATING MICROMACHINED MEMBERS COUPLED FOR RELATIVE ROTATION  |
| 13388XR | US     | 10/031,159 | 6,694,072 | Granted | 11-Jan-02 | 17-Feb-04 | FLEXIBLE, MODULAR, COMPACT FIBER OPTIC SWITCH IMPROVEMENTS   |
| 13389XR | US     | 09/704,458 | 6,882,765 | Granted | 1-Nov-00  | 19-Apr-05 | CONNECTION PROTECTION BETWEEN CLIENTS AND OPTICAL CROSS-CONNECT SWITCHES   |
| 13421RR | US     | 09/698,362 | 6,867,797 | Granted | 27-Oct-00 | 15-Mar-05 | ANIMATING IMAGES DURING A CALL   |
| 13423RO | US     | 09/751,796 | 6,937,572 | Granted | 29-Dec-00 | 30-Aug-05 | CALL TRACE ON A PACKET SWITCHED NETWORK  |
| 13426RO | US     | 09/863,319 | 6,886,161 | Granted | 24-May-01 | 26-Apr-05 | METHOD AND DATA STRUCTURE FOR COMPRESSING FILE-REFERENCE INFORMATION   |
| 13456HU | US     | 09/689,101 | 6,590,961 | Granted | 12-Oct-00 | 8-Jul-03  | CALL PROTECT SYSTEMS WITH HANDOFF REDUNDANCY   |
| 13459BA | US     | 09/877,150 | 6,993,136 | Granted | 8-Jun-01  | 31-Jan-06 | SPATIAL KEY TREES FOR KEY MANAGEMENT IN WIRELESS ENVIRONMENTS  |
| 13460BA | US     | 09/952,328 | 7,539,313 | Granted | 13-Sep-01 | 26-May-09 | SYSTEM AND METHOD FOR KEY MANAGEMENT ACROSS GEOGRAPHIC DOMAINS   |
| 13464RO | US     | 09/746,124 | 6,928,245 | Granted | 20-Dec-00 | 9-Aug-05  | METHOD FOR CONFIGURING WDM RING OPTICAL NETWORKS   |
| 13469RO | US     | 09/723,591 | 7,519,047 | Granted | 28-Nov-00 | 14-Apr-09 | METHOD AND APPARATUS FOR CLONING TERMINALS IN A COMMUNICATIONS NETWORK   |
| 13476ST | US     | 09/735,500 | 6,763,093 | Granted | 14-Dec-00 | 13-Jul-04 | APPLICATION BASED QUEUING VIA AN H.323/SIP INTERFACE   |
| 13476ST | US     | 10/856,733 | 7,613,289 | Granted | 28-May-04 | 3-Nov-09  | APPLICATION BASED QUEUING VIA AN H.323/SIP INTERFACE   |
| 13477ST | US     | 09/735,501 | 6,643,357 | Granted | 14-Dec-00 | 4-Nov-03  | DISTRIBUTED REDIRECT SERVER  |
| 13477ST | US     | 10/694,566 | 7,031,445 | Granted | 27-Oct-03 | 18-Apr-06 | DISTRIBUTED REDIRECT SERVER  |
| 13487RR | US     | 09/976,643 | 7,200,125 | Granted | 12-Oct-01 | 3-Apr-07  | METHOD AND APPARATUS FOR DIFFERENTIATED COMMUNICATIONS IN A WIRELESS NETWORK                                     |
| 13492ID | US     | 09/864,844 | 6,490,385 | Granted | 24-May-01 | 3-Dec-02  | DIMENSIONALLY STABLE DEVICE CONSTRUCTION   |
| 13499RO | US     | 09/742,347 | 6,961,776 | Granted | 22-Dec-00 | 1-Nov-05  | ARCHITECTURE FOR MULTIPLE CHANNEL ACCESS TO APPLICATIONS   |
| 13530RO | US     | 09/961,379 | 6,889,338 | Granted | 25-Sep-01 | 3-May-05  | ELECTING A MASTER SERVER USING ELECTION PERIODIC TIMER IN FAULT-TOLERANT DISTRIBUTED DYNAMIC NETWORKS SYSTEMS    |
| 13541RN | US     | 09/741,401 | 7,333,505 | Granted | 18-Dec-00 | 19-Feb-08 | TRANSACTION MANAGEMENT FOR INTERWORKING BETWEEN DISPARATE NETWORKS   |
| 13557RO | US     | 09/697,120 | 6,795,445 | Granted | 27-Oct-00 | 21-Sep-04 | HIERARCHICAL BANDWIDTH MANAGEMENT IN MULTISERVICE NETWORKS   |

| Pub No  | App No | Pub No     | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |   |
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| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |   |
| 13569RO | US     | 10/191,512 | 7,103,282 | Granted |        | 10-Jul-02 | 5-Sep-06  | ALL OPTICAL CLOCK RECOVERY  |
| 13569RO | US     | 11/496,727 | 7,376,354 | Granted |        | 1-Aug-06  | 20-May-08 | ALL OPTICAL CLOCK RECOVERY  |
| 13575RO | US     | 29/133,148 | D454,548  | Granted |        | 24-Nov-00 | 19-Mar-02 | BULGING ELEMENT ON PRINTED CIRCUIT BOARD  |
| 13586RO | US     | 10/005,328 | 7,379,465 | Granted |        | 7-Dec-01  | 27-May-08 | TUNNELING SCHEME OPTIMIZED FOR USE IN VIRTUAL PRIVATE NETWORKS  |
| 13589D  | US     | 09/893,258 | 6,647,030 | Granted |        | 27-Jun-01 | 11-Nov-03 | TUNING OF OPTICAL FIBER COMPONENTS  |
| 13606RN | US     | 09/842,298 | 6,961,332 | Granted |        | 25-Apr-01 | 1-Nov-05  | MULTIPLE APPEARANCE DIRECTORY NUMBER SUPPORT ACROSS PACKET AND CIRCUIT SWITCHED NETWORKS              |
| 136128A | US     | 10/040,975 | 7,533,183 | Granted |        | 28-Dec-01 | 12-May-09 | CENTRAL CONTROL OF MULTIPLE ADDRESS DOMAINS WITHIN A ROUTER   |
| 13619D  | US     | 09/815,323 | 6,853,719 | Granted |        | 22-Mar-01 | 8-Feb-05  | PROVISION OF MEDIA CONTENT TO TELEPHONY CALLERS ON-HOLD   |
| 13620D  | US     | 09/888,883 | 6,854,013 | Granted |        | 25-Jun-01 | 8-Feb-05  | METHOD AND APPARATUS FOR OPTIMIZING NETWORK SERVICE   |
| 13621D  | US     | 09/745,887 | 6,496,626 | Granted |        | 21-Dec-00 | 17-Dec-02 | TELECOMMUNICATION SYSTEM POWER SUPPLY   |
| 13626SS | US     | 09/935,819 | 6,566,639 | Granted |        | 23-Aug-01 | 20-May-03 | SYSTEM, METHOD AND APPARATUS FOR DATA STORAGE USING AN OPTICAL MEDIUM                                 |
| 13630RO | US     | 09/742,232 | 6,621,338 | Granted |        | 22-Dec-00 | 16-Sep-03 | GAIN DETERMINATION FOR CORRELATION PROCESSES  |
| 13639RO | US     | 09/753,025 | 6,970,906 | Granted |        | 29-Dec-00 | 29-Nov-05 | VOICE MAIL CALLER IDENTIFICATION  |
| 13640RO | US     | 09/753,345 | 7,031,437 | Granted |        | 29-Dec-00 | 18-Apr-06 | METHOD AND SYSTEM FOR PROVIDING REMOTE ACCESS TO PREVIOUSLY TRANSMITTED ENTERPRISE MESSAGES           |
| 13645D  | US     | 09/751,058 | 6,985,447 | Granted |        | 29-Dec-00 | 10-Jan-06 | LABEL SWITCHED TRAFFIC ROUTING AND SIGNALING IN A LABEL SWITCHED COMMUNICATION PACKET NETWORK         |
| 13655RO | US     | 10/094,655 | 6,762,877 | Granted |        | 12-Mar-02 | 13-Jul-04 | TECHNIQUE FOR SELECTIVELY FREQUENCY TRANSLATING OPTICAL CHANNELS IN AN OPTICAL NETWORK                |
| 13658D  | US     | 09/888,730 | 7,343,399 | Granted |        | 25-Jun-01 | 11-Mar-08 | APPARATUS AND METHOD FOR MANAGING INTERNET RESOURCE REQUESTS  |
| 13682SS | US     | 09/723,388 | 6,775,804 | Granted |        | 28-Nov-00 | 10-Aug-04 | DETERMINING INTEGRITY OF A PACKET   |
| 13683SS | US     | 09/723,835 | 6,782,503 | Granted |        | 28-Nov-00 | 24-Aug-04 | GENERATING A SIGNATURE TO ADD TO A TEST PACKET TO ACHIEVE A DESIRED CHECK VALUE                       |
| 13684SS | US     | 09/723,836 | 6,625,764 | Granted |        | 28-Nov-00 | 23-Sep-03 | TESTING USING TEST PACKETS CONTAINING RANDOM DATA   |
| 13694RO | US     | 09/829,978 | 6,497,578 | Granted |        | 11-Apr-01 | 24-Dec-02 | METHOD AND APPARATUS TO INCREASE CABLE CONNECTOR DENSITY IN EQUIPMENT                                 |
| 13702XR | US     | 09/704,457 | 6,571,030 | Granted |        | 1-Nov-00  | 27-May-03 | OPTICAL CROSS-CONNECT SWITCHING SYSTEM  |
| 13706RO | US     | 29/135,001 | D456,241  | Granted |        | 4-Jan-01  | 30-Apr-02 | CABLE GUIDE   |
| 13708RO | US     | 09/960,959 | 7,233,590 | Granted |        | 25-Sep-01 | 19-Jun-07 | SWITCHED CHANNEL-BAND NETWORK   |
| 13711BA | US     | 09/707,280 | 7,483,964 | Granted |        | 6-Nov-00  | 27-Jan-09 | SYSTEM, DEVICE, AND METHOD FOR PROVIDING PERSONALIZED SERVICES IN A COMMUNICATION SYSTEM              |
| 13722RO | US     | 10/115,561 | 7,246,376 | Granted |        | 3-Apr-02  | 17-Jul-07 | METHOD AND APPARATUS FOR SECURITY MANAGEMENT IN A NETWORK ENVIRONMENT                                 |
| 13725RR | US     | 09/742,042 | 6,970,711 | Granted |        | 20-Dec-00 | 29-Nov-05 | DUAL PROTOCOL GPRS MESSAGE CENTER AND METHOD THEREFOR   |
| 13765BA | US     | 09/861,822 | 7,349,630 | Granted |        | 21-May-01 | 25-Mar-08 | HYBRID WDM/TDM NETWORK ARCHITECTURE   |
| 13766RO | US     | 09/928,745 | 7,171,121 | Granted |        | 14-Aug-01 | 30-Jan-07 | OPTICAL NETWORK SUBSCRIBER ACCESS ARCHITECTURE  |
| 13767BA | US     | 09/930,548 | 7,738,359 | Granted |        | 15-Aug-01 | 15-Jun-10 | SYSTEM, DEVICE, AND METHOD FOR MANAGING ALTERNATE SITE SWITCHING IN AN OPTICAL COMMUNICATION SYSTEM   |
| 13769RO | US     | 09/946,736 | 7,787,370 | Granted |        | 6-Sep-01  | 31-Aug-10 | TECHNIQUE FOR ADAPTIVELY LOAD BALANCING CONNECTIONS IN MULTI-LINK TRUNKS                              |
| 13775RO | US     | 10/209,904 | 7,352,971 | Granted |        | 2-Aug-02  | 1-Apr-08  | BROADBAND CONTROL OF POLARIZATION MODE DISPERSION   |
| 13783BA | US     | 10/016,777 | 7,240,123 | Granted |        | 10-Dec-01 | 3-Jul-07  | DISTRIBUTED ROUTING CORE  |
| 13787BA | US     | 09/906,548 | 7,154,851 | Granted |        | 16-Jul-01 | 26-Dec-06 | APPLICATION-AWARE RESOURCE RESERVATION IN MULTISERVICE NETWORKS                                       |
| 13860D  | US     | 09/848,743 | 7,380,017 | Granted |        | 3-May-01  | 27-May-08 | ROUTE PROTECTION IN A COMMUNICATIONS NETWORK  |
| 13874D  | US     | 09/794,125 | 7,411,994 | Granted |        | 27-Feb-01 | 12-Aug-08 | METHOD OF PROVIDING TONE INFORMATION TO NODES IN A PACKET NETWORK                                     |
| 13886RO | US     | 10/075,436 | 7,301,950 | Granted |        | 14-Feb-02 | 27-Nov-07 | ADAPTIVE STATE TRANSITION CONTROL   |
| 13888RO | US     | 09/821,722 | 7,348,494 | Granted |        | 29-Mar-01 | 25-Mar-08 | SINGLE LAYER INTERCONNECTS  |
| 13901RO | US     | 29/135,361 | D460,753  | Granted |        | 11-Jan-01 | 23-Jul-02 | INTEGRATED COMMUNICATION ACCESS DEVICE  |
| 13903RO | US     | 10/083,305 | 7,065,143 | Granted |        | 26-Feb-02 | 20-Jun-06 | METHOD AND DESIGN FOR INCREASING SIGNAL TO NOISE RATIO IN XDSL MODEMS                                 |
| 13981FR | US     | 09/161,589 | 6,138,097 | Granted |        | 28-Sep-98 | 24-Oct-00 | RECONNAISSANCE EN APPRENTISSAGE- FR9712063- SPEECH RECOGNITION LEARNING TECHNIQUE                     |
| 14020FR | US     | 09/161,588 | 6,246,980 | Granted |        | 28-Sep-98 | 12-Jun-01 | METHOD OF SPEECH RECOGNITION  |
| 14034RO | US     | 10/115,396 | 7,290,286 | Granted |        | 3-Apr-02  | 30-Oct-07 | CONTENT PROVIDER SECURE AND TRACEABLE PORTAL  |
| 14039BA | US     | 09/934,446 | 7,046,662 | Granted |        | 21-Aug-01 | 16-May-06 | SYSTEM, DEVICE, AND METHOD FOR DISTRIBUTING ROUTING INFORMATION IN AN OPTICAL VIRTUAL PRIVATE NETWORK |
| 14041RO | US     | 09/892,492 | 7,079,772 | Granted |        | 28-Jun-01 | 18-Jul-06 | OPTICAL SIGNAL GENERATOR WITH STABILIZED CARRIER FREQUENCY OUTPUT                                     |
| 14042RO | US     | 09/893,493 | 7,599,620 | Granted |        | 29-Jun-01 | 6-Oct-05  | COMMUNICATIONS NETWORK FOR A METROPOLITAN AREA  |
| 14043RO | US     | 09/870,665 | 7,035,541 | Granted |        | 1-Jun-01  | 25-Apr-06 | WAVELENGTH ARCHITECTURE AND IMPLEMENTATION FOR A PHOTONICALLY SWITCHED NETWORK                        |
| 14051RO | US     | 10/025,615 | 6,889,187 | Granted |        | 26-Dec-01 | 3-May-05  | METHOD AND APPARATUS FOR IMPROVED VOICE ACTIVITY DETECTION IN A PACKET VOICE NETWORK                  |
| 14092HU | US     | 09/976,721 | 6,763,089 | Granted |        | 12-Oct-01 | 13-Jul-04 | SYSTEM FOR ENABLING TDD COMMUNICATION IN A TELEPHONE NETWORK AND METHOD FOR USING SAME                |
| 14102RR | US     | 09/751,461 | 6,868,396 | Granted |        | 29-Dec-00 | 15-Mar-05 | METHOD AND APPARATUS FOR MONITORING INTERNET BASED SALES TRANSACTION BY LOCAL VENDORS                 |
| 14108CK | US     | 09/966,502 | 6,813,291 | Granted |        | 28-Sep-01 | 2-Nov-04  | TUNABLE FABRY-PEROT FILTER AND TUNABLE VERTICAL CAVITY SURFACE EMITTING LASER                         |
| 14111CK | US     | 10/103,416 | 6,744,324 | Granted |        | 20-Mar-02 | 1-Jun-04  | METHOD AND APPARATUS FOR CALIBRATING A FABRY-PEROT INTERFEROMETER BASED MEASUREMENT SYSTEM            |
| 14114RO | US     | 09/817,796 | 6,947,547 | Granted |        | 27-Mar-01 | 20-Sep-05 | MANAGEMENT SYSTEM FOR A TELECOMMUNICATIONS SWITCH   |
| 14124RG | US     | 10/196,884 | 7,796,583 | Granted |        | 17-Jul-02 | 14-Sep-10 | PACKET HANDLER FOR HIGH SPEED DATA NETWORKS   |





| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    | Pub No  |
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| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    | Pub No  |
| 14758RO | US     | 12/110,677 | 8,024,457 | Granted | 28-Apr-08 | 20-Sep-11 | LABEL SWITCHED PATH OAM WRAPPER   |
| 14758RO | US     | 13/212,327 | #EMPTY    | Filed   | 18-Aug-11 | #EMPTY    | LABEL SWITCHED PATH OAM WRAPPER   |
| 14763RO | US     | 10/143,889 | 7,486,677 | Granted | 14-May-02 | 3-Feb-09  | TECHNIQUE FOR PROVIDING INTER-NODAL COMMUNICATIONS IN A PHOTONICS NETWORK   |
| 14774RO | US     | 10/058,879 | 6,646,790 | Granted | 28-Jan-02 | 11-Nov-03 | OPTICAL AMPLIFIER GAIN CONTROL MONITORING   |
| 14779RO | US     | 10/274,083 | 7,830,914 | Granted | 21-Oct-02 | 9-Nov-10  | TECHNIQUE FOR DELIVERING AND ENFORCING NETWORK QUALITY OF SERVICE TO MULTIPLE OUTSTATIONS   |
| 14782DE | US     | 09/999,267 | 7,529,711 | Granted | 31-Oct-01 | 5-May-09  | METHOD AND SYSTEM FOR PROVIDING AND BILLING INTERNET SERVICES   |
| 14784RO | US     | 10/191,660 | 7,152,115 | Granted | 9-Jul-02  | 19-Dec-06 | VIRTUAL PRIVATE NETWORKS  |
| 14796RO | US     | 10/054,512 | 7,187,654 | Granted | 13-Nov-01 | 6-Mar-07  | RATE-CONTROLLED OPTICAL BURST SWITCHING   |
| 14796RO | US     | 11/625,949 | 8,406,246 | Granted | 23-Jan-07 | 26-Mar-13 | RATE-CONTROLLED OPTICAL BURST SWITCHING   |
| 14796RO | US     | 13/792,825 | 8,902,916 | Granted | 11-Mar-13 | 2-Dec-14  | RATE-CONTROLLED OPTICAL BURST SWITCHING   |
| 14800CK | US     | 09/993,271 | 6,520,652 | Granted | 14-Nov-01 | 18-Feb-03 | METHOD AND APPARATUS FOR REDUCING UNDESIRABLE REFLECTED LIGHT IN INTEGRATED OPTO-ELECTRONIC MODULES   |
| 14807D  | US     | 09/991,386 | 8,782,226 | Granted | 13-Nov-01 | 15-Jul-14 | ALLOCATING INTERNET PROTOCOL (IP) ADDRESSES TO NODES IN COMMUNICATIONS NETWORKS WHICH USE INTEGRATED IS-IS  |
| 14818ID | US     | 09/973,656 | 7,246,166 | Granted | 9-Oct-01  | 17-Jul-07 | ESTABLISHING A COMMUNICATIONS PATH VIA A MULTI-HOMED COMMUNICATIONS NETWORK   |
| 14828RO | US     | 10/081,987 | 7,020,150 | Granted | 22-Feb-02 | 28-Mar-06 | SYSTEM, DEVICE, AND METHOD FOR TRAFFIC AND SUBSCRIBER SERVICE DIFFERENTIATION USING MULTIPROTOCOL LABEL SWITCHING   |
| 14829RO | US     | 10/013,677 | 8,429,221 | Granted | 13-Dec-01 | 23-Apr-13 | CONTENT REQUEST ROUTING METHOD  |
| 14845SS | US     | 10/177,998 | 8,750,702 | Granted | 21-Jun-02 | 10-Jun-14 | PASSIVE OPTICAL LOOPBACK  |
| 14846RO | US     | 10/180,050 | 7,236,699 | Granted | 27-Jun-02 | 26-Jun-07 | HIGH CAPACITY OPTICAL NODE  |
| 14850RO | US     | 10/326,123 | 7,069,650 | Granted | 23-Dec-02 | 4-Jul-06  | TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A SIGNAL ROUTING DEVICE  |
| 14851RO | US     | 10/178,131 | 7,610,332 | Granted | 24-Jun-02 | 27-Oct-09 | OVERLAY NETWORKS  |
| 14866SS | US     | 10/172,547 | 7,352,836 | Granted | 14-Jun-02 | 1-Apr-08  | SYSTEM AND METHOD FOR CROSS-CLOCK DOMAIN RATE MATCHING  |
| 14869RO | US     | 10/224,417 | 8,086,865 | Granted | 21-Aug-02 | 27-Dec-11 | TECHNIQUE FOR ENABLING A PLURALITY OF SOFTWARE COMPONENTS TO COMMUNICATE IN A SOFTWARE COMPONENT MATRIX ENVIRONMENT   |
| 14869RO | US     | 13/334,375 | 8,341,218 | Granted | 22-Dec-11 | 25-Dec-12 | TECHNIQUE FOR ENABLING A PLURALITY OF SOFTWARE COMPONENTS TO COMMUNICATE IN A SOFTWARE COMPONENT MATRIX ENVIRONMENT   |
| 14869RO | US     | 13/724,017 | 8,706,806 | Granted | 21-Dec-12 | 22-Apr-14 | TECHNIQUE FOR ENABLING A PLURALITY OF SOFTWARE COMPONENTS TO COMMUNICATE IN A SOFTWARE COMPONENT MATRIX ENVIRONMENT   |
| 14876RO | US     | 10/172,981 | 7,221,656 | Granted | 18-Jun-02 | 22-May-07 | TECHNIQUE FOR IMPLEMENTING AN ADMISSION CONTROL SCHEME FOR DATA FLOWS   |
| 14877RO | US     | 10/076,415 | 7,043,651 | Granted | 19-Feb-02 | 9-May-06  | TECHNIQUE FOR SYNCHRONIZING CLOCKS IN A NETWORK   |
| 14879RO | US     | 10/054,509 | 7,212,551 | Granted | 13-Nov-01 | 1-May-07  | TIME COORDINATION IN A BURST-SWITCHING NETWORK  |
| 14880RO | US     | 10/054,362 | 7,215,666 | Granted | 13-Nov-01 | 8-May-07  | DATA BURST SCHEDULING   |
| 14880RO | US     | 11/696,213 | 7,590,109 | Granted | 4-Apr-07  | 15-Sep-09 | DATA BURST SCHEDULING   |
| 14903ID | US     | 10/037,043 | 8,095,668 | Granted | 9-Nov-01  | 10-Jan-12 | MIDDLEBOX CONTROL   |
| 14903ID | US     | 13/325,278 | 8,468,259 | Granted | 14-Dec-11 | 18-Jun-13 | MIDDLEBOX CONTROL   |
| 14903ID | US     | 13/325,290 | 8,489,751 | Granted | 14-Dec-11 | 16-Jul-13 | MIDDLEBOX CONTROL   |
| 14904FR | US     | 10/054,207 | 8,713,185 | Granted | 22-Jan-02 | 29-Apr-14 | METHODS OF ESTABLISHING VIRTUAL CIRCUITS AND OF PROVIDING A VIRTUAL PRIVATE NETWORK SERVICE THROUGH A SHARED NETWORK, AND PROVIDER EDGE DEVICE FOR SUCH NETWORK |
| 14908RO | US     | 10/139,928 | 6,926,561 | Granted | 7-May-02  | 9-Aug-05  | INTEGRATED HIGH AND LOW FREQUENCY CONNECTOR ASSEMBLY  |
| 14918RO | US     | 10/101,211 | 7,256,354 | Granted | 20-Mar-02 | 14-Aug-07 | TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERCIRCUIT BOARD  |
| 14945RN | US     | 10/079,237 | 8,644,475 | Granted | 20-Feb-02 | 4-Feb-14  | TELEPHONY USAGE DERIVED PRESENCE INFORMATION  |
| 14946FR | US     | 10/185,113 | 6,789,121 | Granted | 28-Jun-02 | 7-Sep-04  | METHOD OF PROVIDING A VIRTUAL PRIVATE NETWORK SERVICE THROUGH A SHARED NETWORK, AND PROVIDER EDGE DEVICE FOR SUCH NETWORK                                       |
| 14963RR | US     | 10/102,171 | 7,382,748 | Granted | 20-Mar-02 | 3-Jun-08  | ASSIGNING A DYNAMIC HOME AGENT FOR A MOBILE NETWORK ELEMENT   |
| 14966CK | US     | 10/264,060 | 6,831,450 | Granted | 3-Oct-02  | 14-Dec-04 | ELECTRONIC METHOD AND APPARATUS FOR MEASURING OPTICAL WAVELENGTH AND LOCKING TO A SET OPTICAL WAVELENGTH OF FABRY-PEROT TUNABLE CAVITY OPTO-ELECTRONIC DEVICES  |
| 14979BA | US     | 10/077,763 | 7,149,215 | Granted | 20-Feb-02 | 12-Dec-06 | TECHNIQUE FOR MULTICASTING RECEIVER MEMBERSHIP REPORTS  |
| 14986BA | US     | 09/930,375 | 7,437,449 | Granted | 15-Aug-01 | 14-Oct-08 | SYSTEM, DEVICE, AND METHOD FOR MANAGING SERVICE LEVEL AGREEMENTS IN AN OPTICAL COMMUNICATION SYSTEM   |
| 14997BA | US     | 09/933,330 | 6,693,732 | Granted | 20-Aug-01 | 17-Feb-04 | OPTICAL SAMPLER BASED ON STABLE, NON-ABSORBING OPTICAL HARD LIMITERS  |
| 14999BA | US     | 09/933,222 | 6,674,559 | Granted | 20-Aug-01 | 6-Jan-04  | OPTICAL AUTOMATIC GAIN CONTROL BASED ON STABLE, NON-ABSORBING OPTICAL HARD LIMITERS   |
| 15000BA | US     | 09/933,146 | 6,636,337 | Granted | 20-Aug-01 | 21-Oct-03 | OPTICAL SWITCHING DEVICE BASED ON STABLE, NON-ABSORBING OPTICAL HARD LIMITERS   |
| 15001BA | US     | 09/969,348 | 6,573,330 | Granted | 2-Oct-01  | 3-Jun-03  | MULTIPLE QUANTUM WELL OPTOELECTRONIC DEVICES  |
| 15023RO | US     | 10/152,028 | 7,212,492 | Granted | 22-May-02 | 1-May-07  | TECHNIQUE FOR PROVIDING A CONTROL AND MANAGEMENT PROTOCOL FOR AN ETHERNET LAYER IN AN ETHERNET NETWORK  |
| 15030RN | US     | 10/106,415 | 7,286,545 | Granted | 26-Mar-02 | 23-Oct-07 | SERVICE BROKER  |
| 15041RO | US     | 10/407,460 | 7,069,646 | Granted | 7-Apr-03  | 4-Jul-06  | TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYER SIGNAL ROUTING DEVICE   |
| 15044RR | US     | 10/113,696 | 6,999,564 | Granted | 29-Mar-02 | 14-Feb-06 | SYSTEM AND METHOD FOR TELEPHONIC SWITCHING AND SIGNALING BASED ON VOICE RECOGNITION   |
| 15070RO | US     | 10/232,063 | 7,499,404 | Granted | 30-Aug-02 | 3-Mar-09  | DISTRIBUTED QUALITY OF SERVICE ROUTING  |
| 15082ID | US     | 10/106,339 | 6,765,723 | Granted | 26-Mar-02 | 20-Jul-04 | COMPENSATION OF POLARIZATION-DEPENDENT DISTORTION SUCH AS PMD   |
| 15094RO | US     | 10/102,790 | 6,922,531 | Granted | 21-Mar-02 | 26-Jul-05 | METHOD AND SYSTEM FOR ENCODING OPTICAL COMMUNICATION INFORMATION DURING AUTOMATIC LASER SHUTDOWN RESTART SEQUENCE   |
| 15112ID | US     | 10/225,541 | 7,349,427 | Granted | 21-Aug-02 | 25-Mar-08 | ROUTING METHOD AND APPARATUS FOR OPTIMISING AUTO-TUNNELLING IN A HETEROGENEOUS NETWORK  |

| Pub No  | Pub Title | Pub No     | Pub Title | Pub No  | Pub Title | Pub No    | Pub Title |   |
|---------|-----------|------------|-----------|---------|-----------|-----------|-----------|---|
| 15120RO | US        | 10/316,557 | 7,450,845 | Granted |           | 11-Dec-02 | 11-Nov-08 | EXPANDABLE UNIVERSAL NETWORK  |
| 15130RO | US        | 10/195,620 | 8,144,711 | Granted |           | 15-Jul-02 | 27-Mar-12 | HITLESS SWITCHOVER AND BANDWIDTH SHARING IN A COMMUNICATION NETWORK                               |
| 15130RO | US        | 13/413,171 | 8,483,224 | Granted |           | 6-Mar-12  | 9-Jul-13  | HITLESS SWITCHOVER AND BANDWIDTH SHARING IN A COMMUNICATION NETWORK                               |
| 15137RO | US        | 10/437,676 | 7,369,491 | Granted |           | 14-May-03 | 6-May-08  | REGULATING DATA-BURST TRANSFER  |
| 15137RO | US        | 12/051,317 | 7,817,543 | Granted |           | 19-Mar-08 | 19-Oct-10 | REGULATING DATA-BURST TRANSFER  |
| 15141RO | US        | 10/106,781 | 7,072,304 | Granted |           | 27-Mar-02 | 4-Jul-06  | NETWORK PATH SELECTION BASED ON BANDWIDTH   |
| 15148RO | US        | 11/002,580 | 7,542,473 | Granted |           | 2-Dec-04  | 2-Jun-09  | HIGH-SPEED SCHEDULING APPARATUS FOR A SWITCHING NODE  |
| 15148RO | US        | 12/365,995 | 7,983,273 | Granted |           | 5-Feb-09  | 19-Jul-11 | HIGH-SPEED SCHEDULING APPARATUS FOR A SWITCHING NODE  |
| 15155AB | US        | 10/267,765 | 7,746,797 | Granted |           | 9-Oct-02  | 29-Jun-10 | EMBEDDED REAL-TIME VOICE QUALITY ANALYSIS SYSTEM  |
| 15155AB | US        | 12/782,468 | 8,593,975 | Granted |           | 18-May-10 | 26-Nov-13 | NON-INTRUSIVE MONITORING OF QUALITY LEVELS FOR VOICE COMMUNICATIONS OVER A PACKET-BASED NETWORK   |
| 15156RO | US        | 10/265,621 | 7,260,097 | Granted |           | 8-Oct-02  | 21-Aug-07 | LABEL CONTROL METHOD AND APPARATUS FOR VIRTUAL PRIVATE LAN SEGMENT NETWORKS                       |
| 15158ID | US        | 10/425,807 | 7,136,558 | Granted |           | 29-Apr-03 | 14-Nov-06 | OPTICAL WAVEGUIDE   |
| 15171RO | US        | 10/326,122 | 7,653,050 | Granted |           | 23-Dec-02 | 26-Jan-10 | TECHNIQUE FOR IMPLEMENTING A MULTI-SERVICE PACKET AND OPTICAL/TDM VIRTUAL PRIVATE CROSS-CONNECT   |
| 15172RN | US        | 10/100,703 | 7,227,937 | Granted |           | 19-Mar-02 | 5-Jun-07  | MONITORING NATURAL INTERACTION FOR PRESENCE DETECTION   |
| 15175RN | US        | 10/119,923 | 7,139,797 | Granted |           | 10-Apr-02 | 21-Nov-06 | PRESENCE INFORMATION BASED ON MEDIA ACTIVITY  |
| 15178ID | US        | 10/176,140 | 6,950,571 | Granted |           | 20-Jun-02 | 27-Sep-05 | OPTICAL SWITCHABLE COMPONENT  |
| 15179BA | US        | 10/212,408 | 7,783,043 | Granted |           | 5-Aug-02  | 24-Aug-10 | SECURE GROUP COMMUNICATIONS   |
| 15179BA | US        | 12/804,216 | 8,300,830 | Granted |           | 15-Jul-10 | 30-Oct-12 | SECURE GROUP COMMUNICATIONS   |
| 15187RN | US        | 10/331,206 | 7,349,419 | Granted |           | 30-Dec-02 | 25-Mar-08 | QUEUE SIZING FOR PACKET ROUTING   |
| 15188RO | US        | 10/301,681 | 7,508,846 | Granted |           | 22-Nov-02 | 24-Mar-09 | PHYSICAL CAPACITY AGGREGATION SYSTEM AND METHOD   |
| 15195RO | US        | 10/262,022 | 7,646,761 | Granted |           | 1-Oct-02  | 12-Jan-10 | INTEGRATING MULTIMEDIA CAPABILITIES WITH LEGACY NETWORKS  |
| 15196ID | US        | 10/090,383 | 7,058,008 | Granted |           | 4-Mar-02  | 6-Jun-06  | LINK CAPACITY ADJUSTMENT COMPONENT  |
| 15199RO | US        | 10/175,065 | 6,657,186 | Granted |           | 26-Jun-02 | 2-Dec-03  | CHROMATIC DISPERSION DISCRIMINATOR  |
| 15203RO | US        | 10/172,930 | 7,269,132 | Granted |           | 17-Jun-02 | 11-Sep-07 | METHOD AND APPARATUS FOR ACHIEVING TRANSPARENT REDUNDANCY AT A HIERARCHICAL BOUNDARY              |
| 15204RO | US        | 10/323,678 | 7,483,450 | Granted |           | 20-Dec-02 | 27-Jan-09 | METHOD AND SYSTEM FOR LINK-BASED CLOCK SYNCHRONIZATION IN ASYNCHRONOUS NETWORKS                   |
| 15207RO | US        | 10/259,433 | 7,403,988 | Granted |           | 30-Sep-02 | 22-Jul-08 | TECHNIQUE FOR AUTONOMOUS NETWORK PROVISIONING   |
| 15209RN | US        | 10/336,523 | 7,711,810 | Granted |           | 3-Jan-03  | 4-May-10  | DISTRIBUTED SERVICES BASED ON PRESENCE TECHNOLOGY   |
| 15219RO | US        | 10/266,183 | 7,944,817 | Granted |           | 7-Oct-02  | 17-May-11 | HIERARCHICAL VIRTUAL TRUNKING OVER PACKET NETWORKS  |
| 15228ID | US        | 10/179,656 | 7,139,381 | Granted |           | 25-Jun-02 | 21-Nov-06 | METHOD AND APPARATUS FOR INITIATING TELEPHONY CONTACT   |
| 15233RO | US        | 10/326,123 | 6,710,513 | Granted |           | 23-Dec-02 | 23-Mar-04 | TECHNIQUE AND APPARATUS FOR WAVE-MIXING FREQUENCY TRANSLATION IN A NETWORK                        |
| 15234RO | US        | 10/325,978 | 6,825,971 | Granted |           | 23-Dec-02 | 30-Nov-04 | TECHNIQUE AND APPARATUS FOR FREQUENCY CONVERSION IN AN OPTICAL NETWORK                            |
| 15236XR | US        | 09/388,772 | 6,392,220 | Granted |           | 2-Sep-99  | 21-May-02 | MICROMACHINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES                   |
| 15263RR | US        | 10/385,352 | 7,136,635 | Granted |           | 10-Mar-03 | 14-Nov-06 | PROXY SIP SERVER INTERFACE FOR SESSION INITIATION COMMUNICATIONS                                  |
| 15268RO | US        | 10/176,060 | 7,333,438 | Granted |           | 21-Jun-02 | 19-Feb-08 | PRIORITY AND POLICY BASED RECOVERY IN CONNECTION-ORIENTED COMMUNICATION NETWORKS                  |
| 15273RO | US        | 10/139,982 | 6,876,085 | Granted |           | 7-May-02  | 5-Apr-05  | SIGNAL LAYER INTERCONNECT USING TAPERED TRACES  |
| 15283RO | US        | 10/326,064 | 6,753,679 | Granted |           | 23-Dec-02 | 22-Jun-04 | TEST POINT MONITOR USING EMBEDDED PASSIVE RESISTANCE  |
| 15289RO | US        | 10/797,071 | 7,286,755 | Granted |           | 11-Mar-04 | 23-Oct-07 | METHOD AND APPARATUS FOR TESTING AN OPTICAL COMPONENT   |
| 15292RR | US        | 10/186,787 | 7,142,562 | Granted |           | 1-Jul-02  | 28-Nov-06 | ADAPTIVE DATA RATE CONTROL FOR MOBILE DATA TRANSFER FOR HIGH THROUGHPUT AND GUARANTEED ERROR RATE |
| 15300AL | US        | 10/283,717 | 7,443,841 | Granted |           | 30-Oct-02 | 28-Oct-08 | LONGEST PREFIX MATCHING (LPM) USING A FIXED COMPARISON HASH TABLE                                 |
| 15302RR | US        | 10/194,329 | 7,289,484 | Granted |           | 12-Jul-02 | 30-Oct-07 | CALL-FAIL-SAFE METHOD FOR WIRELESS TRAFFIC DISTRIBUTION ACROSS BANDS                              |
| 15312RO | US        | 10/262,288 | 7,920,546 | Granted |           | 1-Oct-02  | 5-Apr-11  | AUTOMATED ATTENDANT MULTIMEDIA SESSION  |
| 15312RO | US        | 13/047,362 | 8,848,693 | Granted |           | 14-Mar-11 | 30-Sep-14 | AUTOMATED ATTENDANT MULTIMEDIA SESSION  |
| 15313RO | US        | 10/389,804 | 8,594,499 | Granted |           | 18-Mar-03 | 26-Nov-13 | MONITORING PHASE NON-LINEARITIES IN AN OPTICAL COMMUNICATIONS SYSTEM                              |
| 15313RO | US        | 14/064,901 | 8,781,317 | Granted |           | 28-Oct-13 | 15-Jul-14 | MONITORING PHASE NON-LINEARITIES IN AN OPTICAL COMMUNICATIONS SYSTEM                              |
| 15316RO | US        | 10/261,577 | 7,050,565 | Granted |           | 1-Oct-02  | 23-May-06 | MULTIMEDIA AUGMENTED CALL COVERAGE  |
| 15324XR | US        | 10/384,270 | 7,042,922 | Granted |           | 7-Mar-03  | 9-May-06  | METHOD FOR CALIBRATING PHOTONIC CROSSCONNECT DEVICE   |
| 15325XR | US        | 10/383,437 | 7,072,031 | Granted |           | 7-Mar-03  | 4-Jul-06  | ALIGNMENT LASER FOR USE IN CROSS-CONNECTS   |
| 15327XR | US        | 10/384,108 | 6,836,589 | Granted |           | 7-Mar-03  | 28-Dec-04 | LOW LOSS OPTICAL SWITCH USING DUAL AXIS PIEZO ACTUATION AND SENSING                               |
| 15331XR | US        | 10/259,240 | 6,853,763 | Granted |           | 27-Sep-02 | 8-Feb-05  | PHOTONIC SWITCHING INCLUDING PHOTONIC PASS-THROUGH AND ADD/DROP CAPABILITIES                      |
| 15333RO | US        | 10/390,880 | 6,922,501 | Granted |           | 19-Mar-03 | 26-Jul-05 | FAST OPTICAL SWITCH   |
| 15333RO | US        | 11/152,926 | 7,171,072 | Granted |           | 15-Jun-05 | 30-Jan-07 | FAST OPTICAL SWITCH   |
| 15333RO | US        | 11/553,596 | 7,386,202 | Granted |           | 27-Oct-06 | 10-Jun-08 | FAST OPTICAL SWITCH   |
| 15333RO | US        | 11/619,847 | 7,593,607 | Granted |           | 4-Jan-07  | 22-Sep-09 | FAST OPTICAL SWITCH   |
| 15337RO | US        | 10/385,995 | 7,620,712 | Granted |           | 11-Mar-03 | 17-Nov-09 | AVAILABILITY MEASUREMENT IN NETWORKS  |



| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No.  | Pub. No.  | Pub. No.  |
|----------|----------|------------|-----------|----------|-----------|-----------|---|
| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No.  | Pub. No.  | Pub. No.  |
| 15790D   | US       | 10/968,518 | 8,908,609 | Granted  | 19-Oct-04 | 9-Dec-14  | MULTI-HOP WIRELESS COMMUNICATIONS SYSTEM AND METHOD   |
| 15791RO  | US       | 10/645,489 | 7,965,717 | Granted  | 22-Aug-03 | 21-Jun-11 | MULTI-STAGED SERVICES POLICING  |
| 15793RO  | US       | 10/459,475 | 6,817,870 | Granted  | 12-Jun-03 | 16-Nov-04 | TECHNIQUE FOR INTERCONNECTION MULTILAYER CIRCUIT BOARDS   |
| 15843RR  | US       | 10/402,186 | 7,076,038 | Granted  | 26-Mar-03 | 11-Jul-06 | METHODS AND SYSTEMS FOR ENABLING CHARGING LAND-LINE LONG-DISTANCE CALLS TO WIRELESS SUBSCRIBER'S ACCOUNT                |
| 15845RO  | US       | 10/716,731 | 7,350,233 | Granted  | 19-Nov-03 | 25-Mar-08 | FAST RE-ESTABLISHMENT OF COMMUNICATIONS FOR VIRTUAL PRIVATE NETWORK DEVICES   |
| 15854RO  | US       | 10/653,289 | 7,220,287 | Granted  | 3-Sep-03  | 22-May-07 | TECHNIQUES FOR TUNING AN EMBEDDED CAPACITOR IN A MULTI CIRCUIT BOARD  |
| 15863RO  | US       | 10/780,557 | 7,567,556 | Granted  | 18-Feb-04 | 28-Jul-09 | CIRCULATING SWITCH  |
| 15863RO  | US       | 11/185,542 | 7,856,010 | Granted  | 21-Jul-05 | 21-Dec-10 | CIRCULATING SWITCH  |
| 15863RO  | US       | 12/493,801 | 7,961,649 | Granted  | 29-Jun-09 | 14-Jun-11 | CIRCULATING SWITCH  |
| 15865RO  | US       | 10/722,480 | 7,383,548 | Granted  | 28-Nov-03 | 3-Jun-08  | CPU USAGE REGULATION  |
| 15873RO  | US       | 10/385,966 | 7,668,349 | Granted  | 11-Mar-03 | 23-Feb-10 | VERIFICATION OF CONFIGURATION INFORMATION IN BGP VPNS   |
| 15873RO  | US       | 12/649,562 | 8,266,322 | Granted  | 30-Dec-09 | 11-Sep-12 | VERIFICATION OF CONFIGURATION INFORMATION IN BGP VPNS   |
| 15873RO  | US       | 13/602,266 | 8,554,901 | Granted  | 3-Sep-12  | 8-Oct-13  | VERIFICATION OF CONFIGURATION INFORMATION IN BGP VPNS   |
| 15874RO  | US       | 10/385,993 | 7,480,253 | Granted  | 11-Mar-03 | 20-Jan-09 | ASCERTAINING THE AVAILABILITY OF COMMUNICATIONS BETWEEN DEVICES   |
| 15875RO  | US       | 10/386,092 | 7,453,886 | Granted  | 11-Mar-03 | 18-Nov-08 | VERIFICATION OF COMMUNICATIONS PATHS BETWEEN DEVICES  |
| 15876RO  | US       | 10/385,996 | 7,610,360 | Granted  | 11-Mar-03 | 27-Oct-09 | TRANSIENT TOLERANT VERIFICATION OF COMMUNICATIONS PATHS BETWEEN DEVICES   |
| 15890RO  | US       | 10/403,690 | 8,132,017 | Granted  | 31-Mar-03 | 6-Mar-12  | METHOD AND APPARATUS FOR SECURELY SYNCHRONIZING PASSWORD SYSTEMS  |
| 15890RO  | US       | 13/304,060 | 8,838,959 | Granted  | 23-Nov-11 | 16-Sep-14 | METHOD AND APPARATUS FOR SECURELY SYNCHRONIZING PASSWORD SYSTEMS  |
| 15901RO  | US       | 10/667,491 | 8,123,927 | Granted  | 23-Sep-03 | 28-Feb-12 | REDUCED CIRCUIT TRACE ROUGHNESS FOR IMPROVED SIGNAL PERFORMANCE   |
| 15902RO  | US       | 10/697,312 | 7,389,043 | Granted  | 31-Oct-03 | 17-Jun-08 | PROTECTION ARCHITECTURE FOR PHOTONIC SWITCH USING TUNABLE OPTICAL FILTER  |
| 15909RO  | US       | 10/617,192 | 7,450,520 | Granted  | 10-Jul-03 | 11-Nov-08 | REMOVE INTERFACE FOR A NETWORK DEVICE IN THE PHYSICAL PLANT   |
| 15917RO  | US       | 10/755,573 | 7,245,829 | Granted  | 12-Jan-04 | 17-Jul-07 | ARCHITECTURE FOR DYNAMIC CONNECTIVITY IN AN EDGE PHOTONIC NETWORK ARCHITECTURE  |
| 15934RR  | US       | 10/375,549 | 7,260,841 | Granted  | 27-Feb-03 | 21-Aug-07 | SYSTEM AND METHOD FOR MAINTAINING ACCESS TO CONTENT IN AN ENCRYPTED NETWORK ENVIRONMENT                                 |
| 15941BA  | US       | 10/661,903 | 7,526,658 | Granted  | 12-Sep-03 | 28-Apr-09 | SCALABLE, DISTRIBUTED METHOD AND APPARATUS FOR TRANSFORMING PACKETS TO ENABLE SECURE COMMUNICATION BETWEEN TWO STATIONS |
| 15941BA  | US       | 11/552,230 | 7,900,250 | Granted  | 24-Oct-06 | 1-Mar-11  | METHOD OF PROVIDING SECURE GROUPS USING A COMBINATION OF GROUP AND PAIR-WISE KEYING                                     |
| 15942RN  | US       | 10/616,621 | 7,486,659 | Granted  | 10-Jul-03 | 3-Feb-09  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION BETWEEN VIRTUAL PRIVATE NETWORK SITES                           |
| 15943BA  | US       | 10/647,739 | 7,395,423 | Granted  | 25-Aug-03 | 1-Jul-08  | SECURITY ASSOCIATION STORAGE AND RECOVERY IN GROUP KEY MANAGEMENT   |
| 15959RO  | US       | 10/693,806 | 7,096,043 | Granted  | 24-Oct-03 | 22-Aug-06 | CALL ORIGINATION CONTROL  |
| 15965RN  | US       | 10/403,582 | 7,688,852 | Granted  | 31-Mar-03 | 30-Mar-10 | AUTO-COMPRESSION FOR MEDIA OVER IP  |
| 15965RN  | US       | 12/732,578 | 8,374,199 | Granted  | 26-Mar-10 | 12-Feb-13 | AUTO-COMPRESSION FOR MEDIA OVER IP  |
| 15965RN  | US       | 13/689,833 | 8,669,904 | Granted  | 30-Nov-12 | 4-Mar-14  | AUTO-COMPRESSION FOR MEDIA OVER IP  |
| 15984RO  | US       | 10/745,061 | 7,680,923 | Granted  | 22-Dec-03 | 16-Mar-10 | CONNECTIVITY ASSESSMENT FOR LABEL DISTRIBUTION PROTOCOL (LDP) NETWORKS  |
| 15986RN  | US       | 10/648,000 | 7,313,232 | Granted  | 26-Aug-03 | 25-Dec-07 | MONITORING FOR OPERATOR SERVICES  |
| 15990SS  | US       | 10/678,705 | 7,734,748 | Granted  | 3-Oct-03  | 8-Jun-10  | METHOD AND APPARATUS FOR INTELLIGENT MANAGEMENT OF A NETWORK ELEMENT  |
| 15990SS  | US       | 12/730,992 | 8,161,139 | Granted  | 24-Mar-10 | 17-Apr-12 | METHOD AND APPARATUS FOR INTELLIGENT MANAGEMENT OF A NETWORK ELEMENT  |
| 15992RR  | US       | 10/610,509 | 6,963,352 | Granted  | 30-Jun-03 | 8-Nov-05  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM                     |
| 15996RR  | US       | 10/610,511 | 7,765,302 | Granted  | 30-Jun-03 | 27-Jul-10 | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD                          |
| 15996RR  | US       | 12/824,034 | 8,554,828 | Granted  | 25-Jun-10 | 8-Oct-13  | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD                          |
| 16006RO  | US       | 10/437,628 | 7,535,841 | Granted  | 14-May-03 | 19-May-09 | FLOW-RATE-REGULATED BURST SWITCHES  |
| 16006RO  | US       | 12/427,106 | 8,031,538 | Granted  | 21-Apr-09 | 4-Oct-11  | FLOW-RATE-REGULATED BURST SWITCHES  |
| 16015BA  | US       | 10/864,146 | 8,687,485 | Granted  | 9-Jun-04  | 1-Apr-14  | METHOD AND APPARATUS FOR PROVIDING REPLAY PROTECTION IN SYSTEMS USING GROUP SECURITY ASSOCIATIONS                       |
| 16019RO  | US       | 10/666,529 | 7,561,586 | Granted  | 19-Sep-03 | 14-Jul-09 | METHOD AND APPARATUS FOR PROVIDING NETWORK VPN SERVICES ON DEMAND   |
| 16021D   | US       | 10/645,438 | 8,010,807 | Granted  | 21-Aug-03 | 30-Aug-11 | MANAGEMENT OF QUEUES IN CONTACT CENTRES   |
| 16027BA  | US       | 10/686,071 | 7,577,736 | Granted  | 15-Oct-03 | 18-Aug-09 | NETWORK ACCOUNTING STATISTICS COLLECTION  |
| 16039RO  | US       | 10/732,532 | 7,409,020 | Granted  | 11-Dec-03 | 5-Aug-08  | TECHNIQUE FOR FILTER-ENHANCED CLOCK SYNCHRONIZATION   |
| 16040RO  | US       | 10/682,625 | 7,289,440 | Granted  | 9-Oct-03  | 30-Oct-07 | BIMODAL BURST SWITCHING   |
| 16040RO  | US       | 11/858,373 | 7,756,141 | Granted  | 20-Sep-07 | 13-Jul-10 | BIMODAL BURST SWITCHING   |
| 16047AB  | US       | 10/620,453 | 7,343,284 | Granted  | 17-Jul-03 | 11-Mar-08 | METHOD AND SYSTEM FOR SPEECH PROCESSING FOR ENHANCEMENT AND DETECTION   |
| 16053D   | US       | 10/447,909 | 7,330,463 | Granted  | 28-May-03 | 12-Feb-08 | ENTERPRISE VOICE OVER INTERNET PROTOCOL (VOIP) VIRTUAL PRIVATE NETWORK (VPN)  |
| 16056RR  | US       | 10/701,716 | 7,477,734 | Granted  | 4-Nov-03  | 13-Jan-09 | PACKET SWITCHING DIALING PLAN INTERFACE TO/FROM PSTN NETWORKS   |
| 16064AB  | US       | 10/688,642 | 7,369,546 | Granted  | 17-Oct-03 | 6-May-08  | METHOD AND APPARATUS FOR FAST DTMF DETECTION  |
| 16065RO  | US       | 10/701,767 | 7,174,002 | Granted  | 5-Nov-03  | 6-Feb-07  | METHOD AND APPARATUS FOR ASCERTAINING THE CAPACITY OF A NETWORK SWITCH  |
| 16066RO  | US       | 11/002,398 | 7,639,678 | Granted  | 2-Dec-04  | 29-Dec-09 | MULTIMODAL DATA SWITCH  |
| 16075D   | US       | 10/675,162 | 7,593,388 | Granted  | 30-Sep-03 | 22-Sep-09 | CONVERTOR SHARED BY MULTIPLE VIRTUAL PRIVATE NETWORKS   |

| Pub No  | Pub Class | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    | Pub No  |
|---------|-----------|------------|-----------|---------|-----------|-----------|---|
| Pub No  | Pub Class | Pub No     | Pub No    | Pub No  | Pub No    | Pub No    | Pub No  |
| 16083RO | US        | 10/741,988 | 8,019,841 | Granted | 19-Dec-03 | 13-Sep-11 | ZONING FOR DISTANCE PRICING AND NETWORK ENGINEERING IN CONNECTIONLESS AND CONNECTION-ORIENTED NETWORKS      |
| 16085RO | US        | 10/883,206 | 7,423,980 | Granted | 1-Jul-04  | 9-Sep-08  | FULL MESH STATUS MONITOR  |
| 16085RO | US        | 12/190,146 | 7,646,732 | Granted | 12-Aug-08 | 12-Jan-10 | FULL MESH STATUS MONITOR  |
| 16100ID | US        | 10/674,139 | 7,568,041 | Granted | 29-Sep-03 | 28-Jul-09 | METHODS AND APPARATUS FOR SELECTING A MEDIA PROXY   |
| 16118RO | US        | 10/819,309 | 7,359,647 | Granted | 6-Apr-04  | 15-Apr-08 | METHOD AND APPARATUS FOR TRANSMITTING AND RECEIVING POWER OVER OPTICAL FIBER                                |
| 16162RN | US        | 10/723,841 | 8,407,777 | Granted | 26-Nov-03 | 26-Mar-13 | SOCKS TUNNELING FOR FIREWALL TRAVERSAL  |
| 16162RN | US        | 13/804,239 | #EMPTY    | Filed   | 14-Mar-13 | #EMPTY    | SOCKS TUNNELING FOR FIREWALL TRAVERSAL  |
| 16164SS | US        | 10/678,704 | 7,359,993 | Granted | 3-Oct-03  | 15-Apr-08 | METHOD AND APPARATUS FOR INTERFACING EXTERNAL RESOURCES WITH A NETWORK ELEMENT                              |
| 16182RO | US        | 10/682,467 | 7,397,792 | Granted | 9-Oct-03  | 8-Jul-08  | VIRTUAL BURST-SWITCHING NETWORKS  |
| 16182RO | US        | 12/135,526 | 7,889,723 | Granted | 9-Jun-08  | 15-Feb-11 | VIRTUAL BURST SWITCHING NETWORKS  |
| 16192RR | US        | 10/746,419 | 7,894,581 | Granted | 24-Dec-03 | 22-Feb-11 | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                                       |
| 16192RR | US        | 10/746,432 | 7,899,164 | Granted | 24-Dec-03 | 1-Mar-11  | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                                       |
| 16205RN | US        | 10/794,675 | 8,484,348 | Granted | 5-Mar-04  | 9-Jul-13  | METHOD AND APPARATUS FOR FACILITATING FULFILLMENT OF WEB SERVICE REQUESTS ON A COMMUNICATION NETWORK        |
| 16213RO | US        | 10/670,568 | 8,737,200 | Granted | 26-Sep-03 | 27-May-14 | MPLS/IP PSEUDO-WIRE AND LAYER-2 VIRTUAL PRIVATE NETWORK RESILIENCY  |
| 16217RR | US        | 10/610,373 | 7,281,051 | Granted | 30-Jun-03 | 9-Oct-07  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR MANAGING RESOURCES IN A COMMUNICATION SYSTEM                    |
| 16218RR | US        | 10/610,508 | 7,606,181 | Granted | 30-Jun-03 | 20-Oct-09 | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR PROCESSING AUDIO INFORMATION IN A COMMUNICATION SYSTEM          |
| 16227RO | US        | 11/010,742 | 7,539,181 | Granted | 13-Dec-04 | 26-May-09 | BALANCED BUFFERLESS SWITCH  |
| 16227RO | US        | 12/427,067 | 8,139,570 | Granted | 21-Apr-09 | 20-Mar-12 | BALANCED BUFFERLESS SWITCH  |
| 16248RN | US        | 10/606,687 | 7,899,174 | Granted | 26-Jun-03 | 1-Mar-11  | EMERGENCY SERVICES FOR PACKET NETWORKS  |
| 16248RN | US        | 13/021,134 | 8,737,594 | Granted | 4-Feb-11  | 27-May-14 | EMERGENCY SERVICES FOR PACKET NETWORKS  |
| 16259RR | US        | 10/878,274 | 7,477,806 | Granted | 28-Jun-04 | 13-Jan-09 | SYSTEM AND METHOD FOR PATH FAILURE RECOVERY IN A COMMUNICATIONS ENVIRONMENT                                 |
| 16259RR | US        | 12/330,257 | 8,284,672 | Granted | 8-Dec-08  | 9-Oct-12  | SYSTEM AND METHOD FOR PATH FAILURE RECOVERY IN A COMMUNICATIONS ENVIRONMENT                                 |
| 16285SS | US        | 10/891,172 | 8,223,792 | Granted | 14-Jul-04 | 17-Jul-12 | ULTRA LOW COST ETHERNET ARCHITECTURE  |
| 16288AB | US        | 10/737,770 | 7,657,007 | Granted | 18-Dec-03 | 2-Feb-10  | METHOD AND APPARATUS FOR INSTANT VOICE MESSAGING  |
| 16289RO | US        | 10/746,472 | 7,075,933 | Granted | 23-Dec-03 | 11-Jul-06 | METHOD AND APPARATUS FOR IMPLEMENTING HUB-AND-SPOKE TOPOLOGY VIRTUAL PRIVATE NETWORKS                       |
| 16327ID | US        | 10/697,464 | 7,643,412 | Granted | 30-Oct-03 | 5-Jan-10  | MEDIA PROXY ABLE TO DETECT BLOCKING   |
| 16327ID | US        | 12/572,007 | 8,000,236 | Granted | 1-Oct-09  | 16-Aug-11 | MEDIA PROXY ABLE TO DETECT BLOCKING   |
| 16328RO | US        | 10/967,575 | 7,366,120 | Granted | 18-Oct-04 | 29-Apr-08 | METHOD AND APPARATUS FOR IMPROVING QUALITY OF SERVICE OVER MESHED BACKHAUL FACILITIES IN A WIRELESS NETWORK |
| 16332RO | US        | 10/959,037 | 7,536,543 | Granted | 5-Oct-04  | 19-May-09 | SYSTEM AND METHOD FOR AUTHENTICATION AND AUTHORIZATION USING A CENTRALIZED AUTHORITY                        |
| 16336RO | US        | 10/960,154 | 7,315,940 | Granted | 7-Oct-04  | 1-Jan-08  | RECOVERY OF A NETWORK ELEMENT AFTER A RESTART   |
| 16337RO | US        | 10/958,675 | 7,590,717 | Granted | 5-Oct-04  | 15-Sep-09 | SINGLE IP ADDRESS FOR REDUNDANT SHELF PROCESSORS  |
| 16346BA | US        | 10/961,630 | 8,443,087 | Granted | 8-Oct-04  | 14-May-13 | SYSTEM FOR MANAGING SESSIONS AND CONNECTIONS IN A NETWORK   |
| 16349RO | US        | 10/658,384 | 7,436,828 | Granted | 10-Sep-03 | 14-Oct-08 | METHOD AND APPARATUS FOR LABEL SWITCHING DATA PACKETS   |
| 16353RO | US        | 10/723,831 | 7,302,258 | Granted | 26-Nov-03 | 27-Nov-07 | CALL TRANSFER FOR AN INTEGRATED PACKET AND WIRELESS SERVICE USING A TEMPORARY DIRECTORY NUMBER              |
| 16358RO | US        | 10/723,808 | #EMPTY    | Filed   | 26-Nov-03 | #EMPTY    | PRESENCE REPORTING USING WIRELESS MESSAGING   |
| 16365RN | US        | 10/742,196 | 8,717,868 | Granted | 19-Dec-03 | 6-May-14  | SELECTIVE PROCESSING OF A DAMAGED PACKETS   |
| 16367RO | US        | 10/827,181 | 8,081,566 | Granted | 19-Apr-04 | 20-Dec-11 | METHOD AND APPARATUS FOR INDICATING CONGESTION IN A SOURCE ROUTED NETWORK                                   |
| 16377BA | US        | 10/661,657 | 7,519,834 | Granted | 12-Sep-03 | 14-Apr-09 | SCALABLE METHOD AND APPARATUS FOR TRANSFORMING PACKETS TO ENABLE SECURE COMMUNICATION BETWEEN TWO STATIONS  |
| 16391RO | US        | 10/747,968 | 7,593,395 | Granted | 29-Dec-03 | 22-Sep-09 | APPARATUS AND METHOD FOR DISTRIBUTING LAYER-2 VPN INFORMATION   |
| 16392RO | US        | 10/747,346 | 8,190,772 | Granted | 29-Dec-03 | 29-May-12 | APPARATUS AND METHOD FOR LAYER-2 AND LAYER-3 VPN DISCOVERY  |
| 16392RO | US        | 13/473,181 | #EMPTY    | Filed   | 16-May-12 | #EMPTY    | APPARATUS AND METHOD FOR LAYER-2 AND LAYER-3 VPN DISCOVERY  |
| 16399RO | US        | 10/721,335 | 7,613,179 | Granted | 26-Nov-03 | 3-Nov-09  | TECHNIQUE FOR TRACING SOURCE ADDRESSES OF PACKETS   |
| 16404RO | US        | 10/772,433 | 7,697,881 | Granted | 6-Feb-04  | 13-Apr-10 | PARALLELIZABLE INTEGRITY-AWARE ENCRYPTION TECHNIQUE   |
| 16404RO | US        | 12/750,086 | 8,503,670 | Granted | 30-Mar-10 | 6-Aug-13  | PARALLELIZABLE INTEGRITY-AWARE ENCRYPTION TECHNIQUE   |
| 16407BA | US        | 10/794,104 | 7,492,932 | Granted | 5-Mar-04  | 17-Feb-09 | METHOD AND APPARATUS FOR PROCESSING MEDICAL IMAGE DATA IN A NETWORK ENVIRONMENT                             |
| 16422BA | US        | 10/891,982 | 7,493,040 | Granted | 15-Jul-04 | 17-Feb-09 | METHOD AND APPARATUS FOR SECURING FIBER IN AN OPTICAL NETWORK   |
| 16422BA | US        | 12/350,333 | 8,000,601 | Granted | 8-Jan-09  | 16-Aug-11 | METHOD AND APPARATUS FOR SECURING FIBER IN AN OPTICAL NETWORK   |
| 16423RO | US        | 10/739,299 | 7,917,649 | Granted | 19-Dec-03 | 29-Mar-11 | TECHNIQUE FOR MONITORING SOURCE ADDRESSES THROUGH STATISTICAL CLUSTERING OF PACKETS                         |
| 16428RR | US        | 10/705,274 | 7,324,506 | Granted | 10-Nov-03 | 29-Jan-08 | USING DSL SERVICES TO FACILITATE REAL-TIME COMMUNICATIONS IN ENTERPRISE NETWORKS                            |
| 16431RO | US        | 10/682,472 | 7,359,396 | Granted | 9-Oct-03  | 15-Apr-08 | OPTICAL-CORE NETWORK WITH SELECTIVE SIGNAL QUEUEING   |
| 16438RO | US        | 10/744,769 | 8,819,265 | Granted | 22-Dec-03 | 26-Aug-14 | MANAGING FLOW CONTROL BUFFER  |
| 16439RO | US        | 10/740,763 | 8,312,145 | Granted | 22-Dec-03 | 13-Nov-12 | TRAFFIC ENGINEERING AND BANDWIDTH MANAGEMENT OF BUNDLED LINKS   |
| 16439RO | US        | 13/659,763 | 8,463,916 | Granted | 24-Oct-12 | 11-Jun-13 | TRAFFIC ENGINEERING AND BANDWIDTH MANAGEMENT OF BUNDLED LINKS   |







| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |  |
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| Pub No  | Pub No | Pub No     | Pub No    | Pub No  | Pub No | Pub No    | Pub No    |  |
| 16991D  | US     | 10/964,466 | 8,291,044 | Granted |        | 13-Oct-04 | 16-Oct-12 | BROKERING NETWORK RESOURCES  |
| 16991D  | US     | 13/652,109 | 8,738,741 | Granted |        | 15-Oct-12 | 27-May-14 | BROKERING NETWORK RESOURCES  |
| 16992D  | US     | 10/975,066 | 7,333,827 | Granted |        | 13-Oct-04 | 19-Feb-08 | RESTRICTED DISSEMINATION OF TOPOLOGY INFORMATION IN A COMMUNICATION NETWORK                                  |
| 17024MD | US     | 11/142,125 | 7,586,848 | Granted |        | 1-Jun-05  | 8-Sep-09  | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK                        |
| 17024MD | US     | 12/512,363 | 8,179,800 | Granted |        | 30-Jul-09 | 15-May-12 | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK                        |
| 17024MD | US     | 13/459,645 | 8,498,209 | Granted |        | 30-Apr-12 | 30-Jul-13 | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK                        |
| 17024MD | US     | 13/933,305 | 8,913,500 | Granted |        | 2-Jul-13  |           | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK                        |
| 17024MD | US     | 14/300,516 | #EMPTY    | Filed   |        | 10-Jun-14 |           | ELASTIC TRAFFIC MARKING FOR MULTI-PRIORITY PACKET STREAMS IN A COMMUNICATIONS NETWORK                        |
| 17028RR | US     | 11/241,462 | 7,715,341 | Granted |        | 30-Sep-05 | 11-May-10 | OPTIMIZED SCHEDULING METHOD FOR DELAY-SENSITIVE TRAFFIC ON HIGH SPEED SHARED PACKET DATA CHANNELS            |
| 17028RR | US     | 12/767,887 | 8,750,329 | Granted |        | 27-Apr-10 | 10-Jun-14 | OPTIMIZED SCHEDULING METHOD FOR DELAY-SENSITIVE TRAFFIC ON HIGH SPEED SHARED PACKET DATA CHANNELS            |
| 17034SS | US     | 11/287,583 | 7,876,749 | Granted |        | 23-Nov-05 | 25-Jan-11 | CROSS-CONNECT USING ETHERNET MULTIPLEXORS FOR A SIMPLE METRO ETHERNET NETWORK                                |
| 17034SS | US     | 13/012,522 | #EMPTY    | Filed   |        | 24-Jan-11 | #EMPTY    | CROSS-CONNECT USING ETHERNET MULTIPLEXORS FOR A SIMPLE METRO ETHERNET NETWORK                                |
| 17049ID | US     | 10/955,496 | 7,471,669 | Granted |        | 30-Sep-04 | 30-Dec-08 | ROUTING OF PROTOCOL DATA UNITS WITHIN A COMMUNICATION NETWORK  |
| 17078SC | US     | 10/994,542 | 7,756,259 | Granted |        | 22-Nov-04 | 13-Jul-10 | ENHANCED CALLER IDENTIFICATION USING CALLER READABLE DEVICES   |
| 17078SC | US     | 12/784,596 | 8,194,835 | Granted |        | 21-May-10 | 5-Jun-12  | ENHANCED CALLER IDENTIFICATION USING CALLER READABLE DEVICES   |
| 17078SC | US     | 13/475,480 | 8,873,724 | Granted |        | 18-May-12 | 28-Oct-14 | ENHANCED CALLER IDENTIFICATION USING CALLER READABLE DEVICES   |
| 17095RN | US     | 11/313,898 | 8,745,181 | Granted |        | 21-Dec-05 | 3-Jun-14  | GENERIC SNMP INFORMATION COLLECTION  |
| 17104RO | US     | 10/926,294 | 7,197,213 | Granted |        | 26-Aug-04 | 27-Mar-07 | SYSTEM AND METHOD FOR CONTROLLING DEFLECTION OF OPTICAL BEAMS  |
| 17105RO | US     | 10/925,943 | 7,245,798 | Granted |        | 26-Aug-04 | 17-Jul-07 | APPARATUS FOR REDIRECTING OPTICAL SIGNALS IN FREE SPACE  |
| 17115RO | US     | 11/220,126 | 7,573,826 | Granted |        | 6-Sep-05  | 11-Aug-09 | DARWINIAN NETWORK  |
| 17134SS | US     | 11/159,065 | 8,855,122 | Granted |        | 22-Jun-05 | 7-Oct-14  | BACKBONE PROVIDER BRIDGING NETWORKS  |
| 17161RO | US     | 11/167,883 | 8,289,964 | Granted |        | 27-Jun-05 | 16-Oct-12 | LAYER-2 TO MPLS SERVICE MEDIATION ARCHITECTURE   |
| 17161RO | US     | 13/566,221 | 8,594,097 | Granted |        | 3-Aug-12  | 26-Nov-13 | LAYER-2 TO MPLS SERVICE MEDIATION ARCHITECTURE   |
| 17163RO | US     | 11/024,692 | 8,718,057 | Granted |        | 30-Dec-04 | 6-May-14  | ETHERNET LAN SERVICE ENHANCEMENTS  |
| 17164RR | US     | 10/954,049 | 8,477,605 | Granted |        | 29-Sep-04 | 2-Jul-13  | PREVENTING ILLICIT COMMUNICATIONS  |
| 17173AB | US     | 11/316,268 | 8,464,210 | Granted |        | 22-Dec-05 | 11-Jun-13 | SOFTWARE DEVELOPMENT AND TESTING ENVIRONMENT   |
| 17222D  | US     | 11/010,908 | 7,639,633 | Granted |        | 13-Dec-04 | 29-Dec-09 | APPARATUS AND METHOD FOR SETTING UP A CONFERENCE CALL  |
| 17234D  | US     | 11/018,265 | 7,535,838 | Granted |        | 21-Dec-04 | 19-May-09 | METHOD FOR DETERMINING RESOURCE USE IN A NETWORK   |
| 17245RN | US     | 10/960,259 | 7,533,418 | Granted |        | 7-Oct-04  | 12-May-09 | TOKENS FOR CONTACT INFORMATION   |
| 17268ID | US     | 11/577,472 | 8,229,100 | Granted |        | 2-Jul-07  | 24-Jul-12 | CALL PRIORITIZATION METHODS IN A CALL CENTER   |
| 17268ID | US     | 13/523,399 | #EMPTY    | Filed   |        | 14-Jun-12 | #EMPTY    | IMPROVEMENTS IN OR RELATING TO CALL PRIORITISATION METHODS IN A CALL CENTER                                  |
| 17273RO | US     | 11/153,650 | 7,609,968 | Granted |        | 15-Jun-05 | 27-Oct-09 | SECURE ANALOG COMMUNICATIONS SYSTEM USING TIME AND WAVELENGTH SCRAMBLING                                     |
| 17277RO | US     | 11/295,921 | 7,787,494 | Granted |        | 7-Dec-05  | 31-Aug-10 | METHOD AND APPARATUS FOR ASSIGNING AND ALLOCATING NETWORK RESOURCES TO PACKET-BASED VIRTUAL PRIVATE NETWORKS |
| 17277RO | US     | 12/857,860 | 8,199,773 | Granted |        | 17-Aug-10 | 12-Jun-12 | METHOD AND APPARATUS FOR ASSIGNING AND ALLOCATING NETWORK RESOURCES TO PACKET-BASED VIRTUAL PRIVATE NETWORKS |
| 17330RO | US     | 11/269,358 | 8,417,633 | Granted |        | 8-Nov-05  | 9-Apr-13  | ENABLING IMPROVED PROTECTION OF CONSUMER INFORMATION IN ELECTRONIC TRANSACTIONS                              |
| 17330RO | US     | 13/858,435 | #EMPTY    | Filed   |        | 8-Apr-13  | #EMPTY    | METHOD AND APPARATUS ENABLING IMPROVED PROTECTION OF CONSUMER INFORMATION IN ELECTRONIC TRANSACTIONS         |
| 17376RO | US     | 11/262,664 | 8,315,255 | Granted |        | 31-Oct-05 | 20-Nov-12 | PSEUDO WIRE MERGE FOR IPTV   |
| 17386RO | US     | 11/287,131 | 8,036,956 | Granted |        | 23-Nov-05 | 11-Oct-11 | SECURE, DIFFERENTIATED READING OF SENSORS AND RFID TAGS  |
| 17386RO | US     | 13/245,156 | 8,401,933 | Granted |        | 26-Sep-11 | 19-Mar-13 | SECURE DIFFERENTIATED READING OF SENSORS AND RFID TAGS   |
| 17396RO | US     | 11/526,548 | 8,428,071 | Granted |        | 25-Sep-06 | 23-Apr-13 | SCALABLE OPTICAL-CORE NETWORK  |
| 17425RO | US     | 11/211,158 | 7,519,053 | Granted |        | 24-Aug-05 | 14-Apr-09 | MULTI-SPEED ROTORSWITCH  |
| 17474RO | US     | 11/280,615 | 8,464,299 | Granted |        | 16-Nov-05 | 11-Jun-13 | RESOURCE CONSERVATION FOR PACKET TELEVISION SERVICES   |
| 17476RO | US     | 11/186,092 | 8,369,322 | Granted |        | 21-Jul-05 | 5-Feb-13  | TANDEM CALL ADMISSION CONTROL BY PROXY FOR USE WITH NON-HOP-BY-HOP VOIP SIGNALING PROTOCOLS                  |
| 17476RO | US     | 13/739,903 | 8,588,230 | Granted |        | 11-Jan-13 | 19-Nov-13 | TANDEM CALL ADMISSION CONTROL BY PROXY FOR USE WITH NON-HOP-BY-HOP VOIP SIGNALING PROTOCOLS                  |
| 17508RO | US     | 11/236,230 | 7,813,409 | Granted |        | 27-Sep-05 | 12-Oct-10 | SECURE NETWORK USING ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING SPREAD SPECTRUM COMMUNICATIONS               |
| 17510SS | US     | 11/305,555 | 7,672,236 | Granted |        | 16-Dec-05 | 2-Mar-10  | METHOD AND ARCHITECTURE FOR A SCALABLE APPLICATION AND SECURITY SWITCH USING MULTI-LEVEL LOAD BALANCING      |
| 17510SS | US     | 12/685,505 | 8,130,845 | Granted |        | 11-Jan-10 | 6-Mar-12  | METHOD AND ARCHITECTURE FOR A SCALABLE APPLICATION AND SECURITY SWITCH USING MULTI-LEVEL LOAD BALANCING      |
| 17510SS | US     | 13/267,667 | 8,477,613 | Granted |        | 6-Oct-11  | 2-Jul-13  | METHOD AND ARCHITECTURE FOR A SCALABLE APPLICATION AND SECURITY SWITCH USING MULTI-LEVEL LOAD BALANCING      |
| 17518RO | US     | 11/814,290 | 8,045,492 | Granted |        | 19-Jul-07 | 25-Oct-11 | DYNAMIC ESTABLISHMENT OF VIRTUAL CIRCUITS USING MULTI-SEGMENT PSEUDOWIRES                                    |
| 17518RO | US     | 13/275,956 | 8,787,218 | Granted |        | 18-Oct-11 | 22-Jul-14 | DYNAMIC ESTABLISHMENT OF VIRTUAL CIRCUITS USING MULTI-SEGMENT PSEUDOWIRES                                    |
| 17519RO | US     | 11/315,715 | 7,590,110 | Granted |        | 22-Dec-05 | 15-Sep-09 | BALANCED HIGH-CAPACITY SWITCH  |
| 17542RO | US     | 11/377,128 | 8,687,628 | Granted |        | 16-Mar-06 | 1-Apr-14  | SCALABLE BALANCED SWITCHES   |
| 17559RN | US     | 11/268,845 | 8,756,326 | Granted |        | 8-Nov-05  | 17-Jun-14 | USING INTERACTIVE COMMUNICATION SESSIONS COOKIES IN WEB SESSIONS   |
| 17570RO | US     | 11/271,939 | 7,623,446 | Granted |        | 14-Nov-05 | 24-Nov-09 | MPLS VIRTUAL RINGS   |

| Pub. No. | Pub. No. (US) | Pub. No. (Foreign) | Pub. No. (Foreign) | Pub. No. (Foreign) | Pub. No. (Foreign) | Pub. No. (Foreign) | Pub. No. (Foreign)  |
|----------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|---|
| Pub. No. | Pub. No.      | Pub. No.           | Pub. No.           | Pub. No.           | Pub. No.           | Pub. No.           | Pub. No.  |
| 17620BA  | US            | 11/241,612         | 7,869,442          | Granted            | 30-Sep-05          | 11-Jan-11          | METHOD AND APPARATUS FOR SPECIFYING IP TERMINATION IN A NETWORK ELEMENT   |
| 17620BA  | US            | 11/646,693         | 7,643,496          | Granted            | 28-Dec-06          | 5-Jan-10           | APPLICATION SPECIFIED STEERING POLICY IMPLEMENTATION  |
| 17624RO  | US            | 11/242,029         | 7,406,060          | Granted            | 4-Oct-05           | 29-Jul-08          | COVERAGE IMPROVEMENT IN WIRELESS SYSTEMS WITH FIXED INFRASTRUCTURE BASED RELAYS   |
| 17624RO  | US            | 12/119,817         | 8,520,569          | Granted            | 13-May-08          | 27-Aug-13          | COVERAGE IMPROVEMENT IN WIRELESS SYSTEMS WITH FIXED INFRASTRUCTURE BASED RELAYS   |
| 17659SS  | US            | 11/314,678         | 8,699,354          | Granted            | 21-Dec-05          | 15-Apr-14          | METHOD AND APPARATUS FOR DETECTING A FAULT ON AN OPTICAL FIBER  |
| 17661RO  | US            | 11/303,990         | #EMPTY             | Filed              | 19-Dec-05          | #EMPTY             | COMPACT FLOATING POINT DELTA ENCODING FOR COMPLEX DATA  |
| 17685SS  | US            | 11/265,759         | 7,707,269          | Granted            | 2-Nov-05           | 27-Apr-10          | INTERFACING BETWEEN A COMMAND LINE INTERFACE-BASED APPLICATION PROGRAM AND A REMOTE NETWORK DEVICE                            |
| 17685SS  | US            | 12/732,043         | 8,161,140          | Granted            | 25-Mar-10          | 17-Apr-12          | INTERFACING BETWEEN A COMMAND LINE INTERFACE-BASED APPLICATION PROGRAM AND A REMOTE NETWORK DEVICE                            |
| 17685SS  | US            | 13/449,143         | 8,417,803          | Granted            | 17-Apr-12          | 9-Apr-13           | INTERFACING BETWEEN A COMMAND LINE INTERFACE-BASED APPLICATION PROGRAM AND A REMOTE NETWORK DEVICE                            |
| 17686RO  | US            | 11/241,145         | 7,466,985          | Granted            | 30-Sep-05          | 16-Dec-08          | NETWORK ELEMENT FOR IMPLEMENTING SCHEDULED HIGH-POWER PTP AND LOW-POWER PTMP TRANSMISSION                                     |
| 17692RR  | US            | 11/388,276         | 8,203,993          | Granted            | 24-Mar-06          | 19-Jun-12          | PROVIDING IMPROVED POST-DIAL DELAY AT AN ORIGINATING TERMINAL   |
| 17692RR  | US            | 11/388,379         | 8,902,879          | Granted            | 24-Mar-06          | 2-Dec-14           | GENERATING A COMFORT INDICATOR AT AN ORIGINATING TERMINAL   |
| 17692RR  | US            | 13/523,275         | 8,848,612          | Granted            | 14-Jun-12          | 30-Sep-14          | PROVIDING IMPROVED POST-DIAL DELAY AT AN ORIGINATING TERMINAL   |
| 17700RR  | US            | 11/313,338         | 8,233,384          | Granted            | 21-Dec-05          | 31-Jul-12          | GEOGRAPHIC REDUNDANCY IN COMMUNICATION NETWORKS   |
| 17717RO  | US            | 11/338,118         | 7,995,569          | Granted            | 23-Jan-06          | 9-Aug-11           | VIRTUAL ROUTERS FOR GMPLS NETWORKS  |
| 17724RO  | US            | 11/172,100         | 7,590,210          | Granted            | 30-Jun-05          | 15-Sep-09          | METHOD AND APPARATUS FOR SYNCHRONIZATION INTERNAL STATE OF FREQUENCY GENERATORS ON A COMMUNICATIONS NETWORK                   |
| 17735RO  | US            | 11/262,665         | 8,331,360          | Granted            | 31-Oct-05          | 11-Dec-12          | METHOD AND APPARATUS FOR LAYER 2 FAST RE-CONFIGURATION IN A ROUTING BRIDGE NETWORK  |
| 17736RO  | US            | 11/328,199         | 7,522,841          | Granted            | 10-Jan-06          | 21-Apr-09          | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS   |
| 17749HU  | US            | 11/325,064         | 8,369,329          | Granted            | 3-Jan-06           | 5-Feb-13           | DYNAMIC HIERARCHICAL ADDRESS RESOURCE MANAGEMENT ARCHITECTURE, METHOD AND APPARATUS   |
| 17769RO  | US            | 11/526,789         | 8,327,427          | Granted            | 25-Sep-06          | 4-Dec-12           | SYSTEM AND METHOD FOR TRANSPARENT SINGLE SIGN-ON  |
| 17775ID  | US            | 11/223,246         | 8,498,297          | Granted            | 26-Aug-05          | 30-Jul-13          | FORWARDING TABLE MINIMISATION IN ETHERNET SWITCHES  |
| 17780ID  | US            | 11/264,634         | 7,697,528          | Granted            | 1-Nov-05           | 13-Apr-10          | MULTILINK TRUNKING FOR ENCAPSULATED TRAFFIC   |
| 17786RO  | US            | 11/303,989         | #EMPTY             | Filed              | 19-Dec-05          | #EMPTY             | METHOD AND SYSTEM FOR ENHANCING COLLABORATION   |
| 17790RO  | US            | 11/239,111         | 7,639,631          | Granted            | 30-Sep-05          | 29-Dec-09          | PARALLEL CONSTRAINT BASED PATH COMPUTATION USING PATH VECTOR  |
| 17791RO  | US            | 11/481,826         | 7,787,828          | Granted            | 7-Jul-06           | 31-Aug-10          | DOUBLE PHASE ENCODING QUANTUM KEY DISTRIBUTION  |
| 17792RO  | US            | 11/280,428         | 8,161,549          | Granted            | 17-Nov-05          | 17-Apr-12          | METHOD FOR DEFENDING AGAINST DENIAL-OF-SERVICE ATTACK ON THE IPV6 NEIGHBOR CACHE  |
| 17792RO  | US            | 13/421,390         | 8,869,278          | Granted            | 15-Mar-12          | 21-Oct-14          | METHOD FOR DEFENDING AGAINST DENIAL-OF-SERVICE ATTACK ON THE IPV6 NEIGHBOR CACHE  |
| 17796RO  | US            | 11/304,043         | 8,818,897          | Granted            | 15-Dec-05          | 26-Aug-14          | SYSTEM AND METHOD FOR VALIDATION AND ENFORCEMENT OF APPLICATION SECURITY  |
| 17812BA  | US            | 11/297,822         | 7,936,680          | Granted            | 8-Dec-05           | 3-May-11           | METHOD AND APPARATUS FOR INCREASING THE SCALABILITY OF ETHERNET OAM   |
| 17812BA  | US            | 13/078,503         | 8,811,181          | Granted            | 1-Apr-11           | 19-Aug-14          | METHOD AND APPARATUS FOR INCREASING THE SCALABILITY OF THE ETHERNET OAM   |
| 17812BA  | US            | 14/267,365         | #EMPTY             | Filed              | 1-May-14           | #EMPTY             | METHOD AND APPARATUS FOR INCREASING THE SCALABILITY OF ETHERNET OAM   |
| 17815RO  | US            | 11/481,906         | 7,760,883          | Granted            | 7-Jul-06           | 20-Jul-10          | ANY-POINT-TO-ANY-POINT (AP2AP) QUANTUM KEY DISTRIBUTION PROTOCOL FOR OPTICAL RING NETWORK                                     |
| 17816RO  | US            | 11/392,908         | 8,160,453          | Granted            | 30-Mar-06          | 17-Apr-12          | PROTECTION SWITCHING WITH TRANSMITTER COMPENSATION FUNCTION   |
| 17816RO  | US            | 13/446,278         | 8,682,179          | Granted            | 13-Apr-12          | 25-Mar-14          | PROTECTION SWITCHING WITH TRANSMITTER COMPENSATION FUNCTION   |
| 17816RO  | US            | 14/177,865         | 8,879,904          | Granted            | 11-Feb-14          | 4-Nov-14           | PROTECTION SWITCHING WITH TRANSMITTER COMPENSATION FUNCTION   |
| 17829RO  | US            | 11/304,019         | 8,045,475          | Granted            | 15-Dec-05          | 25-Oct-11          | METHOD AND APPARATUS FOR PROVIDING AVAILABILITY METRICS FORMEASUREMENT AND MANAGEMENT OF ETHERNET SERVICES                    |
| 17829RO  | US            | 13/269,724         | 8,520,530          | Granted            | 10-Oct-11          | 27-Aug-13          | METHOD AND APPARATUS FOR PROVIDING AVAILABILITY METRICS FORMEASUREMENT AND MANAGEMENT OF ETHERNET SERVICES                    |
| 17833RO  | US            | 11/479,694         | 8,369,330          | Granted            | 30-Jun-06          | 5-Feb-13           | PROVIDER BACKBONE BRIDGING - PROVIDER BACKBONE TRANSPORT INTERNETWORKING  |
| 17833RO  | US            | 13/715,421         | 8,553,697          | Granted            | 14-Dec-12          | 8-Oct-13           | PROVIDER BACKBONE BRIDGING - PROVIDER BACKBONE TRANSPORT INTERNETWORKING  |
| 17838RO  | US            | 11/305,979         | 7,467,069          | Granted            | 19-Dec-05          | 16-Dec-08          | METHOD AND APPARATUS FOR EXTRACTING INFORMATION FROM AN ARRAY OF HAZARDOUSMATERIAL SENSORS                                    |
| 17842RO  | US            | 11/311,102         | 8,146,157          | Granted            | 19-Dec-05          | 27-Mar-12          | METHOD AND APPARATUS FOR SECURE TRANSPORT AND STORAGE OF SURVEILLANCE VIDEO   |
| 17842RO  | US            | 13/429,483         | #EMPTY             | Filed              | 26-Mar-12          | #EMPTY             | METHOD AND APPARATUS FOR SECURE TRANSPORT AND STORAGE OF SURVEILLANCE VIDEO   |
| 17856RO  | US            | 12/790,937         | 8,180,056          | Granted            | 31-May-10          | 15-May-12          | METHODS AND SYSTEMS FOR COMMUNICATING OVER A QUANTUM CHANNEL  |
| 17861RO  | US            | 11/289,182         | 8,199,743          | Granted            | 29-Nov-05          | 12-Jun-12          | ENHANCED SERVICES FOR A POTS LINE   |
| 17865RO  | US            | 11/312,613         | #EMPTY             | Filed              | 20-Dec-05          | #EMPTY             | INITIATING OUTGOING CALLS TO A VOP TERMINAL FROM A POTS BASED TELEPHONE TERMINAL  |
| 17884RR  | US            | 11/438,565         | 7,620,390          | Granted            | 22-May-06          | 17-Nov-09          | ESTABLISHING A CALL SESSION DURING AN ADVERTISEMENT TIME PERIOD   |
| 17899RO  | US            | 11/533,940         | 7,769,405          | Granted            | 21-Sep-06          | 3-Aug-10           | HIGH-SPEED DIGITAL SIGNAL PROCESSING IN A COHERENT OPTICAL NETWORK  |
| 17910RN  | US            | 11/316,430         | 7,587,831          | Granted            | 22-Dec-05          | 8-Sep-09           | FORCED HOLD CALL HANDLING IN A VOP ENVIRONMENT  |
| 17910RN  | US            | 12/509,528         | 8,233,591          | Granted            | 27-Jul-09          | 31-Jul-12          | FORCED HOLD CALL HANDLING IN A VOP ENVIRONMENT  |
| 17910RN  | US            | 13/539,801         | 8,705,517          | Granted            | 2-Jul-12           | 22-Apr-14          | FORCED HOLD CALL HANDLING IN A VOP ENVIRONMENT  |
| 17913ID  | US            | 11/343,996         | 7,756,035          | Granted            | 31-Jan-06          | 13-Jul-10          | PLANNING ROUTES AND ALLOCATING IDENTIFIERS TO ROUTES IN A MANAGED FRAME-FORWARDING NETWORK                                    |
| 17913ID  | US            | 12/752,228         | 8,238,245          | Granted            | 1-Apr-10           | 7-Aug-12           | PLANNING ROUTES AND ALLOCATING IDENTIFIERS TO ROUTES IN A MANAGED FRAME-FORWARDING NETWORK                                    |
| 179225C  | US            | 11/291,300         | 7,292,121          | Granted            | 1-Dec-05           | 6-Nov-07           | RF COMBINING DEVICE AND METHOD  |
| 17932RO  | US            | 11/427,522         | 7,676,154          | Granted            | 29-Jun-06          | 9-Mar-10           | METHOD AND SYSTEM FOR CONFIGURING A CONNECTION-ORIENTED PACKET NETWORK OVER A WAVELENGTH DIVISION MULTIPLEXED OPTICAL NETWORK |





| Pub. No. | App. No. | Pub. Date  | App. Date | Pub. Title | App. Title | Pub. Title | App. Title  |
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| 18855RO  | US       | 13/722,074 | 8,717,897 | Granted    | 20-Dec-12  | 6-May-14   | METHOD AND SYSTEM FOR PACKET DISCARD PRECEDENCE FOR VIDEO TRANSPORT   |
| 18872RO  | US       | 12/006,151 | 8,559,412 | Granted    | 31-Dec-07  | 15-Oct-13  | COMMUNICATION TIME INFORMATION IN A NETWORK TO ENABLE SYNCHRONIZATION   |
| 18898RO  | US       | 11/986,005 | 8,385,527 | Granted    | 19-Nov-07  | 26-Feb-13  | METHOD AND APPARATUS FOR OVERLAYING WHISPERED AUDIO ONTO A TELEPHONE CALL   |
| 18905RO  | US       | 12/104,598 | 8,144,715 | Granted    | 17-Apr-08  | 27-Mar-12  | METHOD AND APPARATUS FOR INTERWORKING VPLS AND PBB NETWORKS   |
| 18910RO  | US       | 12/006,291 | 8,854,982 | Granted    | 31-Dec-07  | 7-Oct-14   | METHOD AND APPARATUS FOR MANAGING THE INTERCONNECTION BETWEEN NETWORK DOMAINS   |
| 18923RO  | US       | 11/964,478 | 7,911,944 | Granted    | 26-Dec-07  | 22-Mar-11  | TIE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 18923RO  | US       | 13/023,823 | 8,699,329 | Granted    | 9-Feb-11   | 15-Apr-14  | TIE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 18923RO  | US       | 13/477,366 | 8,761,022 | Granted    | 22-May-12  | 24-Jun-14  | TIE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 18931ID  | US       | 11/962,476 | 8,005,081 | Granted    | 21-Dec-07  | 23-Aug-11  | EVOLUTION OF ETHERNET NETWORKS  |
| 18931ID  | US       | 13/206,732 | 8,675,519 | Granted    | 10-Aug-11  | 18-Mar-14  | EVOLUTION OF ETHERNET NETWORKS  |
| 189558A  | US       | 12/345,815 | 8,243,608 | Granted    | 30-Dec-08  | 14-Aug-12  | METRO ETHERNET CONNECTIVITY FAULT MANAGEMENT ACCELERATION   |
| 18970RO  | US       | 12/250,681 | 7,995,597 | Granted    | 14-Oct-08  | 9-Aug-11   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUING   |
| 18970RO  | US       | 13/169,504 | 8,711,871 | Granted    | 27-Jun-11  | 29-Apr-14  | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUING   |
| 18999RO  | US       | 12/118,410 | 7,969,884 | Granted    | 9-May-08   | 28-Jun-11  | METHOD AND SYSTEM FOR WEIGHT AND RATE SCHEDULING  |
| 19010RO  | US       | 12/182,968 | 8,391,148 | Granted    | 30-Jul-08  | 5-Mar-13   | METHOD AND APPARATUS FOR ETHERNET DATA COMPRESSION  |
| 19010RO  | US       | 13/750,373 | #EMPTY    | Filed      | 25-Jan-13  | #EMPTY     | METHOD AND APPARATUS FOR ETHERNET DATA COMPRESSION  |
| 19040RO  | US       | 12/268,008 | 8,467,418 | Granted    | 10-Nov-08  | 18-Jun-13  | DIFFERENTIAL TIMING TRANSFER OVER SYNCHRONOUS ETHERNET USING DIGITAL FREQUENCY GENERATORS AND CONTROL WORD SIGNALING                  |
| 19041RO  | US       | 12/241,312 | 8,045,570 | Granted    | 30-Sep-08  | 25-Oct-11  | EXTENDED PRIVATE LAN  |
| 19060RO  | US       | 12/343,589 | 8,094,823 | Granted    | 24-Dec-08  | 10-Jan-12  | EXTENDED DIFFIE-HELLMAN GROUP KEY GENERATION  |
| 19065RN  | US       | 12/215,350 | 7,894,450 | Granted    | 26-Jun-08  | 22-Feb-11  | IMPLEMENTATION OF IP VPLS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK  |
| 19065RN  | US       | 13/004,979 | #EMPTY    | Filed      | 12-Jan-11  | #EMPTY     | IMPLEMENTATION OF IP VPLS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK  |
| 19096RO  | US       | 12/152,085 | 7,924,715 | Granted    | 12-May-08  | 12-Apr-11  | METHOD AND APPARATUS FOR DISCOVERING, NEGOTIATING, AND PROVISIONING END-TO-END SLAS BETWEEN MULTIPLE SERVICE PROVIDER DOMAINS         |
| 19096RO  | US       | 13/044,598 | #EMPTY    | Filed      | 10-Mar-11  | #EMPTY     | METHOD AND APPARATUS FOR DISCOVERING, NEGOTIATING, AND PROVISIONING END-TO-END SLAS BETWEEN MULTIPLE SERVICE PROVIDER DOMAINS         |
| 19097RO  | US       | 12/249,941 | 7,898,965 | Granted    | 12-Oct-08  | 1-Mar-11   | IP NETWORK AND PERFORMANCE MONITORING USING ETHERNET OAM  |
| 19097RO  | US       | 12/249,944 | 7,996,559 | Granted    | 12-Oct-08  | 9-Aug-11   | AUTOMATIC MEP PROVISIONING IN A LINK STATE CONTROLLED ETHERNET NETWORK  |
| 19097RO  | US       | 12/249,946 | 8,264,970 | Granted    | 12-Oct-08  | 11-Sep-12  | CONTINUITY CHECK MANAGEMENT IN A LINK STATE CONTROLLED ETHERNET NETWORK   |
| 19097RO  | US       | 13/173,807 | 8,918,538 | Granted    | 30-Jun-11  | #EMPTY     | AUTOMATIC MEP PROVISIONING IN A LINK STATE CONTROLLED ETHERNET NETWORK  |
| 19098RO  | US       | 12/250,266 | 8,165,031 | Granted    | 13-Oct-08  | 24-Apr-12  | MULTI-POINT AND ROOTED MULTI-POINT PROTECTION SWITCHING   |
| 19100RO  | US       | 12/218,147 | 7,872,529 | Granted    | 11-Jul-08  | 18-Jan-11  | SWITCH METHOD FOR SWITCHING CLASS AMPLIFIERS  |
| 19269RO  | US       | 12/340,817 | 8,325,732 | Granted    | 22-Dec-08  | 4-Dec-12   | METHOD FOR OPERATING MULTI-DOMAIN PROVIDER ETHERNET NETWORKS  |
| 19269RO  | US       | 13/679,500 | 8,559,363 | Granted    | 16-Nov-12  | 15-Oct-13  | METHOD FOR OPERATING MULTI-DOMAIN PROVIDER ETHERNET NETWORKS  |
| 19269RO  | US       | 13/922,843 | 8,891,439 | Granted    | 20-Jun-13  | 18-Nov-14  | METHOD FOR OPERATING MULTI-DOMAIN PROVIDER ETHERNET NETWORKS  |
| 19270RR  | US       | 13/383,971 | 8,862,119 | Granted    | 13-Jan-12  | 14-Oct-14  | METHOD AND APPARATUS FOR TELECOMMUNICATIONS NETWORK PERFORMANCE ANOMALY EVENTS DETECTION AND NOTIFICATION                             |
| 19271IN  | US       | 12/638,556 | 8,893,260 | Granted    | 15-Dec-09  | 18-Nov-14  | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 19277RO  | US       | 12/260,558 | 7,924,836 | Granted    | 29-Oct-08  | 12-Apr-11  | BREAK BEFORE MAKE FORWARDING INFORMATION BASE (FIB) POPULATION FOR MULTICAST  |
| 19277RO  | US       | 13/048,614 | 8,331,367 | Granted    | 15-Mar-11  | 11-Dec-12  | BREAK BEFORE MAKE FORWARDING INFORMATION BASE (FIB) POPULATION FOR MULTICAST  |
| 19277RO  | US       | 13/667,547 | 8,644,313 | Granted    | 2-Nov-12   | 4-Feb-14   | BREAK BEFORE MAKE FORWARDING INFORMATION BASE (FIB) POPULATION FOR MULTICAST  |
| 19311RO  | US       | 12/340,174 | 8,270,290 | Granted    | 19-Dec-08  | 18-Sep-12  | RESILIENT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 19311RO  | US       | 13/586,620 | 8,861,335 | Granted    | 15-Aug-12  | 14-Oct-14  | RESILIENT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 19311RO  | US       | 14/195,320 | #EMPTY    | Filed      | 3-Mar-14   | #EMPTY     | RESILIENT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 19318RO  | US       | 13/185,676 | #EMPTY    | Filed      | 19-Jul-11  | #EMPTY     |   |
| 19318RO  | US       | 13/185,676 | 8,630,167 | Granted    | 19-Jul-11  | 14-Jan-14  | DISTRIBUTED FAILURE RECOVERY IN A ROUTED ETHERNET NETWORK   |
| 19329ID  | US       | 12/334,013 | 8,565,244 | Granted    | 12-Dec-08  | 22-Oct-13  | RESILIENT PROVIDER LINK STATE BRIDGING (PLSB) VIRTUAL PRIVATE LAN SERVICE (VPLS) INTERWORKING   |
| 19337BA  | US       | 12/418,919 | 8,494,313 | Granted    | 6-Apr-09   | 23-Jul-13  | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 19355RO  | US       | 12/344,010 | 8,339,438 | Granted    | 24-Dec-08  | 25-Dec-12  | WEB BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 19355RO  | US       | 13/713,880 | #EMPTY    | Filed      | 13-Dec-12  | #EMPTY     | WEB BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 19363RO  | US       | 12/394,405 | 7,948,885 | Granted    | 27-Feb-09  | 24-May-11  | LINK BUNDLE CO-ROUTED VCAT VIA RSVP MESSAGE BUNDLING  |
| 19363RO  | US       | 13/098,270 | 8,599,961 | Granted    | 29-Apr-11  | 26-Nov-13  | LINK BUNDLED CO-ROUTED VCAT VIA RSVP MESSAGE BUNDLING   |
| 19405RO  | US       | 12/168,688 | 8,842,076 | Granted    | 7-Jul-08   | 23-Sep-14  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 19412RO  | US       | 12/412,743 | #EMPTY    | Filed      | 27-Mar-09  | #EMPTY     | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIPLEXED PASSIVE OPTICAL NETWORKS (WDM PONS)                               |
| 19412RO  | US       | 13/434,365 | 8,340,524 | Granted    | 29-Mar-12  | 25-Dec-12  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIPLEXED PASSIVE OPTICAL NETWORKS (WDM PONS)                               |
| 19422RO  | US       | 12/345,186 | 8,050,404 | Granted    | 29-Dec-08  | 1-Nov-11   | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL                           |
| 19422RO  | US       | 13/269,674 | 8,462,943 | Granted    | 10-Oct-11  | 11-Jun-13  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL                           |
| 19431RO  | US       | 12/276,623 | 7,941,531 | Granted    | 24-Nov-08  | 10-May-11  | AGE BIASED DISTRIBUTED COLLISION RESOLUTION WITHOUT CLOCKS  |





| Pub. No. | App. No. | Pub. Date  | Pub. Title | Pub. Status | Pub. Date | Pub. Title | Pub. Status   |
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| BA0247   | US       | 09/314,563 | 6,647,424  | Granted     | 19-May-99 | 11-Nov-03  | METHOD AND APPARATUS FOR DISCARDING DATA PACKETS  |
| BA0262   | US       | 09/100,590 | 6,483,833  | Granted     | 19-Jun-98 | 19-Nov-02  | PROTOCOL  |
| BA0264   | US       | 09/270,930 | 6,873,618  | Granted     | 16-Mar-99 | 29-Mar-05  | MULTIPOINT NETWORK ROUTING PROTOCOL   |
| BA0268   | US       | 09/072,410 | 6,098,131  | Granted     | 4-May-98  | 1-Aug-00   | NETWORK APPARATUS WITH REMOVABLE ELECTRONIC MODULE  |
| BA0289   | US       | 09/252,430 | 6,760,336  | Granted     | 18-Feb-99 | 6-Jul-04   | FLOW DETECTION SCHEME TO SUPPORT QOS FLOWS BETWEEN SOURCE AND DESTINATION NODES                               |
| BA0292   | US       | 09/307,190 | 6,707,796  | Granted     | 7-May-99  | 16-Mar-04  | SYSTEM DEVICE AND METHOD FOR REDUCING FORWARDING STATES IN A COMMUNICATION SYSTEM                             |
| BA0297   | US       | 09/204,930 | 6,587,943  | Granted     | 3-Dec-98  | 1-Jul-03   | APPARATUS AND METHOD FOR LIMITING UNAUTHORIZED ACCESS TO A NETWORK MULTICAST                                  |
| BA0298   | US       | 09/253,103 | 6,330,555  | Granted     | 19-Feb-99 | 11-Dec-01  | METHOD AND APPARATUS FOR ENABLING A VIEW OF DATA ACROSS A DATABASE  |
| BA0302   | US       | 09/165,509 | 6,101,539  | Granted     | 2-Oct-98  | 8-Aug-00   | DYNAMIC PRESENTATION OF MANAGEMENT OBJECTS BASED ON ADMINISTRATION PRIVILEGES                                 |
| BA0303   | US       | 09/165,507 | 6,754,702  | Granted     | 2-Oct-98  | 22-Jun-04  | CUSTOM ADMINISTRATOR VIEWS OF MANAGEMENT OBJECTS  |
| BA0305   | US       | 09/165,508 | 6,539,021  | Granted     | 2-Oct-98  | 25-Mar-03  | ROLE BASED MANAGEMENT INDEPENDENT OF THE HARDWARE TOPOLOGY  |
| BA0306   | US       | 09/264,949 | 6,559,861  | Granted     | 9-Mar-99  | 6-May-03   | DISPLAYING COMPUTER INTERFACES IN MULTIPLE LANGUAGES  |
| BA0307   | US       | 09/786,529 | 8,675,647  | Granted     | 23-Feb-01 | 18-Mar-14  | NON-BROADCAST MULTIPLE ACCESS INVERSE NEXT HOP RESOLUTION PROTOCOL (INHRP)                                    |
| BA0309   | US       | 09/412,689 | 6,662,208  | Granted     | 5-Oct-99  | 9-Dec-03   | SYSTEM FOR TRACKING THE HISTORY OF CHANNEL BASED NETWORK DEVICES  |
| BA0315   | US       | 09/309,471 | 6,601,150  | Granted     | 10-May-99 | 29-Jul-03  | MEMORY MANAGEMENT TECHNIQUE FOR MAINTAINING PACKET ORDER IN A PACKET PROCESSING SYSTEM                        |
| BA0316   | US       | 09/227,237 | 6,182,214  | Granted     | 8-Jan-99  | 30-Jan-01  | EXCHANGING A SECRET OVER AN UNRELIABLE NETWORK  |
| BA0317   | US       | 09/236,700 | 6,425,804  | Granted     | 24-Feb-99 | 23-Jul-02  | DETECTING AND LOCATING A MISBEHAVING DEVICE IN A NETWORK DOMAIN   |
| BA0319   | US       | 10/278,034 | 6,891,835  | Granted     | 22-Oct-02 | 10-May-05  | SERVICING OUTPUT QUEUES DYNAMICALLY ACCORDING TO BANDWIDTH ALLOCATION IN A FRAME ENVIRONMENT                  |
| BA0320   | US       | 09/167,792 | 6,597,704  | Granted     | 7-Oct-98  | 22-Jul-03  | SYSTEM FOR TRANSLATING A MESSAGE FROM A FIRST TRANSMISSION PROTOCOL TO A SECOND TRANSMISSION PROTOCOL         |
| BA0321   | US       | 09/167,746 | 6,484,206  | Granted     | 7-Oct-99  | 19-Nov-02  | EFFICIENT RECOVERY OF MULTIPLE CONNECTIONS IN A COMMUNICATION NETWORK   |
| BA0322   | US       | 09/167,811 | 6,311,222  | Granted     | 7-Oct-98  | 30-Oct-01  | TRANSLATOR MEMORY MANAGEMENT SYSTEM   |
| BA0323   | US       | 09/167,916 | 6,226,676  | Granted     | 7-Oct-98  | 1-May-01   | CONNECTION ESTABLISHMENT AND TERMINATION IN A MIXED PROTOCOL NETWORK  |
| BA0324   | US       | 09/167,839 | 6,320,874  | Granted     | 7-Oct-98  | 20-Nov-01  | ESTABLISHING AND TERMINATING CONNECTIONS IN A MIXED PROTOCOL NETWORK  |
| BA0325   | US       | 09/167,950 | 6,618,359  | Granted     | 7-Oct-98  | 9-Sep-03   | ERROR RECOVERY IN A MIXED PROTOCOL NETWORKS   |
| BA0327   | US       | 09/257,075 | 6,671,279  | Granted     | 24-Feb-99 | 30-Dec-03  | ESTABLISHING SHORTCUTS IN A MULTIPROTOCOL-OVER-ATM SYSTEM   |
| BA0328   | US       | 09/274,940 | 6,888,837  | Granted     | 23-Mar-99 | 3-May-05   | NETWORK ADDRESS TRANSLATION IN A NETWORK HAVING MULTIPLE OVERLAPPING ADDRESS DOMAINS                          |
| BA0328   | US       | 09/274,944 | 6,493,765  | Granted     | 23-Mar-99 | 10-Dec-02  | DOMAIN NAME RESOLUTION IN A NETWORK HAVING MULTIPLE OVERLAPPING ADDRESS DOMAINS                               |
| BA0334   | US       | 09/309,530 | 6,614,791  | Granted     | 11-May-99 | 2-Sep-03   | SYSTEM, DEVICE, AND METHOD FOR SUPPORTING VIRTUAL PRIVATE NETWORKS  |
| BA0334   | US       | 10/609,290 | 7,327,738  | Granted     | 27-Jun-03 | 5-Feb-08   | SYSTEM DEVICE, AND METHOD, FOR SUPPORTING VIRTUAL PRIVATE NETWORKS  |
| BA0335   | US       | 09/330,238 | 6,704,280  | Granted     | 10-Jun-99 | 9-Mar-04   | A SWITCHING DEVICE AND METHOD FOR TRAFFIC POLICING OVER A NETWORK   |
| BA0344   | US       | 09/361,540 | 6,535,906  | Granted     | 27-Jul-99 | 18-Mar-03  | SYSTEM FOR CONTROLLING THE EFFECT OF TRANSMITTING A DOCUMENT ACROSS A PACKET BASED NETWORK                    |
| BA0346   | US       | 09/340,477 | 6,597,700  | Granted     | 30-Jun-99 | 22-Jul-03  | SYSTEM, DEVICE, AND METHOD FOR ADDRESS MANAGEMENT IN A DISTRIBUTED COMMUNICATION ENVIRONMENT                  |
| BA0346   | US       | 09/340,478 | 6,888,802  | Granted     | 30-Jun-99 | 3-May-05   | SYSTEM, DEVICE, AND METHOD FOR ADDRESS REPORTING IN A DISTRIBUTED COMMUNICATION ENVIRONMENT                   |
| BA0346   | US       | 10/963,779 | 7,203,176  | Granted     | 12-Oct-04 | 10-Apr-07  | SYSTEM, DEVICE, AND METHOD FOR ADDRESS REPORTING IN A DISTRIBUTED COMMUNICATION ENVIRONMENT                   |
| BA0352   | US       | 11/301,162 | 7,174,388  | Granted     | 12-Dec-05 | 6-Feb-07   | SYSTEM, DEVICE AND METHOD FOR SUPPORTING VIRTUAL PRIVATE NETWORKS IN A LABEL SWITCHED COMMUNICATIONS NETWORK  |
| BA0354   | US       | 09/290,753 | 6,725,276  | Granted     | 13-Apr-99 | 20-Apr-04  | APPARATUS AND METHOD FOR AUTHENTICATING MESSAGES TRANSMITTED ACROSS DIFFERENT MULTICAST DOMAINS               |
| BA0355   | US       | 09/473,103 | 7,076,559  | Granted     | 28-Dec-99 | 11-Jul-06  | SYSTEM, DEVICE, AND METHOD FOR ESTABLISHING LABEL SWITCHED PATHS ACROSS MULTIPLE AUTONOMOUS SYSTEMS           |
| BA0356   | US       | 10/771,201 | 6,987,727  | Granted     | 3-Feb-04  | 17-Jan-06  | AUTOMATIC PROTECTION SWITCHING USING LINK-LEVEL REDUNDANCY SUPPORTING MULTI-PROTOCOL LABEL SWITCHING          |
| BA0356   | US       | 11/188,989 | 8,134,917  | Granted     | 25-Jul-05 | 13-Mar-12  | AUTOMATIC PROTECTION SWITCHING USING LINK-LEVEL REDUNDANCY SUPPORTING MULTI-PROTOCOL LABEL SWITCHING          |
| BA0357   | US       | 09/257,866 | 6,631,420  | Granted     | 25-Feb-99 | 7-Oct-03   | REDUCING CONVERGE TIME BY A PROTOCOL INDEPENDENT MULTICAST (P.M.) ROUTER                                      |
| BA0358   | US       | 09/400,132 | 7,269,728  | Granted     | 21-Sep-99 | 11-Sep-07  | APPARATUS AND METHOD FOR DISTRIBUTING MANAGEMENT KEYS IN A MULTICAST DOMAIN                                   |
| BA0359   | US       | 09/351,268 | 6,678,271  | Granted     | 12-Jul-99 | 13-Jan-04  | HIGH PERFORMANCE SYSTEM AND METHOD HAVING A LOCAL BUS AND GLOBAL BUS  |
| BA0361   | US       | 09/378,141 | 6,535,481  | Granted     | 20-Aug-99 | 18-Mar-03  | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING                                     |
| BA0361   | US       | 10/351,780 | 7,486,615  | Granted     | 27-Jan-03 | 3-Feb-09   | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING                                     |
| BA0361   | US       | 12/341,603 | 7,760,623  | Granted     | 23-Dec-08 | 20-Jul-10  | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING                                     |
| BA0364   | US       | 09/511,777 | 7,185,097  | Granted     | 24-Feb-00 | 27-Feb-07  | ENCODING ADDRESSES IN A COMMUNICATION SYSTEM  |
| BA0367   | US       | 09/632,294 | 7,260,621  | Granted     | 4-Aug-00  | 21-Aug-07  | OBJECT-ORIENTED NETWORK MANAGEMENT INTERFACE  |
| BA0367   | US       | 09/753,342 | 6,842,781  | Granted     | 29-Dec-00 | 11-Jan-05  | DOWNLOAD AND PROCESSING OF A NETWORK MANAGEMENT APPLICATION ON A NETWORK DEVICE                               |
| BA0372   | US       | 09/478,391 | 6,757,731  | Granted     | 6-Jan-00  | 29-Jun-04  | APPARATUS AND METHOD FOR INTERFACING MULTIPLE PROTOCOL STACKS IN A COMMUNICATION NETWORK                      |
| BA0374   | US       | 09/305,149 | 6,387,248  | Granted     | 4-May-99  | 28-May-02  | SYSTEM AND METHOD TO DISCOVER END NODE PHYSICAL CONNECTIVITY TO NETWORKING DEVICES                            |
| BA0385   | US       | 09/472,668 | 6,581,175  | Granted     | 27-Dec-99 | 17-Jun-03  | APPARATUS AND METHOD OF REQUESTING RETRANSMISSION OF A MESSAGE ACROSS A NETWORK                               |
| BA0391   | US       | 09/667,460 | 6,892,245  | Granted     | 22-Sep-00 | 10-May-05  | MANAGEMENT INFORMATION BASE FOR A MULTI-DOMAIN NETWORK ADDRESS TRANSLATOR                                     |
| BA0396   | US       | 09/326,733 | 6,754,219  | Granted     | 4-Jun-99  | 22-Jun-04  | MODULAR ROUTING SYSTEM  |
| BA0397   | US       | 09/326,022 | 6,757,289  | Granted     | 4-Jun-99  | 29-Jun-04  | APPARATUS AND METHOD FOR MANAGING COMMUNICATION BETWEEN A FAILED APPLICATION AND OTHER EXECUTING APPLICATIONS |





| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) |   |
|----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) |   |
| HQ0045   | US            | 11/767,563    | 7,895,183     | Granted       |               | 25-Jun-07     | 22-Feb-11     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 11/767,569    | 7,672,970     | Granted       |               | 25-Jun-07     | 2-Mar-10      | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 11/767,584    | 7,895,178     | Granted       |               | 25-Jun-07     | 22-Feb-11     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 11/767,632    | 7,933,883     | Granted       |               | 25-Jun-07     | 26-Apr-11     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 11/767,650    | 7,469,245     | Granted       |               | 25-Jun-07     | 23-Dec-08     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 12/418,386    | 7,945,553     | Granted       |               | 3-Apr-09      | 17-May-11     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 13/723,707    | 8,631,036     | Granted       |               | 21-Dec-12     | 14-Jan-14     | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 13/724,076    | #EMPTY        | Filed         |               | 21-Dec-12     | #EMPTY        | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 13/724,147    | 8,645,351     | Granted       |               | 21-Dec-12     | 4-Feb-14      | ASSOCIATIVE SEARCH ENGINE   |
| HQ0045   | US            | 13/724,209    | 8,706,713     | Granted       |               | 21-Dec-12     | 22-Apr-14     | ASSOCIATIVE SEARCH ENGINE   |
| HU0117   | US            | 08/796,591    | 5,912,962     | Granted       |               | 6-Feb-97      | 15-Jun-99     | A METHOD FOR PORTING FOR USE WITH LOCAL NUMBER PORTABILITY  |
| HU0118   | US            | 08/982,313    | 6,335,963     | Granted       |               | 1-Dec-97      | 1-Jan-02      | SYSTEM AND METHOD FOR PROVIDING NOTIFICATION OF A RECEIVED ELECTRONIC MAIL MESSAGE  |
| HU0120   | US            | 08/815,663    | 5,937,041     | Granted       |               | 10-Mar-97     | 10-Aug-99     | SYSTEM AND METHOD FOR RETRIEVING INTERNET DATA FILES USING ASCREEN DISPLAY TELEPHONE TERMINAL   |
| HU0120   | US            | 08/901,763    | 5,923,738     | Granted       |               | 29-Jul-97     | 13-Jul-99     | SYSTEM AND METHOD FOR RETRIEVING INTERNET DATA FILES USING ASCREEN DISPLAY TELEPHONE TERMINAL   |
| HU0120   | US            | 08/902,101    | 5,930,341     | Granted       |               | 29-Jul-97     | 27-Jul-99     | SYSTEM AND METHOD FOR RETRIEVING INTERNET DATA FILES USING ASCREEN DISPLAY TELEPHONE TERMINAL   |
| HU0125   | US            | 09/223,972    | 6,965,925     | Granted       |               | 31-Dec-98     | 15-Nov-05     | DISTRIBUTED OPEN ARCHITECTURE FOR MEDIA AND TELEPHONY SERVICES  |
| HU0128   | US            | 09/223,842    | 6,445,776     | Granted       |               | 31-Dec-98     | 3-Sep-02      | ABSTRACT INTERFACE FOR MEDIA AND TELEPHONY SERVICES   |
| HU0137   | US            | 09/195,774    | 6,526,135     | Granted       |               | 18-Nov-98     | 25-Feb-03     | AUTOMATED COMPETITIVE BUSINESS CALL DISTRIBUTION (ACBCD) SYSTEM   |
| HU0138   | US            | 09/193,277    | 6,714,641     | Granted       |               | 17-Nov-98     | 30-Mar-04     | WEB BASED PERSONAL DIRECTORY  |
| HU0138   | US            | 10/777,696    | 7,020,262     | Granted       |               | 12-Feb-04     | 28-Mar-06     | WEB BASED PERSONAL DIRECTORY  |
| HU0140   | US            | 09/185,492    | 6,327,344     | Granted       |               | 3-Nov-98      | 4-Dec-01      | ENHANCED NETWORK SUBSCRIBER SERVICE (ENSS)  |
| HU0143   | US            | 09/183,002    | 6,148,285     | Granted       |               | 30-Oct-98     | 14-Nov-00     | ALLOPHONIC TEXT-TO-SPEECH GENERATOR   |
| HU0144   | US            | 09/054,681    | 6,259,771     | Granted       |               | 3-Apr-98      | 10-Jul-01     | WEB BASED VOICE RESPONSE SYSTEM   |
| HU0146   | US            | 09/392,367    | 6,449,636     | Granted       |               | 8-Sep-99      | 10-Sep-02     | SYSTEM AND METHOD FOR CREATING A DYNAMIC DATA FILE FROM COLLECTED AND FILTERED WEB PAGES  |
| HU0152   | US            | 09/390,865    | 6,798,772     | Granted       |               | 7-Sep-99      | 28-Sep-04     | METHOD FOR PUBLIC ACCESS TO PRIVATE PHONE NUMBERS AND OTHER TELEPHONIC PERIPHERALS USING A CALLER ACCESS CODE   |
| HU0152   | US            | 10/823,554    | 7,280,535     | Granted       |               | 14-Apr-04     | 9-Oct-07      | METHOD FOR PUBLIC ACCESS TO PRIVATE PHONE NUMBERS AND OTHER TELEPHONIC PERIPHERALS USING A CALLER ACCESS CODE   |
| HU0154   | US            | 09/421,024    | 6,714,637     | Granted       |               | 19-Oct-99     | 30-Mar-04     | CUSTOMER PROGRAMMABLE CALLER ID ALERTING INDICATOR  |
| ID0269   | US            | 08/765,293    | 6,016,320     | Granted       |               | 21-Jun-95     | 18-Jan-00     | TELECOMMUNICATIONS SYSTEM   |
| ID0284   | US            | 08/628,738    | 5,901,356     | Granted       |               | 28-Jul-95     | 4-May-99      | CELLULAR COMMUNICATIONS SYSTEM  |
| ID0341   | US            | 08/930,288    | 6,215,771     | Granted       |               | 29-Mar-96     | 10-Apr-01     | TRAFFIC ROUTING IN A TELECOMMUNICATIONS NETWORK   |
| ID0356   | US            | 09/011,571    | 6,133,958     | Granted       |               | 29-Jul-96     | 17-Oct-00     | BROADCAST VIDEO DESYNCHRONISER  |
| ID0433   | US            | 08/739,367    | 6,449,278     | Granted       |               | 29-Oct-96     | 10-Sep-02     | EXCHANGE FOR COMMUNICATION NETWORK  |
| ID0438   | US            | 09/117,594    | 6,671,285     | Granted       |               | 21-Mar-97     | 30-Dec-03     | METHOD FOR CHARGING IN A DATA COMMUNICATION NETWORK   |
| ID0451   | US            | 09/214,448    | 6,215,929     | Granted       |               | 3-Jul-97      | 10-Apr-01     | DISPERSION COMPENSATING WAVEGUIDE FOR OPTICAL TRANSMISSION SYSTEMS  |
| ID0470   | US            | 08/838,608    | 5,886,629     | Granted       |               | 10-Apr-97     | 23-Mar-99     | COMMISSIONING/DECOMMISSIONING TOOL  |
| ID0499   | US            | 09/194,004    | 6,144,783     | Granted       |               | 30-Jul-97     | 7-Nov-00      | OPTICAL MULTIPLEXER/DEMULTIPLEXER   |
| ID0525   | US            | 09/083,469    | 6,400,496     | Granted       |               | 22-May-98     | 4-Jun-02      | OPTICALLY AMPLIFIED WDM TRANSMISSION SYSTEM   |
| ID0532   | US            | 09/202,423    | 6,519,257     | Granted       |               | 3-Jul-97      | 11-Feb-03     | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| ID0532   | US            | 11/055,787    | RE40398       | Granted       |               | 10-Feb-05     | 24-Jun-08     | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| ID0532   | US            | 11/759,494    | 8,547,849     | Granted       |               | 7-Jun-07      | 1-Oct-13      | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC   |
| ID0533   | US            | 09/230,011    | 6,785,532     | Granted       |               | 25-Jul-97     | 31-Aug-04     | POWER LINE COMMUNICATIONS   |
| ID0535   | US            | 09/230,009    | 6,317,031     | Granted       |               | 25-Jul-97     | 13-Nov-01     | POWER LINE COMMUNICATIONS   |
| ID0553   | US            | 09/254,901    | 6,597,708     | Granted       |               | 17-Oct-97     | 22-Jul-03     | DIGITAL COMMUNICATIONS SYSTEM   |
| ID0571   | US            | 08/789,974    | 6,198,734     | Granted       |               | 29-Jan-97     | 6-Mar-01      | ADAPTIVE RADIO COMMUNICATIONS SYSTEM  |
| ID0584   | US            | 08/975,014    | 6,163,525     | Granted       |               | 20-Nov-97     | 19-Dec-00     | NETWORK RESTORATION   |
| ID0604   | US            | 08/864,789    | 6,282,170     | Granted       |               | 29-May-97     | 28-Aug-01     | NETWORK RESTORATION ROUTING OPTIMISATION  |
| ID0613   | US            | 08/865,492    | 6,229,633     | Granted       |               | 29-May-97     | 8-May-01      | OPTICAL SAMPLING BY MODULATING A PULSE TRAIN  |
| ID0640   | US            | 09/319,137    | 6,466,578     | Granted       |               | 1-Dec-97      | 15-Oct-02     | SCALABLE DATA NETWORK ROUTER  |
| ID0657   | US            | 08/882,453    | 6,128,589     | Granted       |               | 26-Jun-97     | 3-Oct-00      | METHOD AND APPARATUS FOR MODELLING A SYSTEM WHICH INCLUDES THE TRANSMISSION AND RECEPTION OF SIGNALS  |
| ID0673   | US            | 09/136,019    | 6,151,556     | Granted       |               | 17-Sep-98     | 21-Nov-00     | METHOD AND APPARATUS FOR PHASE DETECTION IN DIGITAL SIGNALS   |
| ID0679   | US            | 09/015,675    | 6,310,996     | Granted       |               | 29-Jan-98     | 30-Oct-01     | WRITING BRAGG GRATINGS IN OPTICAL WAVEGUIDES  |
| ID0694   | US            | 09/341,584    | 6,574,223     | Granted       |               | 13-Jul-99     | 3-Jun-03      | ADAPTATION LAYER SWITCHING  |
| ID0701   | US            | 09/010,387    | 6,477,566     | Granted       |               | 21-Jan-98     | 5-Nov-02      | METHOD AND SYSTEM OF PROVIDING IMPROVED NETWORK MANAGEMENT DATA BETWEEN A PLURALITY OF NETWORK ELEMENTS AND A MANAGEMENT SYSTEM FOR INCREASING A FLOW AND DECREASING AN AMOUNT OF DATA TRANSFER |

| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No. | Pub. No.  | Pub. No.  |  |
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| Pub. No. | Pub. No. | Pub. No.   | Pub. No.  | Pub. No. | Pub. No. | Pub. No.  | Pub. No.  |  |
| ID0711   | US       | 09/065,934 | 6,171,143 | Granted  |          | 24-Apr-98 | 9-Jan-01  | MULTIPLE COAXIAL CABLE CONNECTOR   |
| ID0722   | US       | 09/620,398 | 6,570,868 | Granted  |          | 20-Jul-00 | 27-May-03 | SYSTEM AND METHOD FOR ESTABLISHING A COMMUNICATION CONNECTION  |
| ID0722   | US       | 10/444,404 | 7,545,800 | Granted  |          | 23-May-03 | 9-Jun-05  | SYSTEM AND METHOD FOR ESTABLISHING A COMMUNICATION CONNECTION  |
| ID0724   | US       | 08/914,919 | 6,262,991 | Granted  |          | 19-Aug-97 | 17-Jul-01 | COMMUNICATION SYSTEM ARCHITECTURE, INFRASTRUCTURE EXCHANGE AND METHOD OF OPERATION   |
| ID0737   | US       | 08/869,901 | 5,999,284 | Granted  |          | 5-Jun-97  | 7-Dec-99  | OPTICAL DETECTION AND LOGIC DEVICES WITH LATCHING FUNCTION   |
| ID0745   | US       | 09/089,796 | 6,396,840 | Granted  |          | 3-Jun-98  | 28-May-02 | METHOD, INTERFACE AND SYSTEM FOR CONNECTING COMMUNICATION TRAFFIC ACROSS AN INTERMEDIATE NETWORK   |
| ID0752   | US       | 09/006,380 | 6,049,819 | Granted  |          | 13-Jan-98 | 11-Apr-00 | COMMUNICATIONS NETWORK INCORPORATING AGENT ORIENTED COMPUTING ENVIRONMENT  |
| ID0753   | US       | 09/445,917 | 7,286,488 | Granted  |          | 12-Jun-98 | 23-Oct-07 | MULTIMEDIA COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK  |
| ID0769   | US       | 09/371,983 | 6,873,597 | Granted  |          | 11-Aug-99 | 29-Mar-05 | REDUCED DATA RATE COMMUNICATION SYSTEM   |
| ID0780   | US       | 09/089,728 | 6,487,194 | Granted  |          | 3-Jun-98  | 26-Nov-02 | COMMUNICATIONS NETWORK   |
| ID0788   | US       | 08/960,787 | 6,560,588 | Granted  |          | 30-Oct-97 | 6-May-03  | METHOD AND APPARATUS FOR IDENTIFYING ITEMS OF INFORMATION FROM A MULTI-USER INFORMATION SYSTEM   |
| ID0801   | US       | 09/185,932 | 6,166,850 | Granted  |          | 4-Nov-98  | 26-Dec-00 | OPTICAL AMPLIFIER GAIN CONTROL   |
| ID0818   | US       | 09/185,390 | 6,373,923 | Granted  |          | 3-Nov-98  | 16-Apr-02 | LINE TESTING METHOD AND APPARATUS THEREFOR   |
| ID0821   | US       | 09/052,736 | 6,400,701 | Granted  |          | 31-Mar-98 | 4-Jun-02  | ASYMMETRIC INTERNET ACCESS OVER FIXED WIRELESS ACCESS  |
| ID0824   | US       | 09/152,838 | 6,226,509 | Granted  |          | 15-Sep-98 | 1-May-01  | IMAGE REJECT MIXER, CIRCUIT AND METHOD FOR IMAGE REJECTION   |
| ID0835   | US       | 09/156,541 | 6,917,586 | Granted  |          | 17-Sep-98 | 12-Jul-05 | COMMUNICATION SYSTEM ARCHITECTURE AND OPERATING METHODS THEREOF  |
| ID0835   | US       | 11/065,308 | 7,675,853 | Granted  |          | 24-Feb-05 | 9-Mar-10  | COMMUNICATION SYSTEM ARCHITECTURE AND OPERATING METHODS THEREOF  |
| ID0836   | US       | 09/509,089 | 6,990,105 | Granted  |          | 21-Sep-98 | 24-Jan-06 | TRANSPORTING MULTIPROTOCOL DATAGRAMS   |
| ID0845   | US       | 08/991,273 | 6,385,196 | Granted  |          | 16-Dec-97 | 7-May-02  | COMMUNICATION SYSTEM ARCHITECTURE AND A MANAGEMENT CONTROL AGENT AND OPERATING PROTOCOL THEREFOR   |
| ID0847   | US       | 09/057,222 | 6,266,342 | Granted  |          | 8-Apr-98  | 24-Jul-01 | ADAPTABLE RESOURCE MODULE AND OPERATING METHOD THEREFOR  |
| ID0850   | US       | 09/470,629 | 6,954,461 | Granted  |          | 22-Dec-99 | 11-Oct-05 | COMMUNICATIONS NETWORK   |
| ID0852   | US       | 09/082,102 | 6,272,110 | Granted  |          | 20-May-98 | 7-Aug-01  | METHOD AND APPARATUS FOR MANAGING AT LEAST PART OF A COMMUNICATIONS NETWORK  |
| ID0859   | US       | 09/049,708 | 6,137,878 | Granted  |          | 28-Mar-98 | 24-Oct-00 | METHOD FOR OUTPUTTING USER FEEDBACK AUDIO MESSAGES AND TELECOMMUNICATIONS EQUIPMENT EMPLOYING SAID METHOD  |
| ID0873   | US       | 09/028,540 | 6,359,906 | Granted  |          | 24-Feb-98 | 19-Mar-02 | PROVIDING DIGITAL SERVICES TO TELEPHONE SUBSCRIBERS  |
| ID0882   | US       | 09/143,466 | 6,496,519 | Granted  |          | 27-Aug-98 | 17-Dec-02 | FRAME BASED DATA TRANSMISSION OVER SYNCHRONOUS DIGITAL HIERARCHY NETWORK   |
| ID0882   | US       | 10/233,183 | 6,816,496 | Granted  |          | 29-Aug-02 | 9-Nov-04  | FRAME BASED DATA TRANSMISSION OVER SYNCHRONOUS DIGITAL HIERARCHY NETWORK   |
| ID0889   | US       | 09/143,465 | 6,584,118 | Granted  |          | 27-Aug-98 | 24-Jun-03 | PAYLOAD MAPPING IN SYNCHRONOUS NETWORKS  |
| ID0889   | US       | 10/230,050 | 6,704,326 | Granted  |          | 28-Aug-02 | 9-Mar-04  | PAYLOAD MAPPING IN SYNCHRONOUS NETWORKS  |
| ID0895   | US       | 09/072,811 | 6,308,174 | Granted  |          | 5-May-98  | 23-Oct-01 | METHOD AND APPARATUS FOR MANAGING A COMMUNICATIONS NETWORK BY STORING MANAGEMENT INFORMATION ABOUT TWO OR MORE CONFIGURATION STATES OF THE NETWORK |
| ID0897   | US       | 09/010,475 | 6,408,163 | Granted  |          | 21-Jan-98 | 18-Jun-02 | METHOD AND APPARATUS FOR REPLICATING OPERATIONS ON DATA  |
| ID0931   | US       | 09/165,053 | 6,175,671 | Granted  |          | 1-Oct-98  | 16-Jan-01 | PHOTONIC CRYSTAL WAVEGUIDE ARRAYS  |
| ID0933   | US       | 09/157,234 | 6,563,539 | Granted  |          | 18-Sep-98 | 13-May-03 | CHARGE TRANSFER CIRCUIT FOR USE IN IMAGING SYSTEMS   |
| ID0935   | US       | 09/135,967 | 6,271,952 | Granted  |          | 18-Aug-98 | 7-Aug-01  | POLARISATION MODE DISPERSION COMPENSATION  |
| ID0945   | US       | 09/396,987 | 6,907,003 | Granted  |          | 16-Sep-99 | 14-Jun-05 | METHOD OF MONITORING PACKET COMMUNICATIONS TRAFFIC   |
| ID0951   | US       | 09/114,778 | 6,404,773 | Granted  |          | 13-Jul-98 | 11-Jun-02 | CARRYING SPEECH-BAND SIGNALS OVER A POWER LINE COMMUNICATIONS SYSTEM   |
| ID0959   | US       | 09/111,682 | 6,275,223 | Granted  |          | 8-Jul-98  | 14-Aug-01 | INTERACTIVE ON LINE CODE INSPECTION PROCESS AND TOOL   |
| ID0965   | US       | 09/346,323 | 6,519,261 | Granted  |          | 2-Jul-99  | 11-Feb-03 | ASYNCHRONOUS TRANSFER MODE ADAPTATION ARRANGEMENTS   |
| ID0986   | US       | 09/349,347 | 7,016,375 | Granted  |          | 7-Jul-99  | 21-Mar-06 | INTEGRATED CONNECTION ADMISSION CONTROL AND BANDWIDTH ON DEMAND FOR A ACCESS ASYNCHRONOUS NETWORK  |
| ID0993   | US       | 09/086,116 | 6,396,853 | Granted  |          | 28-May-98 | 28-May-02 | PROVIDING DATA SERVICES TO TELECOMMUNICATIONS USER TERMINALS   |
| ID0994   | US       | 09/294,708 | 6,587,469 | Granted  |          | 19-Apr-99 | 1-Jul-03  | TELECOMMUNICATIONS SYSTEM  |
| ID1004   | US       | 09/222,019 | 6,937,612 | Granted  |          | 31-Dec-98 | 30-Aug-05 | COMMUNICATIONS METHOD AND APPARATUS  |
| ID1013   | US       | 09/211,881 | 6,353,628 | Granted  |          | 15-Dec-98 | 5-Mar-02  | APPARATUS, METHOD AND SYSTEM HAVING REDUCED POWER CONSUMPTION IN A MULTI-CARRIER WIRELINE ENVIRONMENT  |
| ID1045   | US       | 09/346,322 | 6,574,224 | Granted  |          | 2-Jul-99  | 3-Jun-03  | PROCESSING COMMUNICATION TRAFFIC   |
| ID1068   | US       | 09/190,081 | 6,522,627 | Granted  |          | 12-Nov-98 | 18-Feb-03 | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES  |
| ID1072   | US       | 09/305,633 | 6,549,530 | Granted  |          | 5-May-99  | 15-Apr-03 | INTEGRATED SIGNALLING FOR ASYNCHRONOUS NETWORKS  |
| ID1078   | US       | 09/368,280 | 6,498,786 | Granted  |          | 3-Aug-99  | 24-Dec-02 | METHOD OF ALLOCATING RESOURCES IN A TELECOMMUNICATIONS NETWORK   |
| ID1079   | US       | 09/368,275 | 6,556,548 | Granted  |          | 3-Aug-99  | 29-Apr-03 | METHOD OF ALLOCATING RESOURCES IN A TELECOMMUNICATIONS NETWORK   |
| ID1081   | US       | 09/190,082 | 6,507,577 | Granted  |          | 12-Nov-98 | 14-Jan-03 | VOICE OVER INTERNET PROTOCOL NETWORK ARCHITECTURE  |
| ID1086   | US       | 09/364,132 | 6,577,650 | Granted  |          | 30-Jul-99 | 10-Jun-03 | METHOD OF SETTING-UP AND CONTROLLING SYNCHRONIZATION WITHIN A MODEM  |
| ID1089   | US       | 09/219,005 | 6,353,636 | Granted  |          | 23-Dec-98 | 5-Mar-02  | SYMBOL ALIGNMENT METHOD  |
| ID1097   | US       | 09/206,597 | 6,925,054 | Granted  |          | 7-Dec-98  | 2-Aug-05  | NETWORK PATH DETECTION   |
| ID1101   | US       | 09/358,977 | 6,515,778 | Granted  |          | 22-Jul-99 | 4-Feb-03  | POLARIZATION MODE DISPERSION COMPENSATION  |
| ID1102   | US       | 09/281,490 | 6,522,626 | Granted  |          | 30-Mar-99 | 18-Feb-03 | POWER LINE COMMUNICATIONS SYSTEM AND METHOD OF OPERATION THEREOF   |



| Patent Number | Applicant | Inventor   | Issue Date | Grant Status | Priority Date | Effective Date | Title   |
|---------------|-----------|------------|------------|--------------|---------------|----------------|---|
| RN1118        | US        | 09/164,885 | 6,826,272  | Granted      | 1-Oct-98      | 30-Nov-04      | METHOD AND APPARATUS FOR INTEGRATED MULTIMEDIA CALL CONTROL   |
| RN1120        | US        | 09/130,314 | 6,330,329  | Granted      | 9-Sep-98      | 11-Dec-01      | METHOD AND APPARATUS WITHIN A SWITCH FOR PERFORMING CIRCULAR HUNTS WITH A WINDOW  |
| RN1156        | US        | 09/327,049 | 6,591,301  | Granted      | 7-Jun-99      | 8-Jul-03       | METHODS AND SYSTEMS FOR CONTROLLING NETWORK GATEKEEPER MESSAGE PROCESSING   |
| RN1156        | US        | 10/454,208 | 6,907,462  | Granted      | 4-Jun-03      | 14-Jun-05      | NETWORK GATEKEEPER PRIORITIZING METHOD AND SYSTEM   |
| RN1157        | US        | 09/303,310 | 6,742,037  | Granted      | 30-Apr-99     | 25-May-04      | METHOD AND APPARATUS FOR DYNAMIC INFORMATION TRANSFER FROM A MOBILE TARGET TO A FIXED TARGET THAT TRACKS THEIR RELATIVE MOVEMENT AND SYNCHRONIZES DATA BETWEEN THEM |
| RN1159        | US        | 09/249,051 | 6,657,992  | Granted      | 12-Feb-99     | 2-Dec-03       | SYSTEM AND METHOD FOR PROVIDING SERVICE CONTROL TO A SINGLE TELEPHONE END TERMINAL FROM MULTIPLE SERVICE PROVIDERS  |
| RN1159        | US        | 10/411,162 | 7,369,539  | Granted      | 10-Apr-03     | 6-May-08       | SYSTEM AND METHOD FOR PROVIDING SERVICE CONTROL TO A SINGLE TELEPHONE END TERMINAL FROM MULTIPLE SERVICE PROVIDERS  |
| RO2770        | US        | 08/320,849 | 5,987,099  | Granted      | 7-Oct-94      | 16-Nov-99      | LOW POWER WIRELESS SYSTEM FOR TELEPHONE SERVICES  |
| RO2883        | US        | 08/443,515 | 5,552,961  | Granted      | 18-May-95     | 3-Sep-96       | ELECTRONIC UNIT   |
| RO2953        | US        | 08/419,898 | 5,675,578  | Granted      | 11-Apr-95     | 7-Oct-97       | METHOD OF TRACING THE ROUTE OF VIRTUAL CONNECTIONS  |
| RO2953        | US        | 08/938,630 | 5,901,141  | Granted      | 26-Sep-97     | 4-May-99       | METHOD OF TRACING THE ROUTE OF VIRTUAL CONNECTIONS  |
| RO2953        | US        | 09/292,356 | 6,563,795  | Granted      | 16-Apr-99     | 13-May-03      | METHOD OF TRACING THE ROUTE OF VIRTUAL CONNECTIONS  |
| RO2971        | US        | 08/535,404 | 6,421,444  | Granted      | 28-Sep-95     | 16-Jul-02      | EMBEDDED HIGHER ORDER MICROPHONE  |
| RO2972        | US        | 08/390,715 | 5,960,075  | Granted      | 16-Feb-95     | 28-Sep-99      | SWITCHMODE POWER CONVERTERS FOR TELEPHONE SUBSCRIBER LINE INTERFACE CIRCUITS  |
| RO2991        | US        | 08/534,668 | 5,867,569  | Granted      | 27-Sep-95     | 2-Feb-99       | ENHANCED EFFICIENT TELEPHONE NUMBER PORTABILITY   |
| RO2991        | US        | 09/020,444 | 6,411,703  | Granted      | 9-Feb-98      | 25-Jun-02      | GEOGRAPHICALLY DISTRIBUTED TELEPHONY  |
| RO3003        | US        | 08/812,834 | 5,828,666  | Granted      | 6-Mar-97      | 27-Oct-98      | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| RO3009        | US        | 08/721,095 | 6,125,111  | Granted      | 27-Sep-96     | 26-Sep-00      | ARCHITECTURE FOR A MODULAR COMMUNICATIONS SWITCHING SYSTEM  |
| RO3014        | US        | 08/634,408 | 5,754,530  | Granted      | 18-Apr-96     | 19-May-98      | FLOW CONTROL OF ABR TRAFFIC IN ATM NETWORKS   |
| RO3026        | US        | 08/899,794 | 5,912,850  | Granted      | 24-Jul-97     | 15-Jun-99      | MULTI-PORT RAM WITH SHADOW WRITE TEST ENHANCEMENT   |
| RO3041        | US        | 08/753,880 | 5,822,415  | Granted      | 2-Dec-96      | 13-Oct-98      | METHOD FOR COUNTING PAY PER USE FEATURE ACTIVATIONS IN CPE  |
| RO3042        | US        | 08/743,897 | 5,937,347  | Granted      | 6-Nov-96      | 10-Aug-99      | INTERACTIVE SUBSCRIBER TELEPHONE TERMINAL WITH AUTOMATIC MANAGEMENT SOFTWARE DOWNLOAD FEATURE   |
| RO3042        | US        | 09/334,184 | 6,157,708  | Granted      | 16-Jun-99     | 5-Dec-00       | INTERACTIVE SUBSCRIBER TELEPHONE TERMINAL WITH AUTOMATIC MANAGEMENT SOFTWARE DOWNLOAD FEATURE   |
| RO3049        | US        | 08/912,812 | 6,094,478  | Granted      | 19-Aug-97     | 25-Jul-00      | A METHOD AND SYSTEM FOR EXTENDING THE DIRECTORY NUMBER OF A TERMINAL  |
| RO3070        | US        | 08/637,961 | 5,878,044  | Granted      | 25-Apr-96     | 2-Mar-99       | DATA TRANSFER METHOD AND APPARATUS  |
| RO3075        | US        | 08/681,504 | 5,752,596  | Granted      | 23-Jul-96     | 19-May-98      | SIDE OPERATED KEY ACTUATOR  |
| RO3098        | US        | 08/588,848 | 5,870,475  | Granted      | 19-Jan-96     | 9-Feb-99       | FACILITATING SECURE COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| RO3103        | US        | 08/796,550 | 5,896,380  | Granted      | 6-Feb-97      | 20-Apr-99      | MULTI-CORE ATM SWITCH WITH CELLS IN THE CORE FROM AN INLET FOR AN OUTLET BEING ALIGNED  |
| RO3110        | US        | 08/681,461 | 5,870,394  | Granted      | 23-Jul-96     | 9-Feb-99       | METHOD AND APPARATUS FOR REASSEMBLY OF DATA PACKETS INTO MESSAGES IN AN ASYNCHRONOUS TRANSFER MODE COMMUNICATIONS SYSTEM  |
| RO3115        | US        | 08/987,216 | 7,006,617  | Granted      | 9-Dec-97      | 28-Feb-06      | METHOD OF PROVIDING CONFERENCING IN TELEPHONY   |
| RO3119        | US        | 09/244,824 | 6,721,271  | Granted      | 4-Feb-99      | 13-Apr-04      | RATE-CONTROLLED MULTI-CLASS HIGH-CAPACITY PACKET SWITCH   |
| RO3119        | US        | 10/741,375 | 6,876,629  | Granted      | 19-Dec-03     | 5-Apr-05       | RATE-CONTROLLED MULTI-CLASS HIGH-CAPACITY PACKET SWITCH   |
| RO3123        | US        | 08/817,000 | 5,894,298  | Granted      | 14-Mar-97     | 13-Apr-99      | DISPLAY APPARATUS   |
| RO3123        | US        | 09/233,117 | 6,175,353  | Granted      | 19-Jan-99     | 16-Jan-01      | DISPLAY APPARATUS   |
| RO3132        | US        | 08/972,318 | 5,878,031  | Granted      | 18-Nov-97     | 2-Mar-99       | LOOPBACK MECHANISM FOR FRAME RELAY OAM  |
| RO3136        | US        | 08/767,499 | 6,005,927  | Granted      | 16-Dec-96     | 21-Dec-99      | TELEPHONE DIRECTORY APPARATUS AND METHOD  |
| RO3144        | US        | 08/929,404 | 6,125,177  | Granted      | 15-Sep-97     | 26-Sep-00      | TELEPHONE COMMUNICATIONS NETWORK WITH ENHANCED SIGNALLING AND CALL ROUTING  |
| RO3149        | US        | 08/878,966 | 6,031,904  | Granted      | 19-Jun-97     | 29-Feb-00      | SERVICE ORDER MECHANISM FOR TELEPHONE SUBSCRIBERS   |
| RO3152        | US        | 08/682,127 | 5,905,755  | Granted      | 17-Jul-96     | 18-May-99      | METHOD AND CIRCUIT FOR DATA REGENERATION OF A DATA STREAM   |
| RO3177        | US        | 08/812,831 | 5,842,514  | Granted      | 6-Mar-97      | 1-Dec-98       | ELECTRONIC UNIT   |
| RO3186        | US        | 08/772,673 | 6,005,334  | Granted      | 20-Dec-96     | 21-Dec-99      | SIMULATING CHANGES IN TELEPHONE SUBSCRIBER LINE   |
| RO3188        | US        | 08/813,031 | 5,982,755  | Granted      | 6-Mar-97      | 9-Nov-99       | SYSTEM AND METHOD FOR PROVIDING HIGH TERMINAL COUPLING LOSS IN A HANDSFREE TERMINAL   |
| RO3215        | US        | 08/690,650 | 5,881,145  | Granted      | 29-Jul-96     | 9-Mar-99       | REDIRECTION OF CALLS TO PORTED DIRECTORY NUMBERS IN TELEPHONE NETWORKS  |
| RO3216        | US        | 09/974,812 | 6,721,395  | Granted      | 12-Oct-01     | 13-Apr-04      | METHOD AND APPARATUS FOR ROUTING EMERGENCY SERVICE CALLS IN AN INTELLIGENT NETWORK  |
| RO3222        | US        | 08/844,840 | 6,337,898  | Granted      | 22-Apr-97     | 8-Jan-02       | METHOD FOR MONITORING VOICEMAIL CALLS USING ADSI CAPABLE CPE  |
| RO3223        | US        | 08/929,774 | 5,987,036  | Granted      | 15-Sep-97     | 16-Nov-99      | FRAME TRANSFER NORMALIZED PRIORITY  |
| RO3241        | US        | 08/813,440 | 5,850,205  | Granted      | 10-Mar-97     | 15-Dec-98      | AUTOMATIC CONTRAST CONTROL FOR LIQUID CRYSTAL DISPLAYS  |
| RO3271        | US        | 08/772,256 | 6,028,842  | Granted      | 23-Dec-96     | 22-Feb-00      | DYNAMIC TRAFFIC CONDITIONING  |
| RO3271        | US        | 08/818,612 | 6,023,456  | Granted      | 14-Mar-97     | 8-Feb-00       | DYNAMIC TRAFFIC CONDITIONING  |
| RO3281        | US        | 08/730,856 | 6,091,808  | Granted      | 17-Oct-96     | 18-Jul-00      | METHODS OF AND APPARATUS FOR PROVIDING TELEPHONE CALL CONTROL AND INFORMATION   |
| RO3288        | US        | 08/976,423 | 6,118,792  | Granted      | 21-Nov-97     | 12-Sep-00      | METHOD AND APPARATUS FOR A FLEXIBLE ACCESS RATE COMMON MEMORY PACKET SWITCH   |
| RO3289        | US        | 08/773,956 | 5,842,007  | Granted      | 26-Dec-96     | 24-Nov-98      | METHOD AND SYSTEM FOR TRANSFERRING SERIAL DATA SIGNAL TRANSMISSION USING MULTI-COUPLING SIGNALLING  |
| RO3289        | US        | 09/195,245 | 6,061,784  | Granted      | 18-Nov-98     | 9-May-00       | METHOD AND SYSTEM FOR TRANSFERRING SERIAL DATA FRAMES WITHIN A SERIAL STREAM  |

| Patent No. | Applicant | Inventor   | Grant Date | Issue Date | Patent Title |           |  |
|------------|-----------|------------|------------|------------|--------------|-----------|--|
| RO3292     | US        | 08/934,672 | 5,939,901  | Granted    | 22-Sep-97    | 17-Aug-99 | SYNTHESIZABLE FLIP FLOP BASED PHASE FREQUENCY COMPARATOR FOR PHASE-LOCKED LOOPS  |
| RO3313     | US        | 08/985,265 | 6,037,937  | Granted    | 4-Dec-97     | 14-Mar-00 | NAVIGATION TOOL FOR GRAPHICAL USER INTERFACE   |
| RO3315     | US        | 08/842,020 | 6,333,973  | Granted    | 23-Apr-97    | 25-Dec-01 | INTEGRATED MESSAGE CENTER  |
| RO3316     | US        | 08/842,036 | 6,084,951  | Granted    | 23-Apr-97    | 4-Jul-00  | ICONIZED NAME LIST   |
| RO3326     | US        | 09/071,000 | 6,255,830  | Granted    | 4-May-98     | 3-Jul-01  | METHOD OF TESTING SHIELDING EFFECTIVENESS AND ELECTROMAGNETIC FIELD GENERATOR FOR USE IN TESTING SHIELDING EFFECTIVENESS                                   |
| RO3334     | US        | 08/821,145 | 5,946,313  | Granted    | 20-Mar-97    | 31-Aug-99 | MECHANISM FOR MULTIPLEXING ATM AALS VIRTUAL CIRCUITS OVER ETHERNET   |
| RO3335     | US        | 09/146,232 | 6,271,835  | Granted    | 3-Sep-98     | 7-Aug-01  | TOUCH-SCREEN INPUT DEVICE  |
| RO3336     | US        | 08/958,396 | 6,118,777  | Granted    | 27-Oct-97    | 12-Sep-00 | SYSTEM AND METHOD FOR PROVIDING COMPETING LOCAL EXCHANGE CARRIERS UNBUNDLED ACCESS TO SUBSCRIBER ACCESS LINES  |
| RO3366     | US        | 08/996,997 | 6,225,867  | Granted    | 23-Dec-97    | 1-May-01  | PROTECTION SCHEME FOR MULTI TRANSISTOR AMPLIFIERS  |
| RO3373     | US        | 08/749,688 | 6,014,707  | Granted    | 15-Nov-96    | 11-Jan-00 | STATELESS DATA TRANSFER PROTOCOL WITH CLIENT CONTROLLED TRANSFER UNIT SIZE   |
| RO3401     | US        | 08/947,855 | 6,130,893  | Granted    | 9-Oct-97     | 10-Oct-00 | METHOD AND APPARATUS FOR MULTIPLEXING TELEPHONE LINES OVER A COMMON ACCESS NETWORK   |
| RO3403     | US        | 08/896,978 | 5,807,537  | Granted    | 18-Jul-97    | 25-May-99 | OA&M SYSTEM  |
| RO3409     | US        | 08/962,291 | 6,091,739  | Granted    | 31-Oct-97    | 18-Jul-00 | INTERCONNECT   |
| RO3419     | US        | 08/992,581 | 6,055,310  | Granted    | 17-Dec-97    | 25-Apr-00 | PHASE REVERSAL TONE DETECTOR USING DSP   |
| RO3424     | US        | 08/987,251 | 5,991,544  | Granted    | 9-Dec-97     | 23-Nov-99 | PROCESS AND APPARATUS FOR MANAGING A SOFTWARE LOAD IMAGE   |
| RO3437     | US        | 08/986,783 | 6,202,091  | Granted    | 8-Dec-97     | 13-Mar-01 | PROCESS AND APPARATUS FOR INITIALIZING A COMPUTER FROM POWER UP  |
| RO3440     | US        | 08/921,028 | 6,069,895  | Granted    | 29-Aug-97    | 30-May-00 | DISTRIBUTED ROUTE SERVER   |
| RO3442     | US        | 08/988,391 | 6,148,052  | Granted    | 10-Dec-97    | 14-Nov-00 | DIGITAL PHASE DETECTOR WITH RING OSCILLATOR CAPTURE AND INVERTERS DELAY CALIBRATION  |
| RO3444     | US        | 08/970,206 | 6,083,281  | Granted    | 14-Nov-97    | 4-Jul-00  | PROCESS AND APPARATUS FOR TRACING SOFTWARE ENTITIES IN A DISTRIBUTED SYSTEM  |
| RO3448     | US        | 09/207,255 | 6,184,717  | Granted    | 9-Dec-98     | 6-Feb-01  | DIGITAL SIGNAL TRANSMITTER AND RECEIVER USING SOURCE BASED REFERENCE LOGIC LEVELS  |
| RO3467     | US        | 08/996,251 | 6,751,232  | Granted    | 22-Dec-97    | 15-Jun-04 | LINK   |
| RO3468     | US        | 09/172,996 | 6,381,246  | Granted    | 16-Oct-98    | 30-Apr-02 | TELEPHONY SYSTEM AND METHOD OF SIGNALLING  |
| RO3484     | US        | 08/854,266 | 6,086,377  | Granted    | 9-May-97     | 11-Jul-00 | SYSTEM AND METHOD FOR PRODUCT AND SERVICE CONFIGURATION  |
| RO3486     | US        | 08/774,548 | 5,918,248  | Granted    | 30-Dec-96    | 29-Jun-99 | SHARED MEMORY CONTROL ALGORITHM FOR MUTUAL EXCLUSION AND ROLLBACK  |
| RO3494     | US        | 08/996,772 | 5,987,098  | Granted    | 23-Dec-97    | 16-Nov-99 | METHOD AND SYSTEM FOR SPARING ECHO CANCELLERS  |
| RO3500     | US        | 08/996,765 | 5,909,574  | Granted    | 23-Dec-97    | 1-Jun-99  | COMPUTING SYSTEM WITH EXCEPTION HANDLER AND METHOD OF HANDLING EXCEPTIONS IN A COMPUTING SYSTEM  |
| RO3503     | US        | 08/812,807 | 5,991,292  | Granted    | 6-Mar-97     | 23-Nov-99 | NETWORK ACCESS IN MULTI-SERVICE ENVIRONMENT  |
| RO3506     | US        | 08/998,218 | 6,128,708  | Granted    | 24-Dec-97    | 3-Oct-00  | METHOD FOR TESTING AND MITIGATING SHARED MEMORY CONTENTION IN MULTIPROCESSOR SYSTEMS   |
| RO3523     | US        | 09/050,013 | 6,310,875  | Granted    | 30-Mar-98    | 30-Oct-01 | METHOD AND APPARATUS FOR PORT MEMORY MULTICAST COMMON MEMORY SWITCHES  |
| RO3526     | US        | 08/992,003 | 6,310,944  | Granted    | 17-Dec-97    | 30-Oct-01 | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| RO3526     | US        | 09/948,671 | 6,853,711  | Granted    | 10-Sep-01    | 8-Feb-05  | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| RO3531     | US        | 08/897,603 | 6,058,177  | Granted    | 21-Jul-97    | 2-May-00  | MECHANISM TO SUPPORT MULTIPLE VERSIONS OF TOLL FREE SERVICE  |
| RO3534     | US        | 09/223,836 | 6,473,428  | Granted    | 31-Dec-98    | 29-Oct-02 | MULTI-THREADED, MULTI-CAST SWITCH  |
| RO3539     | US        | 09/218,429 | 6,522,633  | Granted    | 22-Dec-98    | 18-Feb-03 | CONFERENCING ARRANGEMENT FOR USE WITH WIRELESS TERMINALS   |
| RO3546     | US        | 08/966,212 | 5,920,614  | Granted    | 7-Nov-97     | 6-Jul-99  | CITY, TIME AND TOLL-CHARGE DISPLAY WHEN CALLING TELEPHONE NUMBERS  |
| RO3556     | US        | 09/136,416 | 6,333,917  | Granted    | 19-Aug-98    | 25-Dec-01 | METHOD AND APPARATUS FOR RED (RANDOM EARLY DETECTION) AND ENHANCEMENTS   |
| RO3559     | US        | 09/223,004 | 6,557,056  | Granted    | 30-Dec-98    | 29-Apr-03 | METHOD AND APPARATUS FOR EXCHANGING DATA BETWEEN TRANSACTIONAL AND NON-TRANSACTIONAL INPUT/OUTPUT SYSTEMS IN A MULTI-PROCESSING, SHARED MEMORY ENVIRONMENT |
| RO3559     | US        | 10/390,734 | 6,757,756  | Granted    | 19-Mar-03    | 29-Jun-04 | METHOD AND APPARATUS FOR EXCHANGING DATA BETWEEN TRANSACTIONAL AND NON-TRANSACTIONAL INPUT/OUTPUT SYSTEMS IN A MULTI-PROCESSING, SHARED MEMORY ENVIRONMENT |
| RO3561     | US        | 08/977,811 | 6,092,196  | Granted    | 25-Nov-97    | 18-Jul-00 | HTTP DISTRIBUTED REMOTE USER AUTHENTICATION SYSTEM   |
| RO3563     | US        | 08/921,009 | 6,014,711  | Granted    | 29-Aug-97    | 11-Jan-00 | APPARATUS AND METHOD FOR PROVIDING ELECTRONIC MAIL RELAY/TRANSLATION SERVICES  |
| RO3564     | US        | 08/921,013 | 6,122,258  | Granted    | 29-Aug-97    | 19-Sep-00 | METHOD FOR CREATING A NUMBERING PLAN-INDEPENDENT DIRECTORY STRUCTURE FOR TELECOMMUNICATIONS APPLICATIONS   |
| RO3570     | US        | 08/827,882 | 6,041,040  | Granted    | 7-Apr-97     | 21-Mar-00 | LARGE-SCALE SERVICE-RATE REGULATORS FOR ATM SWITCHING  |
| RO3572     | US        | 09/073,442 | 6,246,872  | Granted    | 6-May-98     | 12-Jun-01 | MOBILE SWITCHING CENTER AND METHOD FOR HANDLING A DROPPED CONNECTION BETWEEN A MOBILE STATION AND A BASE STATION TRANSCIVER                                |
| RO3576     | US        | 09/064,552 | 5,949,645  | Granted    | 23-Apr-98    | 7-Sep-99  | ELECTRONIC UNIT  |
| RO3578     | US        | 08/867,624 | 6,128,649  | Granted    | 2-Jun-97     | 3-Oct-00  | DYNAMIC SELECTION OF MEDIA STREAMS FOR DISPLAY   |
| RO3583     | US        | 08/885,589 | 6,195,354  | Granted    | 16-Jul-97    | 27-Feb-01 | ROUTE SELECTION FOR PATH BALANCING IN CONNECTION-ORIENTED PACKET SWITCHING NETWORKS  |
| RO3585     | US        | 08/994,966 | 6,019,167  | Granted    | 19-Dec-97    | 1-Feb-00  | LIQUID IMMERSION COOLING APPARATUS FOR ELECTRONICS SYSTEMS OPERATING IN THERMALLY UNCONTROLLED ENVIRONMENTS  |
| RO3591     | US        | 09/001,626 | 6,356,758  | Granted    | 31-Dec-97    | 12-Mar-02 | WIRELESS TOOLS FOR DATA MANIPULATION AND VISUALIZATION   |
| RO3592     | US        | 09/209,759 | 6,061,241  | Granted    | 11-Dec-98    | 9-May-00  | LINE INTERFACE MODULE  |
| RO3616     | US        | 08/996,034 | 6,122,348  | Granted    | 22-Dec-97    | 19-Sep-00 | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| RO3616     | US        | 09/477,679 | 6,463,131  | Granted    | 5-Jan-00     | 8-Oct-02  | SYSTEM AND METHOD FOR NOTIFYING A USER OF AN INCOMING COMMUNICATION EVENT  |
| RO3617     | US        | 08/996,135 | 5,940,118  | Granted    | 22-Dec-97    | 17-Aug-99 | SYSTEM AND METHOD FOR STEERING DIRECTIONAL MICROPHONES   |

| Patent No. | App. No. | Pub. No.   | Pub. Date | Grant Date | App. No. | Pub. No. | Pub. Date | App. No.  | Pub. No. | Pub. Date | App. No. | Pub. No. | Pub. Date  |
|------------|----------|------------|-----------|------------|----------|----------|-----------|-----------|----------|-----------|----------|----------|--|
| RO3620     | US       | 09/137,687 | 6,510,452 | Granted    |          |          | 21-Aug-98 | 21-Jan-03 |          |           |          |          | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON                                     |
| RO3627     | US       | 09/295,215 | 6,501,762 | Granted    |          |          | 21-Apr-99 | 31-Dec-02 |          |           |          |          | SCHEDULER IMPLEMENTING WEIGHTED FAIR QUEUEING BY A WEIGHT LIMITED FIRST IN-FIRST OUT METHODOLOGY                 |
| RO3628     | US       | 08/997,353 | 6,345,037 | Granted    |          |          | 23-Dec-97 | 5-Feb-02  |          |           |          |          | METHOD AND APPARATUS FOR AUTO DETECTION OF AALS TYPE FRAMES  |
| RO3648     | US       | 08/992,765 | 6,185,288 | Granted    |          |          | 18-Dec-97 | 6-Feb-01  |          |           |          |          | MULTIMEDIA CALL SIGNALING SYSTEM AND METHOD  |
| RO3653     | US       | 09/567,030 | 6,826,184 | Granted    |          |          | 8-May-00  | 30-Nov-04 |          |           |          |          | METHOD AND SYSTEM FOR MULTI-SERVICE CUT-THROUGH SWITCHING THROUGH A CONNECTION-ORIENTED NETWORK                  |
| RO3655     | US       | 08/997,822 | 6,115,157 | Granted    |          |          | 24-Dec-97 | 5-Sep-00  |          |           |          |          | METHODS FOR EQUALIZING WDM SYSTEMS   |
| RO3655     | US       | 09/559,562 | 6,219,162 | Granted    |          |          | 27-Apr-00 | 17-Apr-01 |          |           |          |          | METHODS FOR EQUALIZING WDM SYSTEMS   |
| RO3661     | US       | 09/085,226 | 6,080,930 | Granted    |          |          | 27-May-98 | 27-Jun-00 |          |           |          |          | ESD/EMC GASKET   |
| RO3676     | US       | 08/948,465 | 6,005,851 | Granted    |          |          | 21-Dec-99 | 10-Oct-97 |          |           |          |          | ADAPTIVE CHANNEL CONTROL FOR DATA SERVICE DELIVERY   |
| RO3687     | US       | 08/997,778 | 6,233,245 | Granted    |          |          | 24-Dec-97 | 15-May-01 |          |           |          |          | METHOD AND APPARATUS FOR MANAGEMENT OF BANDWIDTH IN A DATA COMMUNICATION NETWORK                                 |
| RO3688     | US       | 08/989,647 | 6,327,053 | Granted    |          |          | 12-Dec-97 | 4-Dec-01  |          |           |          |          | FACSIMILE SIGNAL TRANSMISSION WITH SUPPRESSION OF MULTIPLE MODULATION AND DEMODULATION ACROSS A CONNECTION       |
| RO3689     | US       | 08/971,202 | 6,151,305 | Granted    |          |          | 14-Nov-97 | 21-Nov-00 |          |           |          |          | METHOD AND APPARATUS FOR PLANNING AN ATM NETWORK FOR AN AREA OF CONCENTRATED DEMAND FOR TRANSPORT BANDWIDTH      |
| RO3693     | US       | 08/998,347 | 6,246,684 | Granted    |          |          | 24-Dec-97 | 12-Jun-01 |          |           |          |          | METHOD AND APPARATUS FOR RE-ORDERING DATA PACKETS IN A NETWORK ENVIRONMENT                                       |
| RO3713     | US       | 09/056,096 | 6,198,558 | Granted    |          |          | 7-Apr-98  | 6-Mar-01  |          |           |          |          | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE-PLANT COMPONENT OF FIBER-BASED SYSTEM                            |
| RO3713     | US       | 09/736,739 | 6,421,150 | Granted    |          |          | 10-Jan-01 | 16-Jul-02 |          |           |          |          | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE-PLANT COMPONENT OF FIBER-BASED ACCESS SYSTEM                     |
| RO3714     | US       | 09/084,370 | 6,229,788 | Granted    |          |          | 27-May-98 | 8-May-01  |          |           |          |          | METHOD AND APPARATUS FOR TRAFFIC SHAPING IN A BROADBAND FIBER-BASED ACCESS SYSTEM                                |
| RO3715     | US       | 09/200,436 | 6,460,154 | Granted    |          |          | 27-Nov-98 | 1-Oct-02  |          |           |          |          | DATA ERROR CORRECTION SYSTEM   |
| RO3717     | US       | 09/217,898 | 6,519,255 | Granted    |          |          | 22-Dec-98 | 11-Feb-03 |          |           |          |          | UNIVERSAL OPTICAL NETWORK UNIT FOR USE IN NARROWBAND AND BROADBAND ACCESS NETWORKS                               |
| RO3718     | US       | 09/100,010 | 6,522,699 | Granted    |          |          | 19-Jun-98 | 18-Feb-03 |          |           |          |          | TRANSMISSION SYSTEM FOR REDUCTION OF AMATEUR RADIO INTERFERENCE  |
| RO3723     | US       | 09/146,341 | 6,289,063 | Granted    |          |          | 2-Sep-98  | 11-Sep-01 |          |           |          |          | QAM RECEIVER WITH IMPROVED IMMUNITY TO CROSSTALK NOISE   |
| RO3724     | US       | 09/080,189 | 6,310,429 | Granted    |          |          | 18-May-98 | 30-Oct-01 |          |           |          |          | ACOUSTIC WAVE TRANSDUCER DEVICE  |
| RO3725     | US       | 09/168,928 | 6,037,846 | Granted    |          |          | 9-Oct-98  | 14-Mar-00 |          |           |          |          | SURFACE MOUNT EMI GASKET FILTER  |
| RO3731     | US       | 09/066,701 | 6,097,262 | Granted    |          |          | 27-Apr-98 | 1-Aug-00  |          |           |          |          | TRANSMISSION LINE IMPEDANCE MATCHING APPARATUS   |
| RO3737     | US       | 08/989,270 | 6,049,606 | Granted    |          |          | 11-Dec-97 | 11-Apr-00 |          |           |          |          | CIRCUIT AND METHOD OF DOUBLE TALK DETECTION FOR USE IN HANDSFREE TELEPHONE TERMINALS                             |
| RO3744     | US       | 08/933,952 | 6,084,956 | Granted    |          |          | 19-Sep-97 | 4-Jul-00  |          |           |          |          | SS7 MEDIATION FOR DATA NETWORK CALL SETUP AND SERVICES INTERWORKING  |
| RO3747     | US       | 09/170,973 | 6,438,132 | Granted    |          |          | 14-Oct-98 | 20-Aug-02 |          |           |          |          | VIRTUAL PORT SCHEDULER   |
| RO3750     | US       | 09/105,469 | 6,359,884 | Granted    |          |          | 26-Jun-98 | 19-Mar-02 |          |           |          |          | MODULAR SCALABLE PACKET SCHEDULER WITH RATE BASED SHAPING AND VIRTUAL PORT SCHEDULER                             |
| RO3753     | US       | 08/994,456 | 6,178,162 | Granted    |          |          | 19-Dec-97 | 23-Jan-01 |          |           |          |          | METHOD AND APPARATUS FOR INHIBITING ECHO IN A CHANNEL OF A COMMUNICATION SYSTEM                                  |
| RO3763     | US       | 09/126,855 | 6,327,675 | Granted    |          |          | 31-Jul-98 | 4-Dec-01  |          |           |          |          | FAULT TOLERANT SYSTEM AND METHOD   |
| RO3764     | US       | 09/170,974 | 6,212,185 | Granted    |          |          | 14-Oct-98 | 3-Apr-01  |          |           |          |          | MULTIPLE NETWORK ADDRESS RESOLUTION  |
| RO3776     | US       | 09/219,316 | 6,701,382 | Granted    |          |          | 23-Dec-98 | 2-Mar-04  |          |           |          |          | NAME SERVICE FOR TRANSPARENT CONTAINER OBJECTS   |
| RO3784     | US       | 08/995,539 | 5,990,932 | Granted    |          |          | 22-Dec-97 | 23-Nov-99 |          |           |          |          | COLLABORATIVE SHARED SPACE   |
| RO3797     | US       | 09/307,356 | 7,068,641 | Granted    |          |          | 7-May-99  | 27-Jun-06 |          |           |          |          | TELEPHONY AND DATA NETWORK SERVICES AT A TELEPHONE   |
| RO3797     | US       | 11/300,997 | 7,660,295 | Granted    |          |          | 15-Dec-05 | 9-Feb-10  |          |           |          |          | TELEPHONY AND DATA NETWORK SERVICES AT A TELEPHONE   |
| RO3797     | US       | 12/646,404 | #EMPTY    | Filed      |          |          | 23-Dec-09 | #EMPTY    |          |           |          |          | TELEPHONY AND DATA NETWORK SERVICES AT A TELEPHONE   |
| RO3806     | US       | 09/182,655 | 6,873,612 | Granted    |          |          | 30-Oct-98 | 29-Mar-05 |          |           |          |          | METHODS AND DEVICES FOR ASYNCHRONOUS OPERATION OF A CDMA MOBILE COMMUNICATION SYSTEM                             |
| RO3809     | US       | 09/050,924 | 6,466,586 | Granted    |          |          | 31-Mar-98 | 15-Oct-02 |          |           |          |          | DIGITAL SUBSCRIBER LINE FRAMING STRUCTURE SUPPORTING IMBEDDED RATE ADAPTIVE SYNCHRONOUS AND ASYNCHRONOUS TRAFFIC |
| RO3812     | US       | 08/991,554 | 6,166,919 | Granted    |          |          | 16-Dec-97 | 26-Dec-00 |          |           |          |          | CASING MOUNTABLE FILLER MODULE   |
| RO3815     | US       | 09/148,154 | 6,389,034 | Granted    |          |          | 4-Sep-98  | 14-May-02 |          |           |          |          | SYSTEM FOR PROVIDING STREAM BASED AND PACKET BASED SERVICES  |
| RO3816     | US       | 09/002,113 | 6,262,998 | Granted    |          |          | 31-Dec-97 | 17-Jul-01 |          |           |          |          | PARALLEL DATA BUS INTEGRATED CLOCKING AND CONTROL  |
| RO3816     | US       | 09/875,202 | 7,061,938 | Granted    |          |          | 7-Jun-01  | 13-Jun-06 |          |           |          |          | PARALLEL DATA BUS INTEGRATED CLOCKING AND CONTROL  |
| RO3821     | US       | 09/034,905 | 6,194,949 | Granted    |          |          | 4-Mar-98  | 27-Feb-01 |          |           |          |          | DRIVER CIRCUIT FOR HIGH SPEED DATA   |
| RO3823     | US       | 09/031,647 | 6,236,726 | Granted    |          |          | 27-Feb-98 | 22-May-01 |          |           |          |          | TRANSMIT POWER SCALING FOR FAR-END CROSSTALK REDUCTION   |
| RO3832     | US       | 09/015,937 | 6,314,109 | Granted    |          |          | 30-Jan-98 | 6-Nov-01  |          |           |          |          | METHOD AND APPARATUS FOR ADDING OR AUGMENTING A NETWORK NODE   |
| RO3837     | US       | 09/076,633 | 6,240,150 | Granted    |          |          | 12-May-98 | 29-May-01 |          |           |          |          | METHOD AND APPARATUS FOR FILTERING INTERFERENCE IN A MODEM RECEIVER  |
| RO3838     | US       | 09/069,741 | 6,289,057 | Granted    |          |          | 30-Apr-98 | 11-Sep-01 |          |           |          |          | METHOD AND APPARATUS FOR ENERGY DETECTION IN A MODEM   |
| RO3852     | US       | 09/175,620 | 5,995,368 | Granted    |          |          | 20-Oct-98 | 30-Nov-99 |          |           |          |          | AIR FLOW DISTRIBUTION DEVICE FOR SHELF-BASED CIRCUIT CARDS   |
| RO3854     | US       | 09/181,823 | 7,027,430 | Granted    |          |          | 29-Oct-98 | 11-Apr-06 |          |           |          |          | COMMUNICATION NETWORK UTILIZING AUTONOMOUS SERVERS TO ESTABLISH COMMUNICATION SESSIONS                           |
| RO3868     | US       | 09/221,794 | 6,483,836 | Granted    |          |          | 28-Dec-98 | 19-Nov-02 |          |           |          |          | ATM CONNECTION ACCELERATOR FOR USE IN COMMUNICATION NETWORKS   |
| RO3895     | US       | 09/028,520 | 6,019,338 | Granted    |          |          | 23-Feb-98 | 1-Feb-00  |          |           |          |          | TILT STAND FOR DESKTOP TERMINAL  |
| RO3896     | US       | 09/028,519 | 6,038,314 | Granted    |          |          | 23-Feb-98 | 14-Mar-00 |          |           |          |          | PLUG-IN ACCESSORIES  |
| RO3897     | US       | 09/040,272 | 6,219,679 | Granted    |          |          | 18-Mar-98 | 17-Apr-01 |          |           |          |          | ENHANCED USER-INTERACTIVE INFORMATION CONTENT BOOKMARKING  |
| RO3905     | US       | 09/026,434 | 6,226,380 | Granted    |          |          | 19-Feb-98 | 1-May-01  |          |           |          |          | METHOD OF DISTINGUISHING BETWEEN ECHO PATH CHANGE AND DOUBLE TALK CONDITIONS IN AN ECHO CANCELLER                |
| RO3909     | US       | 09/057,528 | 6,091,814 | Granted    |          |          | 9-Apr-98  | 18-Jul-00 |          |           |          |          | STIFFENING ELEMENTS FOR A POLYMERIC TELEPHONE BASE   |

| ROW#   | APP# | APP TITLE  | APP STATUS | APP DATE | APP TYPE  | APP DESCRIPTION |   |
|--------|------|------------|------------|----------|-----------|-----------------|---|
| RO3917 | US   | 09/281,945 | 6,446,123  | Granted  | 31-Mar-99 | 3-Sep-02        | TOOL FOR MONITORING HEALTH OF NETWORKS  |
| RO3918 | US   | 09/177,609 | 6,323,881  | Granted  | 23-Oct-98 | 27-Nov-01       | WEB BASED GUI SERVER AND METHOD FOR A TELECOMMUNICATIONS NODE   |
| RO3931 | US   | 09/092,851 | 6,201,873  | Granted  | 8-Jun-98  | 13-Mar-01       | LOUDSPEAKER-DEPENDENT AUDIO COMPRESSION   |
| RO3936 | US   | 08/965,930 | 5,878,032  | Granted  | 7-Nov-97  | 2-Mar-99        | DELAY MONITORING OF TELECOMMUNICATION NETWORKS  |
| RO3937 | US   | 09/210,536 | 6,282,592  | Granted  | 14-Dec-98 | 28-Aug-01       | METHOD AND APPARATUS FOR HIGH-SPEED DATA TRANSMISSION BUS ENTRAINMENT   |
| RO3944 | US   | 09/157,533 | 6,882,639  | Granted  | 21-Sep-98 | 19-Apr-05       | TELECOMMUNICATIONS MIDDLEWARE   |
| RO3947 | US   | 09/057,525 | 6,307,852  | Granted  | 9-Apr-98  | 23-Oct-01       | ROTATOR SWITCH DATA PATH STRUCTURES   |
| RO3947 | US   | 09/971,011 | 7,009,964  | Granted  | 5-Oct-01  | 7-Mar-06        | ROTATOR SWITCH DATA PATH STRUCTURES   |
| RO3951 | US   | 09/213,271 | 6,885,745  | Granted  | 17-Dec-98 | 26-Apr-05       | VOLTAGE AND PROTECTION ARRANGEMENT FOR A TELEPHONE SUBSCRIBER LINE INTERFACE CIRCUIT  |
| RO3952 | US   | 09/092,847 | 6,195,714  | Granted  | 8-Jun-98  | 27-Feb-01       | SYSTEM FOR TRANSFERRING STM CALLS THROUGH ATM NETWORK BY CONVERTING THE STM CALLS TO ATM AND VICE VERSA AT THE EDGE NODES OF ATM NETWORK  |
| RO3957 | US   | 09/188,297 | 6,389,029  | Granted  | 10-Nov-98 | 14-May-02       | LOCAL AREA NETWORK INCORPORATING UNIVERSAL SERIAL BUS PROTOCOL  |
| RO3984 | US   | 08/997,990 | 6,965,870  | Granted  | 24-Dec-97 | 15-Nov-05       | METHOD AND SYSTEM FOR ACTIVITY-RESPONSIVE TELEMARKETING   |
| RO3995 | US   | 09/041,128 | 6,351,771  | Granted  | 12-Mar-98 | 26-Feb-02       | DISTRIBUTED SERVICE NETWORK SYSTEM CAPABLE OF TRANSPARENTLY CONVERTING DATA FORMATS AND SELECTIVELY CONNECTING TO AN APPROPRIATE BRIDGE IN ACCORDANCE WITH CLIENTS CHARACTERISTICS IDENTIFIED DURING PRELIMINARY CONNECTION |
| RO3998 | US   | 09/165,189 | 6,822,961  | Granted  | 2-Oct-98  | 23-Nov-04       | METHOD AND APPARATUS FOR REDUCTION OF CALL SETUP RATE IN AN ATM NETWORK   |
| RO4001 | US   | 09/185,635 | 6,584,111  | Granted  | 4-Nov-98  | 24-Jun-03       | ABR FLOW CONTROL USING SINGLE BIT CONGESTION INDICATION AND WAVELET TRANSFORM FILTERING   |
| RO4004 | US   | 09/049,928 | 6,700,879  | Granted  | 30-Mar-98 | 2-Mar-04        | MODEM LOOP RATE ADAPTATION  |
| RO4008 | US   | 09/215,376 | 6,510,135  | Granted  | 18-Dec-98 | 21-Jan-03       | FLOW-LEVEL DEMULTIPLEXING WITHIN ROUTERS  |
| RO4009 | US   | 09/215,262 | 6,587,431  | Granted  | 18-Dec-98 | 1-Jul-03        | SUPERTRUNKING FOR PACKET SWITCHING  |
| RO4010 | US   | 09/150,698 | 6,324,170  | Granted  | 10-Sep-98 | 27-Nov-01       | ECHO CONTROLLER WITH COMPENSATION FOR VARIABLE DELAY NETWORKS   |
| RO4017 | US   | 09/050,246 | 6,501,766  | Granted  | 30-Mar-98 | 31-Dec-02       | GENERIC BUS SYSTEM  |
| RO4036 | US   | 09/207,250 | 6,246,736  | Granted  | 9-Dec-98  | 12-Jun-01       | DIGITAL SIGNAL FRAMING SYSTEMS AND METHODS  |
| RO4042 | US   | 09/023,084 | 6,426,950  | Granted  | 13-Feb-98 | 30-Jul-02       | METHOD OF RESOURCE MANAGEMENT AT COMPUTER CONTROLLED TELEPHONY HARDWARE   |
| RO4045 | US   | 09/207,251 | 6,137,051  | Granted  | 9-Dec-98  | 24-Oct-00       | EMI SHIELD/GASKET ENCLOSURE   |
| RO4046 | US   | 09/028,506 | 6,052,883  | Granted  | 24-Feb-98 | 18-Apr-00       | ADDRESS LOOKUP IN PACKET DATA COMMUNICATION NETWORK   |
| RO4054 | US   | 08/997,989 | 6,215,784  | Granted  | 24-Dec-97 | 10-Apr-01       | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE   |
| RO4066 | US   | 09/134,924 | 6,377,551  | Granted  | 17-Aug-98 | 23-Apr-02       | QOS BASED ROUTE DETERMINATION METHOD FOR COMMUNICATIONS NETWORKS  |
| RO4069 | US   | 09/208,980 | 6,301,244  | Granted  | 11-Dec-98 | 9-Oct-01        | QOS-ORIENTED ONE-TO-ALL ROUTE SELECTION METHOD FOR COMMUNICATION NETWORKS   |
| RO4072 | US   | 09/216,935 | 6,269,995  | Granted  | 21-Dec-98 | 31-Jul-01       | METHOD AND SYSTEM IN A COMPUTER-BASED SYSTEM FOR PROVIDING ACCESS TO SERVICES ASSOCIATED WITH DIFFERENT ACCESS POINTS   |
| RO4087 | US   | 09/098,951 | 6,219,353  | Granted  | 17-Jun-98 | 17-Apr-01       | MESSAGE HUB   |
| RO4096 | US   | 09/196,344 | 6,480,507  | Granted  | 19-Nov-98 | 12-Nov-02       | COMMUNICATION PROTOCOL STACK APPARATUS AND METHOD OF IMPLEMENTING SAME  |
| RO4103 | US   | 09/215,377 | 6,574,230  | Granted  | 18-Dec-98 | 3-Jun-03        | SCHEDULING TECHNIQUE FOR DELAYED QUEUE SERVICE  |
| RO4104 | US   | 09/356,046 | 6,775,480  | Granted  | 16-Jul-99 | 10-Aug-04       | FREE SPACE OPTICAL INTERCONNECT SYSTEM  |
| RO4106 | US   | 09/071,117 | 6,272,185  | Granted  | 4-May-98  | 7-Aug-01        | METHOD AND APPARATUS FOR PERFORMING DATA PULSE DETECTION  |
| RO4115 | US   | 09/028,512 | 6,104,807  | Granted  | 23-Feb-98 | 15-Aug-00       | DISPLAY-BASED ADD-ON MODULE   |
| RO4120 | US   | 09/206,277 | 6,930,998  | Granted  | 7-Dec-98  | 16-Aug-05       | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME  |
| RO4121 | US   | 09/158,855 | 6,282,194  | Granted  | 23-Sep-98 | 28-Aug-01       | TRANSIT TRUNK SUBNETWORK SYSTEM   |
| RO4123 | US   | 09/190,292 | 6,256,760  | Granted  | 13-Nov-98 | 3-Jul-01        | AUTOMATIC TEST EQUIPMENT SCAN TEST ENHANCEMENT  |
| RO4128 | US   | 09/201,875 | 6,344,851  | Granted  | 30-Nov-98 | 5-Feb-02        | METHOD AND SYSTEM FOR WEBSITE OVERVIEW  |
| RO4134 | US   | 09/195,556 | 6,336,035  | Granted  | 19-Nov-98 | 1-Jan-02        | TOOLS FOR WIRELESS NETWORK PLANNING   |
| RO4135 | US   | 09/062,727 | 6,101,486  | Granted  | 20-Apr-98 | 8-Aug-00        | SYSTEM AND METHOD FOR RETRIEVING CUSTOMER INFORMATION AT A TRANSACTION CENTER   |
| RO4149 | US   | 09/151,448 | 6,512,746  | Granted  | 11-Sep-98 | 28-Jan-03       | METHOD AND APPARATUS FOR MEASURING VOICE GRADE OF SERVICE IN AN IP NETWORK  |
| RO4151 | US   | 09/069,521 | 6,188,722  | Granted  | 29-Apr-98 | 13-Feb-01       | SEQUENTIAL BLIND CONVERGENCE PROCESS IN AN ADAPTIVE DECISION FEEDBACK EQUALIZER   |
| RO4152 | US   | 09/069,400 | 6,215,818  | Granted  | 29-Apr-98 | 10-Apr-01       | METHOD AND APPARATUS FOR OPERATING AN ADAPTIVE DECISION FEEDBACK EQUALIZER  |
| RO4153 | US   | 09/069,436 | 6,163,572  | Granted  | 29-Apr-98 | 19-Dec-00       | METHOD OF REDUCING COEFFICIENT LEAKAGE NOISE INTRODUCED TO AN EQUALIZER DURING STEADY STATE OPERATION   |
| RO4154 | US   | 09/069,520 | 6,246,722  | Granted  | 29-Apr-98 | 12-Jun-01       | METHOD OF DETECTION OF MISCONVERGENCE USING CONSTELLATION SCANNING IN AN EQUALIZER  |
| RO4155 | US   | 09/076,634 | 6,266,377  | Granted  | 12-May-98 | 24-Jul-01       | METHOD OF TIMING RECOVERY CONVERGENCE MONITORING IN MODEMS  |
| RO4156 | US   | 09/111,718 | 6,141,738  | Granted  | 8-Jul-98  | 31-Oct-00       | ADDRESS TRANSLATION METHOD AND SYSTEM HAVING A FORWARDING TABLE DATA STRUCTURE  |
| RO4156 | US   | 09/616,880 | 6,243,720  | Granted  | 14-Jul-00 | 5-Jun-01        | ADDRESS TRANSLATION METHOD AND SYSTEM HAVING A FORWARDING TABLE DATA STRUCTURE  |
| RO4167 | US   | 09/216,975 | 6,507,654  | Granted  | 21-Dec-98 | 14-Jan-03       | LINE INTERFACE BATTERY FEED ARRANGEMENTS WITH PTC RESISTORS   |
| RO4181 | US   | 09/131,190 | 6,516,417  | Granted  | 7-Aug-98  | 4-Feb-03        | VIRTUAL PRIVATE NETWORKS  |
| RO4206 | US   | 09/220,019 | 6,728,267  | Granted  | 23-Dec-98 | 27-Apr-04       | SERVICE CAPABLE NETWORK   |
| RO4208 | US   | 09/165,351 | 6,321,253  | Granted  | 2-Oct-98  | 20-Nov-01       | SYSTEMS AND METHODS FOR SIMULTANEOUS NETWORK MANAGEMENT OF VOICE AND DATA SIGNALS   |
| RO4218 | US   | 09/218,142 | 6,327,276  | Granted  | 22-Dec-98 | 4-Dec-01        | CONFERENCING OVER LAN/WAN USING A HYBRID CLIENT/SERVER CONFIGURATION  |



| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)   |
|----------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)   |
| RO4225   | US            | 09/071,345    | 6,667,956     | Granted       | 1-May-98      | 23-Dec-03     | MULTI-CLASS NETWORK   |
| RO4226   | US            | 09/186,643    | 6,480,803     | Granted       | 6-Nov-98      | 12-Nov-02     | DEVICE WHICH REDUCES CENTRAL OFFICE BATTERY CURRENT DURING MODEM CONNECTIONS                          |
| RO4238   | US            | 09/222,835    | 6,584,096     | Granted       | 30-Dec-98     | 24-Jun-03     | METHOD AND APPARATUS FOR CONNECTING A HOME NETWORK TO THE INTERNET                                    |
| RO4240   | US            | 09/382,500    | 6,421,542     | Granted       | 25-Aug-99     | 16-Jul-02     | FREQUENCY REUSE IN MILLIMETRIC-WAVE POINT-TO-MULTIPOINT RADIO SYSTEMS                                 |
| RO4242   | US            | 09/204,263    | 6,546,100     | Granted       | 3-Dec-98      | 8-Apr-03      | LOAD COIL DEVICE  |
| RO4243   | US            | 09/216,928    | 6,721,409     | Granted       | 21-Dec-98     | 13-Apr-04     | NETWORK BASED CALL MUTE   |
| RO4255   | US            | 09/154,628    | 6,393,026     | Granted       | 17-Sep-98     | 21-May-02     | DATA PACKET PROCESSING SYSTEM AND METHOD FOR A ROUTER   |
| RO4266   | US            | 09/223,817    | 6,404,806     | Granted       | 31-Dec-98     | 11-Jun-02     | METHOD AND APPARATUS FOR TIME-DOMAIN EQUALIZATION IN FDM-BASED DISCRETE MULTI-TONE MODEMS             |
| RO4269   | US            | 09/137,688    | 6,738,809     | Granted       | 21-Aug-98     | 18-May-04     | NETWORK PRESENCE INDICATOR FOR COMMUNICATIONS MANAGEMENT  |
| RO4273   | US            | 09/218,427    | 6,286,119     | Granted       | 22-Dec-98     | 4-Sep-01      | DELAY FAULT TESTING WITH IEEE 1149.1  |
| RO4277   | US            | 09/258,407    | 6,928,154     | Granted       | 26-Feb-99     | 9-Aug-05      | REMOTE CALLER IDENTIFICATION TELEPHONE SYSTEM AND METHOD WITH INTERNET RETRIEVAL                      |
| RO4288   | US            | 09/219,317    | 6,526,063     | Granted       | 21-Dec-98     | 25-Feb-03     | SYSTEM AND METHOD FOR ATM-FR INTERWORKING OF SVC SIGNALLING   |
| RO4314   | US            | 09/218,054    | 6,456,654     | Granted       | 22-Dec-98     | 24-Sep-02     | FRAME ALIGNMENT AND TIME DOMAIN EQUALIZATION FOR COMMUNICATIONS SYSTEMS USING MULTICARRIER MODULATION |
| RO4316   | US            | 09/209,273    | 6,549,517     | Granted       | 11-Dec-98     | 15-Apr-03     | EXPLICIT RATE COMPUTATION FOR FLOW CONTROL IN COMPUTER NETWORKS                                       |
| RO4320   | US            | 09/131,051    | 7,039,687     | Granted       | 6-Aug-98      | 2-May-06      | MULTI-PROTOCOL LABEL SWITCHING VIRTUAL PRIVATE NETWORKS   |
| RO4325   | US            | 09/217,058    | 6,111,476     | Granted       | 21-Dec-98     | 29-Aug-00     | NON-CONTACT COUPLING SYSTEM   |
| RO4328   | US            | 09/215,547    | 6,486,990     | Granted       | 18-Dec-98     | 26-Nov-02     | METHOD AND APPARATUS FOR COMMUNICATING A CLOCK SIGNAL IN A SOLUTION OPTICAL TRANSMISSION SYSTEM       |
| RO4329   | US            | 09/291,186    | 6,222,669     | Granted       | 14-Apr-99     | 24-Apr-01     | OPTICAL PARTIAL REGENERATION OF SOLITONS  |
| RO4334   | US            | 09/286,431    | 6,570,872     | Granted       | 6-Apr-99      | 27-May-03     | SELF-CONFIGURING DISTRIBUTED SWITCH   |
| RO4334   | US            | 10/409,197    | 7,209,454     | Granted       | 9-Apr-03      | 24-Apr-07     | SELF-CONFIGURING DISTRIBUTED SWITCH   |
| RO4334   | US            | 10/409,702    | 7,230,952     | Granted       | 9-Apr-03      | 12-Jun-07     | SELF-CONFIGURING DISTRIBUTED SWITCH   |
| RO4337   | US            | 09/220,232    | 6,560,223     | Granted       | 23-Dec-98     | 6-May-03      | WIRELESS MULTI-SITE NETWORKING USING SIGNALING AND VOICE-OVER-IP                                      |
| RO4338   | US            | 09/471,244    | 6,996,539     | Granted       | 23-Dec-99     | 7-Feb-06      | IP ADDRESS RESOLUTION METHODS AND APPARATUS   |
| RO4339   | US            | 09/213,769    | 6,757,285     | Granted       | 17-Dec-98     | 29-Jun-04     | METHOD AND APPARATUS FOR COMPLETING TELEPHONE CALLS BETWEEN SUBNETWORKS                               |
| RO4352   | US            | 09/748,848    | 6,920,131     | Granted       | 28-Dec-00     | 19-Jul-05     | GLOBAL DISTRIBUTED SWITCH   |
| RO4366   | US            | 09/220,955    | 6,873,616     | Granted       | 28-Dec-98     | 29-Mar-05     | QUASI-DETERMINISTIC GATEWAY SELECTION ALGORITHM FOR MULTI-DOMAIN SOURCE ROUTED NETWORKS               |
| RO4371   | US            | 09/212,429    | 6,477,582     | Granted       | 16-Dec-98     | 5-Nov-02      | METHOD AND APPARATUS FOR CONSERVATIVE LINK SELECTION  |
| RO4372   | US            | 09/411,294    | 6,542,746     | Granted       | 4-Oct-99      | 1-Apr-03      | FREQUENCY RE-USE SCHEME FOR POINT TO MULTIPOINT RADIO COMMUNICATION                                   |
| RO4373   | US            | 09/222,926    | 6,330,550     | Granted       | 30-Dec-98     | 11-Dec-01     | CROSS-MEDIA NOTIFICATIONS FOR E-COMMERCE  |
| RO4383   | US            | 09/223,818    | 6,693,957     | Granted       | 31-Dec-98     | 17-Feb-04     | ADAPTIVE FRONT END FOR DISCRETE MULTITONE MODEM   |
| RO4386   | US            | 09/375,396    | 6,324,271     | Granted       | 17-Aug-99     | 27-Nov-01     | SYSTEM AND METHOD FOR AUTHENTICATION OF CALLER INFORMATION  |
| RO4390   | US            | 09/216,992    | 6,456,626     | Granted       | 21-Dec-98     | 24-Sep-02     | METHOD OF VIRTUAL CIRCUIT RECONNECTION WITHOUT LOSS OF CALL SESSION                                   |
| RO4408   | US            | 09/465,705    | 6,990,070     | Granted       | 17-Dec-99     | 24-Jan-06     | METHOD AND APPARATUS FOR ADJUSTING PACKET TRANSMISSION VOLUME FROM A SOURCE                           |
| RO4411   | US            | 09/312,840    | 6,697,487     | Granted       | 14-May-99     | 24-Feb-04     | POWER CONTROL DATA DELIVERY CONSISTENCY IN COPPER PLANT   |
| RO4419   | US            | 09/475,722    | 6,490,392     | Granted       | 30-Dec-99     | 3-Dec-02      | METHOD OF AND APPARATUS FOR GENERATING A TREE DATA STRUCTURE SUPPORTING LONGEST MATCH LOOKUP          |
| RO4431   | US            | 09/439,501    | 6,697,372     | Granted       | 12-Nov-99     | 24-Feb-04     | LOCAL AREA NETWORK ACCESSORY FOR INTEGRATING USB CONNECTIVITY IN EXISTING NETWORKS                    |
| RO4432   | US            | 09/386,215    | 6,721,332     | Granted       | 31-Aug-99     | 13-Apr-04     | USB NETWORKING ON A MULTIPLE ACCESS TRANSMISSION MEDIUM   |
| RO4436   | US            | 09/191,845    | 6,205,488     | Granted       | 13-Nov-98     | 20-Mar-01     | INTERNET PROTOCOL VIRTUAL PRIVATE NETWORK REALIZATION USING MULTI-PROTOCOL LABEL SWITCHING TUNNELS    |
| RO4438   | US            | 09/288,565    | 6,570,867     | Granted       | 9-Apr-99      | 27-May-03     | ROUTES AND PATHS MANAGEMENT   |
| RO4441   | US            | 09/189,992    | 6,317,239     | Granted       | 12-Nov-98     | 13-Nov-01     | OPTICAL REPEATERS FOR SINGLE- AND MULTI-WAVELENGTH OPERATION WITH DISPERSION EQUALIZATION             |
| RO4456   | US            | 09/429,712    | 6,574,749     | Granted       | 29-Oct-99     | 3-Jun-03      | RELIABLE DISTRIBUTED SHARED MEMORY  |
| RO4460   | US            | 10/216,397    | 7,043,159     | Granted       | 12-Aug-02     | 9-May-06      | BIDIRECTIONAL OPTICAL NETWORKS  |
| RO4470   | US            | 09/191,142    | 6,493,349     | Granted       | 13-Nov-98     | 10-Dec-02     | EXTENDED INTERNET PROTOCOL VIRTUAL PRIVATE NETWORK ARCHITECTURES                                      |
| RO4487   | US            | 10/147,810    | 6,697,554     | Granted       | 20-May-02     | 24-Feb-04     | ADAPTIVE OPTICAL WAVEGUIDE  |
| RO4496   | US            | 09/192,530    | 6,721,322     | Granted       | 17-Nov-98     | 13-Apr-04     | SYSTEM AND METHOD FOR ESTABLISHING DYNAMIC HIGH USAGE TRUNK GROUPS                                    |
| RO4518   | US            | 09/405,003    | 6,744,775     | Granted       | 27-Sep-99     | 1-Jun-04      | STATE INFORMATION AND ROUTING TABLE UPDATES IN LARGE SCALE DATA NETWORKS                              |
| RO4518   | US            | 10/747,077    | 6,944,131     | Granted       | 29-Dec-03     | 13-Sep-05     | STATE INFORMATION AND ROUTING TABLE UPDATES IN LARGE SCALE DATA NETWORKS                              |
| RO4518   | US            | 11/208,056    | 8,265,085     | Granted       | 19-Aug-05     | 11-Sep-12     | STATE INFORMATION AND ROUTING TABLE UPDATES IN LARGE SCALE DATA NETWORKS                              |
| RO4518   | US            | 13/599,461    | 8,837,497     | Granted       | 30-Aug-12     | 16-Sep-14     | STATE INFORMATION AND ROUTING TABLE UPDATES IN LARGE SCALE DATA NETWORKS                              |
| RO4522   | US            | 09/395,734    | 6,760,391     | Granted       | 14-Sep-99     | 6-Jul-04      | METHOD AND APPARATUS FOR LINE RATE CONTROL IN A DIGITAL COMMUNICATIONS SYSTEM                         |
| RO4523   | US            | 09/345,471    | 6,654,803     | Granted       | 30-Jun-99     | 25-Nov-03     | MULTI-PANEL ROUTE MONITORING GRAPHICAL USER INTERFACE, SYSTEM AND METHOD                              |
| RO4524   | US            | 09/345,472    | 6,487,604     | Granted       | 30-Jun-99     | 26-Nov-02     | ROUTE MONITORING GRAPHICAL USER INTERFACE, SYSTEM AND METHOD  |
| RO4525   | US            | 09/420,424    | 6,633,312     | Granted       | 19-Oct-99     | 14-Oct-03     | METHOD AND APPARATUS FOR SELECTING NETWORK ENTITIES   |
| RO4527   | US            | 09/396,452    | 6,577,327     | Granted       | 15-Sep-99     | 10-Jun-03     | SYSTEM, METHOD AND GRAPHICAL USER INTERFACE FOR BUILDING VIRTUAL PRIVATE NETWORKS                     |

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| RO4529   | US            | 09/397,968    | 6,505,310     | Granted       | 17-Sep-99     | 7-Jan-03      | CONNECTION INTEGRITY MONITOR FOR DIGITAL SELECTION CIRCUITS  |
| RO4531   | US            | 09/338,530    | 6,271,959     | Granted       | 23-Jun-99     | 7-Aug-01      | METHOD AND APPARATUS FOR OPTICAL FREQUENCY DEMODULATION OF AN OPTICAL SIGNAL USING INTERFEROMETRY                                  |
| RR1114   | US            | 08/652,659    | 6,430,282     | Granted       | 28-May-96     | 6-Aug-02      | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |
| RR1116   | US            | 08/718,746    | 5,943,399     | Granted       | 25-Sep-96     | 24-Aug-99     | METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS TO TELECOMMUNICATIONS TERMINALS   |
| RR1126   | US            | 08/866,229    | 5,991,389     | Granted       | 30-May-97     | 23-Nov-99     | PROGRAMMABLE SERVICE ARCHITECTURE FOR CALL CONTROL PROCESSING  |
| RR1127   | US            | 08/865,887    | 6,038,309     | Granted       | 30-May-97     | 14-Mar-00     | APPARATUS AND METHOD FOR EXTERNALLY CONTROLLING PROCESSING OF A SERVICE CALL   |
| RR1128   | US            | 08/865,692    | 6,028,924     | Granted       | 30-May-97     | 22-Feb-00     | PROGRAMMABLE SERVICE NODE FOR CALL CONTROL PROCESSING  |
| RR1134   | US            | 08/768,022    | 6,097,722     | Granted       | 13-Dec-96     | 1-Aug-00      | BANDWIDTH MANAGEMENT PROCESSES AND SYSTEMS FOR ASYNCHRONOUS TRANSFER MODE NETWORKS USING VARIABLE VIRTUAL PATHS                    |
| RR1137   | US            | 08/907,342    | 5,995,487     | Granted       | 6-Aug-97      | 30-Nov-99     | ENHANCED INTERCONNECTION CAPACITY FOR SUBSCRIBERS TO CARRIER NETWORKS  |
| RR1146   | US            | 08/769,649    | 6,032,118     | Granted       | 19-Dec-96     | 29-Feb-00     | VIRTUAL PRIVATE NETWORK SERVICE PROVIDER FOR ASYNCHRONOUS TRANSFER MODE NETWORK  |
| RR1146   | US            | 09/432,949    | 6,584,444     | Granted       | 3-Nov-99      | 24-Jun-03     | VIRTUAL PRIVATE NETWORK SERVICE PROVIDER FOR ASYNCHRONOUS TRANSFER MODE NETWORK  |
| RR1149   | US            | 09/074,209    | 6,389,112     | Granted       | 7-May-98      | 14-May-02     | METHOD AND APPARATUS FOR ON-LINE MONITORING OF TELECOMMUNICATION NETWORK SWITCHES  |
| RR1158   | US            | 08/775,162    | 5,864,541     | Granted       | 31-Dec-96     | 26-Jan-99     | METHOD AND SYSTEM FOR SIMULTANEOUS SERVICE CAPACITY CALCULATION FOR MULTIMEDIA SERVICES UNDER AGGREGATE TRAFFIC CONDITIONS         |
| RR1167   | US            | 08/781,943    | 6,005,859     | Granted       | 19-Dec-96     | 21-Dec-99     | PROXY VAT-PSTN ORIGINATION   |
| RR1171   | US            | 08/775,613    | 5,949,778     | Granted       | 31-Dec-96     | 7-Sep-99      | HIGH PERFORMANCE FAULT TOLERANT SWITCHING SYSTEM FOR MULTIMEDIA SATELLITE AND TERRESTRIAL COMMUNICATIONS SWITCHES                  |
| RR2006   | US            | 08/723,709    | 5,887,156     | Granted       | 30-Sep-96     | 23-Mar-99     | EVOLUTION PLANNING IN A WIRELESS NETWORK   |
| RR2025   | US            | 09/037,371    | 6,167,064     | Granted       | 10-Mar-98     | 26-Dec-00     | METHOD AND SYSTEM IN AN INTELLIGENT COMMUNICATIONS NETWORK FOR A PROGRAMMABLE CALL CONTROL   |
| RR2026   | US            | 09/050,591    | 6,226,516     | Granted       | 30-Mar-98     | 1-May-01      | METHOD FOR INVOKING DYNAMICALLY MODIFIABLE SUBSCRIBER SERVICES AND AN INTELLIGENT TELECOMMUNICATION NETWORK INCORPORATING THE SAME |
| RR2045   | US            | 08/851,672    | 5,875,302     | Granted       | 6-May-97      | 23-Feb-99     | COMMUNICATIONS MANAGEMENT SYSTEM HAVING COMMUNICATION THREAD STRUCTURE INCLUDING A PLURALITY OF INTERCONNECTED THREADS             |
| RR2063   | US            | 08/864,507    | 6,151,512     | Granted       | 28-May-97     | 21-Nov-00     | COMMUNICATION SYSTEM HAVING OPTIMUM RESOURCE ARRANGEMENTS IN A MULTI-SECTORED ENVIRONMENT AND METHOD THEREFOR                      |
| RR2071   | US            | 08/969,373    | 6,260,186     | Granted       | 13-Nov-97     | 10-Jul-01     | UNIVERSAL STATE MACHINE FOR USE WITH A CONCURRENT STATE MACHINE SPACE IN A TELECOMMUNICATIONS NETWORK                              |
| RR2074   | US            | 09/221,909    | 6,014,558     | Granted       | 28-Dec-98     | 11-Jan-00     | VARIABLE RATE OPTIONAL SECURITY MEASURES METHOD AND APPARATUS FOR WIRELESS COMMUNICATIONS NETWORK                                  |
| RR2080   | US            | 08/992,263    | 6,282,190     | Granted       | 17-Dec-97     | 28-Aug-01     | NETWORK CENTRIC CALL PROCESSING ARCHITECTURE USING DISTRIBUTED CALL SEGMENTS   |
| RR2095   | US            | 08/931,969    | 6,038,304     | Granted       | 17-Sep-97     | 14-Mar-00     | TELECOMMUNICATIONS SWITCH INCORPORATING AUTOMATIC CONFERRING SERVICE   |
| RR2138   | US            | 08/903,865    | 6,295,291     | Granted       | 31-Jul-97     | 25-Sep-01     | SETUP OF NEW SUBSCRIBER RADIOTELEPHONE SERVICE USING THE INTERNET  |
| RR2173   | US            | 08/939,275    | 6,161,007     | Granted       | 29-Sep-97     | 12-Dec-00     | METHOD AND APPARATUS FOR PROCESSING MULTIPLE TYPES OF INCOMING COMMUNICATION   |
| RR2180   | US            | 08/922,081    | 5,991,372     | Granted       | 2-Sep-97      | 23-Nov-99     | METHOD AND APPARATUS FOR FACILITATING FINANCIAL TRANSACTIONS WITHIN A COMMUNICATIONS SYSTEM  |
| RR2182   | US            | 08/931,052    | 6,212,506     | Granted       | 16-Sep-97     | 3-Apr-01      | PER CALL REAL TIME BILLING DISPLAY   |
| RR2183   | US            | 09/026,089    | 6,122,522     | Granted       | 19-Feb-98     | 19-Sep-00     | ENHANCED WORST CASE CELL ELIMINATION IN ZONE PAGING WITHIN A CELLULAR COMMUNICATION SYSTEM   |
| RR2185   | US            | 09/221,357    | 6,224,477     | Granted       | 28-Dec-98     | 1-May-01      | METHOD FOR ORDERING SUBSCRIBER RECORDS OF WIRELESS COMMUNICATION NETWORKS  |
| RR2211   | US            | 09/032,504    | 6,129,604     | Granted       | 26-Feb-98     | 10-Oct-00     | DYNAMIC LOAD DISTRIBUTION IN A WIRELESS COMMUNICATION SYSTEM TO EQUALIZE LOADING ON MOBILE SWITCHING CENTERS                       |
| RR2220   | US            | 08/965,279    | 6,122,513     | Granted       | 6-Nov-97      | 19-Sep-00     | METHOD FOR EXTENDING HARD-HANDOFF BOUNDARIES WITHIN A MOBILE TELEPHONE COMMUNICATIONS NETWORK                                      |
| RR2227   | US            | 08/969,878    | 6,101,380     | Granted       | 14-Nov-97     | 8-Aug-00      | METHOD OF RE-USING AUTHENTICATION TRIPLETS ON INTER-VLR LOCATION UPDATES   |
| RR2228   | US            | 08/990,553    | 6,414,758     | Granted       | 15-Dec-97     | 2-Jul-02      | HIGH SPEED FACSIMILE TRANSMISSION  |
| RR2229   | US            | 09/001,282    | 6,085,335     | Granted       | 31-Dec-97     | 4-Jul-00      | SELF ENGINEERING SYSTEM FOR USE WITH A COMMUNICATION SYSTEM AND METHOD OF OPERATION THEREFOR                                       |
| RR2248   | US            | 08/957,829    | 6,021,189     | Granted       | 27-Oct-97     | 1-Feb-00      | SYSTEM FOR CONTROLLING USAGE OF PHONE DEBIT CARDS  |
| RR2267   | US            | 09/096,426    | 6,178,328     | Granted       | 11-Jun-98     | 23-Jan-01     | METHOD AND SYSTEM FOR SOLVING CELLULAR COMMUNICATIONS FREQUENCY PLANNING PROBLEM   |
| RR2267   | US            | 09/676,236    | 6,522,885     | Granted       | 29-Sep-00     | 18-Feb-03     | METHOD AND SYSTEM FOR SOLVING CELLULAR COMMUNICATIONS FREQUENCY PLANNING PROBLEM   |
| RR2294   | US            | 09/038,372    | 6,128,497     | Granted       | 10-Mar-98     | 3-Oct-00      | HIGH CAPACITY CELL PLANNING BASED ON FRACTIONAL FREQUENCY REUSE WITH OPTIMUM TRUNKING EFFICIENCY                                   |
| RR2299   | US            | 08/990,109    | 6,115,457     | Granted       | 12-Dec-97     | 5-Sep-00      | MARKING AND SCREENING TELEPHONE CALLS  |
| RR2299   | US            | 09/549,790    | 6,385,310     | Granted       | 14-Apr-00     | 7-May-02      | MARKING AND SCREENING TELEPHONE CALLS  |
| RR2300   | US            | 08/940,412    | 6,052,363     | Granted       | 30-Sep-97     | 18-Apr-00     | METHOD FOR CASUAL ORDERING IN A DISTRIBUTED NETWORK  |
| RR2304   | US            | 08/994,740    | 6,104,719     | Granted       | 19-Dec-97     | 15-Aug-00     | STATE MACHINE TO SUPPORT CONCURRENT MESSAGE STREAMS  |
| RR2312   | US            | 09/096,657    | 6,421,339     | Granted       | 12-Jun-98     | 16-Jul-02     | METHODS AND SYSTEMS FOR CALL FORWARDING  |
| RR2351   | US            | 09/219,696    | 6,507,735     | Granted       | 23-Dec-98     | 14-Jan-03     | AUTOMATED SHORT MESSAGE ATTENDANT  |
| RR2360   | US            | 09/223,892    | 6,278,874     | Granted       | 31-Dec-98     | 21-Aug-01     | WIRELESS COMMUNICATION SYSTEM IN WHICH A TERMINATION ACCESS TYPE IS IDENTIFIED TO A SERVING MOBILE SWITCHING CENTER                |
| RR2364   | US            | 09/221,382    | 6,256,512     | Granted       | 28-Dec-98     | 3-Jul-01      | MOBILE ACCESS TO A PBX VIA A TLDN  |
| RR2371   | US            | 09/219,557    | 6,327,478     | Granted       | 23-Dec-98     | 4-Dec-01      | SHORT MESSAGE PARK AND PAGE SYSTEM AND METHOD  |
| RR2383   | US            | 09/195,945    | 6,505,046     | Granted       | 19-Nov-98     | 7-Jan-03      | METHOD AND APPARATUS FOR DISTRIBUTING LOCATION-BASED MESSAGES IN A WIRELESS COMMUNICATION NETWORK                                  |
| RR2411   | US            | 09/216,674    | 6,560,459     | Granted       | 18-Dec-98     | 6-May-03      | CDMA FREQUENCY PLANNING FOR FIXED WIRELESS APPLICATION   |
| RR2425   | US            | 09/176,484    | 6,363,430     | Granted       | 21-Oct-98     | 26-Mar-02     | METHODS AND SYSTEMS FOR PROVIDING AN ABSENT ADDRESSING SERVICE TO CUSTOMERS IN A COMMUNICATIONS NETWORK                            |
| RR2449   | US            | 09/239,225    | 6,421,739     | Granted       | 30-Jan-99     | 16-Jul-02     | FAULT-TOLERANT JAVA VIRTUAL MACHINE  |
| RR2450   | US            | 09/220,549    | 6,519,249     | Granted       | 23-Dec-98     | 11-Feb-03     | SCALABLE GATEKEEPERS IN AN INTERNET TELEPHONY SYSTEM AND A METHOD OF OPERATION   |
| RR2451   | US            | 09/211,209    | 6,272,874     | Granted       | 14-Dec-98     | 7-Aug-01      | METHOD AND APPARATUS FOR LOADING A JAVA APPLICATION PROGRAM  |



| Pub. No. | App. No. | Pub. Date  | Pub. Title | Pub. Status | Pub. Date | Pub. Title | Pub. Status   |
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| SR0121   | US       | 08/566,664 | 5,857,020  | Granted     | 4-Dec-95  | 5-Jan-99   | TIMED AVAILABILITY OF SECURED CONTENT PROVISIONED ON A STORAGE MEDIUM   |
| SR0121   | US       | 08/600,173 | 5,825,876  | Granted     | 12-Feb-96 | 20-Oct-98  | TIME BASED AVAILABILITY TO CONTENT OF A STORAGE MEDIUM  |
| SR0126   | US       | 08/667,831 | 5,802,474  | Granted     | 20-Jun-96 | 1-Sep-98   | DIRECTIONAL FREQUENCY ALLOCATION IN AN N=6 CELLULAR RADIO SYSTEM  |
| SR0127   | US       | 08/773,521 | 5,987,113  | Granted     | 23-Dec-96 | 16-Nov-99  | LONG DISTANCE PHONE TAG SERVICE   |
| SR0128   | US       | 08/865,698 | 6,078,650  | Granted     | 30-May-97 | 20-Jun-00  | TELEPHONE SYSTEM INTEGRATED TEXT BASED COMMUNICATION PROCESSES TO ENHANCE ACCESS FOR TDD AND/OR TTY DEVICES   |
| SR0131   | US       | 08/865,949 | 5,943,395  | Granted     | 30-May-97 | 24-Aug-99  | TELEPHONE APPARATUS, SYSTEMS, AND PROCESSES TO ENHANCE ACCESS FOR TDD AND/OR TTY DEVICES  |
| SR0136   | US       | 08/792,188 | 6,226,379  | Granted     | 30-Jan-97 | 1-May-01   | TELECOMMUNICATIONS FUNCTIONS MANAGEMENT SYSTEM PROVIDING DISTINCTIVE ALERTING BASED ON CALLER IDENTIFIER  |
| SR0137   | US       | 08/792,185 | 5,978,451  | Granted     | 30-Jan-97 | 2-Nov-99   | TELECOMMUNICATIONS FUNCTIONS MANAGEMENT SYSTEM PROVIDING SELECTIVE ALERTING BASED ON CALLER SELECTED OPTION   |
| SR0138   | US       | 08/792,184 | 6,263,071  | Granted     | 30-Jan-97 | 17-Jul-01  | TELECOMMUNICATIONS FUNCTIONS MANAGEMENT SYSTEM PROVIDING DISTINCTIVE ALERTING BASED ON CALLER SELECTED OPTION   |
| SR0148   | US       | 08/865,943 | 6,002,749  | Granted     | 30-May-97 | 14-Dec-99  | TELEPHONE SYSTEM INTEGRATED TEXT BASED COMMUNICATION APPARATUS AND SYSTEMS TO ESTABLISH COMMUNICATION LINKS TO TDD AND/OR TTY DEVICES AND OTHER TELEPHONE AND TEXT SERVER SYSTEMS |
| SR0149   | US       | 08/865,699 | 5,940,475  | Granted     | 30-May-97 | 17-Aug-99  | TELEPHONE SYSTEM INTEGRATED TEXT BASED COMMUNICATION APPARATUS AND SYSTEM TO ENHANCE ACCESS FOR TDD AND/OR TTY DEVICES  |
| SR0161   | US       | 09/092,411 | 6,363,420  | Granted     | 4-Jun-98  | 26-Mar-02  | METHOD AND SYSTEM FOR HEURISTICALLY DESIGNING AND MANAGING A NETWORK  |
| SR0169   | US       | 09/424,790 | 6,735,286  | Granted     | 2-Aug-00  | 11-May-04  | TELEPHONE SYSTEM INTEGRATED TEXT BASED COMMUNICATION PROCESSES, APPARATUS AND SYSTEMS   |
| SS0109   | US       | 08/623,635 | 5,905,773  | Granted     | 28-Mar-96 | 18-May-99  | APPARATUS AND METHOD FOR REDUCING SPEECH RECOGNITION VOCABULARY PERPLEXITY AND DYNAMICALLY SELECTING ACOUSTIC MODELS  |
| SS0110   | US       | 08/746,176 | 5,912,880  | Granted     | 7-Nov-96  | 15-Jun-99  | SYSTEM AND METHOD FOR ATM CBR TIMING RECOVERY   |
| SS0112   | US       | 08/746,230 | 6,128,301  | Granted     | 7-Nov-96  | 3-Oct-00   | ARCHITECTURE FOR DISTRIBUTION OF VOICE OVER ATM NETWORKS  |
| SS0113   | US       | 08/942,201 | 6,167,117  | Granted     | 1-Oct-97  | 26-Dec-00  | IMPROVED VOICE DIALING SYSTEM USING MODEL OF CALLING BEHAVIOUR  |
| SS0115   | US       | 08/931,649 | 5,999,529  | Granted     | 16-Sep-97 | 7-Dec-99   | METHODS AND APPARATUS FOR INTERWORKING ATM ADAPTATION LAYER FORMATS   |
| SS0116   | US       | 08/842,605 | 6,236,715  | Granted     | 15-Apr-97 | 22-May-01  | METHOD AND APPARATUS FOR USING THE CONTROL CHANNEL IN TELECOMMUNICATIONS SYSTEMS FOR VOICE DIALING  |
| SS0125   | US       | 09/001,510 | 6,266,404  | Granted     | 31-Dec-97 | 24-Jul-01  | METHOD AND APPARATUS FOR CONTROLLING CHARACTERISTICS OF DISTRIBUTED TELEPHONE SETS FROM A CENTRAL TELEPHONE SWITCH  |
| SS0134   | US       | 08/946,431 | 6,157,644  | Granted     | 7-Oct-97  | 5-Dec-00   | METHOD AND APPARATUS FOR ACCELERATING OSI LAYER 3 ROUTERS   |
| SS0136   | US       | 09/371,781 | 6,721,410  | Granted     | 10-Aug-99 | 13-Apr-01  | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 10/625,493 | 7,627,102  | Granted     | 23-Jul-03 | 1-Dec-09   | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 12/605,168 | 7,860,229  | Granted     | 23-Oct-09 | 28-Dec-10  | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 12/950,749 | 8,442,199  | Granted     | 19-Nov-10 | 14-May-13  | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 13/429,128 | 8,625,768  | Granted     | 23-Mar-12 | 7-Jan-14   | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 13/429,142 | 8,542,811  | Granted     | 23-Mar-12 | 24-Sep-13  | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0136   | US       | 14/137,420 | #EMPTY     | Filed       | 20-Dec-13 | #EMPTY     | RECURSIVE IDENTIFICATION OF INDIVIDUALS FOR CASUAL COLLABORATIVE CONFERENCING   |
| SS0159   | US       | 09/224,548 | 6,449,269  | Granted     | 31-Dec-98 | 10-Sep-02  | PACKET VOICE TELEPHONY SYSTEM AND METHOD  |
| SS0162   | US       | 09/081,135 | 6,330,715  | Granted     | 19-May-98 | 11-Dec-01  | METHOD AND APPARATUS FOR MANAGING SOFTWARE IN A NETWORK SYSTEM  |
| SS0166   | US       | 09/222,927 | 6,885,661  | Granted     | 30-Dec-98 | 26-Apr-05  | PRIVATE BRANCH EXCHANGE BUILT USING AN ATM NETWORK  |
| SS0167   | US       | 09/222,781 | 6,768,736  | Granted     | 30-Dec-98 | 27-Jul-04  | USING AN ATM SWITCH TO GROW THE CAPACITY OF A SWITCHING STAGE   |
| SS0173   | US       | 09/076,844 | 6,597,662  | Granted     | 13-May-98 | 22-Jul-03  | APPARATUS AND METHOD FOR OPTIMIZING MAX-MIN FAIR RATE CONTROL IN ABR SESSIONS   |
| SS0188   | US       | 09/222,782 | 6,778,538  | Granted     | 30-Dec-98 | 17-Aug-04  | VIRTUAL JUNCTIONS   |
| SS0189   | US       | 09/427,711 | 6,542,942  | Granted     | 27-Oct-99 | 1-Apr-03   | METHOD AND APPARATUS FOR PROCESSING CALLS ON A MULTIPROCESSOR COMMUNICATION SYSTEM  |
| SS0189   | US       | 10/351,272 | 6,865,624  | Granted     | 24-Jan-03 | 8-Mar-05   | METHOD AND APPARATUS FOR PROCESSING CALLS ON A MULTIPROCESSOR COMMUNICATION SYSTEM  |
| SS0199   | US       | 09/220,862 | 6,744,761  | Granted     | 28-Dec-98 | 1-Jun-04   | WORKFLOW MANAGER  |
| SS0203   | US       | 09/086,299 | 6,421,328  | Granted     | 28-May-98 | 16-Jul-02  | NEIGHBORHOOD LIST ASSIMILATION FOR CELL-BASED MICROSYSTEM   |
| SS0233   | US       | 09/383,867 | 6,694,019  | Granted     | 26-Aug-99 | 17-Feb-04  | METHOD AND APPARATUS FOR INFINITE RETURN LOSS HANDLER FOR NETWORK ECHO CANCELLER  |
| ST0117   | US       | 08/745,171 | 5,954,799  | Granted     | 7-Nov-96  | 21-Sep-99  | ACCESS TO TELECOMMUNICATIONS NETWORKS IN A MULTISERVICE ENVIRONMENT BY MAPPING AND EXCHANGING CONTROL MESSAGE BETWEEN CPE ADAPTORS AND ACCESS SERVER                              |
| ST0124   | US       | 08/980,761 | 5,911,264  | Granted     | 1-Dec-97  | 15-Jun-99  | HINGE PIN RAMP, RETAINER AND DOORSTOP FOR A FRAME DOOR  |
| ST0127   | US       | 09/220,860 | 6,868,140  | Granted     | 28-Dec-98 | 15-Mar-05  | TELEPHONY CALL CONTROL USING A DATA NETWORK AND A GRAPHICAL USER INTERFACE AND EXCHANGING DATAGRAMS BETWEEN PARTIES TO A TELEPHONE CALL   |
| ST0154   | US       | 09/220,962 | 6,888,927  | Granted     | 28-Dec-98 | 3-May-05   | GRAPHICAL MESSAGE NOTIFICATION  |
| ST0156   | US       | 09/217,910 | 6,477,539  | Granted     | 22-Dec-98 | 5-Nov-02   | METHOD AND APPARATUS FOR INTERFACING A MANAGER AND A PLANT  |
| ST0166   | US       | 09/224,841 | 6,262,972  | Granted     | 31-Dec-98 | 17-Jul-01  | DIGITAL MULTIMEDIA COMMUNICATION TRUNK  |
| ST0179   | US       | 09/220,993 | 7,171,686  | Granted     | 28-Dec-98 | 30-Jan-07  | OPERATING SYSTEM EXTENSION TO PROVIDE SECURITY FOR WEB-BASED PUBLIC ACCESS SERVICES   |
| ST0184   | US       | 09/220,963 | 6,243,450  | Granted     | 28-Dec-98 | 5-Jun-01   | PAY-PER-USE FOR DATA-NETWORK-BASED PUBLIC ACCESS SERVICES   |
| TA0112   | US       | 08/691,486 | 6,055,297  | Granted     | 2-Aug-96  | 25-Apr-00  | REDUCING CROSSTALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0112   | US       | 09/259,681 | 6,339,613  | Granted     | 1-Mar-99  | 15-Jan-02  | REDUCING CROSSTALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0119   | US       | 09/236,159 | 6,438,125  | Granted     | 22-Jan-99 | 20-Aug-02  | METHOD AND SYSTEM FOR REDIRECTING WEB PAGE REQUESTS ON A TCP/IP NETWORK   |
| TM0042   | US       | 08/917,548 | 6,018,708  | Granted     | 26-Aug-97 | 25-Jan-00  | METHOD AND APPARATUS FOR PERFORMING SPEECH RECOGNITION UTILIZING A SUPPLEMENTARY LEXICON OF FREQUENTLY USED ORTHOGRAPHIES   |
| TM0045   | US       | 09/165,120 | 6,295,540  | Granted     | 2-Oct-98  | 25-Sep-01  | ALIGNMENT OF TIRKS USING NETWORK MANAGER  |



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| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)   |
| ID0644   | US            | 08/873,497    | 5,970,064     | Granted       | 12-Jun-97     | 19-Oct-99     | REAL TIME CONTROL ARCHITECTURE FOR ADMISSION CONTROL IN COMMUNICATIONS NETWORK  |
| ID0702   | US            | 08/961,970    | 5,970,185     | Granted       | 31-Oct-97     | 19-Oct-99     | OPTICAL SWITCHES, MODULATORS AND TRANSMITTERS   |
| ID0716   | US            | 08/942,189    | 5,930,439     | Granted       | 1-Oct-97      | 27-Jul-99     | FABRICATION OF POLARIZATION INSENSITIVE PLANAR LIGHTWAVE CIRCUITS   |
| ID0760   | US            | 08/980,504    | 6,130,918     | Granted       | 1-Dec-97      | 10-Oct-00     | METHOD AND APPARATUS FOR REDUCING THE PEAK TO AVERAGE RATIO IN A MULTICARRIER COMMUNICATION SYSTEM  |
| ID0770   | US            | 08/957,267    | 6,078,815     | Granted       | 23-Oct-97     | 20-Jun-00     | METHOD AND APPARATUS FOR ALLOCATING RADIO CHANNELS  |
| ID0805   | US            | 08/943,169    | 6,037,678     | Granted       | 3-Oct-97      | 14-Mar-00     | COUPLING COMMUNICATIONS SIGNALS TO A POWER LINE   |
| ID0838   | US            | 08/993,944    | 5,974,206     | Granted       | 19-Dec-97     | 26-Oct-99     | DISPERSION COMPENSATION WITH LOW POLARISATION MODE DISPERSION   |
| ID0842   | US            | 08/980,505    | 6,061,363     | Granted       | 1-Dec-97      | 9-May-00      | COMMUNICATIONS SYSTEM WITH LOAD SHARING COMMUNICATIONS INTERFACE  |
| ID0843   | US            | 08/991,272    | 6,069,947     | Granted       | 16-Dec-97     | 30-May-00     | COMMUNICATION SYSTEM ARCHITECTURE AND OPERATING PROTOCOL THEREFOR   |
| ID0928   | US            | 09/071,071    | 6,243,514     | Granted       | 30-Apr-98     | 5-Jun-01      | OPTICAL MULTIPLEXER/DEMULTIPLEXER   |
| ID0952   | US            | 09/114,779    | 5,977,650     | Granted       | 13-Jul-98     | 2-Nov-99      | TRANSMITTING COMMUNICATIONS SIGNALS OVER A POWER LINE NETWORK   |
| ID1010   | US            | 09/185,361    | 6,470,020     | Granted       | 3-Nov-98      | 22-Oct-02     | INTEGRATION OF STIMULUS SIGNALING PROTOCOL COMMUNICATION SYSTEMS AND MESSAGE PROTOCOL COMMUNICATION SYSTEMS                               |
| ID1062   | US            | 09/153,393    | 5,991,269     | Granted       | 15-Sep-98     | 23-Nov-99     | EMC REDUCTION METHOD FOR XDSL MODEMS  |
| MO0140   | US            | 08/496,650    | 5,614,750     | Granted       | 29-Jun-95     | 25-Mar-97     | BURIED LAYER CONTACT FOR AN INTEGRATED CIRCUIT STRUCTURE AND METHOD OF FABRICATION THEREOF  |
| MO0146   | US            | 08/814,627    | 5,886,867     | Granted       | 10-Mar-97     | 23-Mar-99     | FERROELECTRIC DIELECTRIC FOR INTEGRATED CIRCUIT APPLICATIONS AT MICROWAVE FREQUENCIES   |
| MO0147   | US            | 08/680,286    | 5,789,303     | Granted       | 11-Jul-96     | 4-Aug-98      | A CAPACITOR FOR AN INTEGRATED CIRCUIT AND METHOD OF FORMATION THEREOF, AND A METHOD OF ADDING ON-CHIP CAPACITORS TO AN INTEGRATED CIRCUIT |
| MO0148   | US            | 08/551,264    | 5,612,560     | Granted       | 31-Oct-95     | 18-Mar-97     | ELECTRODE STRUCTURE FOR FERROELECTRIC CAPACITORS FOR INTEGRATED CIRCUITS  |
| MO0148   | US            | 08/728,373    | 5,789,268     | Granted       | 10-Oct-96     | 4-Aug-98      | ELECTRODE STRUCTURE FOR FERROELECTRIC CAPACITORS FOR INTEGRATED CIRCUITS  |
| RM1069   | US            | 08/618,747    | 5,793,858     | Granted       | 20-Mar-96     | 11-Aug-98     | METHOD FOR IMPROVING CALL COMPLETION RATES IN TELEPHONY   |
| RM1076   | US            | 08/723,080    | 5,812,652     | Granted       | 30-Sep-96     | 22-Sep-98     | CENTRALIZED MANAGEMENT AND ALLOCATION OF BRIDGES IN A TELECOMMUNICATIONS NETWORK FOR A MEET-ME CONFERENCE SERVICE                         |
| RM1084   | US            | 08/723,081    | 5,812,653     | Granted       | 30-Sep-96     | 22-Sep-98     | SUBSCRIPTION AND PAIRED AUTHORIZATION CODE BASED ACCESS TO A MEET-ME CONFERENCE SERVICE   |
| RM1086   | US            | 08/822,618    | 5,930,348     | Granted       | 20-Mar-97     | 27-Jul-99     | DYNAMICALLY CONTROLLED ROUTING OF CALLS IN INTELLIGENT NETWORKS   |
| RO2818   | US            | 08/440,358    | 5,761,295     | Granted       | 11-May-95     | 2-Jun-98      | TELEPHONE INSTRUMENT AND METHOD FOR ALTERING AUDIBLE CHARACTERISTICS  |
| RO2896   | US            | 08/487,771    | 5,566,052     | Granted       | 8-Jun-95      | 15-Oct-96     | ELECTRONIC DEVICES WITH ELECTRONIC COMPONENTS CARRIED UPON A SUBSTRATE  |
| RO2899   | US            | 08/662,966    | 5,704,117     | Granted       | 13-Jun-96     | 6-Jan-98      | METHOD OF ASSEMBLING AN EMI SHIELD AROUND AN ELECTRONIC COMPONENT   |
| RO2954   | US            | 08/338,850    | 5,761,197     | Granted       | 14-Nov-94     | 2-Jun-98      | COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| RO2962   | US            | 08/385,419    | 5,563,970     | Granted       | 8-Feb-95      | 8-Oct-96      | TAPER SHAPES FOR ULTRALOW SIDELobe LEVELS IN DIRECTIONAL COUPLER FILTERS  |
| RO2965   | US            | 08/717,608    | 5,757,946     | Granted       | 23-Sep-96     | 26-May-98     | MAGNETIC FLUID LOUDSPEAKER ASSEMBLY WITH PORTED ENCLOSURE   |
| RO2992   | US            | 08/720,277    | 5,828,965     | Granted       | 26-Sep-96     | 27-Oct-98     | WIRELESS TELEPHONE HANDSET  |
| RO2996   | US            | 08/761,213    | 5,903,826     | Granted       | 6-Dec-96      | 11-May-99     | EXTREMELY HIGH FREQUENCY MULTIPoint FIXED-ACCESS WIRELESS COMMUNICATION SYSTEM  |
| RO2998   | US            | 08/551,470    | 5,710,849     | Granted       | 1-Nov-95      | 20-Jan-98     | TAPER SHAPES FOR FLATBAND RESPONSE AND SIDELobe SUPPRESSION IN GRATING ASSISTED OPTICAL COUPLER FILTERS                                   |
| RO3001   | US            | 08/548,304    | 5,668,900     | Granted       | 1-Nov-95      | 16-Sep-97     | TAPER SHAPES FOR SIDELobe SUPPRESSION AND BANDWIDTH MINIMIZATION IN DISTRIBUTED FEEDBACK OPTICAL REFLECTION FILTERS                       |
| RO3003   | US            | 08/516,269    | 5,610,910     | Granted       | 17-Aug-95     | 11-Mar-97     | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| RO3010   | US            | 08/723,649    | 5,861,049     | Granted       | 3-Oct-96      | 9-Mar-99      | ADMISSION CONTROL IN AN ATM SWITCHING NODE  |
| RO3017   | US            | 08/650,502    | 5,761,279     | Granted       | 20-May-96     | 2-Jun-98      | VISUAL CALLING PERSON DISPLAY   |
| RO3048   | US            | 08/548,716    | 5,745,486     | Granted       | 26-Oct-95     | 28-Apr-98     | HIGH CAPACITY ATM SWITCH  |
| RO3061   | US            | 08/630,642    | 5,809,491     | Granted       | 10-Apr-96     | 15-Sep-98     | CALL TRAFFIC BASED EXCEPTION GENERATING SYSTEM  |
| RO3067   | US            | 08/587,046    | 5,737,109     | Granted       | 16-Jan-96     | 7-Apr-98      | THERMAL DOWN MIXING IN DIODE LASER TRANSMITTERS TO SUPPRESS STIMULATED BRILLOUIN SCATTERING   |
| RO3078   | US            | 08/691,050    | 5,715,271     | Granted       | 1-Aug-96      | 3-Feb-98      | POLARIZATION INDEPENDENT GRATING RESONATOR FILTER   |
| RO3112   | US            | 08/773,905    | 5,899,981     | Granted       | 27-Dec-96     | 4-May-99      | METHOD AND SYSTEM FOR PROCESSING EXPENSE VOUCHERS   |
| RO3120   | US            | 08/694,124    | 5,796,818     | Granted       | 8-Aug-96      | 18-Aug-98     | DYNAMIC OPTIMIZATION OF HANDSFREE MICROPHONE GAIN   |
| RO3125   | US            | 08/719,302    | 5,722,845     | Granted       | 19-Sep-96     | 3-Mar-98      | ELECTRICAL CONNECTORS   |
| RO3132   | US            | 08/652,061    | 5,740,159     | Granted       | 23-May-96     | 14-Apr-98     | LOOPBACK MECHANISM FOR FRAME RELAY OAM  |
| RO3143   | US            | 08/728,428    | 5,777,529     | Granted       | 10-Oct-96     | 7-Jul-98      | INTEGRATED CIRCUIT ASSEMBLY FOR DISTRIBUTED BROADCASTING OF HIGH SPEED CHIP INPUT SIGNALS   |
| RO3169   | US            | 08/792,861    | 5,818,874     | Granted       | 31-Jan-97     | 6-Oct-98      | TRANSFORMERLESS DATA TRANSMISSION LINE DRIVER   |
| RO3184   | US            | 08/730,831    | 5,684,294     | Granted       | 17-Oct-96     | 4-Nov-97      | PROXIMITY AND AMBIENT LIGHT MONITOR   |
| RO3205   | US            | 08/727,367    | 5,789,799     | Granted       | 27-Sep-96     | 4-Aug-98      | HIGH FREQUENCY NOISE AND IMPEDANCE MATCHED INTEGRATED CIRCUITS  |
| RO3205   | US            | 09/086,798    | 6,002,860     | Granted       | 29-May-98     | 14-Dec-99     | HIGH FREQUENCY NOISE AND IMPEDANCE MATCHED INTEGRATED CIRCUITS  |
| RO3304   | US            | 08/749,687    | 5,878,228     | Granted       | 15-Nov-96     | 2-Mar-99      | DATA TRANSFER SERVER WITH TIME SLOTS SCHEDULING BASED ON A TRANSFER RATE AND PREDETERMINED DATA   |
| RO3322   | US            | 08/815,260    | 5,825,860     | Granted       | 12-Mar-97     | 20-Oct-98     | LOAD SHARING GROUP OF SERVICE CONTROL POINTS CONNECTED TO A MEDIATION POINT FOR TRAFFIC MANAGEMENT CONTROL                                |
| RO3346   | US            | 08/932,709    | 5,894,166     | Granted       | 17-Sep-97     | 13-Apr-99     | CHIP MOUNTING SCHEME  |
| RO3558   | US            | 09/172,997    | 6,370,151     | Granted       | 16-Oct-98     | 9-Apr-02      | METHOD OF PROVISIONING NODES WITHIN A COMMUNICATIONS NETWORK  |
| RO3625   | US            | 08/998,223    | 6,597,684     | Granted       | 24-Dec-97     | 22-Jul-03     | DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE-BASED ROUTE COMPUTATION                                |
| RR1109   | US            | 08/534,290    | 5,793,857     | Granted       | 27-Sep-95     | 11-Aug-98     | METHOD OF USING DYNAMIC DATABASE TO IMPROVE TELEPHONE NUMBER PORTABILITY  |

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| Pub. No. | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) | Pub. No. (US)                | Pub. No. (US) | Pub. No. (US) | Pub. No. (US) |   |
| RR2226   | US            | 08/948,443    | 6,044,141     | Granted                      |               | 10-Oct-97     | 8-Mar-00      | METHOD AND SYSTEM FOR PROVIDING VIRTUAL AGENTS FOR TELEPHONY SERVICES   |
| SC0030   | US            | 08/715,823    | 5,937,058     | Granted                      |               | 19-Sep-96     | 10-Aug-99     | COORDINATING TELEPHONES OR ADJUNCTS ON THE SAME LOOP  |
| SC0051   | US            | 08/837,975    | 5,966,432     | Granted                      |               | 14-Apr-97     | 12-Oct-99     | REMOTE ANSWERING OF DOORBELL  |
| SS0113   | US            | 08/726,604    | 5,917,891     | Granted                      |               | 7-Oct-96      | 29-Jun-99     | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR  |
| SS0113   | US            | 08/806,861    | 5,905,789     | Granted                      |               | 26-Feb-97     | 18-May-99     | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR  |
| ST0115   | US            | 08/632,597    | 5,787,151     | Granted                      |               | 15-Apr-96     | 28-Jul-98     | TELEPHONY BASED DELIVERY SYSTEM OF MESSAGES CONTAINING SELECTED GREETINGS   |
| TM0037   | US            | 08/413,556    | 5,646,678     | Granted                      |               | 30-Mar-95     | 8-Jul-97      | DIGITAL VIDEO NETWORKS  |
| ID0205   | US            | 08/344,551    | 5,493,624     | Granted                      |               | 23-Nov-94     | 20-Feb-96     | OPTICALLY INTEGRATED POLARISATION CONVERTER & CONTROLLER  |
| MO0121   | US            | 08/637,963    | 5,726,084     | Granted                      |               | 25-Apr-96     | 10-Mar-98     | METHOD OF MAKING INTEGRATED CIRCUITS  |
| RM1073   | US            | 08/329,716    | 5,526,414     | Granted                      |               | 26-Oct-94     | 11-Jun-96     | DYNAMICALLY CONTROLLED ROUTING USING VIRTUAL NODES  |
| RO2863   | US            | 08/354,599    | 5,615,257     | Granted                      |               | 13-Dec-94     | 25-Mar-97     | SCREEN BASED TELEPHONE SET FOR INTERACTIVE ENHANCED TELEPHONY SERVICE   |
| RO2913   | US            | 08/348,850    | 5,489,047     | Granted                      |               | 28-Nov-94     | 12-Mar-96     | TELEVISION SIGNAL DISTRIBUTION NETWORK  |
| RR1060   | US            | 08/292,275    | 5,564,121     | Granted                      |               | 18-Aug-94     | 8-Oct-96      | MICROCELL LAYOUT HAVING DIRECTIONAL AND OMNIDIRECTIONAL ANTENNAS DEFINING A RECTILINEAR LAYOUT IN A BUILDING            |
| 11471RN  | US            | 09/684,828    | 7,227,931     | Assigned Round 2             |               |               |               | Method and system for providing enhanced caller identification  |
| 11471RN  | US            | 09/684,828    | 6,178,232     | Assigned Round 2             |               |               |               | Method and system for providing enhanced caller identification  |
| 14233ST  | US            | 09/515,784    | 6,438,215     | Assigned Round 2             |               |               |               | Method and system for filter based message processing in a unified messaging system                                     |
| 14233ST  | US            | 10/183,283    | 6,782,079     | Assigned Round 2             |               |               |               | Method and system for filter based message processing in a unified messaging system                                     |
| 14233ST  | US            | 10/923,440    | Abandoned     | Assigned Round 2             |               |               |               | Method and system for filter based message processing in a unified messaging system                                     |
| 14234ST  | US            | 09/515,030    | 6,487,278     | Assigned Round 2             |               |               |               | Method and system for interfacing systems unified messaging with legacy systems located behind corporate firewalls      |
| 14234ST  | US            | 10/264,137    | 6,868,144     | Assigned Round 2             |               |               |               | Method and system for interfacing systems unified messaging with legacy systems located behind corporate firewalls      |
| 14234ST  | US            | 10/881,355    | 7,162,014     | Assigned Round 2             |               |               |               | Method and system for interfacing systems unified messaging with legacy systems located behind corporate firewalls      |
| 14235ST  | US            | 09/514,653    | 6,498,835     | Assigned Round 2             |               |               |               | Method and system for providing visual notification in a unified messaging system                                       |
| 14235ST  | US            | 10/246,719    | 7,068,762     | Assigned Round 2             |               |               |               | Method and system for providing visual notification in a unified messaging system                                       |
| 14235ST  | US            | 11/383,388    | Abandoned     | Assigned Round 2             |               |               |               | Method and system for providing visual notification in a unified messaging system                                       |
| RO2939   | US            | 08/979,153    | 5,862,334     | Assigned Round 2             |               |               |               | Mediated access to an intelligent network   |
| 11590RN  | US            | 08/649,436    | 5,850,606     | Assigned Round 2             |               |               |               | Method and system for transferring a cellular telephone call between intelligent cell sites                             |
| 16037AB  | US            | 10/892,020    | 7,619,995     | Assigned Round 2             |               |               |               | Transcoders and mixers for voice-over-IP conferencing   |
| 16037AB  | US            | 12/587,591    | 8,077,636     | Assigned Round 2             |               |               |               | Transcoders and mixers for voice-over-IP conferencing   |
| ID0158   | US            | 08/155,466    | 5,454,109     | Assigned Round 2             |               |               |               | Data processing system with interface between application programs and external tools residing in separate environments |
| 19979RO  | US            | 12/690,196    | Abandoned     | Assigned Round 2             |               |               |               | Method and apparatus for adjusting a symbol decision threshold at a receiver in a communication network                 |
| 19853RO  | US            | 12/620,745    | 7,940,822     | Assigned Round 2             |               |               |               | Tracking injection seeding power based on back facet monitoring (BFM) of an injection seeded laser                      |
| 19853RO  | US            | 13/082,690    | 8,170,074     | Assigned Round 2             |               |               |               | Tracking injection seeding power based on back facet monitoring (BFM) of an injection seeded laser                      |
| MO0105   | US            | 08/125,264    | 5,330,931     | Assigned Round 1             |               |               |               | Method of making a capacitor for an integrated circuit  |
| MO0105   | US            | 08/224,499    | 5,452,178     | Assigned Round 1             |               |               |               | Structure and method of making a capacitor for an integrated circuit  |
| 19075RO  | US            | 12/114,252    | 8,473,638     | Assigned Round 1             |               |               |               | Method and apparatus for time and frequency transfer in communication networks  |
| 18751RO  | US            | 07/897,477    | 5,388,124     | Assigned Round 1             |               |               |               | Encoding scheme for transmitting data using optimally shaped constellations over intersymbol-interference channels      |
| RO3204   | US            | 09/078,509    | 6,052,420     | Assigned Round 2             |               |               |               | Adaptive multiple sub-band common mode RFI suppression  |
| 14234ST  | US            | 11/651,335    | 8,687,773     | RFX Added Rockstar Confirmed |               | 1/8/2007      | 4/1/2014      | Method and system for interfacing systems unified messaging with legacy systems located behind corporate firewalls      |
| 11471RN  | US            | 11/789,658    | 8,139,732     | RFX Added Rockstar Confirmed |               | 4/25/2007     | 3/20/2012     | Method and system for providing enhanced caller identification  |
| 19075RO  | US            | 13/924,714    | Abandoned     | RFX Added Rockstar Confirmed |               | 6/24/2013     |               | METHOD AND APPARATUS FOR TIME AND FREQUENCY TRANSFER IN COMMUNICATION NETWORKS  |
|          | US            | 08/072,585    | 5,471,474     | RFX Added Rockstar Confirmed |               | 6/4/1993      | 11/28/1995    | COMMUNICATIONS HIGHWAY NETWORK SYSTEM   |

|        |    |               |              |          |           |           |             |   |
|--------|----|---------------|--------------|----------|-----------|-----------|-------------|---|
| 10259R | SB | 3055153       | 1091471      | granted  | 24-Jan-02 | 27-Jul-02 | 10259RGE0E  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | SB | 4075374       | 1445515      | granted  | 24-Jan-02 | 15-Jul-02 | 10259RGE1V  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | FR | 3055153       | 1091471      | granted  | 24-Jan-02 | 27-Jul-02 | 10259RPF0E  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | FR | 4075374       | 1445515      | granted  | 24-Jan-02 | 15-Jul-02 | 10259RPF1V  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | DE | 3055153       | 6002448.8    | granted  | 24-Jan-02 | 27-Jul-02 | 10259RDE0E  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | DE | 4075374       | 6009292.8    | granted  | 24-Jan-02 | 15-Jul-02 | 10259RDE1V  | SYSTEM AND METHOD FOR ROUTE OPTIMIZATION IN A WIRELESS INTERNET PROTOCOL NETWORK  |
| 10259R | SB | 8500771       | 1071267      | granted  | 5-Jul-02  | 17-Jul-02 | 10259RGE0E  | METHOD AND APPARATUS FOR AUTOMATIC TRANSFER OF A CALL IN A COMMUNICATIONS SYSTEM IN RESPONSE TO CHANGES IN QUALITY OF SERVICE |
| 10259R | FR | 8500771       | 1071267      | granted  | 5-Jul-02  | 17-Jul-02 | 10259RGE1E  | METHOD AND APPARATUS FOR AUTOMATIC TRANSFER OF A CALL IN A COMMUNICATIONS SYSTEM IN RESPONSE TO CHANGES IN QUALITY OF SERVICE |
| 10259R | DE | 8500771       | 6009375.5    | granted  | 5-Jul-02  | 17-Jul-02 | 10259RDE0E  | METHOD AND APPARATUS FOR AUTOMATIC TRANSFER OF A CALL IN A COMMUNICATIONS SYSTEM IN RESPONSE TO CHANGES IN QUALITY OF SERVICE |
| 10247R | SB | 8500753       | 1071246      | granted  | 5-Jul-02  | 24-Jul-02 | 10247RGE0E  | METHOD AND APPARATUS FOR VOICE OVER INTERNET PROTOCOL SWAPPING IN A COMMUNICATIONS SYSTEM                                     |
| 10247R | FR | 8500753       | 1071246      | granted  | 5-Jul-02  | 24-Jul-02 | 10247RGE1E  | METHOD AND APPARATUS FOR VOICE OVER INTERNET PROTOCOL SWAPPING IN A COMMUNICATIONS SYSTEM                                     |
| 10247R | DE | 8500753       | 6004475.8    | granted  | 5-Jul-02  | 24-Jul-02 | 10247RDE0E  | METHOD AND APPARATUS FOR VOICE OVER INTERNET PROTOCOL SWAPPING IN A COMMUNICATIONS SYSTEM                                     |
| 10247R | CA | 2,312,079     | 2,312,079    | granted  | 29-Jun-02 | 4-Jul-02  | 10247RCA01U | METHOD AND APPARATUS FOR VOICE OVER INTERNET PROTOCOL SWAPPING IN A COMMUNICATIONS SYSTEM                                     |
| 10214R | EP | 10283519      | HEMPHY       | Filed    | 27-Sep-02 |           | HEMPHY      | METHOD AND APPARATUS FOR REMOTELY UPDATING FIRMWARE OF A COMMUNICATION DEVICE   |
| 10214R | EP | 3084514       | HEMPHY       | Filed    | 27-Sep-02 |           | HEMPHY      | METHOD AND APPARATUS FOR REMOTELY UPDATING FIRMWARE OF A COMMUNICATION DEVICE   |
| 10214R | JP | 2000-071518   | 4355427      | granted  | 15-Mar-02 | 7-Jul-02  | 10214RJP04U | VIRTUAL PRIVATE NETWORKS AND METHODS FOR THEIR OPERATION  |
| 10214R | SB | 302021        | 1455553      | granted  | 13-Mar-02 | 11-Jun-02 | 10214RGE0E  | VIRTUAL PRIVATE NETWORKS AND METHODS FOR THEIR OPERATION  |
| 10214R | FR | 302021        | 1455553      | granted  | 13-Mar-02 | 11-Jun-02 | 10214RGE1E  | VIRTUAL PRIVATE NETWORKS AND METHODS FOR THEIR OPERATION  |
| 10214R | DE | 302021        | 60025437.2   | granted  | 13-Mar-02 | 11-Jun-02 | 10214RDE0E  | VIRTUAL PRIVATE NETWORKS AND METHODS FOR THEIR OPERATION  |
| 10214R | CA | 2,236,646     | 2,236,646    | granted  | 20-Jan-02 | 5-Jul-02  | 10214RCA02U | VIRTUAL PRIVATE NETWORKS AND METHODS FOR THEIR OPERATION  |
| 10214R | SB | 304583        | 1065244      | granted  | 25-May-02 | 12-Jul-02 | 10214RGE0E  | METHOD AND APPARATUS FOR MEDIA ACCESS CONTROL FOR PACKET TRANSMISSION OVER A BUFFER INSERTION RING                            |
| 10214R | FR | 304583        | 1065244      | granted  | 25-May-02 | 12-Jul-02 | 10214RGE1E  | METHOD AND APPARATUS FOR MEDIA ACCESS CONTROL FOR PACKET TRANSMISSION OVER A BUFFER INSERTION RING                            |
| 10214R | DE | 304583        | 6007392.4    | granted  | 25-May-02 | 12-Jul-02 | 10214RDE0E  | METHOD AND APPARATUS FOR MEDIA ACCESS CONTROL FOR PACKET TRANSMISSION OVER A BUFFER INSERTION RING                            |
| 10214R | CA | 2,293,127     | 2,293,127    | granted  | 22-Feb-02 | 4-Sep-02  | 10214RCA02U | METHOD AND APPARATUS FOR MEDIA ACCESS CONTROL FOR PACKET TRANSMISSION OVER A BUFFER INSERTION RING                            |
| 10210R | JP | 2000-137889   | 4605693      | granted  | 30-Jun-02 | 15-Oct-02 | 10210RJP04U | METHOD AND APPARATUS FOR MANAGING COMMUNICATIONS BETWEEN NODES IN A BI-DIRECTIONAL RING NETWORK                               |
| 10210R | SB | 3052414       | 1465393      | granted  | 30-Jun-02 | 7-May-02  | 10210RGE0E  | METHOD AND APPARATUS FOR MANAGING COMMUNICATIONS BETWEEN NODES IN A BI-DIRECTIONAL RING NETWORK                               |
| 10210R | FR | 3052414       | 1465393      | granted  | 30-Jun-02 | 7-May-02  | 10210RGE1E  | METHOD AND APPARATUS FOR MANAGING COMMUNICATIONS BETWEEN NODES IN A BI-DIRECTIONAL RING NETWORK                               |
| 10210R | DE | 3052414       | 6008762.3    | granted  | 30-Jun-02 | 7-May-02  | 10210RDE0E  | METHOD AND APPARATUS FOR MANAGING COMMUNICATIONS BETWEEN NODES IN A BI-DIRECTIONAL RING NETWORK                               |
| 10210R | CA | 2,308,527     | 2,308,527    | granted  | 29-May-02 | 21-Sep-02 | 10210RCA02U | METHOD AND APPARATUS FOR MANAGING COMMUNICATIONS BETWEEN NODES IN A BI-DIRECTIONAL RING NETWORK                               |
| 10207R | SB | 6501451       | 1113657      | granted  | 2-Oct-02  | 3-Nov-02  | 10207RGE0E  | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS  |
| 10207R | FR | 6501451       | 1113657      | granted  | 2-Oct-02  | 3-Nov-02  | 10207RGE1E  | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS  |
| 10207R | DE | 6501451       | 1113657      | granted  | 2-Oct-02  | 3-Nov-02  | 10207RDE0E  | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS  |
| 10207R | DE | 6501451       | 1113657      | granted  | 2-Oct-02  | 3-Nov-02  | 10207RDE1E  | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS  |
| 10207R | DE | 6501451       | 1113657      | granted  | 2-Oct-02  | 3-Nov-02  | 10207RDE0E  | APPARATUS AND METHOD FOR PACKET-BASED MEDIA COMMUNICATIONS  |
| 10207R | JP | 2000-223030   | 4380893      | granted  | 25-Jul-02 | 2-Oct-02  | 10207RJP04U | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10207R | EP | 3064854       | HEMPHY       | Filed    | 28-Jul-02 |           | HEMPHY      | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10207R | EP | 10184237      | HEMPHY       | Filed    | 30-Sep-02 |           | HEMPHY      | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10207R | EP | 10184516      | HEMPHY       | Filed    | 1-Oct-02  |           | HEMPHY      | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10207R | CA | 2,314,322     | 2,314,322    | granted  | 21-Jul-02 | 30-Jan-02 | 10207RCA02U | OPTICAL SWITCH AND PROTOCOLS FOR USE THEREWITH  |
| 10422D | JP | 2001-510206   | 509266       | granted  | 27-Jun-02 | 10-Aug-02 | 10422DJP07N | PROCESSING DATA PACKETS   |
| 10422D | JP | 2010-118653   | 5236683      | granted  | 27-Jun-02 | 5-Sep-02  | 10422DJP11V | PROCESSING DATA PACKETS   |
| 10422D | SB | 3406355       | 1201067      | granted  | 27-Jun-02 | 13-Sep-02 | 10422DGE10T | PROCESSING DATA PACKETS   |
| 10422D | FR | 3406355       | 1201067      | granted  | 27-Jun-02 | 13-Sep-02 | 10422DGE10F | PROCESSING DATA PACKETS   |
| 10422D | DE | 3406355       | 6008479.8    | granted  | 27-Jun-02 | 13-Sep-02 | 10422DDE08T | PROCESSING DATA PACKETS   |
| 10422D | CN | 810016        | DL00810016.0 | granted  | 27-Jun-02 | 29-Jun-02 | 10422DCN04N | PROCESSING DATA PACKETS   |
| 10429R | CA | 2,353,250     | 2,353,250    | granted  | 18-Jul-02 | 11-Jul-02 | 10429RCA02U | METHOD FOR CONTROLLING SERVICE LEVELS OVER PACKET-BASED NETWORKS  |
| 10628R | SB | 6501571       | 1113655      | granted  | 16-Oct-02 | 22-Nov-02 | 10628RGE0E  | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM  |
| 10628R | FR | 6501571       | 1113655      | granted  | 16-Oct-02 | 22-Nov-02 | 10628RGE1E  | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM  |
| 10628R | DE | 6501571       | 60031542     | granted  | 16-Oct-02 | 22-Nov-02 | 10628RDE0E  | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM  |
| 10628R | CA | 2,322,964     | 2,322,964    | granted  | 10-Oct-02 | 10-Oct-02 | 10628RCA02U | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM  |
| 10628R | CA | 2,689,783     | 2,689,783    | granted  | 10-Oct-02 | 8-Jul-02  | 10628RCA02V | CALL FEATURES FOR AUTOMATIC CALL DISTRIBUTION SYSTEM  |
| 10642H | FI | 990027        | 114064       | granted  | 8-Jan-02  | 30-Jul-02 | 10642HFI01U | STEERING OF INTERNET ACCESS TO SPONSORS   |
| 10642H | EP | 99200264      | HEMPHY       | Filed    | 23-Feb-02 |           | HEMPHY      | STEERING OF INTERNET ACCESS TO SPONSORS   |
| 10642H | CA | 2,233,971     | 2,233,971    | granted  | 6-Jan-02  | 12-Jul-02 | 10642HCA04U | STEERING OF INTERNET ACCESS TO SPONSORS   |
| 10642H | AU | 764695        | HEMPHY       | Filed    | 4-Jan-02  |           | HEMPHY      | STEERING OF INTERNET ACCESS TO SPONSORS   |
| 10645H | JP | 2012-151843   | HEMPHY       | Filed    | 1-Dec-02  |           | HEMPHY      | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | JP | 2000-585778   | 5113963      | granted  | 1-Dec-02  | 10-Oct-02 | 10645HJP05N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | HK | 21021303      | HK1029950    | granted  | 27-Feb-02 | 25-Oct-02 | 10645HKG05N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | SB | 10173618      | 2252203      | granted  | 1-Dec-02  | 9-Jul-02  | 10645HGE07N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | SB | 99940154      | 1068574      | granted  | 1-Dec-02  | 6-Oct-02  | 10645HGE1E  | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | FR | 10173618      | 2252203      | granted  | 1-Dec-02  | 9-Jul-02  | 10645HFR13V | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | FR | 99940154      | 1068574      | granted  | 1-Dec-02  | 6-Oct-02  | 10645HFR13E | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | EP | 11083457      | HEMPHY       | Filed    | 1-Dec-02  |           | HEMPHY      | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | EP | 10173618      | 2252203      | inactive | 1-Dec-02  | 9-Jul-02  | 10645HEP12V | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | DE | 10173618      | 2252203      | granted  | 1-Dec-02  | 9-Jul-02  | 10645HDE18V | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | DE | 69942893-0-08 | 1068574      | granted  | 1-Dec-02  | 6-Oct-02  | 10645HDE14E | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | CN | 99802648      | 261982046.8  | granted  | 1-Dec-02  | 2-Jul-02  | 10645HCN08N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | CA | 2,317,460     | 2,317,460    | granted  | 1-Dec-02  | 8-Jul-02  | 10645HCA05N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10645H | AU | 2094200       | 774402       | granted  | 1-Dec-02  | 14-Oct-02 | 10645HAU06N | PROVIDING DESIRED SERVICE POLICIES TO SUBSCRIBERS ACCESSING INTERNET  |
| 10722R | CA | 2,283,953     | 2,283,953    | granted  | 27-Sep-02 | 28-Aug-02 | 10722RCA02U | COMPACT HIGH-CAPACITY SWITCH  |
| 10725R | SB | 991709        | 1243117      | granted  | 29-Oct-02 | 15-Jun-02 | 10725RGE0E  | DISTRIBUTION OF LOCATION INFORMATION IN IP NETWORKS BY INTELLIGENT ENDPOINTS  |
| 10725R | FR | 991709        | 1243117      | granted  | 29-Oct-02 | 15-Jun-02 | 10725RGE1E  | DISTRIBUTION OF LOCATION INFORMATION IN IP NETWORKS BY INTELLIGENT ENDPOINTS  |
| 10725R | DE | 991709        | 60020675.6   | granted  | 29-Oct-02 | 15-Jun-02 | 10725RDE0E  | DISTRIBUTION OF LOCATION INFORMATION IN IP NETWORKS BY INTELLIGENT ENDPOINTS  |
| 10745N | SB | 3093473       | 1095769      | granted  | 26-Oct-02 | 26-Jul-02 | 10745NGE0E  | METHODS AND SYSTEMS FOR BUILDING AND DISTRIBUTING AUDIO PACKAGES  |
| 10745N | FR | 3093473       | 1095769      | granted  | 26-Oct-02 | 26-Jul-02 | 10745NGE1E  | METHODS AND SYSTEMS FOR BUILDING AND DISTRIBUTING AUDIO PACKAGES  |
| 10745N | DE | 3093473       | 60029352.4   | granted  | 26-Oct-02 | 26-Jul-02 | 10745NDE0E  | METHODS AND SYSTEMS FOR BUILDING AND DISTRIBUTING AUDIO PACKAGES  |
| 10745N | CA | 2,324,382     | 2,324,382    | granted  | 26-Oct-02 | 24-Jan-02 | 10745NCA02U | METHODS AND SYSTEMS FOR BUILDING AND DISTRIBUTING AUDIO PACKAGES  |
| 10802R | CN | 1358573       | 200135573.9  | granted  | 18-Oct-02 | 26-May-02 | 10802RCN04U | SUMMARY BUILDING BLOCK AND SYSTEM AND METHOD FOR MANAGING NETWORKS  |
| 10804R | SB | 308243        | 1093266      | granted  | 22-Sep-02 | 6-Jul-02  | 10804RGE0E  | TELECOMMUNICATIONS SWITCHES AND METHODS FOR THEIR OPERATION   |
| 10804R | FR | 308243        | 1093266      | granted  | 22-Sep-02 | 6-Jul-02  | 10804RGE1E  | TELECOMMUNICATIONS SWITCHES AND METHODS FOR THEIR OPERATION   |
| 10804R | DE | 308243        | 60095091.6   | granted  | 22-Sep-02 | 6-Jul-02  | 10804RDE0E  | TELECOMMUNICATIONS SWITCHES AND METHODS FOR THEIR OPERATION   |
| 10804R | CA | 2,314,625     | 2,314,625    | granted  | 27-Jul-02 | 4-Sep-02  | 10804RCA02U | TELECOMMUNICATIONS SWITCHES AND METHODS FOR THEIR OPERATION   |
| 10809D | JP | 2011-244462   | HEMPHY       | Filed    | 27-Jul-02 |           | HEMPHY      | PRESENCE MANAGEMENT SYSTEM  |
| 10809D | JP | 2013-139877   | HEMPHY       | Filed    | 26-Sep-13 |           | HEMPHY      | PRESENCE MANAGEMENT SYSTEM  |
| 10809D | JP | 2001-546110   | 5416877      | granted  | 27-Jul-02 | 22-Nov-02 | 10809DJP05N | PRESENCE MANAGEMENT SYSTEM  |
| 10809D | CA | 2,394,344     | 2,394,344    | granted  | 27-Jul-02 | 3-Jul-02  | 10809DCA05N | PRESENCE MANAGEMENT SYSTEM  |
| 10810D | JP | 2001-546111   | 4669529      | granted  | 27-Jul-02 | 21-Nov-02 | 10810DJP05N | ANONYMITY IN A PRESENCE MANAGEMENT SYSTEM   |
| 10810D | SB | 979793.1      | 1240756      | granted  | 27-Jul-02 | 26-Mar-02 | 10810DGE0E  | ANONYMITY IN A PRESENCE MANAGEMENT SYSTEM   |





| Publication No. | Applicant | Inventor(s)             | Status   | Priority Date | Effective Date | IPC Class.  | Description   |
|-----------------|-----------|-------------------------|----------|---------------|----------------|-------------|---|
| 13292D          | FR        | 1318695.5 122014        | Granted  | 20-Dec-01     | 14-Jun-05      | 2320DP064   | METHOD, APPARATUS AND SOFTWARE FOR ACCESSING LOCATION BASED INTERNET SERVICES   |
| 13292D          | DE        | 1318695.5 6011173       | Granted  | 20-Dec-01     | 14-Jun-05      | 2320DP039   | METHOD, APPARATUS AND SOFTWARE FOR ACCESSING LOCATION BASED INTERNET SERVICES   |
| 13270D          | GB        | 3112.5.8 1 111 875      | Granted  | 14-Dec-00     | 17-Aug-05      | 2270DB09E   | CONTROLLING A DESTINATION TERMINAL FROM AN ORIGINATING TERMINAL   |
| 13270D          | FR        | 3112.5.8 1 111 875      | Granted  | 14-Dec-00     | 17-Aug-05      | 2270DB09E   | CONTROLLING A DESTINATION TERMINAL FROM AN ORIGINATING TERMINAL   |
| 13270D          | DE        | 3112.5.8 60022000       | Granted  | 14-Dec-00     | 17-Aug-05      | 2270DB04E   | CONTROLLING A DESTINATION TERMINAL FROM AN ORIGINATING TERMINAL   |
| 13270D          | CA        | 2,325,395 2,325,395     | Granted  | 21-Dec-00     | 13-Aug-05      | 2270DC420   | CONTROLLING A DESTINATION TERMINAL FROM AN ORIGINATING TERMINAL   |
| 12245D          | NX        | 1008972 23654           | Granted  | 6-Apr-01      | 8-May-05       | 2250CM020   | METHOD OF INCREASING CAPACITY IN A WIRELESS ACCESS COMMUNICATIONS NETWORK   |
| 12245D          | CL        | 795-2001 43,373         | Granted  | 30-Mar-01     | 15-Jan-06      | 2250CM020   | METHOD OF INCREASING CAPACITY IN A WIRELESS ACCESS COMMUNICATIONS NETWORK   |
| 12449R          | GB        | 94400623.8 0 617 524    | Granted  | 24-Mar-04     | 28-Apr-05      | 2449RB07T   | A RADIO TRANSMISSION METHOD USING REPEATER STATIONS WITH SPECTRUM REVERSAL (PROCEDEE DE TRANSMISSION RADIOELECTRIQUE UTILISANT DES STATIONS REPEATERES A RETOURNEMENT DE SPECTRE) |
| 12449R          | DE        | 94400623.8 69418072     | Granted  | 24-Mar-04     | 28-Apr-05      | 2449RB08T   | A RADIO TRANSMISSION METHOD USING REPEATER STATIONS WITH SPECTRUM REVERSAL (PROCEDEE DE TRANSMISSION RADIOELECTRIQUE UTILISANT DES STATIONS REPEATERES A RETOURNEMENT DE SPECTRE) |
| 12481R          | GB        | 13106604.4 2 27 804     | Granted  | 13-Dec-01     | 14-Dec-05      | 2481CB08U   | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | FR        | 13106604.4 2 27 804     | Granted  | 13-Dec-01     | 14-Dec-05      | 2481CB07U   | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | DE        | 13106604.4 60119263     | Granted  | 13-Dec-01     | 14-Dec-05      | 2481CB02U   | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | CA        | 0 HEMPTTY               | Filed    | 13-Dec-01     | HEMPTTY        | 2481CC12V   | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | CA        | 2,384,979 2,384,979     | Granted  | 13-Dec-01     | 21-Jun-11      | 2481CC420V  | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | CA        | 2,735,384 HEMPTTY       | Filed    | 13-Dec-01     | HEMPTTY        | 2481CC420V  | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12481R          | AU        | 97388(01) 78373         | Granted  | 20-Dec-01     | 23-Mar-05      | 2481CC40U   | INTERWORKING OF DISIMILAR PACKET NETWORKS FOR TELEPHONY COMMUNICATIONS  |
| 12559D          | EP        | 13764743 HEMPTTY        | Filed    | 18-Dec-01     | HEMPTTY        | 2250DEP4T   | SYSTEM, APPARATUS AND METHOD FOR PERSONALISING WEB CONTENT  |
| 12559D          | CA        | 2,428,227 HEMPTTY       | Filed    | 18-Dec-01     | HEMPTTY        | 2250DC42N   | SYSTEM, APPARATUS AND METHOD FOR PERSONALISING WEB CONTENT  |
| 12620R          | CA        | 2,358,239 2,358,239     | Granted  | 3-Oct-01      | 22-Dec-10      | 2620CP42U   | OPTIMIZED FAULT NOTIFICATION IN AN OVERLAY MESH NETWORK VIA NETWORK KNOWLEDGE CORRELATION   |
| 12621D          | JP        | 2001-088103 491395      | Granted  | 25-May-02     | 27-Jan-12      | 2621DP09N   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | JP        | 2001-09504 5063784      | Granted  | 25-May-02     | 17-Aug-12      | 2621DP12V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | JP        | 2001-09505 5063785      | Granted  | 25-May-02     | 17-Aug-12      | 2621DP13V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | GB        | 6164713.3 2 006 508     | Granted  | 25-May-02     | 12-Mar-14      | 2621DB15V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | GB        | 1031224.5 2 290 999     | Granted  | 25-May-02     | 23-May-12      | 2621DB15V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | FR        | 6164713.3 2 006 508     | Granted  | 25-May-02     | 12-Mar-14      | 2621DFR15V  | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | FR        | 1031224.5 2 290 999     | Inactive | 25-May-02     | 23-May-12      | 2621DFR15V  | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | EP        | 10312154 HEMPTTY        | Filed    | 25-May-02     | HEMPTTY        | 2621DEP11V  | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | EP        | 6164713.3 2 006 508     | Inactive | 25-May-02     | 12-Mar-14      | 2621DEP9V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | EP        | 1031224.5 2 290 999     | Inactive | 25-May-02     | 23-May-12      | 2621DEP10V  | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | DE        | 1031224.5 2 290 999     | Granted  | 25-May-02     | 23-May-12      | 2621DE14V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | DE        | 6014895.2 2 006 508     | Granted  | 25-May-02     | 12-Mar-14      | 2621DE17V   | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12621D          | CA        | 2,418,598 HEMPTTY       | Inactive | 25-May-02     | HEMPTTY        | 2621DC42AN  | MULTIPLE ACCESS SYSTEM FOR COMMUNICATIONS NETWORK   |
| 12650R          | JP        | 2001-159395 4545340     | Granted  | 25-May-02     | 9-Sep-10       | 2260BP04U   | PHOTONIC NETWORK NODE   |
| 12710R          | GB        | 1975909.1 1 307 373     | Granted  | 4-Oct-00      | 13-Sep-06      | 2710CB05E   | NETWORK DRIVEN CELL SWITCHING AND HANDOFF WITH LOAD BALANCING FOR WIRELESS SYSTEMS  |
| 12710R          | FR        | 1975909.1 1 307 373     | Granted  | 4-Oct-00      | 13-Sep-06      | 2710CB09E   | NETWORK DRIVEN CELL SWITCHING AND HANDOFF WITH LOAD BALANCING FOR WIRELESS SYSTEMS  |
| 12710R          | DE        | 1975909.1 60120981      | Granted  | 4-Oct-00      | 13-Sep-06      | 2710CB04E   | NETWORK DRIVEN CELL SWITCHING AND HANDOFF WITH LOAD BALANCING FOR WIRELESS SYSTEMS  |
| 12710R          | CA        | 2,384,090 2,384,090     | Granted  | 29-Nov-00     | 11-Nov-11      | 2710CC42U   | BANDWIDTH ALLOCATION IN ETHERNET NETWORKS   |
| 12850R          | CA        | 2,431,388 2,431,388     | Granted  | 20-Dec-00     | 21-Aug-12      | 2850CC42N   | OSPF BACKUP INTERFACE   |
| 12959R          | FR        | 7255 280992             | Granted  | 6-Jun-00      | 16-Aug-02      | 2259FR01U   | METHOD FOR MONITORING COMMUNICATIONS IN A CELLULAR RADIOCOMMUNICATION SYSTEM AND NETWORK CORE THEREOF   |
| 12959R          | FR        | 1396386.1 2 871 717     | Granted  | 18-May-00     | 26-Sep-07      | 2259FR06T   | METHOD FOR MONITORING COMMUNICATIONS IN A CELLULAR RADIOCOMMUNICATION SYSTEM AND NETWORK CORE THEREOF   |
| 12959R          | CN        | 10212542 1 221 135      | Granted  | 18-May-00     | 26-Sep-05      | 2259FR03AN  | METHOD FOR MONITORING COMMUNICATIONS IN A CELLULAR RADIOCOMMUNICATION SYSTEM AND NETWORK CORE THEREOF   |
| 12920R          | FR        | 1319253.3 1 292 785     | Granted  | 14-Feb-00     | 15-Oct-08      | 2262FR08T   | DUAL BAND UNIDIRECTIONAL SCHEME IN A CELLULAR MOBILE RADIO TELECOMMUNICATIONS SYSTEM  |
| 12920R          | FR        | 1319253.3 1 292 785     | Granted  | 14-Feb-00     | 15-Oct-08      | 2262FR07T   | DUAL BAND UNIDIRECTIONAL SCHEME IN A CELLULAR MOBILE RADIO TELECOMMUNICATIONS SYSTEM  |
| 12920R          | DE        | 1319253.3 60136144      | Granted  | 14-Feb-00     | 15-Oct-08      | 2262FR06G   | DUAL BAND UNIDIRECTIONAL SCHEME IN A CELLULAR MOBILE RADIO TELECOMMUNICATIONS SYSTEM  |
| 12709R          | FR        | 2788932.5 1 459 508     | Granted  | 19-Dec-00     | 15-Feb-06      | 2270FR08E   | DYNAMIC PRESENCE MANAGEMENT   |
| 12709R          | FR        | 2788932.5 1 459 508     | Granted  | 19-Dec-00     | 15-Feb-06      | 2270FR07E   | DYNAMIC PRESENCE MANAGEMENT   |
| 12709R          | DE        | 2788932.5 1 459 508     | Granted  | 19-Dec-00     | 15-Feb-06      | 2270FR02E   | DYNAMIC PRESENCE MANAGEMENT   |
| 13071A          | GB        | 1364081.7 1 323 255     | Granted  | 15-Aug-00     | 20-May-13      | 33071A0813T | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | GB        | 1019177A 2 333 995      | Granted  | 18-Nov-10     | 3-Apr-13       | 33071A0812V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | FR        | 1364081.7 1 323 255     | Granted  | 15-Aug-00     | 20-May-13      | 33071A0814T | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | FR        | 1019177A 2 333 995      | Granted  | 18-Nov-10     | 3-Apr-13       | 33071A0813V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | EP        | 10191769 HEMPTTY        | Filed    | 18-Nov-10     | HEMPTTY        | 33071A0810V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | EP        | 0 HEMPTTY               | Inactive | 15-Aug-00     | HEMPTTY        | 33071A0810V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | EP        | 1364081.7 1 323 255     | Inactive | 15-Aug-00     | 20-May-13      | 33071A0815T | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | EP        | 1019177A 2 333 995      | Inactive | 18-Nov-10     | 3-Apr-13       | 33071A0816V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | EP        | 1364081.7 601 48 041.4  | Granted  | 15-Aug-00     | 20-May-13      | 33071A0813T | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | DE        | 1019177A 2 601 47 846.0 | Granted  | 18-Nov-10     | 3-Apr-13       | 33071A0813V | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13071A          | CA        | 2,418,547 2,418,547     | Granted  | 15-Aug-00     | 11-May-14      | 33071A04AN  | OPTICAL INTERNET PROTOCOL SWITCH ROUTER   |
| 13091D          | GB        | 1806857.3 1 334 599     | Granted  | 30-Oct-00     | 3-Jun-09       | 33091D07T   | METHOD FOR PASSING INFORMATION FROM A FIRST WEB-ENTITY TO ONE OF A PLURALITY OF SECOND WEB-ENTITIES   |
| 13091D          | FR        | 1806857.3 1 334 599     | Granted  | 30-Oct-00     | 3-Jun-09       | 33091D06T   | METHOD FOR PASSING INFORMATION FROM A FIRST WEB-ENTITY TO ONE OF A PLURALITY OF SECOND WEB-ENTITIES   |
| 13091D          | DE        | 1806857.3 60138942      | Granted  | 30-Oct-00     | 3-Jun-09       | 33091D05T   | METHOD FOR PASSING INFORMATION FROM A FIRST WEB-ENTITY TO ONE OF A PLURALITY OF SECOND WEB-ENTITIES   |
| 13091D          | CA        | 2,428,008 2,428,008     | Granted  | 30-Oct-00     | 7-Dec-10       | 33091DC42N  | METHOD FOR PASSING INFORMATION FROM ONE OF A PLURALITY OF FIRST WEB-ENTITIES TO A SECOND WEB-ENTITY   |
| 13295D          | EP        | 1955468 HEMPTTY         | Filed    | 10-Aug-01     | HEMPTTY        | 33295DEP0T  | NETWORK PLANNING TOOL   |
| 13295D          | CA        | 2,421,870 2,421,870     | Granted  | 10-Aug-01     | 11-Nov-11      | 33295DC42AN | NETWORK PLANNING TOOL   |
| 13382R          | JP        | 2001-542251 4,745,579   | Granted  | 1-Dec-00      | 20-May-11      | 33382R09P4N | ARRANGEMENT FOR MULTIPLE LAN SWITCHES   |
| 13382R          | JP        | 2010-168930 498295      | Granted  | 27-Jul-10     | 27-Apr-12      | 33382R09P6V | ARRANGEMENT FOR MULTIPLE LAN SWITCHES   |
| 13487R          | GB        | 2769512 1 442 624       | Granted  | 26-Sep-02     | 7-Apr-10       | 33487R08E0T | METHOD AND APPARATUS FOR DIFFERENTIATED COMMUNICATIONS IN A WIRELESS NETWORK  |
| 13487R          | FR        | 2769512 1 442 624       | Granted  | 26-Sep-02     | 7-Apr-10       | 33487R09T   | METHOD AND APPARATUS FOR DIFFERENTIATED COMMUNICATIONS IN A WIRELESS NETWORK  |
| 13487R          | DE        | 2769512 60295909        | Granted  | 26-Sep-02     | 7-Apr-10       | 33487R08E4T | METHOD AND APPARATUS FOR DIFFERENTIATED COMMUNICATIONS IN A WIRELESS NETWORK  |
| 13537D          | CA        | 2,412,040 2,412,040     | Granted  | 15-Nov-00     | 7-Oct-14       | 33537DC42U  | ATTENUATION DEVICES   |
| 13549R          | GB        | 1279516.3 1 362 456     | Granted  | 9-Oct-00      | 19-Mar-08      | 33549R06E0T | SYSTEM AND METHOD FOR INTERCEPTING TELECOMMUNICATIONS   |
| 13549R          | FR        | 1279516.3 1 362 456     | Granted  | 9-Oct-00      | 19-Mar-08      | 33549R07T   | SYSTEM AND METHOD FOR INTERCEPTING TELECOMMUNICATIONS   |
| 13549R          | DE        | 1279516.3 60133316      | Granted  | 9-Oct-00      | 19-Mar-08      | 33549R08E4T | SYSTEM AND METHOD FOR INTERCEPTING TELECOMMUNICATIONS   |
| 13549R          | CA        | 2,437,275 HEMPTTY       | Filed    | 9-Oct-00      | HEMPTTY        | 33549R042N  | SYSTEM AND METHOD FOR INTERCEPTING TELECOMMUNICATIONS   |
| 13589R          | CA        | 2,412,216 2,412,216     | Granted  | 25-Nov-00     | 27-Sep-11      | 33589R042U  | TUNNELING SCHEME OPTIMIZED FOR USE IN VIRTUAL PRIVATE NETWORKS  |
| 13619D          | GB        | 2251391.8 1 244 282     | Granted  | 18-Mar-00     | 11-Jun-08      | 33619D06E   | METHOD AND APPARATUS FOR LOCAL GENERATION OF MEDIA CONTENT FOR CALLERS PUT ON HOLD  |
| 13619D          | FR        | 2251391.8 1 244 282     | Granted  | 18-Mar-00     | 11-Jun-08      | 33619D09E   | METHOD AND APPARATUS FOR LOCAL GENERATION OF MEDIA CONTENT FOR CALLERS PUT ON HOLD  |
| 13619D          | DE        | 2251391.8 60210213      | Granted  | 18-Mar-00     | 11-Jun-08      | 33619D04E   | METHOD AND APPARATUS FOR LOCAL GENERATION OF MEDIA CONTENT FOR CALLERS PUT ON HOLD  |
| 13619D          | CA        | 2,377,617 2,377,617     | Granted  | 20-Mar-00     | 5-Sep-11       | 33619DC42U  | PROVISION OF MEDIA CONTENT TO TELEPHON CALLERS ON-HOLD  |
| 13639R          | GB        | 1983403.1 1 329 032     | Granted  | 19-Oct-00     | 27-Dec-06      | 33639R05E   | MULTISER DETECTOR FOR DIRECT SEQUENCE - CODE DIVISION MULTIPLE ACCESS (DS/SSMA) CHANNELS  |
| 13639R          | FR        | 1983403.1 1 329 032     | Granted  | 19-Oct-00     | 27-Dec-06      | 33639R09E   | MULTISER DETECTOR FOR DIRECT SEQUENCE - CODE DIVISION MULTIPLE ACCESS (DS/SSMA) CHANNELS  |
| 13639R          | DE        | 1983403.1 60125704      | Granted  | 19-Oct-00     | 27-Dec-06      | 33639R06E   | MULTISER DETECTOR FOR DIRECT SEQUENCE - CODE DIVISION MULTIPLE ACCESS (DS/SSMA) CHANNELS  |
| 13798R          | DE        | 2547251.1 2 724 271     | Granted  | 5-Jul-00      | 24-Mar-06      | 33798R05E   | SWITCHED CHANNEL-BAND NETWORK   |
| 13798R          | FR        | 2547251.1 2 724 271     | Granted  | 5-Jul-00      | 24-Mar-06      | 33798R09E   | SWITCHED CHANNEL-BAND NETWORK   |
| 13798R          | DE        | 2547251.1 2 724 271     | Granted  | 5-Jul-00      | 24-Mar-06      | 33798R06E   | SWITCHED CHANNEL-BAND NETWORK   |
| 13790R          | CA        | 2,436,309 2,436,309     | Granted  | 30-Jul-03     | 3-Jul-12       | 33790CC42U  | BROADBAND CONTROL OF POLARIZATION MODE DISPERSION   |
| 13860D          | GB        | 2253065.9 1 255 373     | Granted  | 27-Apr-00     | 16-Nov-05      | 33860D06E   | ROUTE PROTECTION IN A COMMUNICATIONS NETWORK  |
| 13860D          | FR        | 2253065.9 1 255 373     | Granted  | 27-Apr-00     | 16-Nov-05      | 33860D09E   | ROUTE PROTECTION IN A COMMUNICATIONS NETWORK  |

| Patent No. | IPC Class. | Inventor         | Applicant    | Pub. No. | Pub. Date | IPC Class. | Title   |
|------------|------------|------------------|--------------|----------|-----------|------------|---|
| 13889D     | DE         | 225395.7         | 60207323     | Granted  | 27-Apr-02 | 16-00-00   | 3888DDE04E ROUTE PROTECTION IN A COMMUNICATIONS NETWORK   |
| 13889D     | CA         | 2,383,735        | 2,383,735    | Granted  | 26-Apr-02 | 16-00-00   | 3888DCAD2V ROUTE PROTECTION IN A COMMUNICATIONS NETWORK   |
| 13889D     | GB         | 3739586.6        | 483,929      | Granted  | 22-Jan-03 | 14-00-00   | 3888GCB07T ADAPTIVE STATE TRANSITION CONTROL  |
| 13889D     | FR         | 3739586.6        | 483,929      | Granted  | 22-Jan-03 | 14-00-00   | 3888FR050T ADAPTIVE STATE TRANSITION CONTROL  |
| 13889D     | DE         | 3739586.6        | 60217480     | Granted  | 22-Jan-03 | 14-00-00   | 3888DDE06T ADAPTIVE STATE TRANSITION CONTROL  |
| 13889D     | CN         | 3807965.5        | 020807965.5  | Granted  | 22-Jan-03 | 14-00-00   | 3888CNC02N ADAPTIVE STATE TRANSITION CONTROL  |
| 13889F     | PT         | 93879            | 93879        | Granted  | 26-Apr-02 | 16-00-00   | 3888FPP120 PROCÉDE DE PSEUDO SYNCHRONISATION DE COMMUNICATION MULTISÉRIÉ À DES TEMPS -FR 885649 - PROCESS FOR THE PSEUDO SYNCHRONIZATION OF A TIME MULTIPLEXING COMMUNICATION NETWORK AND USE THEREOF                           |
| 13889F     | GB         | 944003.13        | 0396820      | Granted  | 19-Feb-05 | 12-00-00   | 3888FGB05E METHOD AND APPARATUS FOR DETECTING A CUSTOMER PREMISES EQUIPMENT ALERTING (CAS) SIGNAL ON A TELEPHONE LINE DIRECTION (CAS -FR804758)   |
| 13889F     | FR         | 944003.13        | 0396820      | Granted  | 19-Feb-05 | 28-Apr-02  | 3888FR0920 PROCÉDE ET DISPOSITIF DE DÉTECTION D'UN SIGNAL D'ALERTE SÉRIÉ URNE TELEPHONIQUE/METHOD AND APPARATUS FOR DETECTING A CUSTOMER PREMISES EQUIPMENT ALERTING (CAS) SIGNAL ON A TELEPHONE LINE DIRECTION (CAS -FR804758) |
| 13889F     | FR         | 944003.13        | 0396820      | Granted  | 19-Feb-05 | 12-00-00   | 3888FR092E METHOD AND APPARATUS FOR DETECTING A CUSTOMER PREMISES EQUIPMENT ALERTING (CAS) SIGNAL ON A TELEPHONE LINE DIRECTION (CAS -FR804758)   |
| 13889F     | DE         | 944003.13        | 69587075     | Granted  | 19-Feb-05 | 12-00-00   | 3888FDE05E METHOD AND APPARATUS FOR DETECTING A CUSTOMER PREMISES EQUIPMENT ALERTING (CAS) SIGNAL ON A TELEPHONE LINE DIRECTION (CAS -FR804758)   |
| 14042D     | GB         | 2253043          | 263,258      | Granted  | 30-Apr-02 | 10-00-00   | 14042GB002E COMMUNICATIONS NETWORK FOR A METROPOLITAN AREA  |
| 14042D     | FR         | 2253043          | 263,258      | Granted  | 30-Apr-02 | 10-00-00   | 14042FR002E COMMUNICATIONS NETWORK FOR A METROPOLITAN AREA  |
| 14042D     | DE         | 2253043          | 60217440     | Granted  | 30-Apr-02 | 10-00-00   | 14042DE002E COMMUNICATIONS NETWORK FOR A METROPOLITAN AREA  |
| 14310D     | GB         | 2258724          | 326,371      | Granted  | 19-Dec-02 | 19-00-00   | 14310GB007E RESYNCHRONIZATION OF CONTROL AND DATA PATH STATE FOR NETWORKS   |
| 14310D     | FR         | 2258724          | 326,371      | Granted  | 19-Dec-02 | 19-00-00   | 14310FR007E RESYNCHRONIZATION OF CONTROL AND DATA PATH STATE FOR NETWORKS   |
| 14310D     | DE         | 2258724          | 326,371      | Granted  | 19-Dec-02 | 19-00-00   | 14310DE007E RESYNCHRONIZATION OF CONTROL AND DATA PATH STATE FOR NETWORKS   |
| 14310D     | CA         | 2,414,426        | 2,414,426    | Granted  | 16-Dec-02 | 7-00-00    | 14310CAC20 RESYNCHRONIZATION OF CONTROL AND DATA PATH STATE FOR NETWORKS  |
| 14321N     | GB         | 2806387.1        | 4,777,007    | Granted  | 19-Dec-02 | 29-Mar-06  | 14321GB006E PERSONAL USER AGENT   |
| 14321N     | FR         | 2806387.1        | 4,777,007    | Granted  | 19-Dec-02 | 29-Mar-06  | 14321FR007E PERSONAL USER AGENT   |
| 14321N     | DE         | 2806387.1        | 4,777,007    | Granted  | 19-Dec-02 | 29-Mar-06  | 14321DE006E PERSONAL USER AGENT   |
| 14341D     | EP         | 12136336         | HEMPY        | Filed    | 25-Nov-02 | HEMPY      | 14341D002E SYSTEM AND METHOD FOR INTEGRATING MULTIMEDIA SERVICES WITH TRADITIONAL TELEPHONY/DIFFERENT NETWORKS "TITLE UPDATED ON 23 AUGUST 2004 AS PER RESPECTIVE PATENT OFFICE WEBSITE" - NM - 23 AUG 2004                     |
| 14341D     | EP         | 12136336         | HEMPY        | Filed    | 25-Nov-02 | HEMPY      | 14341D003E SYSTEM AND METHOD FOR INTEGRATING MULTIMEDIA SERVICES WITH TRADITIONAL TELEPHONY/DIFFERENT NETWORKS "TITLE UPDATED ON 23 AUGUST 2004 AS PER RESPECTIVE PATENT OFFICE WEBSITE" - NM - 23 AUG 2004                     |
| 14341D     | CA         | 2,468,213        | 2,468,213    | Granted  | 14-Nov-11 | 14341CAC0N | 14341D004E SYSTEM AND METHOD FOR INTEGRATING MULTIMEDIA SERVICES WITH TRADITIONAL TELEPHONY/DIFFERENT NETWORKS "TITLE UPDATED ON 23 AUGUST 2004 AS PER RESPECTIVE PATENT OFFICE WEBSITE" - NM - 23 AUG 2004                     |
| 14418D     | EP         | 582577202        | 398103       | Granted  | 2-Apr-02  | 6-00-00    | 14418D008N TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK   |
| 14418D     | IN         | 01693/DELMP/2005 | 237756       | Granted  | 2-Apr-02  | 6-00-00    | 14418D007N TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK   |
| 14418D     | GB         | 2706837.2        | 380,129      | Granted  | 2-Apr-02  | 23-Jan-08  | 14418GB012T TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK  |
| 14418D     | FR         | 2706837.2        | 380,129      | Granted  | 2-Apr-02  | 23-Jan-08  | 14418FR011T TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK  |
| 14418D     | DE         | 2706837.2        | 60247926     | Granted  | 2-Apr-02  | 23-Jan-08  | 14418DE010T TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK  |
| 14418D     | CA         | 2,443,066        | 2,443,066    | Granted  | 2-Apr-02  | 15-Sep-09  | 14418CAC04N TIME SLOT SCHEDULING FOR SHARED-RADIO COMMUNICATIONS NETWORK  |
| 14493D     | EP         | 2002-530581      | 525249       | Granted  | 13-May-02 | 21-Jun-13  | 14493D009N DATA STREAM FILTERING APPARATUS AND METHOD   |
| 14493D     | EP         | 2011-000641      | 525273       | Granted  | 5-Jan-11  | 21-Jun-13  | 14493D011V DATA STREAM FILTERING APPARATUS AND METHOD   |
| 14493D     | EP         | 2012-07544       | 527695       | Granted  | 5-Jan-11  | 11-Jul-14  | 14493D012V DATA STREAM FILTERING APPARATUS AND METHOD   |
| 14493D     | IN         | 1216/DELMP/2208  | 250279       | Granted  | 13-May-02 | 21-Oct-11  | 14493DIN08N DATA STREAM FILTERING APPARATUS AND METHOD  |
| 14493D     | EP         | 2722493          | HEMPY        | Filed    | 13-May-02 | HEMPY      | 14493D007T DATA STREAM FILTERING APPARATUS AND METHOD   |
| 14529R     | EP         | 2753172          | HEMPY        | Filed    | 10-Jun-02 | HEMPY      | 14529R003T PROVIDING TELEPHONY SERVICES TO TERMINALS BEHIND A FIREWALL AND/OR A NETWORK ADDRESS TRANSLATOR  |
| 14529R     | EP         | 81001065         | HEMPY        | Filed    | 10-Jun-02 | HEMPY      | 14529R006V PROVIDING TELEPHONY SERVICES TO TERMINALS BEHIND A FIREWALL AND/OR A NETWORK ADDRESS TRANSLATOR  |
| 14530R     | GB         | 2779303.6        | 1,446,924    | Granted  | 26-Sep-02 | 30-Aug-06  | 14530GB007T SCHEDULER WITH FAIRNESS CONTROL AND QUALITY OF SERVICE SUPPORT  |
| 14530R     | FR         | 2779303.6        | 1,446,924    | Granted  | 26-Sep-02 | 30-Aug-06  | 14530FR007T SCHEDULER WITH FAIRNESS CONTROL AND QUALITY OF SERVICE SUPPORT  |
| 14530R     | DE         | 2779303.6        | 60214415     | Granted  | 26-Sep-02 | 30-Aug-06  | 14530DE007T SCHEDULER WITH FAIRNESS CONTROL AND QUALITY OF SERVICE SUPPORT  |
| 14530R     | CN         | 2827401.0        | 020827040.1  | Granted  | 26-Sep-02 | 12-Mar-08  | 14530CNC02N SCHEDULER WITH FAIRNESS CONTROL AND QUALITY OF SERVICE SUPPORT  |
| 14579AL    | TW         | 8811594          | 139388       | Granted  | 24-Nov-99 | 19-Dec-01  | 14579ALT040U METHOD AND APPARATUS FOR MISS SPOORING   |
| 14579AL    | JP         | 11-262452        | 358401       | Granted  | 16-Sep-99 | 11-Jun-04  | 14579ALP020U METHOD AND APPARATUS FOR MISS SPOORING   |
| 14731D     | GB         | 2257861.6        | 1,309,126    | Granted  | 11-Oct-02 | 12-Apr-06  | 14731D006E METHOD AND SYSTEM FOR DETERMINING AVAILABILITY IN NETWORKS   |
| 14731D     | FR         | 2257861.6        | 1,309,126    | Granted  | 11-Oct-02 | 12-Apr-06  | 14731D005E METHOD AND SYSTEM FOR DETERMINING AVAILABILITY IN NETWORKS   |
| 14731D     | DE         | 2257861.6        | 60210562     | Granted  | 11-Oct-02 | 12-Apr-06  | 14731D004E METHOD AND SYSTEM FOR DETERMINING AVAILABILITY IN NETWORKS   |
| 14731D     | CN         | 21481535         | 0201481535.5 | Granted  | 31-Oct-02 | 9-Jul-08   | 14731DCC020U METHOD AND SYSTEM FOR DETERMINING AVAILABILITY IN NETWORKS   |
| 14748R     | DE         | 2747116.6        | 1,415,442    | Granted  | 5-Jul-04  | 29-Mar-06  | 14748R008T USING MPLS LSPS AS L2TP TUNNEL TRANSPORTS  |
| 14748R     | FR         | 2747116.6        | 1,415,442    | Granted  | 5-Jul-04  | 29-Mar-06  | 14748R007T USING MPLS LSPS AS L2TP TUNNEL TRANSPORTS  |
| 14748R     | DE         | 2747116.6        | 60210284     | Granted  | 5-Jul-04  | 29-Mar-06  | 14748R006T USING MPLS LSPS AS L2TP TUNNEL TRANSPORTS  |
| 14850R     | EP         | 2002-006483      | 575041       | Granted  | 30-Aug-02 | 24-Dec-06  | 14850R005U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A SIGNAL ROUTING DEVICE   |
| 14850R     | HK         | 11100388         | NK1147641    | Granted  | 29-Sep-03 | 28-Dec-12  | 14850RHK05V TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A SIGNAL ROUTING DEVICE  |
| 14850R     | CN         | 20101042386      | 020101042386 | Granted  | 19-Mar-10 | 21-Mar-14  | 14850RCC08V TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A SIGNAL ROUTING DEVICE  |
| 14850R     | CA         | 2,438,751        | 2,438,751    | Granted  | 29-Aug-09 | 8-Apr-09   | 14850CAC02U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A SIGNAL ROUTING DEVICE  |
| 14877D     | CA         | 2,395,154        | 2,395,154    | Granted  | 25-Jul-04 | 12-Dec-11  | 14877DCA00E TECHNIQUE FOR SYNCHRONIZING CLOCKS IN A NETWORK   |
| 14920D     | GB         | 2256737.1        | 1,315,359    | Granted  | 27-Sep-02 | 25-Jul-07  | 14920GB004E A METHOD FOR CONTROLLING A MIDDLEBOX  |
| 14920R     | FR         | 2256899          | 1,316,648    | Granted  | 24-Dec-02 | 8-Feb-06   | 14920FR007E FAST RECOVERY METHOD IN LABEL SWITCHING NETWORKS, AND NETWORK ARRANGEMENT TO CARRY OUT THE METHOD   |
| 14920R     | FR         | 2256899          | 1,316,648    | Granted  | 24-Dec-02 | 8-Feb-06   | 14920FR006E FAST RECOVERY METHOD IN LABEL SWITCHING NETWORKS, AND NETWORK ARRANGEMENT TO CARRY OUT THE METHOD   |
| 14920R     | DE         | 2256899          | 60209962     | Granted  | 24-Dec-02 | 8-Feb-06   | 14920DE005E FAST RECOVERY METHOD IN LABEL SWITCHING NETWORKS, AND NETWORK ARRANGEMENT TO CARRY OUT THE METHOD   |
| 14938R     | TW         | 92738419         | Ns-223242    | Granted  | 29-Mar-03 | 11-Oct-04  | 14938R0050U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14938R     | FR         | 102009-0017431   | 10-0983401   | Granted  | 29-Mar-03 | 14-Sep-10  | 14938R0060U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14938R     | HK         | 4106731          | NK1064263    | Granted  | 29-Mar-03 | 12-Jun-09  | 14938RHK07U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14938R     | EP         | 3394028          | HEMPY        | Filed    | 13-Mar-03 | HEMPY      | 14938R0080E TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14938R     | CN         | 3138666.1        | 20530666.1   | Granted  | 29-Mar-03 | 30-Jul-08  | 14938RCC04U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14938R     | CA         | 2,422,677        | 2,422,677    | Granted  | 19-Mar-03 | 6-May-08   | 14938CAC02U TECHNIQUE FOR REDUCING THE NUMBER OF LAYERS IN A MULTILAYERIC/CLUT BOARD  |
| 14939P     | EP         | 10193793         | HEMPY        | Filed    | 14-Mar-07 | HEMPY      | 14939P013V SYSTEMS AND METHODS FOR EXECUTING APPLICATION PROGRAMS FROM A MEMORY DEVCLEINKED TO A SERVER   |
| 14939P     | EP         | 10193793         | HEMPY        | Filed    | 14-Mar-07 | HEMPY      | 14939P016V SYSTEMS AND METHODS FOR EXECUTING APPLICATION PROGRAMS FROM A MEMORY DEVCLEINKED TO A SERVER   |
| 14939P     | EP         | 10193793         | HEMPY        | Filed    | 14-Mar-07 | HEMPY      | 14939P019V SYSTEMS AND METHODS FOR EXECUTING APPLICATION PROGRAMS FROM A MEMORY DEVCLEINKED TO A SERVER   |
| 14939P     | EP         | 10193793         | HEMPY        | Filed    | 14-Mar-07 | HEMPY      | 14939P014V SYSTEMS AND METHODS FOR EXECUTING APPLICATION PROGRAMS FROM A MEMORY DEVCLEINKED TO A SERVER   |
| 14939P     | AU         | 23397797         | 711280       | Granted  | 14-Mar-07 | 26-Jun-09  | 14939PAU12N SYSTEMS AND METHODS FOR EXECUTING APPLICATION PROGRAMS FROM A MEMORY DEVCLEINKED TO A SERVER AT AN INTERNET SITE  |
| 15112D     | EP         | 32551442         | HEMPY        | Filed    | 29-Aug-03 | HEMPY      | 15112D009E ROUTING METHOD AND APPARATUS FOR OPTIMISING AUTO-TUNNELLING IN A HETEROGENEOUS NETWORK   |
| 15112D     | CA         | 2,437,684        | HEMPY        | Filed    | 29-Aug-03 | HEMPY      | 15112DCA020U ROUTING METHOD AND APPARATUS FOR OPTIMISING AUTO-TUNNELLING IN A HETEROGENEOUS NETWORK   |
| 15117D     | GB         | 3250746.3        | 333,630      | Granted  | 5-Feb-03  | 10-Aug-11  | 15117DGB007E TECHNIQUE FOR IMPLEMENTING A MULTI-SERVICE PACKET AND OPTICAL/TDM VIRTUAL PRIVATE CROSS-CONNECT  |
| 15117D     | FR         | 3250746.3        | 333,630      | Granted  | 5-Feb-03  | 10-Aug-11  | 15117DFR006E TECHNIQUE FOR IMPLEMENTING A MULTI-SERVICE PACKET AND OPTICAL/TDM VIRTUAL PRIVATE CROSS-CONNECT  |
| 15117D     | DE         | 3250746.3        | 60297958     | Granted  | 5-Feb-03  | 10-Aug-11  | 15117DDE005E TECHNIQUE FOR IMPLEMENTING A MULTI-SERVICE PACKET AND OPTICAL/TDM VIRTUAL PRIVATE CROSS-CONNECT  |
| 15117D     | CA         | 2,418,433        | 2,418,433    | Granted  | 4-Feb-03  | 24-May-11  | 15117DCC030U TECHNIQUE FOR IMPLEMENTING A MULTI-SERVICE PACKET AND OPTICAL/TDM VIRTUAL PRIVATE CROSS-CONNECT  |
| 15188R     | GB         | 32573784         | 1,432,890    | Granted  | 7-Nov-02  | 24-Oct-07  | 15188R006E PHYSICAL CAPACITY AGGREGATION SCHEME   |
| 15188R     | FR         | 32573784         | 1,432,890    | Granted  | 7-Nov-02  | 24-Oct-07  | 15188R005E PHYSICAL CAPACITY AGGREGATION SCHEME   |
| 15188R     | DE         | 32573784         | 60217021     | Granted  | 7-Nov-02  | 24-Oct-07  | 15188R004E PHYSICAL CAPACITY AGGREGATION SCHEME   |
| 15188R     | CA         | 2,450,421        | 2,450,421    | Granted  | 24-Nov-02 | 27-Sep-11  | 15188RCC020U PHYSICAL CAPACITY AGGREGATION SCHEME   |
| 15188D     | GB         | 30754865.1       | 343,263      | Granted  | 19-Feb-03 | 6-May-06   | 15188DGB00E A LINK CAPACITY ADJUSTMENT COMPONENT  |
| 15188D     | FR         | 30754865.1       | 343,263      | Granted  | 19-Feb-03 | 6-May-06   | 15188DFR00E A LINK CAPACITY ADJUSTMENT COMPONENT  |
| 15188D     | DE         | 30754865.1       | 60297482     | Granted  | 19-Feb-03 | 6-May-06   | 15188DDE04E A LINK CAPACITY ADJUSTMENT COMPONENT  |
| 15188D     | CA         | 2,420,716        | 2,420,716    | Granted  | 5-Mar-03  | 31-Jan-12  | 15188DCA020U A LINK CAPACITY ADJUSTMENT COMPONENT   |
| 15209R     | EP         | 32973975         | HEMPY        | Filed    | 17-Dec-03 | HEMPY      | 15209R020U DISTRIBUTED SERVICES BASED ON PREFERENCE TECHNOLOGY  |
| 15209R     | EP         | 11164208         | HEMPY        | Filed    | 17-Dec-03 | HEMPY      | 15209R016V DISTRIBUTED SERVICES BASED ON PREFERENCE TECHNOLOGY  |
| 15209R     | CA         | 2,447,767        | HEMPY        | Filed    | 31-Oct-03 | HEMPY      | 15209RCC02N DISTRIBUTED SERVICES BASED ON PREFERENCE TECHNOLOGY   |
| 15259R     | FR         | 182001-700045    | 62081        | Granted  | 2-Sep-99  | 29-Aug-98  | 15259RFR060N MICROMACHINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES  |
| 15259R     | JP         | 2014-086613      | HEMPY        | Filed    | 30-Nov-10 | HEMPY      | 15259RJP020V MICROMACHINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES  |

|        |    |                |               |        |          |           |           |              |   |
|--------|----|----------------|---------------|--------|----------|-----------|-----------|--------------|---|
| 15238R | FR | 2000-58834     |               | 477679 | Granted  | 2-Sep-25  | 89-J-11   | 15238RPP09N  | MICRONA CHAINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES                   |
| 15238R | FR | 2010-28738     | HEMPY         |        | Filed    | 30-Nov-10 |           | 15238RPP07V  | MICRONA CHAINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES                   |
| 15238R | FR | 2013-00867     | HEMPY         |        | Filed    | 30-Nov-10 |           | 15238RPP08Y  | MICRONA CHAINED MEMBERS COUPLED FOR RELATIVE ROTATION BY TORSIONAL FLEXURE HINGES                   |
| 15238R | GB | 2922893.8      | 1393 526      |        | Granted  | 10-Apr-09 | 27-AUG-07 | 15238RCP01ZE | FAST OPTICAL SWITCH   |
| 15238R | FR | 2922893.8      | 1393 526      |        | Granted  | 10-Apr-09 | 27-AUG-07 | 15238RCP01ZE | FAST OPTICAL SWITCH   |
| 15238R | EP | 2922893.8      | 1393 526      |        | Inactive | 10-Apr-09 | 27-AUG-07 | 15238RCP01ZE | FAST OPTICAL SWITCH   |
| 15238R | DE | 2922893.8      | 1393 526      |        | Granted  | 10-Apr-09 | 27-AUG-07 | 15238RCP01ZE | FAST OPTICAL SWITCH   |
| 15252D | GB | 3015018.4      | 404 082       |        | Granted  | 15-Jul-03 | 17-OCT-02 | 15252DOB06E  | METHODS FOR DISCOVERING NETWORK ADDRESS AND PORT TRANSLOCATORS                                      |
| 15252D | FR | 3015018.4      | 404 082       |        | Granted  | 15-Jul-03 | 17-OCT-02 | 15252DOB06E  | METHODS FOR DISCOVERING NETWORK ADDRESS AND PORT TRANSLOCATORS                                      |
| 15252D | EP | 3015018.4      | 404 082       |        | Inactive | 15-Jul-03 | 17-OCT-02 | 15252DOB06E  | METHODS FOR DISCOVERING NETWORK ADDRESS AND PORT TRANSLOCATORS                                      |
| 15252D | DE | 3015018.4      | 404 082       |        | Granted  | 15-Jul-03 | 17-OCT-02 | 15252DOB06E  | METHODS FOR DISCOVERING NETWORK ADDRESS AND PORT TRANSLOCATORS                                      |
| 15252D | CA | 2,435.699      | 2,435.699     |        | Granted  | 21-Jul-03 | 18-SEP-02 | 15252DCC02DZ | METHODS FOR DISCOVERING NETWORK ADDRESS AND PORT TRANSLOCATORS                                      |
| 15407R | FR | 10-2204-701926 | 10-0997654    |        | Granted  | 23-Apr-05 | 25-NOV-03 | 15407R0029N  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | GB | 3715200.6      | 1522 248      |        | Granted  | 23-Apr-05 | 25-DEC-13 | 15407R0010T  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | EP | 3715200.6      | 1522 248      |        | Granted  | 23-Apr-05 | 25-DEC-13 | 15407R0010T  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | FR | 11133115.8     | HEMPY         |        | Filed    | 23-Apr-05 |           | 15407R0020V  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | EP | 11133115.8     | HEMPY         |        | Filed    | 23-Apr-05 |           | 15407R0020V  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | FR | 3715200.6      | 1522 248      |        | Inactive | 23-Apr-05 | 25-DEC-13 | 15407R0010T  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | DE | 3715200.6      | 1522 248      |        | Granted  | 23-Apr-05 | 25-DEC-13 | 15407R0010T  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15407R | CN | 3821247.0      | 1209812147.6  |        | Granted  | 23-Apr-05 | 5-SEP-07  | 15407R0036N  | EFFICIENT HANDOFFS BETWEEN CELLULAR AND WIRELESS LOCAL AREA NETWORKS                                |
| 15514R | CN | 3813544.5      | HEMPY         |        | Filed    | 17-Jul-03 |           | 15514R0003N  | HIERARCHICAL OPTICAL WPMs (HOWPM) IN A CARRIER'S CARRIER VPM ENVIRONMENT                            |
| 15514R | CN | 20171029327.X  | HEMPY         |        | Filed    | 17-Jul-03 |           | 15514R0003V  | HIERARCHICAL OPTICAL WPMs (HOWPM) IN A CARRIER'S CARRIER VPM ENVIRONMENT                            |
| 15581R | GB | 3739351.7      | 540 893       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15581R | FR | 3739351.7      | 540 893       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15581R | DE | 3739351.7      | 540 893       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15581R | GB | 3747385.4      | 540 892       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15581R | FR | 3747385.4      | 540 892       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15581R | DE | 3747385.4      | 540 892       |        | Granted  | 9-Sep-03  | 19-OCT-07 | 15581R0010T  | NETWORK AND METHOD FOR PROVIDING SWITCHED VIRTUAL CIRCUIT LAYER-2 VIRTUAL PRIVATE NETWORKS          |
| 15629R | GB | 3750189.1      | 1509 270      |        | Granted  | 9-Sep-03  | 25-APR-07 | 15629R0010T  | GENERALIZED LAYER 2 VPNS  |
| 15629R | FR | 3750189.1      | 1509 270      |        | Granted  | 9-Sep-03  | 25-APR-07 | 15629R0010T  | GENERALIZED LAYER 2 VPNS  |
| 15629R | DE | 3750189.1      | 1509 270      |        | Granted  | 9-Sep-03  | 25-APR-07 | 15629R0010T  | GENERALIZED LAYER 2 VPNS  |
| 15629R | GB | 3750189.1      | 60312483      |        | Granted  | 9-Sep-03  | 25-APR-07 | 15629R0010T  | GENERALIZED LAYER 2 VPNS  |
| 15669R | DE | 3788833.1      | 1509 287      |        | Granted  | 30-May-02 | 31-OCT-12 | 15669R0010T  | APPARATUS, METHOD AND PROGRAM FOR NETWORK TOPOLOGY DISCOVERY UTILIZING DATA LINK LAYER SERVICES     |
| 15669R | FR | 3788833.1      | 1509 287      |        | Granted  | 30-May-02 | 31-OCT-12 | 15669R0010T  | APPARATUS, METHOD AND PROGRAM FOR NETWORK TOPOLOGY DISCOVERY UTILIZING DATA LINK LAYER SERVICES     |
| 15669R | EP | 3788833.1      | 1509 287      |        | Inactive | 30-May-02 | 31-OCT-12 | 15669R0010T  | APPARATUS, METHOD AND PROGRAM FOR NETWORK TOPOLOGY DISCOVERY UTILIZING DATA LINK LAYER SERVICES     |
| 15669R | DE | 3788833.1      | 1509 287      |        | Granted  | 30-May-02 | 31-OCT-12 | 15669R0010T  | APPARATUS, METHOD AND PROGRAM FOR NETWORK TOPOLOGY DISCOVERY UTILIZING DATA LINK LAYER SERVICES     |
| 15729R | FR | 2004-701073    | HEMPY         |        | Filed    | 20-Nov-03 |           | 15729R0009N  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | EP | 2004-53366     | 518403        |        | Granted  | 20-Nov-03 | 18-JAN-13 | 15729R0009N  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | HK | 101096122      | HEMPY         |        | Filed    | 11-OCT-10 |           | 15729R0012V  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | GB | 3788847.5      | 1461 985      |        | Granted  | 20-Nov-03 | 22-OCT-14 | 15729R0015T  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | FR | 3788847.5      | 1461 985      |        | Granted  | 20-Nov-03 | 22-OCT-14 | 15729R0015T  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | EP | 3788847.5      | 1461 985      |        | Inactive | 20-Nov-03 | 22-OCT-14 | 15729R0015T  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | DE | 3788847.5      | 1461 985      |        | Granted  | 20-Nov-03 | 22-OCT-14 | 15729R0015T  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | CN | 200801000317   | 0200801000137 |        | Granted  | 20-Nov-03 | 6-JAN-12  | 15729R0006N  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | CN | 200910205001   | 200910205001  |        | Granted  | 20-Nov-03 | 25-JAN-12 | 15729R0011V  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15729R | CA | 2472.336       | 2472.336      |        | Granted  | 20-Nov-03 | 23-OCT-12 | 15729R0004N  | TECHNIQUE FOR ACCOMMODATING ELECTRONIC COMPONENTS ON A MULTILAYER SIGNAL ROUTING DEVICE             |
| 15773D | DE | 4013951.4      | 1484 892      |        | Granted  | 7-Jun-04  | 6-OCT-06  | 15773D0010E  | METHOD AND SYSTEM FOR LAWFUL INTERCEPTION OF PACKET SWITCHED NETWORK SERVICES                       |
| 15773D | FR | 4013951.4      | 1484 892      |        | Granted  | 7-Jun-04  | 6-OCT-06  | 15773D0010E  | METHOD AND SYSTEM FOR LAWFUL INTERCEPTION OF PACKET SWITCHED NETWORK SERVICES                       |
| 15773D | DE | 4013951.4      | 60004000515.8 |        | Granted  | 7-Jun-04  | 6-OCT-06  | 15773D0010E  | METHOD AND SYSTEM FOR LAWFUL INTERCEPTION OF PACKET SWITCHED NETWORK SERVICES                       |
| 15793R | FR | 10-2204-004295 | 1062538       |        | Granted  | 11-Jun-04 | 30-AUG-11 | 15793R0009D  | TECHNIQUE FOR INTERCONNECTION MULTILAYER CIRCUIT BOARDS   |
| 15793R | HK | 10157343.4     | HEMPY         |        | Filed    | 22-Aug-05 |           | 15793R0010B  | TECHNIQUE FOR INTERCONNECTION MULTILAYER CIRCUIT BOARDS   |
| 15793R | CN | 200410081704   | 0220041008170 |        | Granted  | 11-Jun-04 | 21-APR-12 | 15793R0004D  | TECHNIQUE FOR INTERCONNECTION MULTILAYER CIRCUIT BOARDS   |
| 15827R | FR | 934.029        | 372.024       |        | Granted  | 25-May-94 | 30-SEP-94 | 15827R0010D  | VISIONPHONES  |
| 15829R | FR | 950.766        | 333481        |        | Granted  | 8-Feb-95  | 31-MAR-95 | 15829R0010D  | BORNE TELEPHONIQUE MURALE   |
| 15829R | FR | 950.766        | 333482        |        | Granted  | 8-Feb-95  | 31-MAR-95 | 15829R0010D  | BORNE TELEPHONIQUE MURALE   |
| 15829R | FR | 950.766        | 333483        |        | Granted  | 8-Feb-95  | 31-MAR-95 | 15829R0010D  | BORNE TELEPHONIQUE MURALE   |
| 15829R | FR | 950.766        | 333484        |        | Granted  | 8-Feb-95  | 31-MAR-95 | 15829R0010D  | BORNE TELEPHONIQUE MURALE   |
| 15829R | FR | 963917         | 437373        |        | Granted  | 29-Mar-96 | 23-AUG-96 | 15829R0010D  | APPAREIL COMBINE TELECOPIEUR/REpondeur TELEPHONIQUE - PF-100R - STORNA 660                          |
| 15829R | FR | 963917         | 437374        |        | Granted  | 29-Mar-96 | 23-AUG-96 | 15829R0010D  | APPAREIL COMBINE TELECOPIEUR/REpondeur TELEPHONIQUE - PF-100R - STORNA 660                          |
| 15829R | FR | 963917         | 437375        |        | Granted  | 29-Mar-96 | 23-AUG-96 | 15829R0010D  | APPAREIL COMBINE TELECOPIEUR/REpondeur TELEPHONIQUE - PF-100R - STORNA 660                          |
| 15829R | FR | 963917         | 437372        |        | Granted  | 29-Mar-96 | 23-AUG-96 | 15829R0010D  | APPAREIL COMBINE TELECOPIEUR/REpondeur TELEPHONIQUE - PF-100R - STORNA 660                          |
| 15863R | GB | 425984.5       | 1450 524      |        | Granted  | 20-Feb-04 | 18-JUL-12 | 15863R0010E  | CIRCUITATING SWITCH   |
| 15863R | FR | 425984.5       | 1450 524      |        | Granted  | 20-Feb-04 | 18-JUL-12 | 15863R0010E  | CIRCUITATING SWITCH   |
| 15863R | EP | 425984.5       | HEMPY         |        | Filed    | 20-Feb-04 |           | 15863R0010E  | CIRCUITATING SWITCH   |
| 15863R | DE | 425984.5       | 1450 524      |        | Granted  | 20-Feb-04 | 18-JUL-12 | 15863R0010E  | CIRCUITATING SWITCH   |
| 15863R | CA | 2,457,971      | HEMPY         |        | Filed    | 18-Feb-04 |           | 15863R0004D  | CIRCUITATING SWITCH   |
| 15863R | CA | 2,834,634      | HEMPY         |        | Filed    | 18-Nov-04 |           | 15863R0004V  | CIRCUITATING SWITCH   |
| 15863R | CA | 2,706,654      | 2,706,654     |        | Granted  | 18-Feb-04 | 28-JAN-04 | 15863R0004V  | CIRCUITATING SWITCH   |
| 15929R | EP | 4786406.5      | HEMPY         |        | Filed    | 8-Apr-04  |           | 15929R0010T  | MEMORY PROTECTION SYSTEMS AND METHODS FOR WRITABLE MEMORY   |
| 15929R | EP | 321521263      | HEMPY         |        | Filed    | 8-Apr-04  |           | 15929R0010V  | MEMORY PROTECTION SYSTEMS AND METHODS FOR WRITABLE MEMORY   |
| 15959R | JP | 2004-100907    | HEMPY         |        | Filed    | 30-Mar-04 |           | 15959R0010H  | AUTO-COMPRESSION FOR MEDIA OVERIP   |
| 15959R | CA | 2,461,839      | 2,461,839     |        | Granted  | 25-Mar-04 | 7-MAY-13  | 15959R0004D  | AUTO-COMPRESSION FOR MEDIA OVERIP   |
| 15992R | GB | 4394086.1      | 1458 700      |        | Granted  | 23-Jun-04 | 15-JAN-04 | 15992R0010E  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM |
| 15992R | FR | 4394086.1      | 1458 700      |        | Granted  | 23-Jun-04 | 15-JAN-04 | 15992R0010E  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM |
| 15992R | EP | 30178917       | HEMPY         |        | Filed    | 23-Jun-04 |           | 15992R0010V  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM |
| 15992R | FR | 4394086.1      | 1458 700      |        | Inactive | 23-Jun-04 | 15-JAN-04 | 15992R0010E  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM |
| 15992R | DE | 4394086.1      | 6000404246.8  |        | Granted  | 23-Jun-04 | 15-JAN-04 | 15992R0010E  | APPARATUS, METHOD, AND COMPUTER PROGRAM FOR SUPPORTING VIDEO CONFERENCING IN A COMMUNICATION SYSTEM |
| 15998R | EP | 4342823        | HEMPY         |        | Filed    | 25-Jun-04 |           | 15998R0010T  | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD      |
| 15998R | EP | 11189803       | HEMPY         |        | Filed    | 25-Jun-04 |           | 15998R0010V  | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD      |
| 15998R | EP | 4342823        | HEMPY         |        | Filed    | 25-Jun-04 |           | 15998R0010V  | DISTRIBUTED CALL SERVER SUPPORTING COMMUNICATION SESSIONS IN A COMMUNICATION SYSTEM AND METHOD      |
| 16021D | EP | 407251         | HEMPY         |        | Filed    | 8-AUG-04  |           | 16021D0010E  | MANAGEMENT OF QUEUES IN CONTACT CENTRES   |
| 16021D | EP | 3129592        | HEMPY         |        | Filed    | 8-AUG-04  |           | 16021D0010V  | MANAGEMENT OF QUEUES IN CONTACT CENTRES   |
| 16021D | EP | 31292343       | HEMPY         |        | Filed    | 8-AUG-04  |           | 16021D0010V  | MANAGEMENT OF QUEUES IN CONTACT CENTRES   |
| 16021D | CA | 2,477,868      | 2,477,868     |        | Granted  | 12-AUG-04 | 1-OCT-13  | 16021D0002D  | MANAGEMENT OF QUEUES IN CONTACT CENTRES   |
| 16141R | EP | 4369719        | HEMPY         |        | Filed    | 22-OCT-04 |           | 16141R0010T  | MULTIPLE SERVICES WITH POLICY ENFORCEMENT OVER A COMMON NETWORK                                     |
| 16141R | CA | 2,525,625      | HEMPY         |        | Filed    | 22-OCT-04 |           | 16141R0004N  | MULTIPLE SERVICES WITH POLICY ENFORCEMENT OVER A COMMON NETWORK                                     |
| 16192R | EP | 4343793        | HEMPY         |        | Filed    | 18-JUN-04 |           | 16192R0010T  | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                               |
| 16192R | EP | 301813443      | HEMPY         |        | Filed    | 18-JUN-04 |           | 16192R0010V  | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                               |
| 16192R | CA | 2,529,897      | 2,529,897     |        | Granted  | 18-JUN-04 | 8-JAN-13  | 16192R0004N  | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                               |
| 16192R | CA | 2,768,069      | 2,768,069     |        | Granted  | 18-JUN-04 | 31-OCT-13 | 16192R0004V  | CONVERGENCE OF CIRCUIT-SWITCHED VOICE AND PACKET-BASED MEDIA SERVICES                               |



|        |    |                |              |          |           |           |             |   |  |
|--------|----|----------------|--------------|----------|-----------|-----------|-------------|---|--|
| 177380 | SB | 6759554        | 244248       | granted  | 5-Sep-06  | 11-Nov-12 | 177380C6B71 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | SB | 12152834       | 244248       | granted  | 5-Sep-06  | 20-Nov-13 | 177380C6B72 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | FR | 6759554        | 244248       | granted  | 5-Sep-06  | 11-Nov-12 | 177380C6B73 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | FR | 12152834       | 244248       | granted  | 5-Sep-06  | 20-Nov-13 | 177380C6B74 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | EP | 13175336       | EMPTY        | Filed    | 5-Sep-06  | EMPTY     | 177380C6B75 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | EP | 12152834       | 244248       | Inactive | 5-Sep-06  | 20-Nov-13 | 177380C6B76 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | DE | 12152834       | 244248       | granted  | 5-Sep-06  | 20-Nov-13 | 177380C6B77 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | DE | 64006411       | 244248       | granted  | 5-Sep-06  | 11-Nov-12 | 177380C6B78 | EFFICIENT DATA TRANSMISSION AND TRAINING OF DATA PROCESSING FUNCTIONS                                       |  |
| 177380 | SB | 6075938        | 1798320      | granted  | 19-Aug-06 | 21-Apr-12 | 177380C6B79 | FORWARDING TABLE MINIMIZATION IN ETHERNET SWITCHES  |  |
| 177380 | FR | 6075938        | 1798320      | granted  | 19-Aug-06 | 21-Apr-12 | 177380C6B80 | FORWARDING TABLE MINIMIZATION IN ETHERNET SWITCHES  |  |
| 177380 | DE | 6075938        | 1798320      | granted  | 19-Aug-06 | 21-Apr-12 | 177380C6B81 | FORWARDING TABLE MINIMIZATION IN ETHERNET SWITCHES  |  |
| 177380 | CN | 200610212718   | 020601021271 | granted  | 25-Aug-06 | 30-Mar-11 | 177380C6B82 | FORWARDING TABLE MINIMIZATION IN ETHERNET SWITCHES  |  |
| 177800 | SB | 6775261        | 1343785      | granted  | 22-Sep-06 | 24-Aug-11 | 177800C6B83 | MULTILINK TRAINING FOR ENCAPSULATED TRAFFIC   |  |
| 177800 | FR | 6775261        | 1343785      | granted  | 22-Sep-06 | 24-Aug-11 | 177800C6B84 | MULTILINK TRAINING FOR ENCAPSULATED TRAFFIC   |  |
| 177800 | DE | 6775261        | 1343785      | granted  | 22-Sep-06 | 24-Aug-11 | 177800C6B85 | MULTILINK TRAINING FOR ENCAPSULATED TRAFFIC   |  |
| 177800 | HK | 8113267        | EMPTY        | Filed    | 19-Oct-07 | EMPTY     | 177800C6B86 | TECHNIQUE FOR DYNAMICALLY CONTROLLING DELIVERY OF CONTENT   |  |
| 177800 | EP | 7204263        | EMPTY        | Filed    | 19-Oct-07 | EMPTY     | 177800C6B87 | TECHNIQUE FOR DYNAMICALLY CONTROLLING DELIVERY OF CONTENT   |  |
| 178280 | FR | 5220282        | EMPTY        | Filed    | 29-Sep-06 | EMPTY     | 178280C6B88 | METHOD FOR SUPPLYING POWER TO A DEVICE LIGHT POWER CONTROL FOR SOLAR SENSOR DEVICES                         |  |
| 178280 | HK | 5102675        | EMPTY        | Filed    | 15-Sep-06 | EMPTY     | 178280C6B89 | METHOD AND APPARATUS FOR PROVIDING AVAILABILITY METRICS FOR MEASUREMENT AND MANAGEMENT OF ETHERNET SERVICES |  |
| 178280 | SB | 8115333        | 2446758      | granted  | 15-Sep-06 | 16-Feb-11 | 178280C6B90 | METHOD AND APPARATUS FOR PROVIDING AVAILABILITY METRICS FOR MEASUREMENT AND MANAGEMENT OF ETHERNET SERVICES |  |
| 178280 | IN | 14650404       | 0208         | EMPTY    | Filed     | 11-Sep-06 | EMPTY       | 178280C6B91   | PROVIDER BACKPLANE BRIDGING - PROVIDER BACKPLANE TRANSPORT INTERNETWORKING                     |
| 178280 | EP | 13188563       | EMPTY        | Filed    | 11-Sep-06 | EMPTY     | 178280C6B92 | PROVIDER BACKPLANE BRIDGING - PROVIDER BACKPLANE TRANSPORT INTERNETWORKING                                  |  |
| 178280 | FR | 6759663        | EMPTY        | Filed    | 11-Sep-06 | EMPTY     | 178280C6B93 | PROVIDER BACKPLANE BRIDGING - PROVIDER BACKPLANE TRANSPORT INTERNETWORKING                                  |  |
| 178280 | CN | 20060045800X   | EMPTY        | Filed    | 11-Sep-06 | EMPTY     | 178280C6B94 | PROVIDER BACKPLANE BRIDGING - PROVIDER BACKPLANE TRANSPORT INTERNETWORKING                                  |  |
| 179230 | EP | 7705072        | EMPTY        | Filed    | 30-Jan-07 | EMPTY     | 179230C6B95 | METHOD AND DEVICE FOR CONNECTING SEPARATE SPANNING TREE NETWORKS  |  |
| 179270 | SB | 6795985        | 1917779      | granted  | 25-Aug-06 | 22-Feb-12 | 179270C6B96 | MULTI-SEGMENT PSEUDO-WIRES  |  |
| 179270 | FR | 6795985        | 1917779      | granted  | 25-Aug-06 | 22-Feb-12 | 179270C6B97 | MULTI-SEGMENT PSEUDO-WIRES  |  |
| 179270 | EP | 6795985        | 1917779      | granted  | 25-Aug-06 | 22-Feb-12 | 179270C6B98 | MULTI-SEGMENT PSEUDO-WIRES  |  |
| 179270 | DE | 6795985        | 1917779      | granted  | 25-Aug-06 | 22-Feb-12 | 179270C6B99 | MULTI-SEGMENT PSEUDO-WIRES  |  |
| 179280 | EP | 6844341        | EMPTY        | Filed    | 12-Sep-06 | EMPTY     | 179280C6B99 | FORWARDING PLANE DATA COMMUNICATIONS CHANNEL FOR ETHERNET TRANSPORT NETWORKS                                |  |
| 179390 | FR | 10-2008-701116 | 10-1342944   | granted  | 12-Oct-06 | 12-Oct-13 | 179390C6B99 | GNPS CONTROL OF ETHERNET  |  |
| 179390 | IP | 2008-534887    | 483222       | granted  | 12-Oct-06 | 20-Sep-11 | 179390C6B99 | GNPS CONTROL OF ETHERNET  |  |
| 179390 | IN | 15510404       | 0208         | EMPTY    | Filed     | 12-Oct-06 | EMPTY       | 179390C6B99   | GNPS CONTROL OF ETHERNET   |
| 179390 | CN | 200600455642   | EMPTY        | Filed    | 12-Oct-06 | EMPTY     | 179390C6B99 | GNPS CONTROL OF ETHERNET  |  |
| 179390 | CA | 2,624,369      | EMPTY        | Filed    | 12-Oct-06 | EMPTY     | 179390C6B99 | GNPS CONTROL OF ETHERNET  |  |
| 180175 | EP | 13178331       | EMPTY        | Filed    | 26-Jun-07 | EMPTY     | 180175C6B99 | METHOD AND APPARATUS FOR DETECTING UNSOLICITED MULTIMEDIA COMMUNICATIONS                                    |  |
| 180175 | EP | 7700653        | EMPTY        | Filed    | 26-Jun-07 | EMPTY     | 180175C6B99 | METHOD AND APPARATUS FOR DETECTING UNSOLICITED MULTIMEDIA COMMUNICATIONS                                    |  |
| 180175 | EP | 10182883       | EMPTY        | Filed    | 26-Jun-07 | EMPTY     | 180175C6B99 | METHOD AND APPARATUS FOR DETECTING UNSOLICITED MULTIMEDIA COMMUNICATIONS                                    |  |
| 180690 | EP | 7021408        | EMPTY        | Filed    | 2-Nov-07  | EMPTY     | 180690C6B99 | TIME-SHIFTED BROADCAST DELIVERY   |  |
| 180690 | CA | 2,600,869      | EMPTY        | Filed    | 2-Nov-07  | EMPTY     | 180690C6B99 | TIME-SHIFTED BROADCAST DELIVERY   |  |
| 181590 | SB | 8114782        | 2447378      | granted  | 12-Sep-06 | 6-Jul-11  | 181590C6B99 | DYNAMIC NETWORK IDENTITY AND POLICY MANAGEMENT  |  |
| 181280 | HK | 5112345        | EMPTY        | Filed    | 26-Sep-07 | EMPTY     | 181280C6B99 | A METHOD AND SYSTEM FOR PREDICTING THE ADOPTION OF SERVICES, SUCH AS TELECOMMUNICATION SERVICES             |  |
| 181280 | EP | 781394         | EMPTY        | Filed    | 26-Sep-07 | EMPTY     | 181280C6B99 | A METHOD AND SYSTEM FOR PREDICTING THE ADOPTION OF SERVICES, SUCH AS TELECOMMUNICATION SERVICES             |  |
| 181340 | EP | 12188831       | EMPTY        | Filed    | 24-Sep-07 | EMPTY     | 181340C6B99 | METHOD AND APPARATUS FOR ENABLING COMMUTER GROUPS   |  |
| 181340 | EP | 7815812        | EMPTY        | Inactive | 24-Sep-07 | EMPTY     | 181340C6B99 | METHOD AND APPARATUS FOR ENABLING COMMUTER GROUPS   |  |
| 181340 | CA | 2,664,234      | EMPTY        | Filed    | 24-Sep-07 | EMPTY     | 181340C6B99 | METHOD AND APPARATUS FOR ENABLING COMMUTER GROUPS   |  |
| 181780 | FR | 10-2010-704888 | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181780 | IP | 2010-537222    | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181780 | IP | 2010-147779    | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181780 | IN | 64040404       | 0208         | EMPTY    | Filed     | 12-Oct-08 | EMPTY       | 181780C6B99   | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS |
| 181780 | EP | 8893766        | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181780 | CN | 20080215120X   | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181780 | CA | 2,708,671      | EMPTY        | Filed    | 12-Oct-08 | EMPTY     | 181780C6B99 | METHOD AND SYSTEM FOR LOOPING BACK TRAFFIC IN QIG ETHERNET RINGS AND 1:1 PROTECTED PEER TRUNKS              |  |
| 181890 | EP | 78251265       | EMPTY        | Filed    | 25-Sep-07 | EMPTY     | 181890C6B99 | SYSTEM AND METHOD FOR JOINING A CONFERENCE CALL OR MULTIMEDIA CONFERENCE                                    |  |
| 181890 | CA | 2,665,812      | EMPTY        | Filed    | 25-Sep-07 | EMPTY     | 181890C6B99 | SYSTEM AND METHOD FOR JOINING A CONFERENCE CALL OR MULTIMEDIA CONFERENCE                                    |  |
| 182010 | FR | 10-2007-009878 | 136628       | granted  | 28-Sep-07 | 18-Feb-14 | 182010C6B99 | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |  |
| 182010 | IN | 12740404       | 0207         | EMPTY    | Filed     | 11-Sep-07 | EMPTY       | 182010C6B99   | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS  |
| 182010 | HK | 81107994       | EMPTY        | Filed    | 28-Sep-08 | EMPTY     | 182010C6B99 | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |  |
| 182010 | EP | 7017383        | EMPTY        | Filed    | 5-Sep-07  | EMPTY     | 182010C6B99 | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |  |
| 182010 | CN | 20120163801    | EMPTY        | Filed    | 26-Sep-07 | EMPTY     | 182010C6B99 | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |  |
| 182010 | CN | 200701619305   | 020070161930 | granted  | 26-Sep-07 | 18-Jul-12 | 182010C6B99 | METHOD AND SYSTEM FOR TRUSTED CONTEXTUAL COMMUNICATIONS   |  |
| 182060 | EP | 7825941        | EMPTY        | Filed    | 12-Sep-07 | EMPTY     | 182060C6B99 | CLOSED CAPTIONING LANGUAGE TRANSLATION  |  |
| 182060 | EP | 12160741       | EMPTY        | Filed    | 12-Sep-07 | EMPTY     | 182060C6B99 | CLOSED CAPTIONING LANGUAGE TRANSLATION  |  |
| 182070 | FR | 10-2005-700980 | EMPTY        | Filed    | 17-Oct-07 | EMPTY     | 182070C6B99 | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |  |
| 182070 | FR | 10-2014-702811 | EMPTY        | Filed    | 17-Oct-07 | EMPTY     | 182070C6B99 | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |  |
| 182070 | EP | 7866473        | EMPTY        | Filed    | 17-Oct-07 | EMPTY     | 182070C6B99 | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |  |
| 182070 | CN | 20130164047    | EMPTY        | Filed    | 17-Oct-07 | EMPTY     | 182070C6B99 | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |  |
| 182070 | CN | 200700389501   | 200700389501 | granted  | 17-Oct-07 | 22-May-13 | 182070C6B99 | METHOD OF CONFIGURING A NODE, RELATED NODE AND CONFIGURATION SERVER   |  |
| 182130 | FR | 10-2005-700950 | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | FR | 10-2013-702889 | EMPTY        | Filed    | 3-Oct-13  | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | IP | 2009-527913    | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | IP | 2013-171361    | EMPTY        | Filed    | 22-Aug-13 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | HK | 101062974      | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | EP | 78045103       | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | EP | 12171348       | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | EP | 12171363       | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | CA | 2,663,405      | EMPTY        | Filed    | 13-Sep-07 | EMPTY     | 182130C6B99 | DIGITAL MEDIA RECORDER BASED ADVERTISING  |  |
| 182130 | HK | 10102101       | EMPTY        | Filed    | 11-Jun-07 | EMPTY     | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | HK | 101022723      | EMPTY        | Filed    | 5-Mar-10  | EMPTY     | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | HK | 101022723      | HK133524     | granted  | 5-Mar-10  | 16-May-13 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | SB | 7840295        | 12027674     | granted  | 13-Jun-07 | 23-Oct-13 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | FR | 7840295        | 12027674     | granted  | 13-Jun-07 | 23-Oct-13 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | EP | 131320169      | EMPTY        | Filed    | 13-Jun-07 | EMPTY     | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | EP | 7840295        | 12027674     | Inactive | 13-Jun-07 | 23-Oct-13 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | DE | 7840295        | 12027674     | granted  | 13-Jun-07 | 23-Oct-13 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182130 | CN | 20070029331    | 020070029333 | granted  | 13-Jun-07 | 14-Aug-12 | 182130C6B99 | SUPPORTING MULTI-PROTOCOL LABEL SWITCHING (MPLS) APPLICATIONS OVER ETHERNET SWITCH PATHS                    |  |
| 182880 | HK | 81133366       | EMPTY        | Filed    | 6-Dec-06  | EMPTY     | 182880C6B99 | MESSAGE MAPPING FOR FORCED HOND CALL HANDLING IN A VOP ENVIRONMENT  |  |
| 182880 | EP | 70249222       | EMPTY        | Filed    | 21-Dec-07 | EMPTY     | 182880C6B99 | MESSAGE MAPPING FOR FORCED HOND CALL HANDLING IN A VOP ENVIRONMENT  |  |
| 182900 | DE | 6878462        | 1343782      | granted  | 2-Oct-06  | 26-Mar-12 | 182900C6B99 | PROVIDER LINK STATE BRIDGING  |  |

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| 185270 | SE | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CSE27V | PROVIDER LINK STATE BRIDGING   |
| 185270 | NL | 6817845.2         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CML1RE | PROVIDER LINK STATE BRIDGING   |
| 185270 | NL | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CML2SV | PROVIDER LINK STATE BRIDGING   |
| 185270 | FR | 19-2008-7012958   | 19-1406922    | granted  | 2-May-08   | 5-Jul-12   | 185270CNP50N | PROVIDER LINK STATE BRIDGING   |
| 185270 | JP | 2008-533832       | 477982        | granted  | 2-0-cv-6   | 8-Jul-12   | 185270CNP09N | PROVIDER LINK STATE BRIDGING   |
| 185270 | IT | 6817845.2         | 4579306/70012 | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CMT17E | PROVIDER LINK STATE BRIDGING   |
| 185270 | IT | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CMT27V | PROVIDER LINK STATE BRIDGING   |
| 185270 | IN | 1444\N\CLAMP\2208 | HEMPY         | Filed    | 2-0-cv-6   | HEMPY      | 185270CMT07N | PROVIDER LINK STATE BRIDGING   |
| 185270 | SB | 6817845.2         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CGB1RE | PROVIDER LINK STATE BRIDGING   |
| 185270 | SB | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CGB2SV | PROVIDER LINK STATE BRIDGING   |
| 185270 | FR | 6817845.2         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CPG2SE | PROVIDER LINK STATE BRIDGING   |
| 185270 | FR | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CPG2SV | PROVIDER LINK STATE BRIDGING   |
| 185270 | FI | 6817845.2         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CFI14E | PROVIDER LINK STATE BRIDGING   |
| 185270 | FI | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CFI24V | PROVIDER LINK STATE BRIDGING   |
| 185270 | ES | 111903801         | 2,424,178     | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CES22V | PROVIDER LINK STATE BRIDGING   |
| 185270 | ES | 2 383 613         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CES12E | PROVIDER LINK STATE BRIDGING   |
| 185270 | EP | 14168807          | HEMPY         | Filed    | 2-0-cv-6   | HEMPY      | 185270CEP21V | PROVIDER LINK STATE BRIDGING   |
| 185270 | EP | 6817845.2         | 1,943,782     | Inactive | 2-0-cv-6   | 28-Mar-12  | 185270CEP1RE | PROVIDER LINK STATE BRIDGING   |
| 185270 | EP | 111903801         | 2,424,178     | Inactive | 2-0-cv-6   | 4-0-cv-14  | 185270CEP1OV | PROVIDER LINK STATE BRIDGING   |
| 185270 | DE | 6817845.2         | 1,943,782     | granted  | 2-0-cv-6   | 28-Mar-12  | 185270CDE12E | PROVIDER LINK STATE BRIDGING   |
| 185270 | DE | 111903801         | 602006041842  | granted  | 2-0-cv-6   | 4-0-cv-14  | 185270CDE22V | PROVIDER LINK STATE BRIDGING   |
| 185270 | CN | 20080045720.X     | 020080045710  | granted  | 2-0-cv-6   | 15-May-12  | 185270CCN52N | PROVIDER LINK STATE BRIDGING   |
| 185400 | SB | 73942026.41       | 1,916,833     | granted  | 30-0-cv-07 | 21-0-cv-09 | 185400GBGE   | SOURCE SELECTION FOR CONFERENCE BRIDGES  |
| 185400 | FR | 73942026.41       | 1,916,833     | granted  | 30-0-cv-07 | 21-0-cv-09 | 185400FRGE   | SOURCE SELECTION FOR CONFERENCE BRIDGES  |
| 185400 | DE | 73942026.41       | 1,916,833     | granted  | 30-0-cv-07 | 21-0-cv-09 | 185400DEGE   | SOURCE SELECTION FOR CONFERENCE BRIDGES  |
| 185400 | CA | 2,668,535         | HEMPY         | Filed    | 29-0-cv-07 | HEMPY      | 185400CAC02U | SOURCE SELECTION FOR CONFERENCE BRIDGES  |
| 185410 | SB | 7732861.5         | 2,000,120     | granted  | 3-May-07   | 12-4-cv-14 | 185410SBST   | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK |
| 185410 | FR | 7732861.5         | 2,000,120     | granted  | 3-May-07   | 12-4-cv-14 | 185410FRST   | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK |
| 185410 | EP | 11172826.5        | HEMPY         | Filed    | 3-May-07   | HEMPY      | 185410EPST   | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK |
| 185410 | EP | 7732861.5         | 2,000,120     | Inactive | 3-May-07   | 12-4-cv-14 | 185410EPST   | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK |
| 185410 | DE | 6.02007E+11       | 2,000,120     | granted  | 3-May-07   | 12-4-cv-14 | 185410DEST   | INTERWORKING POINT TO POINT PROTOCOL FOR DIGITAL SUBSCRIBER LINE ACCESS WITH ETHERNET CONNECTIONS IN THE AGGREGATION NETWORK |
| 185310 | EP | 7713914.1         | HEMPY         | Filed    | 18-May-07  | HEMPY      | 185310EPST   | METHOD AND SYSTEM FOR PROTECTING A SUB-DOMAIN WITHIN A BROADCAST DOMAIN  |
| 185310 | CN | 20078018008.5     | HEMPY         | Filed    | 18-May-07  | HEMPY      | 185310CNST   | METHOD AND SYSTEM FOR PROTECTING A SUB-DOMAIN WITHIN A BROADCAST DOMAIN  |
| 185310 | CA | 2,653,861         | HEMPY         | Filed    | 18-May-07  | HEMPY      | 185310CACAN  | METHOD AND SYSTEM FOR PROTECTING A SUB-DOMAIN WITHIN A BROADCAST DOMAIN  |
| 185320 | EP | 7825177.4         | HEMPY         | Filed    | 25-Sep-07  | HEMPY      | 185320EPGAT  | ACTIVE SOURCE IDENTIFICATION FOR CONFERENCE CALLS  |
| 185320 | CA | 2,664,262         | HEMPY         | Filed    | 25-Sep-07  | HEMPY      | 185320CACAN  | ACTIVE SOURCE IDENTIFICATION FOR CONFERENCE CALLS  |
| 184140 | EP | 7024920.6         | HEMPY         | Filed    | 71-Dec-07  | HEMPY      | 184140EPDGE  | CALL SERVER SELECTION  |
| 184350 | EP | 7024923           | HEMPY         | Filed    | 71-Dec-07  | HEMPY      | 184350EPDGE  | PERSONALIZED CONFERENCE BRIDGE   |
| 184600 | EP | 8000593.9         | HEMPY         | Filed    | 18-Jan-08  | HEMPY      | 184600EPDGE  | INTERACTIVE CONTENT FOR CLICK-TO-CALL CALLS  |
| 184650 | EP | 7882100           | HEMPY         | Filed    | 15-Nov-07  | HEMPY      | 184650EPDST  | TECHNIQUES FOR IMPLEMENTING LOGICAL TRUNK GROUPS WITH SESSION INITIATION PROTOCOL (SIP)                                      |
| 184750 | FR | 10-2005-704547    | 10-1089207    | granted  | 15-Nov-07  | 29-Nov-11  | 184750FRDGN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | HK | 4010055.1         | 113980        | granted  | 15-Nov-07  | 5-Jul-13   | 184750HKDGN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | ES | P200809005        | 236782        | granted  | 15-Nov-07  | 20-Aug-12  | 184750ESDGN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | EP | 7845516.5         | HEMPY         | Filed    | 15-Nov-07  | HEMPY      | 184750EPDST  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | CN | 20120520232.5     | HEMPY         | Filed    | 15-Nov-07  | HEMPY      | 184750CNDGN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | CN | 2007801801238     | 0207801801232 | granted  | 15-Nov-07  | 14-Nov-12  | 184750CNDGN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184750 | CA | 2,671,501         | HEMPY         | Filed    | 15-Nov-07  | HEMPY      | 184750CACAN  | SERVING GATEWAY PROXIES FOR NON-SIP SPEAKERS IN A NEXT GENERATION NETWORK  |
| 184870 | SB | 7024500.4         | 1,940,195     | granted  | 21-Dec-07  | 28-Mar-12  | 184870SBPDE  | LOAD BALANCING FOR MULTICAST STREAM PROCESSORS   |
| 184870 | FR | 7024500.4         | 1,940,195     | granted  | 21-Dec-07  | 28-Mar-12  | 184870FRPDE  | LOAD BALANCING FOR MULTICAST STREAM PROCESSORS   |
| 184870 | FR | 7024500.4         | 1,940,195     | Inactive | 21-Dec-07  | 28-Mar-12  | 184870FRPDE  | LOAD BALANCING FOR MULTICAST STREAM PROCESSORS   |
| 184870 | DE | 7024500.4         | 1,940,195     | granted  | 21-Dec-07  | 28-Mar-12  | 184870DEPDE  | LOAD BALANCING FOR MULTICAST STREAM PROCESSORS   |
| 185010 | HK | 8113889.3         | HEMPY         | Filed    | 19-Dec-07  | HEMPY      | 185010HKD3U  | METHOD AND SYSTEM TO CONTROL ADVERTISING   |
| 185010 | EP | 7024588.1         | HEMPY         | Filed    | 19-Dec-07  | HEMPY      | 185010EPDGE  | METHOD AND SYSTEM TO CONTROL ADVERTISING   |
| 185200 | EP | 7024248.8         | HEMPY         | Filed    | 21-Dec-07  | HEMPY      | 185200EPDGE  | RE-ENCRYPTING ENCRYPTED CONTENT ON A VIDEO-ON-DEMAND SYSTEM  |
| 185600 | EP | 8955268.3         | HEMPY         | Filed    | 26-Nov-08  | HEMPY      | 185600EPDST  | APPARATUS AND METHOD FOR MANAGING COMMUNICATION BETWEEN PARTIES  |
| 185680 | EP | 789592.1          | HEMPY         | Filed    | 29-Dec-07  | HEMPY      | 185680EPDST  | SYSTEM AND METHOD FOR PROVIDING POWER MANAGEMENT IN A SENSOR NETWORK   |
| 185710 | EP | 7815108           | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 185710EPDST  | DISTRIBUTED STORAGE OF ROUTING INFORMATION IN A LINK STATE PROTOCOL CONTROLLED NETWORK                                       |
| 185710 | CN | 2012072856.6      | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 185710CNDGN  | DISTRIBUTED STORAGE OF ROUTING INFORMATION IN A LINK STATE PROTOCOL CONTROLLED NETWORK                                       |
| 185710 | CN | 20078040282.8     | 20078040282.8 | granted  | 14-Nov-07  | 10-Oct-12  | 185710CNDGN  | DISTRIBUTED STORAGE OF ROUTING INFORMATION IN A LINK STATE PROTOCOL CONTROLLED NETWORK                                       |
| 185710 | CA | 2,664,564         | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 185710CACAN  | DISTRIBUTED STORAGE OF ROUTING INFORMATION IN A LINK STATE PROTOCOL CONTROLLED NETWORK                                       |
| 185790 | FR | 10-2013-7031713   | HEMPY         | Filed    | 28-Nov-13  | HEMPY      | 185790FRDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | FR | 10-2014-7027480   | HEMPY         | Filed    | 29-Sep-14  | HEMPY      | 185790FRDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | FR | 10-2005-7046506   | 10-1415469    | granted  | 11-Dec-07  | 27-Jun-14  | 185790FRDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | JP | 2009-540887       | HEMPY         | Filed    | 11-Dec-07  | HEMPY      | 185790JPDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | JP | 2013-141123       | HEMPY         | Filed    | 4-Jul-13   | HEMPY      | 185790JPDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | SB | 7890065.6         | 2 127 209     | granted  | 11-Dec-07  | 7-May-14   | 185790SB12T  | MEDIA CONTEXT INFORMATION  |
| 185790 | FR | 7890065.6         | 2 127 209     | granted  | 11-Dec-07  | 7-May-14   | 185790FR12T  | MEDIA CONTEXT INFORMATION  |
| 185790 | EP | 7890065.6         | 2 127 209     | Inactive | 11-Dec-07  | 7-May-14   | 185790EP12T  | MEDIA CONTEXT INFORMATION  |
| 185790 | DE | 7890065.6         | 60007036621.6 | granted  | 11-Dec-07  | 7-May-14   | 185790DE12T  | MEDIA CONTEXT INFORMATION  |
| 185790 | CN | 200780951388.3    | HEMPY         | Filed    | 11-Dec-07  | HEMPY      | 185790CNDGN  | MEDIA CONTEXT INFORMATION  |
| 185790 | CA | 2,672,411         | HEMPY         | Filed    | 11-Dec-07  | HEMPY      | 185790CACAN  | MEDIA CONTEXT INFORMATION  |
| 186470 | WO | PCT/CA011/050397  | HEMPY         | Inactive | 29-Jun-11  | HEMPY      | 186470WOC2U  | METHOD AND APPARATUS FOR ENCODING VIDEO TO PLAY AT MULTIPLE SPEEDS   |
| 186470 | FR | PCT/CA011/050397  | HEMPY         | Filed    | 29-Jun-11  | HEMPY      | 186470FRDGN  | METHOD AND APPARATUS FOR ENCODING VIDEO TO PLAY AT MULTIPLE SPEEDS   |
| 186470 | JP | PCT/CA011/050397  | HEMPY         | Filed    | 29-Jun-11  | HEMPY      | 186470JPDGN  | METHOD AND APPARATUS FOR ENCODING VIDEO TO PLAY AT MULTIPLE SPEEDS   |
| 186470 | EP | 11868801.1        | HEMPY         | Filed    | 29-Jun-11  | HEMPY      | 186470EPDST  | METHOD AND APPARATUS FOR ENCODING VIDEO TO PLAY AT MULTIPLE SPEEDS   |
| 186540 | JP | 2009-535814       | 5129261       | granted  | 2-Nov-07   | 9-Nov-12   | 186540JPDGN  | COMBINING PLSB AND PET TO PRODUCE ENGINEERABLE ELAN SERVICE  |
| 186540 | EP | 7024889.8         | HEMPY         | Filed    | 2-Nov-07   | HEMPY      | 186540EPDST  | COMBINING PLSB AND PET TO PRODUCE ENGINEERABLE ELAN SERVICE  |
| 186540 | EP | 14151170.1        | HEMPY         | Filed    | 2-Nov-07   | HEMPY      | 186540EPDGN  | COMBINING PLSB AND PET TO PRODUCE ENGINEERABLE ELAN SERVICE  |
| 186540 | CN | 200780404941.X    | HEMPY         | Filed    | 2-Nov-07   | HEMPY      | 186540CNDGN  | COMBINING PLSB AND PET TO PRODUCE ENGINEERABLE ELAN SERVICE  |
| 186540 | CA | 2,668,128         | HEMPY         | Filed    | 2-Nov-07   | HEMPY      | 186540CACAN  | TRAFFIC ENGINEERED PATHS IN A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK  |
| 186580 | SB | 7816265.6         | 2 087 712     | granted  | 14-Nov-07  | 14-May-14  | 186580SB1ST  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | FR | 7816265.6         | 2 087 712     | granted  | 14-Nov-07  | 14-May-14  | 186580FR1ST  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | EP | 14151387.4        | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 186580EPDST  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | EP | 7816265.6         | 2 087 712     | Inactive | 14-Nov-07  | 14-May-14  | 186580EP1ST  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | DE | 7816265.6         | 2 087 712     | granted  | 14-Nov-07  | 14-May-14  | 186580DE1ST  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | CN | 200780404932.2    | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 186580CNDGN  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186580 | CA | 2,665,039         | HEMPY         | Filed    | 14-Nov-07  | HEMPY      | 186580CACAN  | METHOD AND APPARATUS FOR COMPUTING ALTERNATE MULTICAST/BROADCAST PATHS IN A ROUTED NETWORK                                   |
| 186680 | EP | 2013-263925       | HEMPY         | Filed    | 19-Dec-13  | HEMPY      | 186680EPDGN  | DAM FOR DIFFERENTIAL FORWARDING IN ADDRESS BASED NETWORKS  |
| 186680 | JP | 2009-534716       | 5345582       | granted  | 31-0-cv-07 | 23-Aug-13  | 186680JPDGN  | DAM FOR DIFFERENTIAL FORWARDING IN ADDRESS BASED NETWORKS  |

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|--------|----|-------------------|---------------|----------|-----------|-----------|-------------|--|
| 186580 | IP | 2012-23652        | HEMPY         | Filed    | 31-Oct-07 | HEMPY     | 186580P087  | DATA FOR DIFFERENTIAL FORWARDING IN ADDRESS-BASED NETWORKS   |
| 186580 | EP | 7839345           | HEMPY         | Filed    | 31-Oct-07 | HEMPY     | 186580EP847 | DATA FOR DIFFERENTIAL FORWARDING IN ADDRESS-BASED NETWORKS   |
| 186580 | CN | 20130252695       | HEMPY         | Filed    | 31-Oct-07 | HEMPY     | 186580CN291 | DATA FOR DIFFERENTIAL FORWARDING IN ADDRESS-BASED NETWORKS   |
| 186580 | CN | 20078040851       | DL20078040851 | Granted  | 31-Oct-07 | 24-Jul-13 | 186580CN291 | DATA FOR DIFFERENTIAL FORWARDING IN ADDRESS-BASED NETWORKS   |
| 186580 | CA | 2,657,581         | HEMPY         | Filed    | 31-Oct-07 | HEMPY     | 186580CA291 | ETHERNET DATA IN IMMEDIATE MODES IN A PET NETWORK  |
| 186580 | EP | 81482763          | HEMPY         | Filed    | 7-May-08  | HEMPY     | 186580EP847 | FACILITATING AUTOMATIC PROTECTION SWITCHING FOR PROVIDER BACKBONE NETWORK  |
| 186580 | CN | 20080015507       | HEMPY         | Filed    | 7-May-08  | HEMPY     | 186580CN291 | FACILITATING AUTOMATIC PROTECTION SWITCHING FOR PROVIDER BACKBONE NETWORK  |
| 186580 | CA | 2,683,571         | HEMPY         | Filed    | 7-May-08  | HEMPY     | 186580CA291 | FACILITATING AUTOMATIC PROTECTION SWITCHING FOR PROVIDER BACKBONE NETWORK  |
| 186580 | IP | 2013-201864       | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 186580IP12V | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | IP | 2013-201865       | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 186580IP12V | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | IP | 2009-546521       | 5385154       | Granted  | 17-Jan-08 | 11-Oct-13 | 186580IP08V | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | EP | 8727836           | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 186580EP847 | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | CN | 20130102845       | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 186580CN11V | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | CN | 20080020355       | DL20080020355 | Granted  | 17-Jan-08 | 29-May-13 | 186580CN291 | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | CA | 2,670,766         | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 186580CA291 | METHOD AND APPARATUS FOR INTERWORKING ETHERNET AND MPLS NETWORKS   |
| 186580 | FR | 10-2009-7014603   | 10-1421511    | Granted  | 15-Nov-07 | 15-Jul-14 | 186580FR07N | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | SB | 7821443.0         | 092.692       | Granted  | 15-Nov-07 | 23-Apr-14 | 186580SB12T | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | FR | 7821443.0         | 092.692       | Granted  | 15-Nov-07 | 23-Apr-14 | 186580FR11T | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | EP | 3318801.3         | HEMPY         | Filed    | 15-Nov-07 | HEMPY     | 186580EP02V | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | EP | 7821443.0         | 092.692       | Inactive | 15-Nov-07 | 23-Apr-14 | 186580EP02V | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | DE | 7821443.0         | 092.692       | Granted  | 15-Nov-07 | 23-Apr-14 | 186580DE10T | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | CN | 20078005177.2     | DL0078005177  | Granted  | 15-Nov-07 | 21-Mar-13 | 186580CN291 | HIRARCHICAL ROUTING FOR PLIS   |
| 186580 | CA | 2,671,671         | HEMPY         | Filed    | 15-Nov-07 | HEMPY     | 186580CA291 | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS            |
| 186580 | FR | 10-2011-700484    | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580FR08N | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | IP | 2011-520610       | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580IP07N | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | IP | 2011-157217       | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580IP10V | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | IP | 2011-157217       | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580IP11V | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | IN | 610/CHENP/2011    | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580IN06N | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | EP | 88205145          | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580EP02V | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | CN | 201102103341      | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580CN29V | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | CN | 200901307645      | DL20090130764 | Granted  | 1-Jul-09  | 23-Jul-14 | 186580CN291 | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 186580 | BR | P101/6251-8       | HEMPY         | Filed    | 1-Jul-09  | HEMPY     | 186580BR02N | MULTIMEDIA ARCHITECTURE FOR AUDIO AND VISUAL CONTENT   |
| 187100 | FR | 10-2011-7015398   | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100FR07N | ENHANCED CHANNEL SURFING   |
| 187100 | IP | 2011-539115       | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100IP08N | ENHANCED CHANNEL SURFING   |
| 187100 | IP | 2011-539115       | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100IP09V | ENHANCED CHANNEL SURFING   |
| 187100 | EP | 2014-238851       | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100EP02V | ENHANCED CHANNEL SURFING   |
| 187100 | EP | 88300684          | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100EP02V | ENHANCED CHANNEL SURFING   |
| 187100 | CN | 200901558718      | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100CN291 | ENHANCED CHANNEL SURFING   |
| 187100 | CA | 2,745,322         | HEMPY         | Filed    | 4-Dec-09  | HEMPY     | 187100CA291 | ENHANCED CHANNEL SURFING   |
| 187380 | EP | 81423401          | HEMPY         | Filed    | 18-Apr-08 | HEMPY     | 187380EP07T | FAILURE NOTIFICATION IN A NETWORK HAVING SERIALY CONNECTED NODES   |
| 187380 | CN | 200800208233      | HEMPY         | Filed    | 18-Apr-08 | HEMPY     | 187380CN291 | FAILURE NOTIFICATION IN A NETWORK HAVING SERIALY CONNECTED NODES   |
| 187380 | CA | 2,684,628         | HEMPY         | Filed    | 18-Apr-08 | HEMPY     | 187380CA291 | FAILURE NOTIFICATION IN A NETWORK HAVING SERIALY CONNECTED NODES   |
| 187500 | SB | 8705873.0         | 2 100.836     | Granted  | 17-Jan-08 | 6-Mar-14  | 187500SB12T | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | FR | 8705873.0         | 2 100.836     | Granted  | 17-Jan-08 | 6-Mar-14  | 187500FR11T | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | EP | 121773563         | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500EP08V | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | EP | 8705873.0         | 2 100.836     | Inactive | 17-Jan-08 | 6-Mar-14  | 187500EP02V | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | DE | 60-2008-027-60.05 | 2 100.836     | Granted  | 17-Jan-08 | 6-Mar-14  | 187500DE10T | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | CN | 20130106118       | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500CN29V | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | CN | 20080020183       | 20080020183   | Granted  | 17-Jan-08 | 1-May-13  | 187500CN291 | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | CA | 2,674,109         | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500CA291 | BORDER GATEWAY PROTOCOL PROCEDURES FOR MULTI-PROTOCOL LABELSWITCHING AND LAYER-2 VIRTUAL PRIVATE NETWORKS USING ETHERNET-BASED TUNNELS |
| 187500 | IN | 3487/CHENP/2008   | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500IN07N | BORDER GATEWAY PROTOCOL EXTENDED COMMUNITY ATTRIBUTE FOR LAYER-2 AND LAYER-3 VIRTUAL PRIVATE NETWORKS USING 802.1QAH-BASED TUNNELS     |
| 187500 | EP | 87137864          | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500EP04T | BORDER GATEWAY PROTOCOL EXTENDED COMMUNITY ATTRIBUTE FOR LAYER-2 AND LAYER-3 VIRTUAL PRIVATE NETWORKS USING 802.1QAH-BASED TUNNELS     |
| 187500 | CN | 20140848929       | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500CN10V | BORDER GATEWAY PROTOCOL EXTENDED COMMUNITY ATTRIBUTE FOR LAYER-2 AND LAYER-3 VIRTUAL PRIVATE NETWORKS USING 802.1QAH-BASED TUNNELS     |
| 187500 | CN | 200800203443      | 20080020344   | Granted  | 17-Jan-08 | 9-Apr-14  | 187500CN291 | BORDER GATEWAY PROTOCOL EXTENDED COMMUNITY ATTRIBUTE FOR LAYER-2 AND LAYER-3 VIRTUAL PRIVATE NETWORKS USING 802.1QAH-BASED TUNNELS     |
| 187500 | CA | 2,674,201         | HEMPY         | Filed    | 17-Jan-08 | HEMPY     | 187500CA291 | BORDER GATEWAY PROTOCOL EXTENDED COMMUNITY ATTRIBUTE FOR LAYER-2 AND LAYER-3 VIRTUAL PRIVATE NETWORKS USING 802.1QAH-BASED TUNNELS     |
| 188230 | FR | 10-2010-7017231   | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230FR08N | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | FR | 10-2010-702384    | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230FR13V | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | IP | 2010-545404       | 5291122       | Granted  | 30-Dec-08 | 14-Jun-13 | 188230IP08N | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | IP | 2010-545223       | 559557        | Granted  | 30-Dec-08 | 30-May-14 | 188230IP11V | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | IN | 3520/CHENP/2010   | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230IN07N | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | EP | 121159193         | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230EP10V | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | EP | 88703911          | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230EP06T | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | CN | 20141058497X      | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230CN11V | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | CN | 200801274938      | DL20080127493 | Granted  | 30-Dec-08 | 27-Aug-14 | 188230CN291 | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188230 | BR | P10821564-3       | HEMPY         | Filed    | 30-Dec-08 | HEMPY     | 188230BR04N | IP FORWARDING ACROSS A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 188380 | EP | 8751719           | HEMPY         | Filed    | 2-Jun-08  | HEMPY     | 188380EP02V | DISTRIBUTED CONNECTION ESTABLISHMENT AND RESTORATION   |
| 188380 | CN | 200800184830      | DL20080018483 | Granted  | 2-Jun-08  | 16-Jan-13 | 188380CN291 | DISTRIBUTED CONNECTION ESTABLISHMENT AND RESTORATION   |
| 188380 | CA | 2,687,882         | HEMPY         | Filed    | 2-Jun-08  | HEMPY     | 188380CA291 | DISTRIBUTED CONNECTION ESTABLISHMENT AND RESTORATION   |
| 188500 | FR | 10-2011-7005769   | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500FR08N | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 188500 | IP | 2011-526385       | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500IP07N | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 188500 | IN | 1740/CHENP/2011   | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500IN06N | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 188500 | EP | 8912751           | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500EP02V | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 188500 | CN | 200901355031      | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500CN291 | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 188500 | BR | P10819250-0       | HEMPY         | Filed    | 10-Sep-09 | HEMPY     | 188500BR08N | RANKING SEARCH RESULTS BASED ON AFFINITY CRITERIA  |
| 189500 | SB | 8140675           | 2451738       | Granted  | 1-Aug-08  | 14-Oct-08 | 189500SB04U | METHOD AND APPARATUS FOR INTERWORKING MPLS AND P2P NETWORKS  |
| 192380 | WO | PCT/CA2012/050337 | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380WO03W | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | FR | 10-2010-7016657   | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380FR08N | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | FR | 10-2010-7027399   | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380FR22N | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | IP | 2013-183388       | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380IP14V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | IP | PCT/CA2012/050337 | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380IP24U | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | IP | 2010-545088       | 5362743       | Granted  | 11-Dec-08 | 13-Sep-13 | 192380IP07N | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | IN | PCT/CA2012/050337 | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380IN29N | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | IN | 2276/K/CHENP/2010 | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380IN06N | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | HK | 13111667A         | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380HK15V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | EP | 8878372A          | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380EP02V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | EP | 12138873A         | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380EP12V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | EP | PCT/CA2012/050337 | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380EP22T | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | CN | 20120033823       | HEMPY         | Filed    | 22-May-12 | HEMPY     | 192380CN10V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | CN | 201010144222      | HEMPY         | Filed    | 11-Dec-08 | HEMPY     | 192380CN19V | THE GREATING IN SHORTEST PATH DETERMINATION  |
| 192380 | CN | 200801278140      | DL20080127814 | Granted  | 11-Dec-08 | 13-Jun-14 | 192380CN291 | THE GREATING IN SHORTEST PATH DETERMINATION  |



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| 19323FO | CA | PCT/CA2012/095937 | HEMPHY | Filed    | 22-May-12 | HEMPHY | 19323FOCCAZN | THE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 19323FO | CA | 2,742,887         | HEMPHY | Filed    | 11-Dec-08 | HEMPHY | 19323FOCCAZN | THE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 19323FO | BR | PI0215404         | HEMPHY | Filed    | 11-Dec-08 | HEMPHY | 19323FOCBRZN | THE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 19323FO | BR | BR 11 2014 029344 | HEMPHY | Filed    | 22-May-12 | HEMPHY | 19323FOCBRZN | THE-BREAKING IN SHORTEST PATH DETERMINATION   |
| 19331D  | FR | 1520157015394     | HEMPHY | Filed    | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 19331D  | JP | 2010-53928        | HEMPHY | Granted  | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 19331D  | IN | 955/CHEMP/2201    | HEMPHY | Filed    | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 19331D  | EP | 8855602           | HEMPHY | Filed    | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 19331D  | CN | 20080125385.4     | HEMPHY | Filed    | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 19331D  | CA | 2,747,007         | HEMPHY | Filed    | 19-Dec-08 | HEMPHY | 19331DOP6N   | EVOLUTION OF ETHERNET NETWORKS  |
| 193390  | RU | 2011121524        | HEMPHY | Granted  | 27-Nov-09 | HEMPHY | 193390RUZN   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | RU | 1020157015357     | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390RUZN   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | JP | 2011-537807       | HEMPHY | Granted  | 27-Nov-09 | HEMPHY | 193390JP6N   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | IN | 955/CHEMP/2201    | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390IN7N   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | EP | 19291314          | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390EP6T   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | CN | 20080153863.3     | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390CN2N   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | CA | 2,742,364         | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390CCAZN  | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193390  | BR | PI0222004         | HEMPHY | Filed    | 27-Nov-09 | HEMPHY | 193390BRZN   | METHOD AND APPARATUS FOR PROVIDING A VIDEO REPRESENTATION OF A THREE DIMENSIONAL COMPUTER-GENERATED VIRTUAL ENVIRONMENT |
| 193700  | RU | 2011113228        | HEMPHY | Granted  | 13-Oct-05 | HEMPHY | 193700RUZN   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | RU | 2011700640        | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700RUZN   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | JP | 2011-530545       | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700JP7N   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | JP | 0                 | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700JP14V  | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | IN | 2351/CHEMP/2201   | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700IN6N   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | EP | 19201452          | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700EP5T   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | CN | 2010106793.3      | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700CN15V  | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | CN | 20080150362       | HEMPHY | Granted  | 13-Oct-05 | HEMPHY | 193700CN4N   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | CA | 2,743,344         | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700CCAZN  | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 193700  | BR | PI0220269-9       | HEMPHY | Filed    | 13-Oct-05 | HEMPHY | 193700BRZN   | METHOD AND SYSTEM FOR WEIGHTED FAIR QUEUEING  |
| 19029N  | FR | 0                 | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NFR4V   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | RU | 10201047017016    | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NFR4V   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | RU | 1020104702694     | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NFR4V   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | JP | 2010-54043        | HEMPHY | Granted  | 12-Jul-13 | HEMPHY | 19029NJP7N   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | IN | 3018/CHEMP/2201   | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NIN6N   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | GB | 887024.5          | HEMPHY | Granted  | 30-Dec-08 | HEMPHY | 19029NGB1T   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | FR | 887024.5          | HEMPHY | Granted  | 30-Dec-08 | HEMPHY | 19029NFR2T   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | EP | 13193117.2        | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NEP9V   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | EP | 887024.5          | HEMPHY | Inactive | 30-Dec-08 | HEMPHY | 19029NEP5T   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | DE | 887024.5          | HEMPHY | Granted  | 30-Dec-08 | HEMPHY | 19029NDE1T   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | CN | 20101085312       | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19029NCN10V  | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19029N  | CN | 2008012787.8      | HEMPHY | Granted  | 30-Dec-08 | HEMPHY | 19029NCN4N   | MPLS P NODE REPLACEMENT USING A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 190600  | WO | PCT/US2009/068493 | HEMPHY | Filed    | 17-Dec-09 | HEMPHY | 190600WO2N   | EXTENDED DIFFIE-HELLMAN GROUP KEY GENERATION  |
| 19069N  | RU | 10201047017135    | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NFR4V   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | RU | 1020104702103     | HEMPHY | Filed    | 4-Jul-14  | HEMPHY | 19069NFR4V   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | JP | 2010-54042        | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NJP6N   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | IN | 2011-061654       | HEMPHY | Granted  | 29-Jun-10 | HEMPHY | 19069NIN11V  | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | IN | 3018/CHEMP/2201   | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NIN7N   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | EP | 8870253.3         | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NEP6T   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | CN | 20101070251       | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NCN15V  | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | CN | 2008012787.8      | HEMPHY | Granted  | 30-Dec-08 | HEMPHY | 19069NCN4N   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 19069N  | BR | PI02152-2         | HEMPHY | Filed    | 30-Dec-08 | HEMPHY | 19069NBRZN   | IMPLEMENTATION OF PVPS OVER A LINK STATE PROTOCOL CONTROLLED ETHERNET NETWORK   |
| 190770  | RU | 10201047010454    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU1ZN  | IP NETWORK AND PERFORMANCE MONITORING USING ETHERNET OAM  |
| 190770  | RU | 10201047010469    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU1ZN  | AUTOMATIC MEP PROVISIONING IN A LINK STATE CONTROLLED ETHERNET NETWORK  |
| 190770  | RU | 10201047025416    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU2ZN  | IP NETWORK AND PERFORMANCE MONITORING USING ETHERNET OAM  |
| 190770  | RU | 1020104702729     | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU2ZN  | IP NETWORK AND PERFORMANCE MONITORING USING ETHERNET OAM  |
| 190770  | RU | 10201047030119    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU3ZN  | IP NETWORK AND PERFORMANCE MONITORING USING ETHERNET OAM  |
| 190770  | RU | 10201047010431    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770RU2ZN  | CONTINUITY CHECK MANAGEMENT IN LINK STATE CONTROLLED ETHERNET NETWORK   |
| 190770  | JP | 2010-085376       | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770JP28V  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | JP | 2010-246383       | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770JP33V  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | JP | 2010-529140       | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190770JP21N  | IP NETWORK AND PERFORMANCE  |
| 190770  | JP | 2010-529147       | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190770JP18N  | AUTOMATIC MEP PROVISIONING  |
| 190770  | JP | 2010-529148       | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190770JP24N  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | IN | 2511/DELMP/2201   | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770IN2ZN  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | IN | 2512/DELMP/2201   | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770IN11N  | IP NETWORK AND PERFORMANCE  |
| 190770  | IN | 2513/DELMP/2201   | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770IN17N  | AUTOMATIC MEP PROVISIONING  |
| 190770  | EP | 8838669           | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770EP1ST  | AUTOMATIC MEP PROVISIONING  |
| 190770  | EP | 8837640.5         | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770EP10T  | IP NETWORK AND PERFORMANCE  |
| 190770  | EP | 8838266           | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770EP22T  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | CN | 20080120443.7     | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770CN21N  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | CN | 2010674602        | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770CN35V  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | CN | 20080120296.3     | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190770CN15N  | AUTOMATIC MEP PROVISIONING  |
| 190770  | CN | 20080120444.1     | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190770CN26N  | IP NETWORK AND PERFORMANCE  |
| 190770  | BR | PI0219246-9       | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770BR2ZN  | CONTINUITY CHECK MANAGEMENT IN  |
| 190770  | BR | PI0219252-3       | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770BR6N   | IP NETWORK AND PERFORMANCE  |
| 190770  | BR | PI0219254-0       | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190770BR15N  | AUTOMATIC MEP PROVISIONING  |
| 190980  | RU | 10201047010491    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190980RU6N   | MULTI-POINT AND ROOTED MULTI-POINT PROTECTION SWITCHING   |
| 190980  | RU | 10201047029597    | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190980RU15V  | MULTI-POINT AND ROOTED MULTI-POINT PROTECTION SWITCHING   |
| 190980  | JP | 2010-528501       | HEMPHY | Granted  | 13-Oct-08 | HEMPHY | 190980JP7N   | PROTECTION SWITCHING FOR MULTIPOINT AND POINT-TO-MULTIPOINT SERVICES  |
| 190980  | IN | 5756/CHEMP/2201   | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190980IN6N   | PROTECTION SWITCHING FOR MULTIPOINT AND POINT-TO-MULTIPOINT SERVICES  |
| 190980  | EP | 8837588           | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190980EP6T   | MULTI-POINT AND ROOTED MULTI-POINT PROTECTION   |
| 190980  | CN | 20080120296.3     | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 190980CN4N   | PROTECTION SWITCHING FOR MULTIPOINT AND POINT-TO-MULTIPOINT SERVICES  |
| 191580  | CN | 20101086958.6     | HEMPHY | Filed    | 13-Oct-08 | HEMPHY | 191580CN11V  | PROTECTION SWITCHING FOR MULTIPOINT AND POINT-TO-MULTIPOINT SERVICES  |
| 191580  | RU | 2011125591        | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580RU1ZN  | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | RU | 1020117017165     | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580RU6N   | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | JP | 2011-541622       | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580JP6N   | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | IN | 4278/CHEMP/2201   | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580IN7N   | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | EP | 98341902          | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580EP6T   | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | CN | 20080153863.7     | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580CN6N   | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | CA | 2,748,020         | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580CCAZN  | TARGETED ADVERTISING SYSTEM AND METHOD  |
| 191580  | BR | PI020235-6        | HEMPHY | Filed    | 16-Dec-09 | HEMPHY | 191580BR6N   | TARGETED ADVERTISING SYSTEM AND METHOD  |

| Part No. | Rev. | Part Name         | Quantity | Unit     | Material  | Notes      |  |   |
|----------|------|-------------------|----------|----------|-----------|------------|--|---|
| 1914290  | FR   | 10-201-7012585    | HEMPY    | Filed    | 7-8-06    | HEMPY      | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (OTL) LOAD CONTROL |   |
| 1914290  | FP   | 201-0-539571      | HEMPY    | Granted  | 7-8-06    | 25-3-13    | 1914290P05N  | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (OTL) LOAD CONTROL  |
| 1914290  | BN   | 2679/CHEMP/2202   | HEMPY    | Filed    | 7-8-06    | HEMPY      | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (OTL) LOAD CONTROL |   |
| 1914290  | EP   | 88462931          | HEMPY    | Filed    | 7-8-06    | HEMPY      | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (OTL) LOAD CONTROL |   |
| 1914290  | CN   | 20080214857.8     | HEMPY    | Filed    | 7-8-06    | HEMPY      | UPLINK POWER CONTROL WITH INTERFERENCE-OVER-THERMAL (OTL) LOAD CONTROL |   |
| 1914390  | WO   | PCT/CAN/01/000288 | HEMPY    | Inactive | 25-Jan-10 | HEMPY      | 1914390W02W  | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | RU   | 20127202478       | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390RU11N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | FR   | 10-201-7011340    | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390FR01N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | FP   | 201-0-519457      | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390FP01N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | FP   | 201-4-259359      | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390FP12V   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | BN   | 9777/CHEMP/2201   | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390BN08N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | EP   | 10795482          | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390EP01T   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | CN   | 201060029106.X    | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390CN02N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | CA   | 2,765,873         | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390CA02N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | BR   | PI010007-8        | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390BR04N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914390  | AU   | 2010289667        | HEMPY    | Filed    | 25-Jan-10 | HEMPY      | 1914390AU02N   | METHOD AND APPARATUS FOR INDEPENDENT LICENSING OF AUDIO/DISTRIBUTION OF AUDIOVISUAL ASSETS  |
| 1914490  | RU   | 2011128774        | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490RU12N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | FR   | 10-201-7012339    | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490FR02N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | FP   | 201-1-540208      | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490FP08N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | BN   | 4251/CHEMP/2201   | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490BN07N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | EP   | 9834186.8         | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490EP02T   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | CN   | 200802520241.5    | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490CN02N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | CA   | 2,745,656         | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490CA02N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1914490  | BR   | PI092923-5        | HEMPY    | Filed    | 2-05-09   | HEMPY      | 1914490BR02N   | READY ACCESS TO UNIFORM RESOURCE IDENTIFIERS THAT ARE ASSOCIATED WITH TELEVISION CONTENT  |
| 1917090  | FR   | 10-201-7012024    | HEMPY    | Filed    | 12-Jan-09 | HEMPY      | 1917090FR01N   | A METHOD AND APPARATUS TO SECURELY EMBED VOIP AND MULTIMEDIA STREAM SESSION KEYS TO ENABLE LAWFUL INTERCEPT AND SESSION RECORDING     |
| 1917090  | FP   | 201-0-541665      | HEMPY    | Filed    | 12-Jan-09 | HEMPY      | 1917090FP01N   | A METHOD AND APPARATUS TO SECURELY EMBED VOIP AND MULTIMEDIA STREAM SESSION KEYS TO ENABLE LAWFUL INTERCEPT AND SESSION RECORDING     |
| 1917090  | BN   | 5045/DEEMP/2203   | HEMPY    | Filed    | 12-Jan-09 | HEMPY      | 1917090BN06N   | A METHOD AND APPARATUS TO SECURELY EMBED VOIP AND MULTIMEDIA STREAM SESSION KEYS TO ENABLE LAWFUL INTERCEPT AND SESSION RECORDING     |
| 1917090  | EP   | 97008385          | HEMPY    | Filed    | 12-Jan-09 | HEMPY      | 1917090EP02T   | A METHOD AND APPARATUS TO ENABLE LAWFUL INTERCEPT OF ENCRYPTED TRAFFIC  |
| 1917090  | CN   | 20080206825.2     | HEMPY    | Filed    | 12-Jan-09 | HEMPY      | 1917090CN04N   | A METHOD AND APPARATUS TO SECURELY EMBED VOIP AND MULTIMEDIA STREAM SESSION KEYS TO ENABLE LAWFUL INTERCEPT AND SESSION RECORDING     |
| 1921700  | EP   | 9166702.2         | HEMPY    | Filed    | 25-Jul-09 | HEMPY      | 1921700EP01T   | VIDEO HEAD-END  |
| 1926990  | RU   | 2014102112        | HEMPY    | Filed    | 28-Jan-14 | HEMPY      | 1926990RU13V   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | RU   | 2011120188        | HEMPY    | Granted  | 25-Nov-12 | 14-June-14 | 1926990RU12N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | FR   | 10-201-7011620    | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990FR02N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | FP   | 201-1-541037      | HEMPY    | Filed    | 25-Nov-12 | 13-June-14 | 1926990FP08N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | BN   | 8411/CHEMP/2201   | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990BN07N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | EP   | 9833363.3         | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990EP02T   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | CN   | 20080245092.5     | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990CN02N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | CA   | 2,742,001         | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990CA02N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1926990  | BR   | PI0929293-0       | HEMPY    | Filed    | 25-Nov-12 | HEMPY      | 1926990BR02N   | A METHOD FOR OPERATING MULTI-COMFAIR PROVIDER ETHERNET NETWORKS   |
| 1927090  | EP   | 10735295.5        | HEMPY    | Filed    | 15-Jul-10 | HEMPY      | 1927090EP02T   | METHOD AND APPARATUS FOR TELECOMMUNICATIONS NETWORK PERFORMANCE ANOMALY EVENTS DETECTION AND NOTIFICATION                             |
| 1927090  | CA   | 2,768,220         | HEMPY    | Filed    | 15-Jul-10 | HEMPY      | 1927090CA02N   | METHOD AND APPARATUS FOR TELECOMMUNICATIONS NETWORK PERFORMANCE ANOMALY EVENTS DETECTION AND NOTIFICATION                             |
| 1927100  | RU   | 2011124586        | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100RU11N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | FR   | 10-201-7016566    | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100FR01N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | FP   | 201-1-541042      | HEMPY    | Granted  | 16-Dec-09 | 26-Sep-14  | 1927100FP09N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | BN   | 4154/CHEMP/2201   | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100BN08N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | EP   | 9822772.9         | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100EP01T   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | CN   | 20080251045.5     | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100CN02N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | CA   | 2,745,341         | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100CA02N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1927100  | BR   | PI0929293-3       | HEMPY    | Filed    | 16-Dec-09 | HEMPY      | 1927100BR04N   | SECURE REMOTE ACCESS PUBLIC COMMUNICATION ENVIRONMENT   |
| 1931390  | RU   | 2014101613        | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390RU14V   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | RU   | 2011120185        | HEMPY    | Granted  | 24-Nov-09 | HEMPY      | 1931390RU13N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | FR   | 10-201-7011634    | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390FR02N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | FP   | 201-4-095773      | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390FP15V   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | FP   | 201-4-095774      | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390FP16V   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | FP   | 201-1-541036      | HEMPY    | Granted  | 24-Nov-09 | 24-May-14  | 1931390FP08N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | BN   | 8412/CHEMP/2201   | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390BN07N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | EP   | 9822754.4         | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390EP02T   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | CN   | 20080246429.4     | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390CN02N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | CN   | 20131055487.8     | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390CN12V   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | CA   | 2,743,087         | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390CA04N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931390  | BR   | PI0929293-9       | HEMPY    | Filed    | 24-Nov-09 | HEMPY      | 1931390BR02N   | RESILIANT ATTACHMENT TO PROVIDER LINK STATE BRIDGING (PLSB) NETWORKS  |
| 1931890  | WO   | PCT/CAN/01/000288 | HEMPY    | Inactive | 18-Mar-11 | HEMPY      | 1931890W04W  | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | RU   | 2012139957        | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890RU12N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | FR   | 10-2012-7025040   | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890FR02N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | FP   | 2013-500289       | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890FP11N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | BN   | 7120/DEMP/2202    | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890BN10N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | EP   | 11758706.3        | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890EP01T   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | CN   | 201060016151.4    | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890CN02N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | CA   | 2,784,456         | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890CA07N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1931890  | BR   | 1_12020E12        | HEMPY    | Filed    | 18-Mar-11 | HEMPY      | 1931890BR06N   | SOURCE ROUTED VID TUNNELS FOR ETHERNET PACKET STEERING  |
| 1932490  | RU   | 2011121622        | HEMPY    | Granted  | 26-Oct-09 | HEMPY      | 1932490RU10N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | FR   | 10-2011-700593    | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490FR02N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | FP   | 2011-533492       | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490FP08N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | BN   | 2899/CHEMP/2201   | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490BN07N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | EP   | 9822923           | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490EP02T   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | CN   | 20080242384.4     | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490CN02N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | CA   | 2,733,382         | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490CA04N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 1932490  | BR   | PI091937-4        | HEMPY    | Filed    | 26-Oct-09 | HEMPY      | 1932490BR02N   | PROVISIONED PROVIDER LINK STATE BRIDGING (PLSB) WITH ROUTED BACK-UP   |
| 193276A  | WO   | PCT/AU2010/006051 | HEMPY    | Inactive | 6-Ap-10   | HEMPY      | 193276AW02W  | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | RU   | 2011143941        | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276ARU10N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | FR   | 10-2011-7026041   | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276AFR02N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | FP   | 2012-530778       | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276AFP08N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | FP   | 2014-111384       | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276AFP12V   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | BN   | 6892/CHEMP/2201   | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276ABN07N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | EP   | 10792287          | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276AEP02T   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | CN   | 201060010284.2    | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276ACN02N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | CA   | 2,757,246         | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276ACA04N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |
| 193276A  | BR   | PI010470-2        | HEMPY    | Filed    | 6-Ap-10   | HEMPY      | 193276ABR02N   | MONITORING EDC POLARIZATION INVERSE FILTER COEFFICIENTS TO IDENTIFY REAL-TIME PHYSICAL INTRUSION INTO A CORE OR METRO OPTICAL NETWORK |

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|---------|----|--------------------|-------|----------|-----------|-----------|-------------|---|
| 15529R  | FR | 10-2011-02081-15   | HEMPY | Filed    | 15-May-09 | HEMPY     | 35559R060R  | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15529R  | JP | 2011-550946        |       | Granted  | 15-May-09 | 25-Apr-10 | 35559R060P  | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15529R  | IN | 7556/CHEMP/22010   | HEMPY | Filed    | 15-May-09 | HEMPY     | 35559R060N  | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15529R  | EP | 2747000.3          | HEMPY | Filed    | 15-May-09 | HEMPY     | 35559R060E  | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15529R  | CN | 200980128277.8     | HEMPY | Filed    | 15-May-09 | HEMPY     | 35559R060CN | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15529R  | BR | P091269-0          | HEMPY | Filed    | 15-May-09 | HEMPY     | 35559R060BR | METHOD AND SYSTEM FOR TRANSMISSION OF FRAGMENTED PACKETS ON A PACKET-BASED COMMUNICATION NETWORK            |
| 15559RO | RU | 201112875          | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R012R  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | FR | 10-2011-1011434    | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R060R  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | JP | 2011-542806        | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0P0R  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | EP | 0                  | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0P1V  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | IN | 4544/CHEMP/22011   | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0I0N  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | EP | 3834186            | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0E0E  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | CN | 200980257800.4     | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0C0CN | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | CA | 2,748,363          | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0C0A  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 15559RO | BR | P092938-8          | HEMPY | Filed    | 24-Dec-09 | HEMPY     | 35559R0E0B  | WEB-BASED ACCESS TO VIDEO ASSOCIATED WITH CALLS   |
| 14240RO | FR | 10-2011-1004337    | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R060R  | MULTILAYER LOSS PROTECTION  |
| 14240RO | JP | 2011-513247        | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0P0R  | MULTILAYER LOSS PROTECTION  |
| 14240RO | EP | 2014-143732        | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0P1V  | MULTILAYER LOSS PROTECTION  |
| 14240RO | IN | 5453/CHEMP/22011   | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0I0N  | MULTILAYER LOSS PROTECTION  |
| 14240RO | EP | 38002123           | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0E0E  | MULTILAYER LOSS PROTECTION  |
| 14240RO | CN | 20098013753.3      | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0C0CN | MULTILAYER LOSS PROTECTION  |
| 14240RO | BR | P091687-0          | HEMPY | Filed    | 3-Jun-09  | HEMPY     | 14240R0E0B  | MULTILAYER LOSS PROTECTION  |
| 14249RO | FR | 10-2011-1002788    | HEMPY | Filed    | 27-May-09 | HEMPY     | 14249R060R  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | EP | 10-2011-1002789    | HEMPY | Filed    | 13-Jun-09 | HEMPY     | 14249R060E  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | JP | 2011-511725        |       | Granted  | 27-May-09 | 15-Nov-10 | 14249R0P1J  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | JP | 2011-511726        |       | Granted  | 13-Jun-09 | 23-Aug-10 | 14249R0P0J  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | IN | 110/DELMP/22011    | HEMPY | Filed    | 13-Jun-09 | HEMPY     | 14249R0I0N  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | IN | PC1/NE2009/06561-1 | HEMPY | Filed    | 27-May-09 | HEMPY     | 14249R0I1A  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | EP | 3754564.4          | HEMPY | Filed    | 27-May-09 | HEMPY     | 14249R0E1T  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | EP | 3754564.2          | HEMPY | Filed    | 13-Jun-09 | HEMPY     | 14249R0E0T  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | CN | 200980135803.8     | HEMPY | Filed    | 13-Jun-09 | HEMPY     | 14249R0C0CN | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | CN | 200980135803.5     | HEMPY | Filed    | 27-May-09 | HEMPY     | 14249R0C1Z  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | BR | P0915658-0         | HEMPY | Filed    | 13-Jun-09 | HEMPY     | 14249R0E0B  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14249RO | BR | P0915658-3         | HEMPY | Filed    | 27-May-09 | HEMPY     | 14249R0E1N  | MULTI-TOUCH TOUCHSCREEN INCORPORATING PEN TRACKING  |
| 14242RO | FR | 10-2011-1024314    | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R060R  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | JP | 2014-013423        | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0P1V  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | JP | 2011-5011071       | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0P0R  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | IN | PC1/CA2009/00874   | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0I0N  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | EP | 3753800.0          | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0E0T  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | CN | 200980111511.1     | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0C0CN | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | BR | P0909474-1         | HEMPY | Filed    | 27-May-09 | HEMPY     | 14242R0E0B  | PROTECTED LIGHT SOURCE FOR MULTIPLE WAVELENGTH DIVISION MULTIMUXED PASSIVE OPTICAL NETWORKS (WDM PONs)      |
| 14242RO | RU | 2011122728         |       | Granted  | 30-Dec-09 | 27-Oct-10 | 14242R012R  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | FR | 2011-1024549       |       | Granted  | 30-Dec-09 | 10-Apr-10 | 14242R060R  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | JP | 2014-131785        | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0P1J  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | JP | 2011-542336        | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0P0R  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | IN | 7361/WOLMP/22011   | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0I0N  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | EP | 9835939            | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0E0T  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | CN | 0                  | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0C1Z  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | CN | 200980154659.4     |       | Granted  | 30-Dec-09 | 2-Jul-10  | 14242R0C0CN | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | CA | 2,745,515          | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0C0A  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14242RO | BR | P092346-8          | HEMPY | Filed    | 30-Dec-09 | HEMPY     | 14242R0E0B  | BANDWIDTH EFFICIENT METHOD AND SYSTEM FOR OBSCURING THE EXISTENCE OF ENCRYPTION IN A COMMUNICATIONS CHANNEL |
| 14249RN | WO | PC1/US1010/037733  | HEMPY | Inactive | 8-Jun-10  | HEMPY     | 14249R0W00W | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | RU | 2011153500         | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R012R  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | FR | PC1/US1010/037733  | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R060R  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | JP | 2012-515563        | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0P0R  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | IN | 8762/CHEMP/22011   | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0I0N  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | EP | 1078657.5          | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0E0E  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | CN | 201080057928.9     | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0C0CN | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | CA | 2,764,692          | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0C0A  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14249RN | BR | BR11201200198-1    | HEMPY | Filed    | 8-Jun-10  | HEMPY     | 14249R0E0B  | TECHNIQUES FOR ROUTING DATA BETWEEN NETWORK AREAS   |
| 14246RO | RU | 2011121621         |       | Granted  | 26-Oct-09 | 27-May-10 | 14246R012R  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | FR | 10-2011-1009534    | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R060R  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | JP | 2013-209161        | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0P1V  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | JP | 2011-539493        |       | Granted  | 26-Oct-09 | 11-Oct-10 | 14246R0P0R  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | IN | 2592/CHEMP/22011   | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0I0N  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | EP | 3922948.8          | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0E0E  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | CN | 20140057341.2      | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0C1Z  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | CN | 20098042382.3      |       | Granted  | 26-Oct-09 | 2-Aug-10  | 14246R0C0CN | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | CA | 2,742,775          | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0C0A  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | BR | P091363-0          | HEMPY | Filed    | 26-Oct-09 | HEMPY     | 14246R0E0B  | PROVIDER LINK STATE BRIDGING (PLS) COMPUTATION METHOD   |
| 14246RO | FR | 10-2011-1027913    | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R060R  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | JP | 2013-244967        | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0P1V  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | JP | 2011-508780        |       | Granted  | 12-May-09 | 6-Dec-10  | 14246R0P0R  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | IN | 7336/CHEMP/22010   | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0I0N  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | EP | 808421.7           | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0E0E  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | EP | 3745343.5          | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0E0T  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | CN | 200980227338.8     | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0C0CN | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 14246RO | BR | P0912641-4         | HEMPY | Filed    | 12-May-09 | HEMPY     | 14246R0E0B  | A MECHANISM TO DIVERT AN IP FLOW OVER A NON-IP TRANSPORT  |
| 15513DC | FR | 10-2011-1005821    | HEMPY | Filed    | 22-Jun-09 | HEMPY     | 15513D060R  | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513DC | JP | 2011-528880        |       | Granted  | 22-Jun-09 | 28-Feb-10 | 15513D0P0R  | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513DC | IN | 1552/CHEMP/22011   | HEMPY | Filed    | 22-Jun-09 | HEMPY     | 15513D0I0N  | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513DC | EP | 3813359.4          | HEMPY | Filed    | 22-Jun-09 | HEMPY     | 15513D0E0T  | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513DC | CN | 200980155626.8     | HEMPY | Filed    | 22-Jun-09 | HEMPY     | 15513D0C0CN | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513DC | CA | 2,735,000          | HEMPY | Filed    | 22-Jun-09 | HEMPY     | 15513D0C0A  | PROTECTION FOR PROVIDER BACKBONE BRIDGE TRAFFIC ENGINEERING   |
| 15513RO | FR | 10-2011-1002193    | HEMPY | Filed    | 30-Nov-09 | HEMPY     | 15513R060R  | IN-BAND SIGNALING FOR POINT-TO-POINT PACKET PROTECTION SWITCHING  |
| 15513RO | EP | 3828845.6          | HEMPY | Filed    | 30-Nov-09 | HEMPY     | 15513R0E0E  | IN-BAND SIGNALING FOR POINT-TO-POINT PACKET PROTECTION SWITCHING  |
| 15513RO | CN | 200980447386.8     | HEMPY | Filed    | 30-Nov-09 | HEMPY     | 15513R0C0CN | IN-BAND SIGNALING FOR POINT-TO-POINT PACKET PROTECTION SWITCHING  |
| 15513RO | CA | 2,742,272          | HEMPY | Filed    | 30-Nov-09 | HEMPY     | 15513R0C0A  | IN-BAND SIGNALING FOR POINT-TO-POINT PACKET PROTECTION SWITCHING  |
| 15567D  | WO | PC1/GB010001052    | HEMPY | Inactive | 27-Aug-10 | HEMPY     | 15567D0W00W | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE               |

| Number | Country | Applicant             | IPC Class | Status   | Priority | App No.   | Pub No.   | Pub Date      | Inventor | Agent | Description  |
|--------|---------|-----------------------|-----------|----------|----------|-----------|-----------|---------------|----------|-------|--|
| 195670 | RU      | 2012111960            | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670RU10    |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | KR      | 10-2012-1007988       | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670KR98    |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | JP      | 2012-528117           | HENPTY    | Granted  | 5519125  | 27-Aug-10 | 21-Apr-10 | 195670JP98    |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | IN      | 3547/CHEMP/2202       | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670IN07N   |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | EP      | 2012528117            | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670EP97    |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | CN      | 201080092929.4        | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670CN05N   |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | CA      | 2,771,197             | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670CA09    |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 195670 | BR      | BR11 2012 004481.8    | HENPTY    | Filed    |          | 27-Aug-10 | HENPTY    | 195670BR09N   |          |       | METHOD AND SYSTEM FOR CONTROLLING ESTABLISHMENT OF COMMUNICATION CHANNELS IN A CONTACT CENTRE                            |
| 19570R | KR      | 10-2011-1002385       | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570RKR09N   |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | JP      | 2011-512813           | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570RJP07N   |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | IN      | 4742/W/COMP/2202      | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570RIN06N   |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | EP      | 2011512813            | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570R97EP01  |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | CN      | 200980125232          | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570R02CN4N  |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | BR      | PI0913636-3           | HENPTY    | Filed    |          | 30-Jun-09 | HENPTY    | 19570RBR09N   |          |       | SIGNALING OF THE OFFSET PARAMETERS FOR THE FORMULA FOR LINKAGE BETWEEN PUSHINCS AND AMOUNT OF RESOURCES USED FOR CONTROL |
| 19570R | WO      | PCT/CA2010/000626     | HENPTY    | Inactive |          | 7-Jun-10  | HENPTY    | 19570RWO02W   |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | RU      | 2011133021            | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570R02RU10N |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | KR      | 10-2011-0205154       | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570RKR09N   |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | JP      | 2012-517984           | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570RJP08N   |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | IN      | 3548/CHEMP/2201       | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570RIN07N   |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | EP      | 2012517984            | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570R97EP01  |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | CN      | 201080095220.4        | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570R02CN05N |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | CA      | 2,778,198             | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570RCA09    |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | BR      | PI1013953-2           | HENPTY    | Filed    |          | 7-Jun-10  | HENPTY    | 19570RBR09N   |          |       | PERSONAL STATUS COMMUNICATIONS MANAGER   |
| 19570R | RU      | 2011128877            | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570R02RU11N |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | KR      | 10-2011-1015384       | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RKR09N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | JP      | 2011-538813           | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RJP07N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | IN      | 2014-212585           | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RIN06N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | BR      | 4229/CHEMP/2201       | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RBR09N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | EP      | 2012538813            | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570R97EP01  |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | CN      | 200980156351.5        | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570R02CN04N |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | CA      | 2,745,369             | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RCA10N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 19570R | BR      | PI0923158-0           | HENPTY    | Filed    |          | 3-Dec-09  | HENPTY    | 19570RBR09N   |          |       | MULTIPLE REDUNDANT GNSS SYNCHRONIZATION SYSTEM   |
| 195690 | WO      | PCT/CA2010/000598     | HENPTY    | Inactive |          | 23-Jun-10 | HENPTY    | 195690WO02W   |          |       | UTILIZING BETWEENNESS TO DETERMINE FORWARDING STATE IN A ROUTED NETWORK  |
| 195690 | EP      | 10791108.3            | HENPTY    | Filed    |          | 23-Jun-10 | HENPTY    | 195690EP02    |          |       | UTILIZING BETWEENNESS TO DETERMINE FORWARDING STATE IN A ROUTED NETWORK  |
| 195690 | CN      | 201080092828.2        | HENPTY    | Filed    |          | 23-Jun-10 | HENPTY    | 195690CN04N   |          |       | UTILIZING BETWEENNESS TO DETERMINE FORWARDING STATE IN A ROUTED NETWORK  |
| 195690 | WO      | PCT/CA2010/001050     | HENPTY    | Inactive |          | 14-Jul-10 | HENPTY    | 195690WO07W   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | KR      | 2012-7002666          | HENPTY    | Filed    |          | 14-Jul-10 | HENPTY    | 195690KR12N   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | JP      | 2012-519855           | HENPTY    | Granted  | 5624136  | 3-Oct-14  | 3-Oct-14  | 195690JP11N   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | IN      | 129/CHEMP/2202        | HENPTY    | Filed    |          | 14-Jul-10 | HENPTY    | 195690IN10N   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | SB      | 10/069393.5 2 276 277 | Gramat    |          |          | 13-Jul-10 | 21-Aug-13 | 195690SB15E   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | FR      | 10/069393.5 2 276 277 | Gramat    |          |          | 13-Jul-10 | 21-Aug-13 | 195690FR4E    |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | EP      | 10/069393.5 2 276 277 | Inactive  |          |          | 13-Jul-10 | 21-Aug-13 | 195690EP02E   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | DE      | 6.02024e+11 2 276 277 | Gramat    |          |          | 13-Jul-10 | 21-Aug-13 | 195690DE13E   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | CN      | 201080090824.8        | HENPTY    | Filed    |          | 14-Jul-10 | HENPTY    | 195690CN02N   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 195690 | CA      | 2,757,454             | HENPTY    | Filed    |          | 14-Jul-10 | HENPTY    | 195690CA09N   |          |       | DEVICE PROGRAMMABLE NETWORK BASED PACKET FILTER  |
| 19570R | RU      | 2011273153            | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R02RU10N |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | KR      | 10-2011-1012726       | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RKR09N   |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | JP      | 2011-541587           | HENPTY    | Granted  | 5514834  | 22-Dec-09 | 4-Apr-14  | 19570RJP08N   |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | IN      | 4227/CHEMP/2201       | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RIN07N   |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | EP      | 2011541587            | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R97EP01  |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | CN      | 20104033361.5         | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R02CN15V |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | CN      | 200980151829.3        | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R02CN05N |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | CA      | 2,745,683             | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RCA09N   |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | BR      | PI0923479-0           | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RBR09N   |          |       | SELECTIVE DATABASE REPLICATION   |
| 19570R | RU      | 2011131697            | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R02RU10N |          |       | COLLABORATION AGENT  |
| 19570R | KR      | 10-2011-1015076       | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RKR09N   |          |       | COLLABORATION AGENT  |
| 19570R | JP      | 2011-542913           | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RJP08N   |          |       | COLLABORATION AGENT  |
| 19570R | IN      | 2014-154508           | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RIN06N   |          |       | COLLABORATION AGENT  |
| 19570R | BR      | 3547/CHEMP/2201       | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RBR09N   |          |       | COLLABORATION AGENT  |
| 19570R | EP      | 2011542913            | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570R97EP01  |          |       | COLLABORATION AGENT  |
| 19570R | CA      | 2,745,472             | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RCA09N   |          |       | COLLABORATION AGENT  |
| 19570R | BR      | PI0923829-9           | HENPTY    | Filed    |          | 22-Dec-09 | HENPTY    | 19570RBR09N   |          |       | COLLABORATION AGENT  |
| 19570R | KR      | 10-2011-1005690       | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570RKR09N   |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | JP      | 2011-529881           | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570RJP08N   |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | IN      | 1589/CHEMP/2201       | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570RIN07N   |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | SB      | 9813404.3 2 382 989   | Gramat    |          |          | 29-Jul-09 | 4-Sep-13  | 19570R02SB17N |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | FR      | 9813404.3 2 382 989   | Gramat    |          |          | 29-Jul-09 | 4-Sep-13  | 19570R02FR13T |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | EP      | 131927529.3           | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570R97EP01  |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | EP      | 9813404.3 2 382 989   | Inactive  |          |          | 29-Jul-09 | 4-Sep-13  | 19570R97EP01  |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | DE      | 9813404.3 2 382 989   | Gramat    |          |          | 29-Jul-09 | 4-Sep-13  | 19570R02DE12T |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | CN      | 200980135628.8        | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570R02CN05N |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | BR      | PI0919728-6           | HENPTY    | Filed    |          | 29-Jul-09 | HENPTY    | 19570RBR09N   |          |       | UTILIZING OPTICAL BYPASS LINKS IN A COMMUNICATION NETWORK  |
| 19570R | WO      | PCT/CA2010/000637     | HENPTY    | Inactive |          | 23-Jun-10 | HENPTY    | 19570RWO02W   |          |       | MOBILE FAST ALERTING   |
| 19570R | JP      | 2012-516448           | HENPTY    | Granted  | 5576933  | 23-Jun-10 | 11-Jul-14 | 19570RJP08N   |          |       | MOBILE FAST ALERTING   |
| 19570R | EP      | 10791107.5            | HENPTY    | Filed    |          | 23-Jun-10 | HENPTY    | 19570R97EP01  |          |       | MOBILE FAST ALERTING   |
| 19570R | WO      | PCT/BR001/059243      | HENPTY    | Inactive |          | 28-Nov-11 | HENPTY    | 19570RWO02W   |          |       | DUAL MODE BASE STATION   |
| 19570R | RU      | 2013130009            | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570R02RU10N |          |       | DUAL MODE BASE STATION   |
| 19570R | KR      | 10-2013-1015947       | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570RKR09N   |          |       | DUAL MODE BASE STATION   |
| 19570R | JP      | 2013-541424           | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570RJP08N   |          |       | DUAL MODE BASE STATION   |
| 19570R | IN      | 4513/CHEMP/2203       | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570RIN07N   |          |       | DUAL MODE BASE STATION   |
| 19570R | EP      | 21889275.9            | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570R97EP01  |          |       | DUAL MODE BASE STATION   |
| 19570R | CN      | 201150068177.1        | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570R02CN05N |          |       | DUAL MODE BASE STATION   |
| 19570R | CA      | 2,817,195             | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570RCA09N   |          |       | DUAL MODE BASE STATION   |
| 19570R | BR      | BR112013013006-7      | HENPTY    | Filed    |          | 28-Nov-11 | HENPTY    | 19570RBR09N   |          |       | DUAL MODE BASE STATION   |
| 195690 | KR      | 10-2011-1009795       | HENPTY    | Filed    |          | 1-Oct-09  | HENPTY    | 195690KR09N   |          |       | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |
| 195690 | JP      | 2011-529426           | HENPTY    | Filed    |          | 1-Oct-09  | HENPTY    | 195690JP08N   |          |       | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |
| 195690 | IN      | 1455/W/COMP/2201      | HENPTY    | Filed    |          | 1-Oct-09  | HENPTY    | 195690IN07N   |          |       | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |
| 195690 | EP      | 2011529426            | HENPTY    | Filed    |          | 1-Oct-09  | HENPTY    | 19569097EP01  |          |       | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |
| 195690 | CN      | 200980149216.6        | Gramat    |          |          | 1-Oct-09  | 23-Apr-14 | 195690CN05N   |          |       | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING   |

|        |    |                   |              |         |             |             |              |   |   |
|--------|----|-------------------|--------------|---------|-------------|-------------|--------------|---|---|
| 157590 | CA |                   | 2,744,578    | HEMPY   | Filed       | 1-01-09     | HEMPY        | 157590CCCLN   | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING  |
| 157590 | BR | PI020795-6        |              | HEMPY   | Filed       | 1-01-09     | HEMPY        | 157590CBGRN   | TECHNIQUES FOR TIME TRANSFER VIA SIGNAL ENCODING  |
| 157590 | WO | PCT/CA2010/000534 |              | HEMPY   | Inactive    | 9-Apr-10    | HEMPY        | 157590COCZW   | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | JP | 2012-539840       |              | 552953  | Granted     | 9-Apr-10    | 25-Apr-14    | 157590COPOTN  | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | EP | 10781169          |              | HEMPY   | Filed       | 9-Apr-10    | HEMPY        | 157590CEPAT   | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | CN | 20108025387.5     |              | HEMPY   | Filed       | 9-Apr-10    | HEMPY        | 157590COCNS   | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | CA | 2,758,154         |              | HEMPY   | Filed       | 9-Apr-10    | HEMPY        | 157590COCAN   | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | AU | 2010934200        |              | HEMPY   | Filed       | 9-Apr-10    | HEMPY        | 157590CALUSN  | ENHANCED COMMUNICATION BRIDGE   |
| 157590 | WO | PCT/CA2010/000595 |              | HEMPY   | Filed       | 18-Jun-10   | HEMPY        | 157590COCZW   | METHOD AND APPARATUS FOR IMPLEMENTING CONTROL OF MULTIPLE PHYSICALLY DUAL-HOME DEVICES                                      |
| 157590 | EP | 10788966          |              | HEMPY   | Filed       | 18-Jun-10   | HEMPY        | 157590CEPAT   | METHOD AND APPARATUS FOR IMPLEMENTING CONTROL OF MULTIPLE PHYSICALLY DUAL-HOME DEVICES                                      |
| 157590 | CN | 20108025388.5     |              | HEMPY   | Filed       | 18-Jun-10   | HEMPY        | 157590COCNS   | METHOD AND APPARATUS FOR IMPLEMENTING CONTROL OF MULTIPLE PHYSICALLY DUAL-HOME DEVICES                                      |
| 157590 | WO | PCT/EP2010/058883 |              | HEMPY   | Inactive    | 23-Jun-10   | HEMPY        | 157590COCZW   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | RU | 2012710492        |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CRLUN   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | BR | 10-2012-000295    |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CRGR  | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | JP | 2012-516710       |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CIPRN   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | IN | 9867/CHEMP/2011   |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CINOTN  | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | EP | 10789132.5        |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CEPAT   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | CN | 20108025503.3     |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590COCNS   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | CA | 2,765,289         |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590COCAN   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | BR | PI025020-2        |              | HEMPY   | Filed       | 23-Jun-10   | HEMPY        | 157590CBGRN   | ANALYSIS OF PACKET-BASED VIDEO CONTENT  |
| 157590 | WO | PCT/AU2011/003669 |              | HEMPY   | Inactive    | 5-Nov-11    | HEMPY        | 157590COCZW   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | BR | 10-2011-701552    |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590CBGRN   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | JP | 2011-541105       |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590CIPRN   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | IN | 3516/CHEMP/2011   |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590CINOTN  | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | EP | 11787382.5        |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590CEPAT   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | CN | 201100150126.0    |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590COCNS   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | CA | 2,854,729         |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590COCAN   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | BR | BR11200410101-9   |              | HEMPY   | Filed       | 5-Nov-11    | HEMPY        | 157590CBGRN   | METHOD AND SYSTEM FOR PROVIDING RELEVANT INFORMATION TO A MOBILE DEVICE   |
| 157590 | RU | 2011120064        | 2,516,321    | Granted | 3-March-09  | 24-Mar-12   | 157590CRLUN  | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |   |
| 157590 | BR | 2011-7009160      |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590CBGRN   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | JP | 2011-533409       |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590CIPRN   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | IN | 2011-533409       |              | 541053  | Granted     | 3-March-09  | 15-Nov-13    | 157590CIPRN   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | EP | 29284/CHEMP/2011  |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590COPOTN  | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | EP | 29284763.3        |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590CEPAT   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | CN | 20090420269       |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590COCNS   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | CN | 2009044238.5      | 2009044238.5 | Granted | 3-March-09  | 2-Apr-12    | 157590COCNS  | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |   |
| 157590 | CA | 2,742,574         |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590COCAN   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 157590 | BR | PI021688-0        |              | HEMPY   | Filed       | 3-March-09  | HEMPY        | 157590CBGRN   | USER EQUIPMENT CENTRIC CLUSTERING METHOD SUITABLE FOR COORDINATED MULTI-POINT TRANSMISSION AND RECEPTION                    |
| 15747A | RU | 2011113636        |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EARULIN  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | BR | 10-2011-7011016   |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EARON  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | JP | 2011-169297       |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EAMP1SV  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | JP | 2011-536309       |              | 569522  | Granted     | 5-March-09  | 24-Oct-14    | 15747EAMPORN  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | IN | 2115/CHEMP/2011   |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EAMOTN   | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | EP | 29285754.5        |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EAP0ST   | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | CN | 20110196003.0     |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EACN1ZV  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | CN | 20090453364       |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EACN2ZV  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | CA | 2,742,735         |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EACALON  | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15747A | BR | PI021578-5        |              | HEMPY   | Filed       | 5-March-09  | HEMPY        | 15747EABRON   | SERVICE INSTANCE APPLIED TO M2M NETWORKS  |
| 15757D | WO | PCT/EP2010/050747 |              | HEMPY   | Inactive    | 22-Jan-10   | HEMPY        | 15757DWOZW  | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | RU | 2012125938        | 251003       | Granted | 22-Jan-10   | 20-Mar-14   | 15757DORULN  | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |   |
| 15757D | BR | PCT/EP2010/050747 |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DORGRN   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | JP | 2012-542044       |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DIPORN   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | IN | 5028/CHEMP/2012   |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DINOTN   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | EP | 10704012.4        |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DEPP0ST  | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | CN | 20108095555.8     |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DCOCNS   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | CA | 2,782,855         |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DCOCAN   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 15757D | BR | BR1120012013785-9 |              | HEMPY   | Filed       | 22-Jan-10   | HEMPY        | 15757DORGRN   | METHOD, ARRANGEMENT AND COMPUTER PROGRAM PRODUCT FOR CLOCKING   |
| 157590 | RU | 2011128267        | 249348       | Granted | 26-March-09 | 20-Apr-13   | 157590RORULN | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |   |
| 157590 | BR | 10-2011-7015174   |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590RORGRN  | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | JP | 2011-531906       |              | 546471  | Granted     | 26-March-09 | 31-Jan-14    | 157590RORORN  | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | IN | 4440/CHEMP/2011   |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROROTN  | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | EP | 2929101.1         |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROR0PAT   | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | CN | 20090158269.6     |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROROCNS   | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | CA | 2,745,047         |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROROCAN   | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | BR | PI022934-6        |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590RORORGRN  | FREQUENCY AGILE FILTER USING USING A DIGITAL FILTER   |
| 157590 | WO | PCT/CA2010/001387 |              | HEMPY   | Inactive    | 6-Oct-10    | HEMPY        | 157590ROROCZW   | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | RU | 2013142425        |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORULN  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | RU | 2013142479        |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORULV  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | RU | 2012115997        | 250709       | Granted | 6-Oct-10    | 20-Feb-14   | 157590RORULN | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |   |
| 157590 | BR | 2012-7011829      |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORORGRN  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | JP | 2012-532428       |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORORN  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | IN | 9130/CHEMP/2012   |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORINOTN  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | EP | 109213203.3       |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590ROR0PAT   | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | CN | 20109054800.1     |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590ROROCNS   | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | CA | 2,776,895         |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590ROROCAN   | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | BR | BR112002007956-4  |              | HEMPY   | Filed       | 6-Oct-10    | HEMPY        | 157590RORORGRN  | METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION AND THE ESTABLISHMENT OF CONNECTIVITY ACROSS MULTIPLE NETWORK AREAS |
| 157590 | RU | 2011128268        | 249349       | Granted | 26-March-09 | 20-Apr-13   | 157590RORULN | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |   |
| 157590 | BR | 10-2011-7015175   |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590RORORGRN  | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | JP | 2011-531905       |              | 520293  | Granted     | 26-March-09 | 26-Apr-14    | 157590RORORN  | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | IN | 4439/CHEMP/2011   |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590RORINOTN  | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | EP | 2929292.3         |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROR0PAT   | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | CN | 20090158268.1     |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROROCNS   | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | CA | 2,745,009         |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590ROROCAN   | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | BR | PI022755-2        |              | HEMPY   | Filed       | 26-March-09 | HEMPY        | 157590RORORGRN  | DSP BASED FREQUENCY AGILE FILTER USING NEGATIVE GROUP DELAY   |
| 157590 | WO | 10-2011-7009138   |              | HEMPY   | Filed       | 19-Sep-09   | HEMPY        | 157590ROROCZW   | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PUSCH  |
| 157590 | JP | 2011-527169       |              | 559392  | Granted     | 19-Sep-09   | 9-May-14     | 157590RORORN  | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PUSCH  |
| 157590 | IN | 2490/CHEMP/2011   |              | HEMPY   | Filed       | 19-Sep-09   | HEMPY        | 157590RORINOTN  | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PUSCH  |
| 157590 | EP | 10339512.3        |              | HEMPY   | Filed       | 19-Sep-09   | HEMPY        | 157590ROR0PAT   | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PUSCH  |
| 157590 | CN | 201104927026.0    |              | HEMPY   | Filed       | 19-Sep-09   | HEMPY        | 157590ROROCNS   | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PUSCH  |

|         |    |                   |               |         |           |           |             |  |
|---------|----|-------------------|---------------|---------|-----------|-----------|-------------|--|
| 137290  | CN | 20060146426.8     | 20090146426.8 | Granted | 19-Sep-09 | HEMPY     | 137290C02N  | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PULCH                                   |
| 137290  | FR | W0915005-8        |               | HEMPY   | Filed     | 19-Sep-09 | 137290C02N  | METHOD AND SYSTEM FOR SPACE CODE TRANSMIT DIVERSITY OF PULCH                                   |
| 138201  | EP | 6788395.5         |               | HEMPY   | Filed     | 29-Jul-08 | 138201EP4T  | SECURIZED NETWORK IDENTITY MANAGEMENT  |
| 138201  | EP | 7869555.5         |               | HEMPY   | Filed     | 12-Dec-07 | 138201EP4T  | DISTRIBUTED NETWORK IDENTITY MANAGEMENT  |
| 138220  | WO | PCT/CA2011/000759 |               | HEMPY   | Inactive  | 13-Jul-11 | 138220WO2W  | BROADBAND COHERENT AMPLIFIER USING BROADBAND TRANSDUCER  |
| 138220  | FR | 16-2014-700080    |               | HEMPY   | Filed     | 13-Jul-11 | 138220FR02N | BROADBAND COHERENT AMPLIFIER USING BROADBAND TRANSDUCER  |
| 138220  | JP | 2014-513554       |               | HEMPY   | Filed     | 13-Jul-11 | 138220JP04N | BROADBAND COHERENT AMPLIFIER USING BROADBAND TRANSDUCER  |
| 138220  | EP | 13865495          |               | HEMPY   | Filed     | 13-Jul-11 | 138220EP2T  | BROADBAND COHERENT AMPLIFIER USING BROADBAND TRANSDUCER  |
| 138220  | CN | 201360072228.6    |               | HEMPY   | Filed     | 13-Jul-11 | 138220CN02N | BROADBAND COHERENT AMPLIFIER USING BROADBAND TRANSDUCER  |
| 13836A  | WO | PCT/US2010/035581 |               | HEMPY   | Inactive  | 23-Jun-10 | 13836AWO2W  | METHOD AND APPARATUS FOR SIMULATING MULTIBRETTING  |
| 13836A  | JP | 2012-517673       |               | HEMPY   | Filed     | 23-Jun-10 | 13836AJP02N | METHOD AND APPARATUS FOR SIMULATING MULTIBRETTING  |
| 13836A  | EP | 10797580.2        |               | HEMPY   | Filed     | 23-Jun-10 | 13836AEP04T | METHOD AND APPARATUS FOR SIMULATING MULTIBRETTING  |
| 138425  | RU | 2011140878        |               | HEMPY   | Filed     | 19-Mar-10 | 138425RU12N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | FR | 16-2012-704814    |               | HEMPY   | Filed     | 19-Mar-10 | 138425FR02N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | JP | 2012-500015       | 552925        | Granted | 19-Mar-10 | 25-Apr-12 | 138425JP08R | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | IN | 6385/CHEMP/72011  |               | HEMPY   | Filed     | 19-Mar-10 | 138425IN07N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | EP | 10753384.7        |               | HEMPY   | Filed     | 19-Mar-10 | 138425EP06T | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | CN | 201060021217.5    |               | HEMPY   | Filed     | 19-Mar-10 | 138425CN02N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | CA | 2,755,792         |               | HEMPY   | Filed     | 19-Mar-10 | 138425CA04N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138425  | FR | PE1008077.1       |               | HEMPY   | Filed     | 19-Mar-10 | 138425FR02N | DELIVERY OF INPUT/OUTPUT DATA WITHIN A STANDARD ATCA SYSTEM                                    |
| 138470  | WO | PCT/CA2010/000610 |               | HEMPY   | Inactive  | 21-Apr-10 | 138470WO2W  | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | JP | 2014-136447       |               | HEMPY   | Filed     | 28-Aug-12 | 138470JP05V | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | EP | 2012-506305       |               | HEMPY   | Filed     | 21-Apr-10 | 138470EP07N | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | EP | 10765663          |               | HEMPY   | Filed     | 21-Apr-10 | 138470EP06T | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | CN | 201060020369.3    |               | HEMPY   | Filed     | 21-Apr-10 | 138470CN02N | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | CA | 2,755,522         |               | HEMPY   | Filed     | 21-Apr-10 | 138470CA04N | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 138470  | AU | 2010230667        |               | HEMPY   | Filed     | 21-Apr-10 | 138470AU02N | METHOD AND APPARATUS FOR ACCOMMODATING DUPLICATE MAC ADDRESS                                   |
| 13858N  | WO | PCT/US2012/026288 |               | HEMPY   | Inactive  | 28-Aug-12 | 13858NWO2W  | FACE TRACKING AUDIO MIXING CONTROL   |
| 139290  | WO | PCT/CA2011/026398 |               | HEMPY   | Inactive  | 29-Jun-11 | 139290WO2W  | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | FR | 16-2013-705572    |               | HEMPY   | Filed     | 29-Jun-11 | 139290FR02N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | JP | PCT/CA2011/026398 |               | HEMPY   | Filed     | 29-Jun-11 | 139290JP07N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | IN | 10775/DELMP/2013  |               | HEMPY   | Filed     | 29-Jun-11 | 139290IN06N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | EP | 11688564.3        |               | HEMPY   | Filed     | 29-Jun-11 | 139290EP06T | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | CN | 20119007373.9     |               | HEMPY   | Filed     | 29-Jun-11 | 139290CN04N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | CA | 2,833,245         |               | HEMPY   | Filed     | 29-Jun-11 | 139290CA02N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | BR | 1.120138142       |               | HEMPY   | Filed     | 29-Jun-11 | 139290BR02N | METHOD AND APPARATUS FOR PRE-LOADING INFORMATION OVER A COMMUNICATION                          |
| 139290  | WO | PCT/NO2010/001955 |               | HEMPY   | Inactive  | 5-Aug-10  | 139290WO2W  | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | RU | 2013104140        |               | HEMPY   | Filed     | 5-Aug-10  | 139290RU12N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | FR | 16-2013-705531    |               | HEMPY   | Filed     | 5-Aug-10  | 139290FR02N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | JP | 2013-523232       |               | HEMPY   | Filed     | 5-Aug-10  | 139290JP08N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | IN | 1788/DELMP/2203   |               | HEMPY   | Filed     | 5-Aug-10  | 139290IN07N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | EP | 10655574.7        |               | HEMPY   | Filed     | 5-Aug-10  | 139290EP06T | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | CN | 20106006467.1     |               | HEMPY   | Filed     | 5-Aug-10  | 139290CN02N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | CA | 2,807,241         |               | HEMPY   | Filed     | 5-Aug-10  | 139290CA04N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | BR | BR112013000171-7  |               | HEMPY   | Filed     | 5-Aug-10  | 139290BR02N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139290  | AU | 2010357440        |               | HEMPY   | Filed     | 5-Aug-10  | 139290AU02N | WEB BASED ACCESS TO VIDEO CONTENT ASSOCIATED WITH VOCEMAIL                                     |
| 139410  | WO | PCT/CA2010/001388 |               | HEMPY   | Inactive  | 8-Sep-10  | 139410WO2W  | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | FR | 16-2012-705069    |               | HEMPY   | Filed     | 8-Sep-10  | 139410FR02N | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | JP | 2012-528201       | 555123        | Granted | 8-Sep-10  | 30-May-14 | 139410JP08N | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | IN | 2332/DELMP/2202   |               | HEMPY   | Filed     | 8-Sep-10  | 139410IN08N | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | EP | 14175306.1        |               | HEMPY   | Filed     | 8-Sep-10  | 139410EP13V | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | EP | 10814838.2        |               | HEMPY   | Filed     | 8-Sep-10  | 139410EP07T | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | CN | 20106005021.8     |               | HEMPY   | Filed     | 8-Sep-10  | 139410CN11N | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139410  | CA | 2,777,400         |               | HEMPY   | Filed     | 8-Sep-10  | 139410CA06N | METHOD AND APPARATUS FOR SELECTING BETWEEN MULTIPLE EQUAL COST PATHS                           |
| 139410  | BR | 1.120138142       |               | HEMPY   | Filed     | 8-Sep-10  | 139410BR02N | ENHANCED SYMMETRIC THE BREAKING ALGORITHM  |
| 139500  | WO | PCT/CA2011/050421 |               | HEMPY   | Inactive  | 11-Jul-11 | 139500WO2W  | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK  |
| 139500  | FR | 16-2014-7000812   |               | HEMPY   | Filed     | 11-Jul-11 | 139500FR02N | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK  |
| 139500  | JP | 2014-513555       |               | HEMPY   | Filed     | 11-Jul-11 | 139500JP04N | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK  |
| 139500  | EP | 11869293.7        |               | HEMPY   | Filed     | 11-Jul-11 | 139500EP06T | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK  |
| 139500  | CN | 201360072228.6    |               | HEMPY   | Filed     | 11-Jul-11 | 139500CN02N | AMPLIFIED LINEARIZATION USING NON-STANDARD FEEDBACK  |
| 13953R  | WO | PCT/US2010/051527 |               | HEMPY   | Inactive  | 5-Oct-10  | 13953RWO2W  | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | RU | 2012118252        |               | HEMPY   | Filed     | 5-Oct-10  | 13953RRU12N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | FR | 16-2012-7011693   |               | HEMPY   | Filed     | 5-Oct-10  | 13953RFR02N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | JP | 2012-532345       |               | HEMPY   | Filed     | 5-Oct-10  | 13953RJP08N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | IN | 5097/DELMP/2202   |               | HEMPY   | Filed     | 5-Oct-10  | 13953RIN07N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | EP | 10823558.8        |               | HEMPY   | Filed     | 5-Oct-10  | 13953REP06T | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | CN | 20106005081.2     |               | HEMPY   | Filed     | 5-Oct-10  | 13953RCN02N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | CA | 2,777,047         |               | HEMPY   | Filed     | 5-Oct-10  | 13953RCA04N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 13953R  | BR | 112012008018-0    |               | HEMPY   | Filed     | 5-Oct-10  | 13953RBR02N | INTER-RA6 BIDIRECTIONAL IP TUNNELING FOR PMP/6-FAST HANDOFF                                    |
| 139580  | WO | PCT/CA2011/000211 |               | HEMPY   | Inactive  | 25-Feb-11 | 139580WO2W  | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | RU | 2012138955        |               | HEMPY   | Filed     | 25-Feb-11 | 139580RU12N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | FR | 16-2012-702043    |               | HEMPY   | Filed     | 25-Feb-11 | 139580FR02N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | JP | 2012-555345       |               | HEMPY   | Filed     | 25-Feb-11 | 139580JP08N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | IN | 6698/DELMP/2202   |               | HEMPY   | Filed     | 25-Feb-11 | 139580IN07N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | EP | 11752366.3        |               | HEMPY   | Filed     | 25-Feb-11 | 139580EP06T | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | CN | 201100120121.7    |               | HEMPY   | Filed     | 25-Feb-11 | 139580CN02N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | CA | 2,781,598         |               | HEMPY   | Filed     | 25-Feb-11 | 139580CA04N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139580  | BR | 1.120138142       |               | HEMPY   | Filed     | 25-Feb-11 | 139580BR02N | METHOD AND APPARATUS FOR REDUCING THE CONTRIBUTION OF NOISE TO DIGITALLY SAMPLED SIGNALS       |
| 139590  | WO | PCT/US2012/025552 |               | HEMPY   | Inactive  | 17-Feb-12 | 139590WO2W  | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | FR | 16-2013-701552    |               | HEMPY   | Filed     | 17-Feb-12 | 139590FR02N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | JP | 2013-554624       |               | HEMPY   | Filed     | 17-Feb-12 | 139590JP08N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | IN | 6437/DELMP/2203   |               | HEMPY   | Filed     | 17-Feb-12 | 139590IN07N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | EP | 12748815.1        |               | HEMPY   | Filed     | 17-Feb-12 | 139590EP06T | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | CN | 201280049386.0    |               | HEMPY   | Filed     | 17-Feb-12 | 139590CN02N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | CA | 2,820,765         |               | HEMPY   | Filed     | 17-Feb-12 | 139590CA04N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 139590  | BR | 1.120138142       |               | HEMPY   | Filed     | 17-Feb-12 | 139590BR02N | NEXT-HOP COMPUTATION FUNCTIONS FOR EQUAL COST MULTIPATH PACKET SWITCHING NETWORKS              |
| 2000165 | WO | PCT/CA2010/061121 |               | HEMPY   | Filed     | 25-Nov-14 | 2000165WO2W | ETHERNET PACKET TRILIN AGGREGATION FOR DATA CENTERS  |
| 2000165 | WO | PCT/CA2010/061125 |               | HEMPY   | Filed     | 27-Nov-14 | 2000165WO2W | SOFTWARE-DEFINED NETWORKING DISCOVERY PROTOCOL FOR OPEN FLOW ENABLED SWITCHES                  |
| 64012   | JP | 27892579          |               | HEMPY   | Filed     | 13-Oct-03 | 64012       | MULTIPLYING OF COMMUNICATIONS SERVICES ON A VIRTUAL SERVICE PATH IN AN ATM NETWORK OR THE LIKE |

| Part Number | Country | Manufacturer | Part Name    | Status   | Reference | Part Name | Description  |
|-------------|---------|--------------|--------------|----------|-----------|-----------|--|
| B4038       | FR      | 107169       | HEMPY        | Filed    | 29-Sep-93 | HEMPY     | SYSTEM HAVING CENTRAL PROCESSOR FOR TRANSMITTING GENERIC PACKETS TO ANOTHER PROCESSOR TO BE ALTERED AND TRANSMITTING ALTERED PACKETS BACK TO CENTRAL PROCESSOR FOR ROUTING   |
| B4039       | FR      | 99597992     | 1395888      | Granted  | 9-Dec-99  | 13-AJ-99  | APPARATUS AND METHOD FOR LIMITING UNAUTHORIZED ACCESS TO A NETWORK MULTICAST   |
| B4039       | FR      | 99597992     | 1395888      | Granted  | 9-Dec-99  | 13-AJ-99  | APPARATUS AND METHOD FOR LIMITING UNAUTHORIZED ACCESS TO A NETWORK MULTICAST   |
| B4039       | DE      | 99597992     | 699410622    | Granted  | 9-Dec-99  | 13-AJ-99  | APPARATUS AND METHOD FOR LIMITING UNAUTHORIZED ACCESS TO A NETWORK MULTICAST   |
| B4039       | FR      | 311286       | 1111860      | Granted  | 15-Dec-00 | 9-AJ-99   | LINK-LEVEL REDUNDANCY SUPPORT FOR AUTOMATIC PROTECTION SWITCHING USING MPLS  |
| B4039       | FR      | 311286       | 1111860      | Granted  | 15-Dec-00 | 9-AJ-99   | LINK-LEVEL REDUNDANCY SUPPORT FOR AUTOMATIC PROTECTION SWITCHING USING MPLS  |
| B4039       | DE      | 311286       | 60029828     | Granted  | 15-Dec-00 | 9-AJ-99   | LINK-LEVEL REDUNDANCY SUPPORT FOR AUTOMATIC PROTECTION SWITCHING USING MPLS  |
| B4057       | FR      | 3024463      | 1052803      | Granted  | 24-Feb-00 | 20-Mar-99 | REDUCING CONVERGE TIME BY A PROTOCOL INDEPENDENT MULTICAST (PIM), ROUTER   |
| B4057       | FR      | 3024463      | 1052803      | Granted  | 24-Feb-00 | 20-Mar-99 | REDUCING CONVERGE TIME BY A PROTOCOL INDEPENDENT MULTICAST (PIM), ROUTER   |
| B4057       | DE      | 3024463      | 600437183    | Granted  | 24-Feb-00 | 20-Mar-99 | REDUCING CONVERGE TIME BY A PROTOCOL INDEPENDENT MULTICAST (PIM), ROUTER   |
| B4081       | FR      | 2028942      | 1079570      | Granted  | 19-Aug-00 | 29-Nov-98 | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING  |
| B4081       | FR      | 2028942      | 1079570      | Granted  | 19-Aug-00 | 29-Nov-98 | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING  |
| B4081       | DE      | 60020791-08  | 1079570      | Granted  | 19-Aug-00 | 29-Nov-98 | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING  |
| B4081       | CA      | 2,311,106    | 2,311,106    | Granted  | 2-Jun-00  | 17-Feb-99 | NETWORK DATA ROUTING PROTECTION CYCLES FOR AUTOMATIC PROTECTION SWITCHING  |
| B4010       | FR      | 690271       | 107507       | Granted  | 1-Sep-00  | 25-Jun-98 | FAST PATH FORWARDING OF LINK STATE ADVERTISEMENTS USING MULTICAST ADDRESSING   |
| B4010       | FR      | 690271       | 107507       | Granted  | 1-Sep-00  | 25-Jun-98 | FAST PATH FORWARDING OF LINK STATE ADVERTISEMENTS USING MULTICAST ADDRESSING   |
| B4010       | DE      | 690271       | 60059928     | Granted  | 1-Sep-00  | 25-Jun-98 | FAST PATH FORWARDING OF LINK STATE ADVERTISEMENTS USING MULTICAST ADDRESSING   |
| B4010       | CA      | 2,310,946    | 2,310,946    | Granted  | 2-Jun-00  | 20-Aug-99 | FAST PATH FORWARDING OF LINK STATE ADVERTISEMENTS USING MULTICAST ADDRESSING   |
| B4057       | FR      | 3070723      | 1079578      | Granted  | 19-Aug-00 | 27-Feb-13 | MANAGING CALLS OVER A DATA NETWORK   |
| B4057       | FR      | 3070723      | 1079578      | Granted  | 19-Aug-00 | 27-Feb-13 | MANAGING CALLS OVER A DATA NETWORK   |
| B4057       | EP      | 3070723      | 1079578      | Inactive | 19-Aug-00 | 27-Feb-13 | MANAGING CALLS OVER A DATA NETWORK   |
| B4057       | DE      | 3070723      | 1079578      | Granted  | 19-Aug-00 | 27-Feb-13 | MANAGING CALLS OVER A DATA NETWORK   |
| B4057       | CA      | 2,316,435    | 2,316,435    | Granted  | 19-Aug-00 | 22-Apr-98 | CODING RESOURCE SELECTION FOR PACKET VOICE   |
| B4067       | FR      | 3083448      | 1093262      | Granted  | 11-Oct-00 | 14-Sep-95 | APPARATUS AND METHOD OF MAINTAINING TIME TOPOLOGY DATA WITHIN A LINK STATE ROUTING NETWORK   |
| B4067       | FR      | 3083448      | 1093262      | Granted  | 11-Oct-00 | 14-Sep-95 | APPARATUS AND METHOD OF MAINTAINING TIME TOPOLOGY DATA WITHIN A LINK STATE ROUTING NETWORK   |
| B4067       | DE      | 3083448      | 60022620     | Granted  | 11-Oct-00 | 14-Sep-95 | APPARATUS AND METHOD OF MAINTAINING TIME TOPOLOGY DATA WITHIN A LINK STATE ROUTING NETWORK   |
| B4067       | CA      | 2,310,524    | 2,310,524    | Granted  | 2-Jun-00  | 15-Nov-11 | APPARATUS AND METHOD OF MAINTAINING TIME TOPOLOGY DATA WITHIN A LINK STATE ROUTING NETWORK   |
| FR017       | FR      | 984020381    | 0396304      | Granted  | 19-Oct-98 | 14-Mar-97 | METHOD AND APPARATUS FOR SETTING UP A CONNECTION TO A TARGET BASE STATION IN A CELLULAR OR CORELESS MOBILE COMMUNICATIONS SYSTEM   |
| FR017       | FR      | 984020381    | 0396304      | Granted  | 19-Oct-98 | 14-Mar-97 | METHOD AND APPARATUS FOR SETTING UP A CONNECTION TO A TARGET BASE STATION IN A CELLULAR OR CORELESS MOBILE COMMUNICATIONS SYSTEM   |
| FR017       | DE      | 984020381    | 69837332     | Granted  | 19-Oct-98 | 14-Mar-97 | METHOD AND APPARATUS FOR SETTING UP A CONNECTION TO A TARGET BASE STATION IN A CELLULAR OR CORELESS MOBILE COMMUNICATIONS SYSTEM   |
| FR023       | FR      | 99597671     | 1090515      | Granted  | 29-Jun-99 | 14-Aug-92 | ANY CELLULAR NETWORK - SELF TUNING NETWORK METHOD AND DEVICE FOR SELECTING PARAMETERS IN A CELLULAR RADIO COMMUNICATION NETWORK PROCEDE ET DISPOSITIF DE SELECTION DE PARAMETRES DANS UN RESEAU CELLULAIRE DE RADIOCOMMUNICATION |
| FR023       | FR      | 99597671     | 1090515      | Granted  | 29-Jun-99 | 14-Aug-92 | ANY CELLULAR NETWORK - SELF TUNING NETWORK METHOD AND DEVICE FOR SELECTING PARAMETERS IN A CELLULAR RADIO COMMUNICATION NETWORK PROCEDE ET DISPOSITIF DE SELECTION DE PARAMETRES DANS UN RESEAU CELLULAIRE DE RADIOCOMMUNICATION |
| FR023       | DE      | 99597671     | 69902542     | Granted  | 29-Jun-99 | 14-Aug-92 | ANY CELLULAR NETWORK - SELF TUNING NETWORK METHOD AND DEVICE FOR SELECTING PARAMETERS IN A CELLULAR RADIO COMMUNICATION NETWORK PROCEDE ET DISPOSITIF DE SELECTION DE PARAMETRES DANS UN RESEAU CELLULAIRE DE RADIOCOMMUNICATION |
| H03044      | CA      | 2,213,728    | 2,213,728    | Granted  | 30-Oct-97 | 20-Aug-92 | CALLER INFORMATION (CLI) CONTROLLED AUTOMATIC ANSWER FEATURE FOR TELEPHONE   |
| H01118      | CA      | 2,254,803    | 2,254,803    | Granted  | 1-Dec-98  | 24-Feb-94 | SYSTEM AND METHOD FOR PROVIDING NOTIFICATION OF A RECEIVED ELECTRONIC MAIL MESSAGE   |
| B0063       | FR      | 9122571      | 2260983      | Inactive | 24-Oct-91 | 21-Jun-85 | CLOCK RECOVERY FROM A MANCHESTER ENCODED FRAME   |
| B0110       | FR      | 9218587      | 2269073      | Inactive | 23-Jul-92 | 19-Jun-88 | REMOTE LINE TESTER   |
| B0110       | FR      | 9309090      | 5909030      | Inactive | 22-Jul-93 | 5-Apr-88  | REMOTE LINE TESTER   |
| B0140       | FR      | 9404867      | 2276787      | Granted  | 14-Mar-94 | 23-Oct-86 | TRANSMISSION SYSTEM INCORPORATING OPTICAL AMPLIFIERS   |
| B0140       | EP      | 943017005    | 0517327      | Inactive | 14-Mar-94 | 15-Apr-90 | TRANSMISSION SYSTEM INCORPORATING OPTICAL AMPLIFIERS   |
| B0152       | FR      | 96900343     | 0308546      | Granted  | 5-Feb-96  | 23-May-90 | TELECOMMUNICATIONS SYSTEM  |
| B0152       | FR      | 96900343     | 0308546      | Granted  | 5-Feb-96  | 23-May-90 | TELECOMMUNICATIONS SYSTEM  |
| B0152       | DE      | 96900343     | 696123621    | Granted  | 5-Feb-96  | 23-May-90 | TELECOMMUNICATIONS SYSTEM  |
| B0155       | FR      | 9312506      | 2272698      | Granted  | 22-Jun-93 | 9-Oct-88  | TELECOMMUNICATIONS SYSTEMS   |
| B0162       | JP      | 6-28815      | 3488502      | Granted  | 31-Jan-94 | 31-Oct-89 | OPTICALLY AMPLIFIED TRANSMISSION SYSTEMS   |
| B0162       | FR      | 9408076      | 2274751      | Granted  | 18-Jan-94 | 6-Nov-88  | OPTICALLY AMPLIFIED TRANSMISSION SYSTEMS   |
| B0162       | FR      | 9401026      | 2701179      | Granted  | 31-Jan-94 | 24-Nov-89 | OPTICALLY AMPLIFIED TRANSMISSION SYSTEMS   |
| B0162       | DE      | 44 02 428 2  | 44 02 428 2  | Granted  | 27-Jan-94 | 18-Jun-89 | OPTICALLY AMPLIFIED TRANSMISSION SYSTEMS   |
| B0205       | EP      | 94301062     | 0656550      | Inactive | 10-Oct-94 | 16-Dec-78 | OPTICALLY INTEGRATED POLARISATION CONVERTER & CONTROLLER   |
| B0212       | FR      | 9421870      | 2282831      | Granted  | 31-Oct-94 | 6-Nov-85  | OPTICAL FIBRE ELEMENTS   |
| B0260       | JP      | 26213795     | 3033887      | Granted  | 14-Sep-95 | 7-Mar-85  | INTERACTIVE VIDEO SYSTEM   |
| B0260       | FR      | 95306046     | 0702492      | Granted  | 30-Aug-95 | 20-Mar-89 | INTERACTIVE VIDEO SYSTEM   |
| B0260       | DE      | 95306046     | 695 07 410.5 | Granted  | 30-Aug-95 | 20-Mar-89 | INTERACTIVE VIDEO SYSTEM   |
| B0269       | FR      | 95922675     | 768893       | Granted  | 21-Jun-95 | 05-Sep-89 | TELECOMMUNICATIONS SYSTEM  |
| B0269       | FR      | 94125065     | 229080       | Granted  | 22-Jun-94 | 18-Jun-89 | TELECOMMUNICATIONS SYSTEM  |
| B0269       | FR      | 95922675     | 768893       | Granted  | 21-Jun-95 | 05-Sep-89 | TELECOMMUNICATIONS SYSTEM  |
| B0269       | DE      | 95922675     | 69504676     | Granted  | 21-Jun-95 | 05-Sep-89 | TELECOMMUNICATIONS SYSTEM  |
| B0269       | CA      | 2,192,100    | 2,192,100    | Granted  | 21-Jun-95 | 28-Nov-90 | DETECTION OF A LOW LEVEL MARSHALLING SEQUENCE  |
| B0356       | FR      | 96958904     | 0342573      | Granted  | 29-Jul-96 | 5-Dec-91  | BROADCAST VIDEO DESYNCHRONISER   |
| B0356       | FR      | 96958904     | 0342573      | Granted  | 29-Jul-96 | 5-Dec-91  | BROADCAST VIDEO DESYNCHRONISER   |
| B0356       | DE      | 96958904     | 696176955    | Granted  | 29-Jul-96 | 5-Dec-91  | BROADCAST VIDEO DESYNCHRONISER   |
| B0373       | JP      | 9-590963     | 3620688      | Granted  | 16-Aug-96 | 24-Dec-94 | DIGITAL TRANSMISSION SYSTEM  |
| B0373       | FR      | 96927805     | 0345185      | Granted  | 16-Aug-96 | 7-Mar-91  | DIGITAL TRANSMISSION SYSTEM  |
| B0373       | FR      | 96927805     | 0345185      | Granted  | 16-Aug-96 | 7-Mar-91  | DIGITAL TRANSMISSION SYSTEM  |
| B0373       | DE      | 96927805     | 696120046    | Granted  | 16-Aug-96 | 7-Mar-91  | DIGITAL TRANSMISSION SYSTEM  |
| B0373       | CA      | 2,211,215    | 2,211,215    | Granted  | 16-Aug-96 | 17-Apr-91 | DIGITAL TRANSMISSION SYSTEM  |
| B0405       | FR      | 96944959     | 0367086      | Granted  | 13-Dec-96 | 6-Feb-92  | INTERACTIVE SERVICES   |
| B0405       | FR      | 96944959     | 0367086      | Granted  | 13-Dec-96 | 6-Feb-92  | INTERACTIVE SERVICES   |
| B0405       | DE      | 96944959     | 696193384    | Granted  | 13-Dec-96 | 6-Feb-92  | INTERACTIVE SERVICES   |
| B0433       | JP      | 06-309739    | 3897881      | Granted  | 24-Oct-97 | 5-Jan-97  | AN EXCHANGE SWITCHING SYSTEM FOR A COMMUNICATION NETWORK AND A METHOD OF ROUTING TRAFFIC   |
| B0438       | FR      | 97980405     | 0388700      | Granted  | 21-Mar-97 | 16-Oct-92 | METHOD FOR CHARGING IN A DATA COMMUNICATION NETWORK  |
| B0438       | FR      | 97980405     | 0388700      | Granted  | 21-Mar-97 | 16-Oct-92 | METHOD FOR CHARGING IN A DATA COMMUNICATION NETWORK  |
| B0438       | DE      | 97980405     | 697164328    | Granted  | 21-Mar-97 | 16-Oct-92 | METHOD FOR CHARGING IN A DATA COMMUNICATION NETWORK  |
| B0480       | SE      | 97958993     | 0349399      | Granted  | 4-Aug-97  | 12-Feb-93 | COMMUNICATIONS NETWORK MONITORING  |
| B0480       | JP      | 2069-121769  | 4351467      | Granted  | 6-Mar-99  | 31-Jul-93 | COMMUNICATIONS NETWORK MONITORING  |
| B0480       | FR      | 97958993     | 0349399      | Granted  | 4-Aug-97  | 12-Feb-93 | COMMUNICATIONS NETWORK MONITORING  |
| B0480       | FR      | 97958993     | 0349399      | Granted  | 4-Aug-97  | 12-Feb-93 | COMMUNICATIONS NETWORK MONITORING  |
| B0480       | DE      | 97958993     | 697190021    | Granted  | 4-Aug-97  | 12-Feb-93 | COMMUNICATIONS NETWORK MONITORING  |
| B0480       | CA      | 2,221,541    | 2,221,541    | Granted  | 15-Nov-97 | 21-Nov-96 | COMMUNICATIONS NETWORK MONITORING  |
| B0486       | FR      | 96089683     | 2310106      | Granted  | 12-Feb-96 | 5-Jul-93  | COMMUNICATIONS IN A DISTRIBUTION NETWORK   |
| B0493       | FR      | 9702571      | 2310113      | Granted  | 7-Feb-97  | 5-Apr-92  | A BIDIRECTIONAL COMMUNICATIONS NETWORK   |
| B0507       | FR      | 97303284     | 03797374     | Granted  | 21-Mar-97 | 24-Nov-94 | SYNCHRONOUS TRANSMISSION SYSTEM ADAPTED TO CARRY BOTH SYNCHRONOUS AND ASYNCHRONOUS TRAFFIC   |
| B0507       | FR      | 97303284     | 03797374     | Granted  | 21-Mar-97 | 24-Nov-94 | SYNCHRONOUS TRANSMISSION SYSTEM ADAPTED TO CARRY BOTH SYNCHRONOUS AND ASYNCHRONOUS TRAFFIC   |
| B0507       | DE      | 97303284     | 69731202     | Granted  | 21-Mar-97 | 24-Nov-94 | SYNCHRONOUS TRANSMISSION SYSTEM ADAPTED TO CARRY BOTH SYNCHRONOUS AND ASYNCHRONOUS TRAFFIC   |
| B0532       | JP      | 504961098    | 3026181      | Granted  | 3-Jul-97  | 14-Jul-96 | TELECOMMUNICATIONS SYSTEM  |
| B0532       | FR      | 979294154    | 0306525      | Granted  | 3-Jul-97  | 24-Nov-94 | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC  |
| B0532       | FR      | 979294154    | 0306525      | Granted  | 3-Jul-97  | 24-Nov-94 | TELECOMMUNICATIONS SYSTEM  |
| B0532       | FR      | 979294154    | 0306525      | Granted  | 3-Jul-97  | 24-Nov-94 | ATM TELECOMMUNICATIONS SYSTEMS AND METHOD FOR ROUTING NARROW BAND TRAFFIC  |
| B0532       | EP      | 4028282      | HEMPY        | Filed    | 4-Oct-94  | HEMPY     | TELECOMMUNICATIONS SYSTEM  |





|        |    |                       |              |                  |           |           |        |   |
|--------|----|-----------------------|--------------|------------------|-----------|-----------|--------|---|
| 00951  | DE | 997077443             | 69198963     | Granted          | 19-Mar-99 | 28-Jul-94 | 00951  | CARRYING SPEECH BAND SIGNALS OVER A POWER LINE COMMUNICATIONS SYSTEM  |
| 00992  | GB | 2073297               | 2073297      | Granted          | 17-Mar-98 | 29-Jul-99 | 00992  | SIGNAL COUPLER UNIT   |
| 00994  | GB | 9810583.6             | 2 337 429    | Granted          | 15-May-98 | 29-Jul-99 | 00994  | TELECOMMUNICATIONS SYSTEM   |
| 01068  | JP | 5821257200            | 443122       | Granted          | 9-Nov-99  | 15-Jan-99 | 01068  | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES   |
| 01068  | GB | 9954152.6             | 1 129 557    | Granted          | 9-Nov-99  | 16-Aug-94 | 01068  | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES   |
| 01068  | FR | 9954152.6             | 1 129 557    | Granted          | 9-Nov-99  | 16-Aug-94 | 01068  | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES   |
| 01068  | DE | 9954152.6             | 69198963     | Granted          | 9-Nov-99  | 16-Aug-94 | 01068  | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES   |
| 01068  | CA | 2,950,711             | 2,950,711    | Granted          | 9-Nov-99  | 30-Jul-97 | 01068  | MANAGING INTERNET PROTOCOL CONNECTION ORIENTED SERVICES   |
| 01081  | CA | 2,289,294             | 2,289,294    | Granted          | 17-Nov-99 | 13-Jan-99 | 01081  | VOICE OVER INTERNET PROTOCOL NETWORK ARCHITECTURE   |
| 01008  | JP | 4-10222               | 290620       | Granted          | 29-Jan-92 | 30-Jul-99 | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 01008  | JP | 11-108872             | 356395       | Granted          | 16-Apr-99 | 11-Jun-94 | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 01008  | GB | 92101304              | 0 496 427    | Inactive         | 24-Jan-92 | 9-Jan-92  | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 01008  | FR | 92101304              | 0 496 427    | Inactive         | 24-Jan-92 | 9-Jan-92  | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 01008  | EP | 92101304              | 0 496 427    | Inactive         | 24-Jan-92 | 9-Jan-92  | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 01008  | DE | 92101304              | 6923332      | Inactive         | 24-Jan-92 | 9-Jan-92  | 01008  | SYSTEM FOR TRANSMITTING AND RECEIVING AURAL INFORMATION AND MODULATED DATA  |
| 010005 | FR | Family member of 9612 | 10-308369    | Assigned Round 2 |           |           |        | Method of making a capacitor for an integrated circuit.   |
| 010005 | EP | Family member of 9612 | 302784       | Assigned Round 2 |           |           |        | Method of making a capacitor for an integrated circuit.   |
| 010044 | JP | 6-626424              | 4382876      | Granted          | 14-Feb-96 | 2-Oct-99  | 010044 | CAPACITOR STRUCTURE FOR AN INTEGRATED CIRCUIT AND METHOD OF FABRICATION THEREOF   |
| 010063 | EP | 9416113.7             | 0 705 478    | Inactive         | 18-May-94 | 22-Sep-99 | 010063 | SPEECH RECOGNITION METHOD USING A TWO-PASS SEARCH   |
| 010063 | CA | 2,263,264             | 2,263,264    | Granted          | 14-Aug-97 | 28-Jul-99 | 010063 | INTERNET-BASED TELEPHONE CALL MANAGER   |
| 010107 | SE | 98309271              | 0 304 942    | Granted          | 24-Nov-98 | 18-Apr-97 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010107 | GB | 98309271              | 0 304 942    | Granted          | 24-Nov-98 | 18-Apr-97 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010107 | FR | 98309271              | 0 304 942    | Granted          | 24-Nov-98 | 18-Apr-97 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010107 | FI | 98309271              | 0 304 942    | Granted          | 24-Nov-98 | 18-Apr-97 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010107 | DE | 98309271              | 6983792      | Granted          | 24-Nov-98 | 18-Apr-97 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010107 | CA | 2,251,459             | 2,251,459    | Granted          | 23-Oct-98 | 25-May-94 | 010107 | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET       |
| 010118 | CA | 2,246,312             | 2,246,312    | Granted          | 29-Jul-98 | 26-Jul-94 | 010118 | CALL PICKUP HOLD DISRUPTIVE RINGING SERVICE   |
| 010136 | CA | 2,246,136             | 2,246,136    | Granted          | 31-Aug-98 | 11-Jul-96 | 010136 | NETWORK INTERCONNECTED COMPUTING DEVICE, SERVER AND NOTIFICATION METHOD   |
| 010137 | CA | 2,246,192             | 2,246,192    | Granted          | 31-Aug-98 | 22-Feb-99 | 010137 | METHOD AND DEVICE FOR BRIDGING DATA TELEPHONE NETWORKS  |
| 010139 | CA | 2,246,139             | 2,246,139    | Granted          | 31-Aug-98 | 4-Dec-97  | 010139 | METHOD AND DEVICES FOR PROVIDING NETWORK SERVICES FROM SEVERAL SERVERS  |
| 010143 | GB | 99306045              | 1 009 343    | Granted          | 28-Jul-99 | 25-Jul-97 | 010143 | METHOD AND APPARATUS FOR AUTOMATIC CALL SETUP IN DIFFERENT NETWORK DOMAINS  |
| 010143 | FR | 99306045              | 1 009 343    | Granted          | 28-Jul-99 | 25-Jul-97 | 010143 | METHOD AND APPARATUS FOR AUTOMATIC CALL SETUP IN DIFFERENT NETWORK DOMAINS  |
| 010143 | DE | 99306045              | 6993662      | Granted          | 28-Jul-99 | 25-Jul-97 | 010143 | METHOD AND APPARATUS FOR AUTOMATIC CALL SETUP IN DIFFERENT NETWORK DOMAINS  |
| 010143 | CA | 2,288,564             | 2,288,564    | Granted          | 9-Apr-99  | 12-Jul-99 | 010143 | METHOD AND APPARATUS FOR AUTOMATIC CALL SETUP IN DIFFERENT NETWORK  |
| 010141 | NX | 961094                | 22052        | Granted          | 6-Feb-96  | 24-May-94 | 010141 | LONG DISTANCE SERVICES BUREAU   |
| 010150 | CA | 2,251,154             | 2,251,154    | Granted          | 19-Oct-98 | 7-Jan-99  | 010150 | SYSTEM FOR MANAGING AN AUDIO CONFERENCE   |
| 010182 | GB | 99301965              | 0 942 277    | Granted          | 15-Mar-99 | 19-Jan-11 | 010182 | METHOD AND SYSTEM FOR ASSIGNING MULTIPLE DIRECTORY NUMBERS (DN) TO A PERSONAL COMMUNICATION SYSTEM (PCS) TELEPHONE                |
| 010182 | FR | 99301965              | 0 942 277    | Granted          | 15-Mar-99 | 19-Jan-11 | 010182 | METHOD AND SYSTEM FOR ASSIGNING MULTIPLE DIRECTORY NUMBERS (DN) TO A PERSONAL COMMUNICATION SYSTEM (PCS) TELEPHONE                |
| 010182 | DE | 99301965              | 0 942 277    | Granted          | 15-Mar-99 | 19-Jan-11 | 010182 | METHOD AND SYSTEM FOR ASSIGNING MULTIPLE DIRECTORY NUMBERS (DN) TO A PERSONAL COMMUNICATION SYSTEM (PCS) TELEPHONE                |
| 010190 | EP | 3720993               | HEMPHY       | Filed            | 2-Jun-93  |           | 010190 | METHOD AND SYSTEM FOR HANDLING MISSED CALLS   |
| 010115 | GB | 99308716              | 0 999 712    | Granted          | 3-Nov-99  | 24-Dec-98 | 010115 | MULTI-MEDIA CHANNEL MANAGEMENT THROUGH PSTN SIGNALLING  |
| 010115 | FR | 99308716              | 0 999 712    | Granted          | 3-Nov-99  | 24-Dec-98 | 010115 | MULTI-MEDIA CHANNEL MANAGEMENT THROUGH PSTN SIGNALLING  |
| 010115 | DE | 99308716              | 0 999 712    | Granted          | 3-Nov-99  | 24-Dec-98 | 010115 | MULTI-MEDIA CHANNEL MANAGEMENT THROUGH PSTN SIGNALLING  |
| 010156 | GB | 9931303               | 1 208 682    | Granted          | 7-Jun-00  | 6-Oct-94  | 010156 | METHODS AND SYSTEM FOR CONTROLLING NETWORK GATEKEEPER MESSAGE PROCESSING  |
| 010156 | FR | 9931303               | 1 208 682    | Granted          | 7-Jun-00  | 6-Oct-94  | 010156 | METHODS AND SYSTEM FOR CONTROLLING NETWORK GATEKEEPER MESSAGE PROCESSING  |
| 010156 | EP | 4071362               | HEMPHY       | Filed            | 23-Jul-04 |           | 010156 | METHODS AND SYSTEM FOR CONTROLLING NETWORK GATEKEEPER MESSAGE PROCESSING  |
| 010156 | DE | 9931303               | 60014677.4   | Granted          | 7-Jun-00  | 6-Oct-94  | 010156 | METHODS AND SYSTEM FOR CONTROLLING NETWORK GATEKEEPER MESSAGE PROCESSING  |
| 00234  | FR | 875129                | 875129       | Inactive         | 2-Sep-87  | 2-Sep-87  | 00234  | DISPLAY ADD-ON BASE FOR A TELEPHONE SET   |
| 00245  | FR | 876063                | 876063       | Inactive         | 19-Oct-87 | 19-Oct-87 | 00245  | TELEPHONE HANDETS   |
| 002616 | JP | 4-115464              | 303732       | Granted          | 8-Apr-92  | 21-Jan-90 | 002616 | ROTATING-ACCESS-ATM-SIM PACKET SWITCH   |
| 002616 | CA | 2,061,850             | 2,061,850    | Inactive         | 26-Feb-92 | 2-Aug-94  | 002616 | ROTATING-ACCESS-ATM-SIM PACKET SWITCH   |
| 00320  | GB | 9121144.2             | 0 250 665    | Inactive         | 4-Oct-91  | 31-Aug-94 | 00320  | IMPROVED CALL SETUP IN A COMMUNICATION SYSTEM WITH DYNAMIC CHANNEL ALLOCAT.   |
| 00342  | SG | 9920692.2             | 3398         | Granted          | 19-Jun-96 | 19-Jun-96 | 00342  | SPONTANEOUS CALL WAITING IDENTIFICATION   |
| 00342  | JP | 04-21632              | 29278        | Granted          | 22-Jul-92 | 22-Oct-99 | 00342  | SPONTANEOUS CALL WAITING IDENTIFICATION   |
| 00342  | HK | 9900522               | 961816       | Granted          | 9-Sep-96  | 3-Oct-99  | 00342  | SPONTANEOUS CALL WAITING IDENTIFICATION   |
| 00342  | GB | 9213060.6             | 2259113      | Inactive         | 19-Jun-92 | 4-Jan-99  | 00342  | SPONTANEOUS CALL WAITING IDENTIFICATION   |
| 00387  | JP | 05-50602              | 3291350      | Granted          | 25-Mar-93 | 22-Mar-92 | 00387  | METHOD AND APPARATUS FOR TESTING DIGITAL SYSTEMS  |
| 003743 | EP | 99304466.3            | 0 578 374    | Inactive         | 8-Jun-99  | 2-Dec-99  | 003743 | METHOD AND APPARATUS FOR PROVIDING A PERSONAL LOCATOR, ACCESS CONTROL AND ASSET TRACKING SERVICE USING AN IN-BUILDING TELENETWORK |
| 003745 | GB | 99307646.1            | 0 587 575    | Inactive         | 3-Apr-99  | 26-May-99 | 003745 | TELEPHONE LINE INTERFACE CIRCUIT WITH VOLTAGE SWITCHING   |
| 003745 | FR | 99307646.1            | 0 587 575    | Inactive         | 3-Apr-99  | 26-May-99 | 003745 | TELEPHONE LINE INTERFACE CIRCUIT WITH VOLTAGE SWITCHING   |
| 003745 | EP | 99307646.1            | 0 587 575    | Inactive         | 3-Apr-99  | 26-May-99 | 003745 | TELEPHONE LINE INTERFACE CIRCUIT WITH VOLTAGE SWITCHING   |
| 003745 | DE | 99307646.1            | 69222968.3   | Inactive         | 3-Apr-99  | 26-May-99 | 003745 | TELEPHONE LINE INTERFACE CIRCUIT WITH VOLTAGE SWITCHING   |
| 003745 | CA | 2,105,376             | 2,105,376    | Inactive         | 3-Apr-99  | 19-Feb-97 | 003745 | TELEPHONE LINE INTERFACE CIRCUIT WITH VOLTAGE SWITCHING   |
| 003770 | EP | 94117291.9            | 0 641 136    | Inactive         | 2-Nov-94  | 12-Sep-92 | 003770 | LOW POWER WIRELESS SYSTEM FOR TELEPHONE SERVICES  |
| 003772 | JP | 6-76464               | 3426023      | Granted          | 22-Mar-94 | 9-May-93  | 003772 | INTEGRATED CIRCUIT PACKAGING  |
| 003869 | GB | 9425752               | 0 285 697    | Granted          | 29-Dec-94 | 18-Nov-98 | 003869 | SCREEN BASED TELEPHONE SET FOR INTERACTIVE ENHANCED TELEPHONE SERVICE   |
| 003869 | GB | 9811629.2             | 0 302 766    | Granted          | 29-May-98 | 18-Nov-98 | 003869 | SCREEN BASED TELEPHONE SET FOR INTERACTIVE ENHANCED TELEPHONE SERVICE   |
| 003869 | GB | 9811629.2             | 0 302 519    | Granted          | 29-May-98 | 18-Nov-98 | 003869 | SCREEN BASED TELEPHONE SET FOR INTERACTIVE ENHANCED TELEPHONE SERVICE   |
| 003869 | CA | 2,138,069             | 2,138,069    | Granted          | 14-Dec-94 | 27-Nov-90 | 003869 | SCREEN BASED TELEPHONE SET FOR INTERACTIVE ENHANCED TELEPHONE SERVICE AND METHOD OF OPERATING SAME BY MICROPROCESSOR CONTROL      |
| 003917 | GB | 96941533.8            | 0 885 416    | Granted          | 19-Dec-96 | 15-Sep-99 | 003917 | ENCODING TECHNIQUE FOR SOFTWARE AND HARDWARE  |
| 003917 | FR | 96941533.8            | 0 885 416    | Granted          | 19-Dec-96 | 15-Sep-99 | 003917 | ENCODING TECHNIQUE FOR SOFTWARE AND HARDWARE  |
| 003917 | DE | 96941533.8            | 69604307.6   | Granted          | 19-Dec-96 | 15-Sep-99 | 003917 | ENCODING TECHNIQUE FOR SOFTWARE AND HARDWARE  |
| 003917 | CA | 2,243,468             | 2,243,469    | Granted          | 19-Dec-96 | 31-Oct-90 | 003917 | ENCODING TECHNIQUE FOR SOFTWARE AND HARDWARE  |
| 003953 | CA | 2,172,205             | 2,172,205    | Granted          | 29-Mar-96 | 30-Jul-92 | 003953 | METHOD OF TRACING THE ROUTE OF VIRTUAL CONNECTIONS  |
| 003954 | JP | 9-515902              | 314362       | Granted          | 9-Nov-99  | 26-Oct-91 | 003954 | A METHOD OF COMMUNICATING INFORMATION AND TERMINAL  |
| 003954 | GB | 9939395.3             | 0 739 557    | Granted          | 9-Nov-99  | 21-Jan-94 | 003954 | COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| 003954 | FR | 9939395.3             | 0 739 557    | Granted          | 9-Nov-99  | 21-Jan-94 | 003954 | COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| 003954 | DE | 9939395.3             | 695 32467.5  | Granted          | 9-Nov-99  | 21-Jan-94 | 003954 | COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| 003954 | CA | 2,180,013             | 2,180,013    | Granted          | 9-Nov-99  | 29-May-90 | 003954 | COMMUNICATIONS IN A DISTRIBUTION NETWORK  |
| 003971 | GB | 96900070.2            | 0 852 891    | Granted          | 10-Jan-96 | 4-Jul-91  | 003971 | MOUNTING ARRANGEMENT FOR A NOISE CANCELLING MICROPHONE  |
| 003971 | FR | 96900070.2            | 0 852 891    | Granted          | 10-Jan-96 | 4-Jul-91  | 003971 | MOUNTING ARRANGEMENT FOR A NOISE CANCELLING MICROPHONE  |
| 003971 | DE | 96900070.2            | 696 13 706.2 | Granted          | 10-Jan-96 | 4-Jul-91  | 003971 | MOUNTING ARRANGEMENT FOR A NOISE CANCELLING MICROPHONE  |
| 003909 | GB | 96921848.6            | 0 845 196    | Granted          | 10-Jul-96 | 2-Jul-93  | 003909 | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| 003909 | FR | 96921848.6            | 0 845 196    | Granted          | 10-Jul-96 | 2-Jul-93  | 003909 | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| 003909 | DE | 96921848.6            | 69689925.3   | Granted          | 10-Jul-96 | 2-Jul-93  | 003909 | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| 003909 | CA | 2,227,474             | 2,227,474    | Granted          | 10-Jul-96 | 21-May-92 | 003909 | AN IMPROVED ACCESS TO TELECOMMUNICATIONS NETWORKS IN MULTISERVICE ENVIRONMENT   |
| 003901 | FR | 96-1805               | 961805       | Granted          | 25-Mar-96 | 31-Oct-96 | 003901 | TELEPHONE NETWORK SET   |
| 003942 | GB | 99309193.5            | 0 841 792    | Granted          | 3-Nov-97  | 12-May-94 | 003942 | INTERACTIVE SUBSCRIBER TELEPHONE TERMINAL WITH AUTOMATIC MANAGEMENT SOFTWARE DOWNLOAD FEATURE                                     |

| Pub No | App No | App Title     | App Type   | App Status | App Date  | App Class | App Desc   |
|--------|--------|---------------|------------|------------|-----------|-----------|--|
| 032842 | FR     | 97387935.0    | 641.792    | granted    | 24-May-02 | 032842    | INTERACTIVE SUBSCRIBER TELEPHONE TERMINAL WITH AUTOMATIC MANAGEMENT SOFTWARE DOWNLOADED FEATURE  |
| 032842 | DE     | 97387935.0    | 6972947.6  | granted    | 24-May-02 | 032842    | INTERACTIVE SUBSCRIBER TELEPHONE TERMINAL WITH AUTOMATIC MANAGEMENT SOFTWARE DOWNLOADED FEATURE  |
| 032848 | GB     | 96522406.6    | 0.697.393  | granted    | 9-Oct-96  | 032848    | HIGH CAPACITY ATM SWITCH   |
| 032848 | FR     | 96522406.6    | 0.697.393  | granted    | 9-Oct-96  | 032848    | HIGH CAPACITY ATM SWITCH   |
| 032848 | DE     | 96522406.6    | 69619843.6 | granted    | 9-Oct-96  | 032848    | HIGH CAPACITY ATM SWITCH   |
| 032848 | CA     | 2,233.629     | 2,233.629  | granted    | 9-Oct-96  | 032848    | HIGH CAPACITY ATM SWITCH   |
| 032898 | GB     | 9700971.1     | 2.309.964  | granted    | 17-Jan-97 | 032898    | FACILITATING SECURE COMMUNICATIONS IN A DISTRIBUTION NETWORK   |
| 032898 | CA     | 2,152.634     | 2,152.634  | granted    | 17-Jan-97 | 032898    | FACILITATING SECURE COMMUNICATIONS IN A DISTRIBUTION NETWORK   |
| 032910 | GB     | 97924834.0    | 0.914.749  | granted    | 11-Jun-97 | 032910    | METHOD AND APPARATUS FOR REASSEMBLY OF DATA PACKETS INTO MESSAGES IN AN ASYNCHRONOUS TRANSFER MODE COMMUNICATIONS SYSTEM   |
| 032910 | FR     | 97924834.0    | 0.914.749  | granted    | 11-Jun-97 | 032910    | METHOD AND APPARATUS FOR REASSEMBLY OF DATA PACKETS INTO MESSAGES IN AN ASYNCHRONOUS TRANSFER MODE COMMUNICATIONS SYSTEM   |
| 032910 | DE     | 97924834.0    | 69727936.0 | granted    | 11-Jun-97 | 032910    | METHOD AND APPARATUS FOR REASSEMBLY OF DATA PACKETS INTO MESSAGES IN AN ASYNCHRONOUS TRANSFER MODE COMMUNICATIONS SYSTEM   |
| 032915 | GB     | 97310458.1    | 0.855.927  | granted    | 22-Dec-97 | 032915    | METHOD OF PROVIDING CONFERENCING IN TELEPHONY  |
| 032915 | FR     | 97310458.1    | 0.855.927  | granted    | 22-Dec-97 | 032915    | METHOD OF PROVIDING CONFERENCING IN TELEPHONY  |
| 032915 | DE     | 97310458.1    | 69732075.3 | granted    | 22-Dec-97 | 032915    | METHOD OF PROVIDING CONFERENCING IN TELEPHONY  |
| 032915 | CA     | 2,224.541     | 2,224.541  | granted    | 9-Dec-97  | 032915    | METHOD OF PROVIDING CONFERENCING IN TELEPHONY  |
| 032984 | JP     | 104518746     | 3177253    | granted    | 9-Oct-01  | 032984    | PROXIMITY AND AMBIENT LIGHT MONITOR  |
| 032984 | GB     | 97543705      | 0.886.920  | granted    | 9-Oct-01  | 032984    | PROXIMITY AND AMBIENT LIGHT MONITOR  |
| 032984 | FR     | 97543705      | 0.886.920  | granted    | 9-Oct-01  | 032984    | PROXIMITY AND AMBIENT LIGHT MONITOR  |
| 032971 | GB     | 97546978      | 0.954.943  | granted    | 3-Dec-97  | 032971    | DYNAMIC TRAFFIC CONDITIONING   |
| 032971 | FR     | 97546978      | 0.954.943  | granted    | 3-Dec-97  | 032971    | DYNAMIC TRAFFIC CONDITIONING   |
| 032971 | DE     | 97546978      | 69734013.3 | granted    | 3-Dec-97  | 032971    | DYNAMIC TRAFFIC CONDITIONING   |
| 032981 | JP     | 104518704     | HEMPY      | Inactive   | 23-Apr-01 | 032981    | METHODS OF AND APPARATUS FOR PROVIDING TELEPHONE CALL CONTROL AND INFORMATION  |
| 032988 | CA     | 2,254.407     | 2,254.407  | granted    | 17-Nov-98 | 032988    | METHOD AND APPARATUS FOR A FLEXIBLE ACCESS RATE COMMON MEMORY PACKET SWITCH  |
| 032998 | GB     | 97455882      | 0.947.085  | granted    | 25-Nov-97 | 032998    | UNIVERSAL COMPATIBILITY SOFTWARE SYSTEM FOR SERVICES IN COMMUNICATIONS AND INFORMATION PROCESSING NETWORKS   |
| 032998 | FR     | 97455882      | 0.947.085  | granted    | 25-Nov-97 | 032998    | UNIVERSAL COMPATIBILITY SOFTWARE SYSTEM FOR SERVICES IN COMMUNICATIONS AND INFORMATION PROCESSING NETWORKS   |
| 032998 | DE     | 97455882      | 69739795.2 | granted    | 25-Nov-97 | 032998    | UNIVERSAL COMPATIBILITY SOFTWARE SYSTEM FOR SERVICES IN COMMUNICATIONS AND INFORMATION PROCESSING NETWORKS   |
| 032998 | CA     | 2,275.132     | 2,275.132  | granted    | 25-Nov-97 | 032998    | UNIVERSAL COMPATIBILITY SOFTWARE SYSTEM FOR SERVICES IN COMMUNICATIONS AND INFORMATION PROCESSING NETWORKS   |
| 032967 | CA     | 2,243.078     | 2,243.078  | granted    | 25-Sep-98 | 032967    | APPARATUS AND METHOD FOR COMMUNICATING BOTH DELAY-SENSITIVE DATA SPORADIC DATA   |
| 032948 | GB     | 98306300.1    | 0.920.234  | granted    | 13-Oct-98 | 032948    | A TELEPHONY SYSTEM AND METHOD OF SIGNALLING  |
| 032948 | FR     | 98306300.1    | 0.920.234  | granted    | 13-Oct-98 | 032948    | A TELEPHONY SYSTEM AND METHOD OF SIGNALLING  |
| 032948 | DE     | 98306300.1    | 69831712.3 | granted    | 13-Oct-98 | 032948    | A TELEPHONY SYSTEM AND METHOD OF SIGNALLING  |
| 032950 | GB     | 98029736.3    | 0.968.996  | granted    | 25-Feb-98 | 032950    | NETWORK ACCESS IN MULTI-SERVICE ENVIRONMENT  |
| 032950 | FR     | 98029736.3    | 0.968.996  | granted    | 25-Feb-98 | 032950    | NETWORK ACCESS IN MULTI-SERVICE ENVIRONMENT  |
| 032950 | DE     | 98029736.3    | 69832474.4 | granted    | 25-Feb-98 | 032950    | NETWORK ACCESS IN MULTI-SERVICE ENVIRONMENT  |
| 032950 | CA     | 2,281.543     | 2,281.543  | granted    | 25-Feb-98 | 032950    | NETWORK ACCESS IN MULTI-SERVICE ENVIRONMENT  |
| 032926 | JP     | 10357239      | 4142185    | granted    | 16-Dec-98 | 032926    | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| 032926 | GB     | 98310270.8    | 0.924.917  | granted    | 15-Dec-98 | 032926    | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| 032926 | FR     | 98310270.8    | 0.924.917  | granted    | 15-Dec-98 | 032926    | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| 032926 | DE     | 98310270.8    | 0.924.917  | granted    | 15-Dec-98 | 032926    | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| 032926 | CA     | 2,256.221     | 2,256.221  | granted    | 16-Dec-98 | 032926    | METHOD FOR ADDING CONTEXT TO COMMUNICATIONS  |
| 032961 | CA     | 2,222.259     | 2,222.259  | granted    | 25-Nov-97 | 032961    | HTTP DISTRIBUTED REMOTE USER AUTHENTICATION SYSTEM   |
| 032974 | CA     | 2,245.820     | 2,245.820  | granted    | 27-Aug-98 | 032974    | DISTORTION PENALTY MEASUREMENT PROCEDURE IN OPTICAL SYSTEMS USING NOISE LOADING  |
| 032978 | GB     | 98007862.0    | 0.986.996  | granted    | 11-Mar-98 | 032978    | DYNAMIC SELECTION OF MEDIA STREAMS FOR DISPLAY   |
| 032978 | FR     | 98007862.0    | 0.986.996  | granted    | 11-Mar-98 | 032978    | DYNAMIC SELECTION OF MEDIA STREAMS FOR DISPLAY   |
| 032978 | DE     | 98007862.0    | 69810294.3 | granted    | 11-Mar-98 | 032978    | DYNAMIC SELECTION OF MEDIA STREAMS FOR DISPLAY   |
| 032978 | CA     | 2,285.504     | 2,285.504  | granted    | 11-Mar-98 | 032978    | DYNAMIC SELECTION OF MEDIA STREAMS FOR DISPLAY   |
| 032983 | CA     | 2,243.074     | 2,243.074  | granted    | 10-Jul-98 | 032983    | ROUTE SELECTION FOR PATH BALANCING IN CONNECTION-ORIENTED PACKET SWITCHING NETWORKS  |
| 032916 | SE     | 98310272.4    | 0.938.213  | granted    | 15-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | JP     | 10355531      | HEMPY      | Filed      | 15-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | JP     | 2009-211795   | 4976472    | granted    | 14-Sep-09 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | GB     | 98310272.4    | 0.938.213  | granted    | 15-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | FR     | 98310272.4    | 0.938.213  | granted    | 15-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | DE     | 98310272.4    | 0.938.213  | granted    | 15-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032916 | CA     | 2,258.283     | 2,258.283  | granted    | 17-Dec-98 | 032916    | SYSTEM AND METHOD FOR MANAGING INCOMING COMMUNICATION EVENTS USING MULTIPLE MEDIA OPTIONS  |
| 032920 | GB     | 41049397      | 0.434.392  | granted    | 8-Oct-04  | 032920    | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON   |
| 032920 | FR     | 99306993.9    | 0.989.700  | granted    | 23-Aug-99 | 032920    | NETWORK PRESENCE INDICATOR FOR COMMUNICATIONS MANAGEMENT   |
| 032920 | FR     | 41049397      | 0.434.392  | granted    | 8-Oct-04  | 032920    | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON   |
| 032920 | FR     | 99306993.9    | 0.989.700  | granted    | 23-Aug-99 | 032920    | NETWORK PRESENCE INDICATOR FOR COMMUNICATIONS MANAGEMENT   |
| 032920 | EP     | 41049397      | 0.434.392  | Inactive   | 8-Oct-04  | 032920    | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON   |
| 032920 | DE     | 41049397      | 0.434.392  | granted    | 8-Oct-04  | 032920    | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON   |
| 032920 | CA     | 99306993.9    | 69939593.4 | granted    | 23-Aug-99 | 032920    | NETWORK PRESENCE INDICATOR FOR COMMUNICATIONS MANAGEMENT   |
| 032920 | CA     | 2,280.573     | 2,280.573  | granted    | 29-Aug-99 | 032920    | SYSTEM AND METHOD FOR COMMUNICATIONS MANAGEMENT WITH A NETWORK PRESENCE ICON   |
| 032925 | GB     | 98030655      | 0.936.922  | granted    | 23-Dec-98 | 032925    | A DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE BASED COMPUTATION   |
| 032925 | FR     | 98030655      | 0.936.922  | granted    | 23-Dec-98 | 032925    | A DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE BASED COMPUTATION   |
| 032925 | EP     | 98030655      | 0.936.922  | Inactive   | 23-Dec-98 | 032925    | A DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE BASED COMPUTATION   |
| 032925 | DE     | 98030655      | 0.936.922  | granted    | 23-Dec-98 | 032925    | A DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE BASED COMPUTATION   |
| 032925 | CA     | 2,256.937     | 2,256.937  | granted    | 23-Dec-98 | 032925    | A DISTRIBUTED ARCHITECTURE AND ASSOCIATED PROTOCOLS FOR EFFICIENT QUALITY OF SERVICE BASED ROUTE COMPUTATION   |
| 032948 | EP     | 10392529      | HEMPY      | Filed      | 12-Nov-98 | 032948    | MULTIMEDIA CALL SIGNALING SYSTEM AND METHOD  |
| 032948 | EP     | 99309244      | HEMPY      | Filed      | 12-Nov-98 | 032948    | MULTIMEDIA CALL SIGNALING SYSTEM AND METHOD  |
| 032948 | CA     | 2,250.275     | 2,250.275  | granted    | 13-Oct-98 | 032948    | MULTIMEDIA CALL SIGNALING SYSTEM AND METHOD  |
| 032987 | GB     | 98310117.1    | 0.936.922  | granted    | 10-Dec-98 | 032987    | METHOD AND APPARATUS FOR MANAGEMENT OF BANDWIDTH IN A DATA COMMUNICATION NETWORK   |
| 032987 | FR     | 98310117.1    | 0.936.922  | granted    | 10-Dec-98 | 032987    | METHOD AND APPARATUS FOR MANAGEMENT OF BANDWIDTH IN A DATA COMMUNICATION NETWORK   |
| 032987 | DE     | 98310117.1    | 69916224.4 | granted    | 10-Dec-98 | 032987    | METHOD AND APPARATUS FOR MANAGEMENT OF BANDWIDTH IN A DATA COMMUNICATION NETWORK   |
| 032987 | CA     | 2,255.385     | 2,255.385  | granted    | 4-Dec-98  | 032987    | SYSTEM AND METHOD FOR COMMUNICATION SESSION DISPOSITION RESPONSIVE TO EVENTS IN A TELECOMMUNICATIONS NETWORK AND THE INTERNET METHOD AND APPARATUS FOR MANAGEMENT OF BANDWIDTH IN A DATA COMMUNICATION NETWORK |
| 032988 | GB     | 98309207.0    | 0.933.222  | granted    | 24-Nov-98 | 032988    | FACSIMILE SIGNAL TRANSMISSION WITH SUPPRESSION OF MULTIPLE MODULATION AND DEMODULATION ACROSS A CONNECTION   |
| 032988 | FR     | 98309207.0    | 0.933.222  | granted    | 24-Nov-98 | 032988    | FACSIMILE SIGNAL TRANSMISSION WITH SUPPRESSION OF MULTIPLE MODULATION AND DEMODULATION ACROSS A CONNECTION   |
| 032988 | DE     | 69839324.4-06 | 0.933.222  | granted    | 24-Nov-98 | 032988    | FACSIMILE SIGNAL TRANSMISSION WITH SUPPRESSION OF MULTIPLE MODULATION AND DEMODULATION ACROSS A CONNECTION   |
| 032988 | CA     | 2,254.774     | 2,254.774  | granted    | 19-Nov-98 | 032988    | FACSIMILE SIGNAL TRANSMISSION WITH SUPPRESSION OF MULTIPLE MODULATION AND DEMODULATION ACROSS A CONNECTION   |
| 032973 | GB     | 99300713.5    | 0.949.838  | granted    | 7-Apr-99  | 032973    | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE PLANT COMPONENT OF FIBER BASED SYSTEM  |
| 032973 | FR     | 99300713.5    | 0.949.838  | granted    | 7-Apr-99  | 032973    | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE PLANT COMPONENT OF FIBER BASED SYSTEM  |
| 032973 | FR     | 99300713.5    | 0.949.838  | granted    | 7-Apr-99  | 032973    | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE PLANT COMPONENT OF FIBER BASED SYSTEM  |
| 032973 | DE     | 99300713.5    | 69917975   | granted    | 7-Apr-99  | 032973    | ARCHITECTURE REPARTITIONING TO SIMPLIFY OUTSIDE PLANT COMPONENT OF FIBER BASED SYSTEM  |
| 032974 | GB     | 99341102.0    | 0.961.572  | granted    | 27-Aug-99 | 032974    | NOVEL METHOD AND APPARATUS FOR TRAFFIC SHAPING IN A BROADBAND FIBER-BASED ACCESS SYSTEM  |
| 032974 | FR     | 99341102.0    | 0.961.572  | granted    | 27-Aug-99 | 032974    | NOVEL METHOD AND APPARATUS FOR TRAFFIC SHAPING IN A BROADBAND FIBER-BASED ACCESS SYSTEM  |
| 032974 | DE     | 99341102.0    | 69934653   | granted    | 27-Aug-99 | 032974    | NOVEL METHOD AND APPARATUS FOR TRAFFIC SHAPING IN A BROADBAND FIBER-BASED ACCESS SYSTEM  |
| 032974 | CA     | 2,272.278     | 2,272.278  | granted    | 20-Aug-99 | 032974    | NOVEL METHOD AND APPARATUS FOR TRAFFIC SHAPING IN A BROADBAND FIBER-BASED ACCESS SYSTEM  |
| 032944 | CA     | 2,243.369     | 2,243.369  | granted    | 15-Jul-98 | 032944    | SET MEDIATION FOR DATA NETWORK CALL SETUP AND SERVICES INTERWORKING  |
| 032984 | EP     | 98310656.3    | HEMPY      | Filed      | 18-Dec-98 | 032984    | VIDEO CONFERENCING SYSTEM  |
| 032984 | CA     | 2,256.787     | 2,256.787  | granted    | 21-Dec-98 | 032984    | COLLABORATIVE SHARED SPACE   |

|            |    |            |              |          |           |           |        |  |  |
|------------|----|------------|--------------|----------|-----------|-----------|--------|--|--|
| [REDACTED] |    |            |              |          |           |           |        |  |  |
| 803797     | SB | 99151.51   | 180 236      | Granted  | 3-May-00  | 13-Dec-99 | 803797 | TELEPHONE AND DATA NETWORK SERVICES AT A TELEPHONE   |  |
| 803797     | FR | 99151.51   | 180 236      | Granted  | 3-May-00  | 13-Dec-99 | 803797 | TELEPHONE AND DATA NETWORK SERVICES AT A TELEPHONE   |  |
| 803797     | DE | 99151.51   | 6002356      | Granted  | 3-May-00  | 13-Dec-99 | 803797 | TELEPHONE AND DATA NETWORK SERVICES AT A TELEPHONE   |  |
| 803797     | CA | 2,273,657  | 2,273,657    | Granted  | 7-Jul-99  | 21-Sep-99 | 803797 | TELEPHONE AND DATA NETWORK SERVICES AT A TELEPHONE   |  |
| 803854     | SB | 99306382.0 | 9 998 109    | Granted  | 25-Oct-99 | 21-Jul-99 | 803854 | COMMUNICATION NETWORK UTILIZING AUTONOMOUS SERVERS TO ESTABLISH COMMUNICATION SESSIONS   |  |
| 803854     | FR | 99306382.0 | 9 998 109    | Granted  | 25-Oct-99 | 21-Jul-99 | 803854 | COMMUNICATION NETWORK UTILIZING AUTONOMOUS SERVERS TO ESTABLISH COMMUNICATION SESSIONS   |  |
| 803854     | DE | 99306382.0 | 699300151    | Granted  | 25-Oct-99 | 21-Jul-99 | 803854 | COMMUNICATION NETWORK UTILIZING AUTONOMOUS SERVERS TO ESTABLISH COMMUNICATION SESSIONS   |  |
| 803854     | CA | 2,284,451  | 2,284,451    | Granted  | 1-Oct-99  | 16-Jul-99 | 803854 | A COMMUNICATION NETWORK UTILIZING AUTONOMOUS SERVERS TO ESTABLISH A COMMUNICATION SESSIONS                                     |  |
| 803947     | SB | 99302716.8 | 0 366 123    | Granted  | 7-Apr-99  | 3-Jul-99  | 803947 | ROTATOR SWITCH DATA PATH STRUCTURES  |  |
| 803947     | FR | 99302716.8 | 0 366 123    | Granted  | 7-Apr-99  | 3-Jul-99  | 803947 | ROTATOR SWITCH DATA PATH STRUCTURES  |  |
| 803947     | DE | 99302716.8 | 69917855.2   | Granted  | 7-Apr-99  | 3-Jul-99  | 803947 | ROTATOR SWITCH DATA PATH STRUCTURES  |  |
| 803947     | CA | 2,288,361  | 2,288,361    | Granted  | 6-Apr-99  | 15-Jul-99 | 803947 | ROTATOR SWITCH DATA PATH STRUCTURES  |  |
| 804009     | SB | 99309726   | 1 018 823    | Granted  | 3-Dec-99  | 8-Oct-99  | 804009 | APPARATUS AND METHOD FOR PACKET SWITCHING WITH SUPERTRUNKING   |  |
| 804009     | FR | 99309726   | 1 018 823    | Granted  | 3-Dec-99  | 8-Oct-99  | 804009 | APPARATUS AND METHOD FOR PACKET SWITCHING WITH SUPERTRUNKING   |  |
| 804009     | DE | 99309726   | 1 018 823    | Granted  | 3-Dec-99  | 8-Oct-99  | 804009 | APPARATUS AND METHOD FOR PACKET SWITCHING WITH SUPERTRUNKING   |  |
| 804010     | SB | 99306387.1 | 0 986 130    | Granted  | 7-Sep-99  | 22-Nov-99 | 804010 | ECHO CONTROLLER WITH COMPENSATION FOR VARIABLE DELAY NETWORKS  |  |
| 804010     | FR | 99306387.1 | 0 986 130    | Granted  | 7-Sep-99  | 22-Nov-99 | 804010 | ECHO CONTROLLER WITH COMPENSATION FOR VARIABLE DELAY NETWORKS  |  |
| 804010     | DE | 99306387.1 | 69934066.7   | Granted  | 7-Sep-99  | 22-Nov-99 | 804010 | ECHO CONTROLLER WITH COMPENSATION FOR VARIABLE DELAY NETWORKS  |  |
| 804010     | CA | 2,283,065  | 2,283,065    | Granted  | 5-Sep-99  | 5-Jul-99  | 804010 | ECHO CONTROLLER WITH COMPENSATION FOR VARIABLE DELAY NETWORKS  |  |
| 804016     | CA | 2,278,500  | 2,278,500    | Granted  | 7-Jul-99  | 4-Jul-99  | 804016 | DIGITAL SIGNAL FRAMING SYSTEMS AND METHODS   |  |
| 804042     | CA | 2,280,723  | 2,280,723    | Granted  | 4-Feb-99  | 30-Dec-99 | 804042 | A METHOD OF RESOURCE MANAGEMENT AT COMPUTER CONTROLLED TELEPHONE HARDWARE  |  |
| 804054     | JP | 10 362 294 | 438421       | Granted  | 21-Dec-98 | 2-Oct-99  | 804054 | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE        |  |
| 804054     | SB | 89310429   | 0 995 380    | Granted  | 18-Dec-98 | 21-Sep-99 | 804054 | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE        |  |
| 804054     | FR | 89310429   | 0 995 380    | Granted  | 18-Dec-98 | 21-Sep-99 | 804054 | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE        |  |
| 804054     | DE | 89310429   | 69891650.9   | Granted  | 18-Dec-98 | 21-Sep-99 | 804054 | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE        |  |
| 804054     | CA | 2,255,599  | 2,255,599    | Granted  | 4-Dec-98  | 24-Feb-99 | 804054 | METHOD AND SYSTEM FOR VOICE CALL COMPLETION USING INFORMATION RETRIEVED FROM AN OPEN APPLICATION ON A COMPUTING MACHINE        |  |
| 804106     | SB | 99303447.0 | 0 955 728    | Granted  | 30-Apr-99 | 28-Jul-99 | 804106 | METHOD AND APPARATUS FOR PERFORMING DATA PULSE DETECTION   |  |
| 804106     | FR | 99303447.0 | 0 955 728    | Granted  | 30-Apr-99 | 28-Jul-99 | 804106 | METHOD AND APPARATUS FOR PERFORMING DATA PULSE DETECTION   |  |
| 804106     | DE | 99303447.0 | 69932118     | Granted  | 30-Apr-99 | 28-Jul-99 | 804106 | METHOD AND APPARATUS FOR PERFORMING DATA PULSE DETECTION   |  |
| 804120     | SB | 99309782.0 | 1 009 134    | Granted  | 6-Dec-99  | 13-Feb-13 | 804120 | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME                       |  |
| 804120     | FR | 99309782.0 | 1 009 134    | Granted  | 6-Dec-99  | 13-Feb-13 | 804120 | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME                       |  |
| 804120     | EP | 99309782.0 | 1 009 134    | Inactive | 6-Dec-99  | 13-Feb-13 | 804120 | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME                       |  |
| 804120     | DE | 69944574.0 | 1 009 134    | Granted  | 6-Dec-99  | 13-Feb-13 | 804120 | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME                       |  |
| 804120     | CA | 2,288,556  | 2,288,556    | Granted  | 16-Nov-99 | 3-Feb-00  | 804120 | HYBRID TDM AND ATM VOICE SWITCHING CENTRAL OFFICE AND METHOD OF COMPLETING INTER-OFFICE CALLS USING SAME                       |  |
| 804128     | EP | 99973138.3 | HEMPY        | Filed    | 26-Nov-99 | HEMPY     | 804128 | METHOD AND SYSTEM FOR WEBSITE OVERVIEW   |  |
| 804128     | EP | 11 569 584 | HEMPY        | Filed    | 26-Nov-99 | HEMPY     | 804128 | METHOD AND SYSTEM FOR WEBSITE OVERVIEW   |  |
| 804128     | CA | 2,346,156  | 2,346,156    | Granted  | 26-Nov-99 | 11-May-10 | 804128 | METHOD AND SYSTEM FOR WEBSITE OVERVIEW   |  |
| 804206     | CA | 2,243,824  | 2,243,824    | Granted  | 8-Oct-98  | 6-Feb-07  | 804206 | SERVICE SELECTABLE NETWORK   |  |
| 804206     | AU | 60731/99   | 799989       | Granted  | 8-Oct-99  | 21-Aug-00 | 804206 | SERVICE CAPABLE NETWORK  |  |
| 804238     | SB | 99103852.1 | 0 107 206    | Granted  | 21-Dec-99 | 16-Aug-06 | 804238 | SCHEME FOR IP NETWORKING IN THE HOME   |  |
| 804238     | FR | 99103852.1 | 0 107 206    | Granted  | 21-Dec-99 | 16-Aug-06 | 804238 | SCHEME FOR IP NETWORKING IN THE HOME   |  |
| 804238     | DE | 99103852.1 | 0 107 206    | Granted  | 21-Dec-99 | 16-Aug-06 | 804238 | SCHEME FOR IP NETWORKING IN THE HOME   |  |
| 804238     | CA | 2,292,029  | 2,292,029    | Granted  | 18-Dec-99 | 7-May-00  | 804238 | METHOD AND APPARATUS FOR CONNECTING A HOME NETWORK TO THE INTERNET   |  |
| 804242     | SB | 99306919.0 | 1 006 673    | Granted  | 2-Dec-99  | 26-Oct-99 | 804242 | LOAD COIL DEVICE   |  |
| 804242     | FR | 99306919.0 | 1 006 673    | Granted  | 2-Dec-99  | 26-Oct-99 | 804242 | LOAD COIL DEVICE   |  |
| 804242     | DE | 99306919.0 | 1 006 673    | Granted  | 2-Dec-99  | 26-Oct-99 | 804242 | LOAD COIL DEVICE   |  |
| 804269     | CA | 2,280,574  | 2,280,574    | Granted  | 28-Aug-99 | 6-May-00  | 804269 | NETWORK PRESENCE INDICATOR FOR COMMUNICATIONS MANAGEMENT   |  |
| 804316     | CA | 2,291,802  | 2,291,802    | Granted  | 7-Dec-99  | 5-Aug-00  | 804316 | EXPLICIT RATE COMPUTATION FOR FLOW CONTROL IN COMPUTER NETWORKS  |  |
| 804339     | JP | 11-31,2249 | 446929       | Granted  | 2-Nov-99  | 5-Mar-10  | 804339 | EXTENDED TRUNK SWITCHING ACROSS MULTIPLE SWITCHES WITH ATM LINKS   |  |
| 804339     | CA | 2,288,356  | 2,288,356    | Granted  | 2-Nov-99  | 7-Jul-00  | 804339 | EXTENDED TRUNK SWITCHING ACROSS MULTIPLE SWITCHES WITH ATM LINKS   |  |
| 804390     | SB | 99101745.0 | 1 024 753    | Granted  | 21-Dec-99 | 2-Apr-00  | 804390 | METHOD OF VIRTUAL CIRCUIT RECONNECTION WITHOUT LOSS OF CALL SESSION  |  |
| 804390     | FR | 99101745.0 | 1 024 753    | Granted  | 21-Dec-99 | 2-Apr-00  | 804390 | METHOD OF VIRTUAL CIRCUIT RECONNECTION WITHOUT LOSS OF CALL SESSION  |  |
| 804390     | DE | 99101745.0 | 69938448.6   | Granted  | 21-Dec-99 | 2-Apr-00  | 804390 | METHOD OF VIRTUAL CIRCUIT RECONNECTION WITHOUT LOSS OF CALL SESSION  |  |
| 804390     | CA | 2,292,260  | 2,292,260    | Granted  | 14-Dec-99 | 11-Sep-07 | 804390 | METHOD OF VIRTUAL CIRCUIT RECONNECTION WITHOUT LOSS OF CALL SESSION  |  |
| 804496     | JP | 11-285,241 | 441,330      | Granted  | 6-Oct-99  | 27-Nov-00 | 804496 | SYSTEM AND METHOD FOR ESTABLISHING DYNAMIC HIGH USAGE TRUNK GROUPS   |  |
| 804525     | SB | 3061782.0  | 1 094 635    | Granted  | 18-Oct-00 | 5-Aug-00  | 804525 | METHOD AND APPARATUS FOR SELECTING NETWORK ENTITIES  |  |
| 804525     | FR | 3061782.0  | 1 094 635    | Granted  | 18-Oct-00 | 5-Aug-00  | 804525 | METHOD AND APPARATUS FOR SELECTING NETWORK ENTITIES  |  |
| 804525     | DE | 3061782.0  | 60042676.9   | Granted  | 18-Oct-00 | 5-Aug-00  | 804525 | METHOD AND APPARATUS FOR SELECTING NETWORK ENTITIES  |  |
| 804525     | CA | 2,322,720  | 2,322,720    | Granted  | 18-Oct-00 | 30-Jun-00 | 804525 | METHOD AND APPARATUS FOR SELECTING NETWORK ENTITIES  |  |
| 804114     | JP | 0-513928   | 3843804      | Granted  | 28-Aug-96 | 8-Sep-06  | 804114 | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |  |
| 804114     | SB | 86977484.0 | 0 852 872    | Granted  | 28-Aug-96 | 31-Oct-01 | 804114 | METHOD AND APPARATUS FOR ORIGINATING VOICE CALLS   |  |
| 804114     | FR | 86977484.0 | 0 852 872    | Granted  | 28-Aug-96 | 31-Oct-01 | 804114 | METHOD AND APPARATUS FOR ORIGINATING VOICE CALLS   |  |
| 804114     | DE | 86977484.0 | 69616576.7   | Granted  | 28-Aug-96 | 31-Oct-01 | 804114 | METHOD AND APPARATUS FOR ORIGINATING VOICE CALLS   |  |
| 804114     | CA | 2,228,661  | 2,228,661    | Granted  | 28-Aug-96 | 26-Oct-00 | 804114 | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |  |
| 804114     | AU | 19667295   | 694682       | Granted  | 28-Aug-96 | 27-Jul-00 | 804114 | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |  |
| 804114     | JU | 67295/96   | 694682       | Granted  | 28-Aug-96 | 27-Jul-00 | 804114 | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |  |
| 804116     | JP | 0-513932   | 3092777      | Granted  | 26-Sep-96 | 18-Aug-00 | 804116 | METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS TO TELECOMMUNICATIONS TERMINALS   |  |
| 804116     | SB | 86993939   | 0 852 884    | Granted  | 26-Sep-96 | 19-Dec-01 | 804116 | METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS TO TELECOMMUNICATIONS TERMINALS   |  |
| 804116     | FR | 86993939   | 0 852 884    | Granted  | 26-Sep-96 | 19-Dec-01 | 804116 | METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS TO TELECOMMUNICATIONS TERMINALS   |  |
| 804116     | DE | 86993939   | 696 18 216.5 | Granted  | 26-Sep-96 | 19-Dec-01 | 804116 | METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS TO TELECOMMUNICATIONS TERMINALS   |  |
| 804116     | CA | 2,228,682  | 2,228,682    | Granted  | 26-Sep-96 | 16-May-00 | 804116 | METHODS AND APPARATUS FOR ORIGINATING VOICE CALLS  |  |
| 804146     | SB | 2395511    | 2395511      | Granted  | 12-Dec-97 | 24-Oct-01 | 804146 | VIRTUAL PRIVATE NETWORK SERVICE PROVIDER FOR ASYNCHRONOUS TRANSFER MODE NETWORK  |  |
| 804146     | EP | 9746002.0  | HEMPY        | Filed    | 12-Dec-97 | HEMPY     | 804146 | VIRTUAL PRIVATE NETWORK SERVICE PROVIDER FOR ASYNCHRONOUS TRANSFER MODE NETWORK  |  |
| 804276     | MX | 885685     | HEMPY        | Filed    | 15-Jul-98 | HEMPY     | 804276 | SYSTEM AND METHOD OF OPERATION FOR CORRECTLY ROUTING LOCATION UPDATE SERVICE MESSAGES IN A CELLULAR DIGITAL PACKET DATA SYSTEM |  |
| 804299     | SB | 9927399.0  | 2 332 338    | Granted  | 11-Dec-98 | 19-Jun-00 | 804299 | MARKING AND SCREENING TELEPHONE CALLS  |  |
| 804299     | FR | 98 15695   | 9815695      | Granted  | 11-Dec-98 | 19-Oct-00 | 804299 | MARKING AND SCREENING TELEPHONE CALLS  |  |
| 804299     | DE | 19897000.1 | HEMPY        | Filed    | 18-Dec-98 | HEMPY     | 804299 | MARKING AND SCREENING TELEPHONE CALLS  |  |
| 804299     | CA | 2,255,344  | 2,255,344    | Granted  | 9-Dec-98  | 21-Oct-98 | 804299 | MARKING AND SCREENING TELEPHONE CALLS  |  |
| 804449     | SB | 3007234.0  | 1 024 430    | Granted  | 31-Jan-00 | 15-Sep-04 | 804449 | FAULT-TOLERANT JAVA VIRTUAL MACHINE  |  |
| 804449     | FR | 3007234.0  | 1 024 430    | Granted  | 31-Jan-00 | 15-Sep-04 | 804449 | FAULT-TOLERANT JAVA VIRTUAL MACHINE  |  |
| 804449     | DE | 3007234.0  | 60016058.2   | Granted  | 31-Jan-00 | 15-Sep-04 | 804449 | FAULT-TOLERANT JAVA VIRTUAL MACHINE  |  |
| 804449     | CA | 2,284,654  | 2,284,654    | Granted  | 7-Jan-00  | 4-Nov-00  | 804449 | FAULT-TOLERANT JAVA VIRTUAL MACHINE  |  |
| 804450     | SB | 99101232.1 | 1 024 633    | Granted  | 16-Dec-99 | 29-Sep-04 | 804450 | SCALABLE GATEKEEPERS IN AN INTERNET TELEPHONE SYSTEM AND A METHOD OF OPERATION   |  |
| 804450     | FR | 99101232.1 | 1 024 633    | Granted  | 16-Dec-99 | 29-Sep-04 | 804450 | SCALABLE GATEKEEPERS IN AN INTERNET TELEPHONE SYSTEM AND A METHOD OF OPERATION   |  |
| 804450     | DE | 99101232.1 | 69926411.3   | Granted  | 16-Dec-99 | 29-Sep-04 | 804450 | SCALABLE GATEKEEPERS IN AN INTERNET TELEPHONE SYSTEM AND A METHOD OF OPERATION   |  |
| 804451     | SB | 93998911   | 1 011 043    | Granted  | 7-Dec-99  | 31-Jan-99 | 804451 | METHOD AND APPARATUS FOR LOADING A JAVA APPLICATION PROGRAM  |  |
| 804451     | FR | 93998911   | 1 011 043    | Granted  | 7-Dec-99  | 31-Jan-99 | 804451 | METHOD AND APPARATUS FOR LOADING A JAVA APPLICATION PROGRAM  |  |
| 804451     | DE | 93998911   | 1 011 043    | Granted  | 7-Dec-99  | 31-Jan-99 | 804451 | METHOD AND APPARATUS FOR LOADING A JAVA APPLICATION PROGRAM  |  |
| 804451     | CA | 2,290,066  | 2,290,066    | Granted  | 19-Nov-99 | 16-Sep-99 | 804451 | METHOD FOR LOADING A JAVA APPLICATION PROGRAM  |  |

| Patent No. | IPC Class. | Applicant   | Inventor     | Status   | Grant Date | Pub. No.  | Pub. Date | Description  |
|------------|------------|-------------|--------------|----------|------------|-----------|-----------|--|
| 862534     | EP         | 342471      | HEMPHY       | Filed    | 19-Aug-00  | HEMPHY    | 862534    | METHOD AND APPARATUS FOR PROVIDING A VIRTUAL SYSTEM IN A COMMUNICATIONS SYSTEM                                       |
| 862546     | EP         | 3317245     | HEMPHY       | Filed    | 12-Oct-99  | HEMPHY    | 862546    | MOBILE IP INTEGRATED GPRS ACCOUNTING FRAMEWORK   |
| 862546     | EP         | 9954858     | HEMPHY       | Filed    | 12-Oct-99  | HEMPHY    | 862546    | MOBILE IP INTEGRATED GPRS ACCOUNTING FRAMEWORK   |
| S2002      | NZ         | 313874      | 313874       | Granted  | 19-Sep-05  | 20-Apr-05 | S2002     | METHOD OF AND APPARATUS FOR OFF-HOOK SIGNALING BETWEEN TELEPHONES OR ADJUNCTS ON THE SAME LOOP                       |
| S2002      | NX         | 982202      | 210133       | Granted  | 19-Sep-05  | 4-Sep-05  | S2002     | METHOD OF AND APPARATUS FOR OFF-HOOK SIGNALING BETWEEN TELEPHONES OR ADJUNCTS ON THE SAME LOOP                       |
| S2002      | JP         | 9-812265    | 313873       | Granted  | 19-Sep-05  | 15-Dec-05 | S2002     | METHOD OF AND APPARATUS FOR OFF-HOOK SIGNALING BETWEEN TELEPHONES OR ADJUNCTS ON THE SAME LOOP                       |
| S2002      | GB         | 9829956.3   | 0 852 084    | Granted  | 19-Sep-05  | 13-Nov-05 | S2002     | METHOD OF AND APPARATUS FOR OFF-HOOK SIGNALING BETWEEN TELEPHONES OR ADJUNCTS ON THE SAME LOOP                       |
| S2002      | DE         | 9829956.3   | 69824822     | Granted  | 19-Sep-05  | 13-Nov-05 | S2002     | METHOD OF AND APPARATUS FOR OFF-HOOK SIGNALING BETWEEN TELEPHONES OR ADJUNCTS ON THE SAME LOOP                       |
| S2005      | GB         | 98989298    | 0 307 484    | Granted  | 12-Mar-08  | 6-Jul-05  | S2005     | ON-HOOK CALL WAITING DISPLAY METHOD AND APPARATUS  |
| S2005      | FR         | 98989298    | 0 307 484    | Granted  | 12-Mar-08  | 6-Jul-05  | S2005     | ON-HOOK CALL WAITING DISPLAY METHOD AND APPARATUS  |
| S2005      | DE         | 98989298    | 69830760     | Granted  | 12-Mar-08  | 6-Jul-05  | S2005     | ON-HOOK CALL WAITING DISPLAY METHOD AND APPARATUS  |
| S2004      | SE         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | NL         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | JP         | 10-547485   | 313873       | Granted  | 12-Mar-08  | 4-Sep-09  | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | GB         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | FR         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | FI         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | EP         | 98912639    | 0 370 576    | Inactive | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | DE         | 98912639    | 0 370 576    | Granted  | 12-Mar-08  | 14-Dec-11 | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2004      | CA         | 2,218,783   | 2,218,783    | Granted  | 20-Oct-07  | 4-Feb-08  | S2004     | METHOD AND APPARATUS FOR PROVIDING SUBSCRIBER SERVICES TO A TELEPHONE  |
| S2005      | GB         | 98310292.3  | 0 326 865    | Granted  | 15-Dec-08  | 26-Jul-06 | S2005     | TEXT-TO-SPEECH DRIVEN ANNUNCIATION OF CALLER IDENTIFICATION  |
| S2005      | FR         | 98310292.3  | 0 326 865    | Granted  | 15-Dec-08  | 26-Jul-06 | S2005     | TEXT-TO-SPEECH DRIVEN ANNUNCIATION OF CALLER IDENTIFICATION  |
| S2005      | DE         | 98310292.3  | 69835382     | Granted  | 15-Dec-08  | 26-Jul-06 | S2005     | TEXT-TO-SPEECH DRIVEN ANNUNCIATION OF CALLER IDENTIFICATION  |
| S2005      | CA         | 2,254,816   | 2,254,816    | Granted  | 30-Nov-08  | 5-Aug-09  | S2005     | TEXT-TO-SPEECH DRIVEN ANNUNCIATION OF CALLER IDENTIFICATION  |
| S2002      | NX         | 989550      | 218583       | Granted  | 30-Oct-08  | 12-Jan-04 | S2002     | INTERACTIVE GRAPHIC PAPHONE  |
| S2003      | GB         | 93398933    | 0 009 148    | Granted  | 7-Dec-03   | 31-Aug-05 | S2003     | CALLING PARTY IDENTIFICATION AUTHENTICATION AND ROUTING IN RESPONSE THERTO   |
| S2003      | FR         | 93398933    | 0 009 148    | Granted  | 7-Dec-03   | 31-Aug-05 | S2003     | CALLING PARTY IDENTIFICATION AUTHENTICATION AND ROUTING IN RESPONSE THERTO   |
| S2003      | DE         | 93398933    | 69329776     | Granted  | 7-Dec-03   | 31-Aug-05 | S2003     | CALLING PARTY IDENTIFICATION AUTHENTICATION AND ROUTING IN RESPONSE THERTO   |
| S2003      | CA         | 2,279,870   | 2,279,870    | Granted  | 10-Aug-03  | 30-Oct-07 | S2003     | CALLING PARTY IDENTIFICATION AUTHENTICATION AND ROUTING IN RESPONSE THERTO   |
| S2004      | GB         | 93309543    | 1 017 200    | Granted  | 30-Nov-03  | 14-Mar-12 | S2004     | VOICE OVER DATA NETWORK MANAGER  |
| S2004      | FR         | 93309543    | 1 017 200    | Granted  | 30-Nov-03  | 14-Mar-12 | S2004     | VOICE OVER DATA NETWORK MANAGER  |
| S2004      | EP         | 93309543    | 1 017 200    | Inactive | 30-Nov-03  | 14-Mar-12 | S2004     | VOICE OVER DATA NETWORK MANAGER  |
| S2004      | DE         | 93309543    | 1 017 200    | Granted  | 30-Nov-03  | 14-Mar-12 | S2004     | VOICE OVER DATA NETWORK MANAGER  |
| SM0148     | FR         | 98-709503   | 317443       | Granted  | 23-Apr-97  | 30-Nov-01 | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0148     | GB         | 97917189.3  | 0 695 684    | Granted  | 23-Apr-97  | 14-Nov-01 | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0148     | FR         | 97917189.3  | 0 695 684    | Granted  | 23-Apr-97  | 14-Nov-01 | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0148     | DE         | 97917189.3  | 697 08781,4  | Granted  | 23-Apr-97  | 14-Nov-01 | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0148     | CA         | 2,248,577   | 2,248,577    | Granted  | 23-Apr-97  | 5-Nov-02  | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0148     | AU         | 197705622   | 707905       | Granted  | 23-Apr-97  | 22-Jul-99 | SM0148    | INTERNET PROTOCOL FILTER   |
| SM0179     | CA         | 2,243,141   | 2,243,141    | Granted  | 1-Oct-98   | 9-Sep-03  | SM0179    | METHOD AND APPARATUS FOR INTEGRATED SERVICES DIGITAL NETWORK USER PART (ISUP) SIGNALING LOOPBACK                     |
| SM0220     | JP         | 0           | HEMPHY       | Filed    | 29-Jan-97  | HEMPHY    | SM0220    | TELECOMMUNICATIONS FUNCTIONS MANAGEMENT SYSTEM PROVIDING SELECTIVE ALERTING BASED ON CALLER IDENTIFIER               |
| SM0220     | CA         | 2,217,050   | 2,217,050    | Granted  | 29-Jan-97  | 24-Jul-01 | SM0220    | TELECOMMUNICATIONS FUNCTIONS MANAGEMENT SYSTEM PROVIDING SELECTIVE ALERTING BASED ON CALLER IDENTIFIER               |
| S50109     | GB         | 97000693    | 0 850 249    | Granted  | 9-Jan-97   | 16-Mar-05 | S50109    | APPARATUS AND METHOD FOR REDUCING SPEECH RECOGNITION VOCABULARY PERPLEXITY AND DYNAMICALLY SELECTING ACOUSTIC MODELS |
| S50109     | FR         | 97000693    | 0 850 249    | Granted  | 9-Jan-97   | 16-Mar-05 | S50109    | APPARATUS AND METHOD FOR REDUCING SPEECH RECOGNITION VOCABULARY PERPLEXITY AND DYNAMICALLY SELECTING ACOUSTIC MODELS |
| S50109     | DE         | 69727619.9  | 0 850 249    | Granted  | 9-Jan-97   | 16-Mar-05 | S50109    | APPARATUS AND METHOD FOR REDUCING SPEECH RECOGNITION VOCABULARY PERPLEXITY AND DYNAMICALLY SELECTING ACOUSTIC MODELS |
| S50109     | CA         | 2,250,059   | 2,250,059    | Granted  | 9-Jan-97   | 25-Jun-02 | S50109    | APPARATUS AND METHOD FOR REDUCING SPEECH RECOGNITION VOCABULARY PERPLEXITY AND DYNAMICALLY SELECTING ACOUSTIC MODELS |
| S50112     | EP         | 97509536    | HEMPHY       | Filed    | 6-Nov-97   | HEMPHY    | S50112    | ARCHITECTURE FOR DISTRIBUTION OF VOICE OVER ATM NETWORKS   |
| S50113     | GB         | 98907613.8  | 0 982 088    | Granted  | 25-Feb-98  | 12-May-04 | S50113    | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR   |
| S50113     | FR         | 98907613.8  | 0 982 088    | Granted  | 25-Feb-98  | 12-May-04 | S50113    | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR   |
| S50113     | DE         | 98907613.8  | 6982810.9    | Granted  | 25-Feb-98  | 12-May-04 | S50113    | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR   |
| S50113     | CA         | 2,268,000   | 2,268,000    | Granted  | 6-Oct-97   | 17-Sep-02 | S50113    | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR   |
| S50113     | CA         | 2,282,633   | 2,282,633    | Granted  | 25-Feb-98  | 13-May-03 | S50113    | CALL FORWARDING SYSTEM USING ADAPTIVE MODEL OF USER BEHAVIOR   |
| S50116     | CA         | 2,234,662   | 2,234,662    | Granted  | 14-Apr-98  | 26-Aug-03 | S50116    | METHOD AND APPARATUS FOR USING THE CONTROL CHANNEL IN TELECOMMUNICATIONS SYSTEMS FOR VOICE DIALING                   |
| TA0112     | JP         | 10-507406   | 3184981      | Granted  | 15-Jan-97  | 11-May-01 | TA0112    | REDUCING CROSS-TALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0112     | GB         | 97900172.4  | 0 916 139    | Granted  | 15-Jan-97  | 10-May-00 | TA0112    | REDUCING CROSS-TALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0112     | FR         | 97900172.4  | 0 916 139    | Granted  | 15-Jan-97  | 10-May-00 | TA0112    | REDUCING CROSS-TALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0112     | DE         | 97900172.4  | 697 01 989,6 | Granted  | 15-Jan-97  | 10-May-00 | TA0112    | REDUCING CROSS-TALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0112     | CA         | 2,256,898   | 2,256,898    | Granted  | 15-Jan-97  | 2-Apr-02  | TA0112    | REDUCING CROSS-TALK BETWEEN COMMUNICATIONS SYSTEMS   |
| TA0119     | CA         | 2,296,937   | 2,296,937    | Granted  | 21-Jan-00  | 20-Apr-07 | TA0119    | METHOD AND SYSTEM FOR REDIRECTING WEB PAGE REQUESTS ON A TCP/IP NETWORK  |
| TW0008     | JP         | 2000-552810 | 4817497      | Granted  | 1-Jun-99   | 9-Sep-11  | TW0008    | ICDN INTEGRATED DATA CENTRIC NETWORK   |



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| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|------------|------------|---------------------|------------------|
| 10/199,797      | 12/12/2006 | 7149506    | 11032RRUS04D        | 1786             |

35527 7590 11/22/2006  
DUKE W. YEE  
YEE & ASSOCIATES, P.C.  
P.O. BOX 802333  
DALLAS, TX 75380

**ISSUE NOTIFICATION**

The projected patent number and issue date are specified above.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 13 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Gregory T. Osterhout, Coppell, TX;  
Kim B. Holmes, Rowlett, TX;  
Mark Sosebee, Plano, TX;

11-06-06



Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE  
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YEE & ASSOCIATES, P.C.  
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11/09/2006 RMEBRAH1 00000049 503157 10199797

01 FC:1501 1400.00 DA  
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Dell Whitton (Depositor's name)  
Dell Whitton (Signature)  
11-06-06 (Date)

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/199.797      | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |

TITLE OF INVENTION: PORTABLE CALL MANAGEMENT SYSTEM

| APPLN. TYPE    | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO           | \$1400        | \$300               | \$0                  | \$1700           | 11/08/2006 |

| EXAMINER        | ART UNIT | CLASS-SUBCLASS |
|-----------------|----------|----------------|
| NGUYEN, THUAN T | 2618     | 455-417000     |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.
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 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)  
PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Nortel Networks Limited  
(B) RESIDENCE: (CITY and STATE OR COUNTRY) St. Laurent, Quebec H4S 2A9 Canada

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

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 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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Authorized Signature: Peter B. Manzo  
Date: 11-06-06  
Typed or printed name: Peter B. Manzo  
Registration No.: 54,700

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NOTICE OF ALLOWANCE AND FEE(S) DUE

35527 7590 08/08/2006
DUKE W. YEE
YEE & ASSOCIATES, P.C.
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER

NGUYEN, THUAN T

ART UNIT PAPER NUMBER

2618

DATE MAILED: 08/08/2006

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
10/199,797 07/19/2002 Gregory T. Osterhout 11032RRUS04D 1786

TITLE OF INVENTION: PORTABLE CALL MANAGEMENT SYSTEM

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE
nonprovisional NO \$1400 \$300 \$0 \$1700 11/08/2006

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35527 7590 08/08/2006

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EXAMINER

NGUYEN, THUAN T

ART UNIT PAPER NUMBER

2618

DATE MAILED: 08/08/2006

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
10/199,797 07/19/2002 Gregory T. Osterhout 11032RRUS04D 1786

TITLE OF INVENTION: PORTABLE CALL MANAGEMENT SYSTEM

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE
nonprovisional NO \$1400 \$300 \$0 \$1700 11/08/2006

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35527                      7590                      08/08/2006

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|-----------------------------|
| _____<br>(Depositor's name) |
| _____<br>(Signature)        |
| _____<br>(Date)             |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/199,797      | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |

TITLE OF INVENTION: PORTABLE CALL MANAGEMENT SYSTEM

| APPLN. TYPE    | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO           | \$1400        | \$300               | \$0                  | \$1700           | 11/08/2006 |

| EXAMINER        | ART UNIT | CLASS-SUBCLASS |
|-----------------|----------|----------------|
| NGUYEN, THUAN T | 2618     | 455-417000     |

|   |   |
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|---|---|

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

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Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

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5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
10/199,797 07/19/2002 Gregory T. Osterhout 11032RRUS04D 1786

35527 7590 08/08/2006
DUKE W. YEE
YEE & ASSOCIATES, P.C.
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER

NGUYEN, THUAN T

ART UNIT PAPER NUMBER

2618
DATE MAILED: 08/08/2006

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 13 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 13 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

|                               |                        |                     |  |
|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 10/199,797             | OSTERHOUT ET AL.    |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | THUAN T. NGUYEN        | 2618                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to \_\_\_\_\_.
2.  The allowed claim(s) is/are 52-62 and 66-69.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All   b)  Some\*   c)  None   of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

*Remark*

1. Claims 1-51, and 63-65 were canceled. Pending claims 52-62 and 66-69 are for reconsideration.

*Allowable Subject Matter*

2. Claims 52-62 and 66-69 are allowed.

*Reasons for Allowance*

3. The following is an examiner's statement of reasons for allowance:

The closest prior arts of record issued to Wang and Pepe fails to combine to teach or suggest a method for processing a call as claimed in claim 52 and 56 including at least a step of receiving at a session initiated protocol (SIP) server a notice of a call for a mobile data processing system associated with a user and detailed steps as claimed therein.

As for claim 66, the prior art of record to Buttitta (previous) and Pirot either alone or combine fails to teach or suggest a method for initiating calls comprising at least the step of translating the registration from a first protocol into a second protocol to form a modified registration notice, and then transmitting the modified registration notice to a terminating device as called for in claim 66. Buttitta teaches to have a first registration notice and a second registration notice after the ending of the first call; and there is no motivation or suggestion to modify and/or translating the first registration notice to a modified registration notice from a first protocol into a second protocol. Perot does not anticipate the claim language of claim 66, please refer to the applicant's arguments from page 6 to page 11 for a detailed analysis.

Art Unit: 2618

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

**4. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to the New Central Fax number:**

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899.


Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



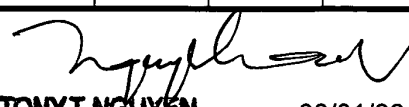
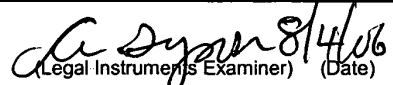
TONY T. NGUYEN  
PATENT EXAMINER, FSA

Tony T. Nguyen  
Art Unit 2618  
August 01, 2006

|  |  |  |  |
|--|--|--|--|
| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>10/199,797 | <b>Applicant(s)/Patent under Reexamination</b><br>OSTERHOUT ET AL. |  |
|  | <b>Examiner</b><br>THUAN T. NGUYEN           | <b>Art Unit</b><br>2618  |  |

| ISSUE CLASSIFICATION         |          |   |   |                    |                                   |      |     |  |  |  |
|------------------------------|----------|---|---|--------------------|-----------------------------------|------|-----|--|--|--|
| ORIGINAL                     |          |   |   | CROSS REFERENCE(S) |                                   |      |     |  |  |  |
| CLASS                        | SUBCLASS |   |   | CLASS              | SUBCLASS (ONE SUBCLASS PER BLOCK) |      |     |  |  |  |
| 455                          | 417      |   |   | 455                | 435.1                             | 436  | 442 |  |  |  |
| INTERNATIONAL CLASSIFICATION |          |   |   | 340                | 3.5                               | 3.52 |     |  |  |  |
| H                            | 0        | 4 | M |                    |                                   |      |     |  |  |  |
|                              |          |   |   | 3/42               |                                   |      |     |  |  |  |
| H                            | 0        | 4 | Q |                    |                                   |      |     |  |  |  |
|                              |          |   |   | 7/20               |                                   |      |     |  |  |  |
|                              |          |   |   | /                  |                                   |      |     |  |  |  |
|                              |          |   |   | /                  |                                   |      |     |  |  |  |
|                              |          |   |   | /                  |                                   |      |     |  |  |  |

|  |  |                    |                                 |                         |
|--|--|--------------------|---------------------------------|-------------------------|
| _____<br>(Assistant Examiner) (Date)   | <br><b>TONY T. NGUYEN</b><br><b>PATENT EXAMINER, FSA</b><br>(Primary Examiner) | 08/01/06<br>(Date) | <b>Total Claims Allowed: 15</b> |                         |
| <br>(Legal Instruments Examiner) (Date) |  |                    | O.G.<br>Print Claim(s)<br>1     | O.G.<br>Print Fig.<br>9 |

| <input type="checkbox"/> Claims renumbered in the same order as presented by applicant |          | <input type="checkbox"/> CPA |          | <input type="checkbox"/> T.D. |               | <input type="checkbox"/> R.1.47 |          |
|--|----------|------------------------------|----------|-------------------------------|---------------|---------------------------------|----------|
| Final  | Original | Final                        | Original | Final                         | Original      | Final                           | Original |
|  | 1        |                              | 31       | 10                            | 61            |                                 |          |
|  | 2        |                              | 32       | 11                            | 62            |                                 |          |
|  | 3        |                              | 33       |                               | <del>63</del> |                                 |          |
|  | 4        |                              | 34       |                               | <del>64</del> |                                 |          |
|  | 5        |                              | 35       |                               | <del>65</del> |                                 |          |
|  | 6        |                              | 36       | 12                            | 66            |                                 |          |
|  | 7        |                              | 37       | 13                            | 67            |                                 |          |
|  | 8        |                              | 38       | 14                            | 68            |                                 |          |
|  | 9        |                              | 39       | 15                            | 69            |                                 |          |
|  | 10       |                              | 40       |                               |               |                                 |          |
|  | 11       |                              | 41       |                               |               |                                 |          |
|  | 12       |                              | 42       |                               |               |                                 |          |
|  | 13       |                              | 43       |                               |               |                                 |          |
|  | 14       |                              | 44       |                               |               |                                 |          |
|  | 15       |                              | 45       |                               |               |                                 |          |
|  | 16       |                              | 46       |                               |               |                                 |          |
|  | 17       |                              | 47       |                               |               |                                 |          |
|  | 18       |                              | 48       |                               |               |                                 |          |
|  | 19       |                              | 49       |                               |               |                                 |          |
|  | 20       |                              | 50       |                               |               |                                 |          |
|  | 21       |                              | 51       |                               |               |                                 |          |
|  | 22       | 1                            | 52       |                               |               |                                 |          |
|  | 23       | 2                            | 53       |                               |               |                                 |          |
|  | 24       | 3                            | 54       |                               |               |                                 |          |
|  | 25       | 4                            | 55       |                               |               |                                 |          |
|  | 26       | 5                            | 56       |                               |               |                                 |          |
|  | 27       | 6                            | 57       |                               |               |                                 |          |
|  | 28       | 7                            | 58       |                               |               |                                 |          |
|  | 29       | 8                            | 59       |                               |               |                                 |          |
|  | 30       | 9                            | 60       |                               |               |                                 |          |

**Search Notes**



Application No.

10/199,797

Examiner

THUAN T. NGUYEN

Applicant(s)

OSTERHOUT ET AL.

Art Unit

2618

**SEARCHED**

| Class | Subclass   | Date    | Examiner |
|-------|------------|---------|----------|
| 465   | 417<br>442 | 7/28/06 | SP       |
|       | 465        |         |          |
|       | 435.1      |         |          |
|       | 435.2      |         |          |
|       | 435.3      |         |          |
|       | 438        |         |          |
|       | 439        |         |          |
|       | 414.4      |         |          |
|       | 432.2      |         |          |
| 340   | 325.52     |         |          |
|       | 3.5        |         |          |
|       | 3.52-3.54  |         |          |
|       | 7.45       |         |          |
|       | 7.45       |         |          |

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

|              | DATE    | EXMR |
|--------------|---------|------|
| Ext searched | 1/19/06 | SP   |
| "            | 1/20/06 | SP   |
| SPE Ed Urban | 1/22/06 | SP   |
| Ext updated  | 7/28/06 | SP   |
|              |         |      |
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**INTERFERENCE SEARCHED**

| Class | Subclass | Date                | Examiner |
|-------|----------|---------------------|----------|
| 465   | 417      | 1/19/06<br>2/7/2006 | SP       |
|       | 442      |                     |          |
|       | 435.1    |                     |          |
|       | 414.4    |                     |          |
|       | 432.2    |                     |          |

340 3.5, 3.52, 3.53, 3.54, 7.45, 7.46  
(see the IS. searched in USPOB attached)





EAST - [10199797.wsp:1]

File View Edit Tools Window Help

Drafts

- BRS:
- Pending
- Active
  - L1: (1498) 455/417 455/442 455/435.1 455/436 455/414.4 455/432.2 340/3.5 34
  - L2: (3) 1 and (registration near5 notice).clm.
  - L3: (1) 1 and (modified near5 registration near5 notice).clm.
  - L4: (0) 1 and (registration near5 announcement).clm.
  - L5: (85) 1 and (registration near5 message).clm.
  - L6: (0) 5 and (modified near5 registration near5 message).clm.
  - L7: (5) 5 and (second near5 protocol).clm.**
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  - S2: (1) "6421536"
  - S3: (1) S2 and pager
  - S4: (1) S3 and palm

Search List Browse Queue Clear

DBs US:PCPUB  Plural

Default operator: OR  Highlight all hit terms initially

5 and (second near5 protocol).clm.

|   | U                        | 1                        | Document ID       | Issue Date | Pages | Title  | Current OR | Current              | Ret | Inventor                  |
|---|--------------------------|--------------------------|-------------------|------------|-------|--|------------|----------------------|-----|---------------------------|
| 1 | <input type="checkbox"/> | <input type="checkbox"/> | US 20060135157 A1 | 20060622   | 39    | Network interworking system and method for providing     | 455/433    | 455/435.1            |     | Baek; Hye-Won et al.      |
| 2 | <input type="checkbox"/> | <input type="checkbox"/> | US 20060025134 A1 | 20060202   | 27    | Method of communicating data in a wireless mobile        | 455/435.1  | 455/574              |     | Cho; Ki Hyoung et al.     |
| 3 | <input type="checkbox"/> | <input type="checkbox"/> | US 20040229608 A1 | 20041118   | 16    | Methods and systems for allowing global roaming          | 455/432.1  | 455/432.2            |     | Isukapalli, Ramana et al. |
| 4 | <input type="checkbox"/> | <input type="checkbox"/> | US 20040219948 A1 | 20041104   | 11    | Multi-mode mobile station and method                     | 455/552.1  | 455/426.1; 455/435.1 |     | Jones, Bryce A. et al.    |
| 5 | <input type="checkbox"/> | <input type="checkbox"/> | US 20040005886 A1 | 20040108   | 35    | Radio terminal, radio terminal controlling apparatus and | 455/422.1  | 455/1; 455/435.1;    |     | Oda, Toshikane et al.     |

Ready NUM

*None of them is prior art.*



- [-] Drafts
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- [-] Active
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  - [-] L4: (0) 1 and (registration near5 announcement).clm.
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  - [-] S5: (0) S4 and hypertext
  - [-] S6: (0) S4 and HTML
  - [-] S7: (0) S4 and PDA
  - [-] S8: (0) S2 and PDA
  - [-] S9: (26261) process\$3 near3 call

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DBs: US-PGPUB  Plurals

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5 and (modified near5 registration near5 message).clm.



| U                 | 1 | Document ID | Issue Date | Pages | Title | Current OR | Current Ret | Inventor |
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  - [-] L3: (1) 1 and (modified near5 registration near5 notice).clm.
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  - [-] S3: (1) S2 and pager
  - [-] S4: (1) S3 and palm
  - [-] S5: (0) S4 and hypertext
  - [-] S6: (0) S4 and HTML
  - [-] S7: (0) S4 and PDA
  - [-] S8: (0) S2 and PDA
  - [-] S9: (26261) process\$3 near3 call
  - [-] S10: (1343) S9 and (PDA or "personal digital assistant")
  - [-] S11: (0) S10 and "Palm VI"
  - [-] S12: (202) S10 and Palm

US 2002/018777 A1

United States  
Patent Application Publication (in Pub. No.) US 2002/018777 A1  
Osterhout et al. (in Pub. Date) Dec. 12, 2002

(5) PORTABLE CALL MANAGEMENT SYSTEM Publication Classification

(7) Inventor: Gregory T. Osterhout, Cayport, TX (US); Alan R. Johnson, Baytown, TX (US); David S. Johnson, Baytown, TX (US)  
 (72) Inventor: Gregory T. Osterhout, Cayport, TX (US); Alan R. Johnson, Baytown, TX (US); David S. Johnson, Baytown, TX (US)

Correspondence Address:  
INTELLECTUAL PROPERTY LAW GROUP  
P O BOX 52228  
HOUSTON, TX 77252-0228

(21) Appl. No.: 09/586,787  
 (22) Filed: Jul. 19, 2002  
 Related U.S. Application Data:  
 (63) Division of application No. 09/418,123, filed on Oct. 15, 1999.

ABSTRACT

A method of selecting a call from a data processing system to service a call. In one embodiment, a voice IP or Internet protocol (IP) network is used to service a call. The system may include a call management system to select the call from the data processing system to service the call. The system may include a call management system to select the call from the data processing system to service the call. The system may include a call management system to select the call from the data processing system to service the call.

| U                        | 1                        | Document ID      | Issue Date | Pages | Title                           | Current OR | Current Ret      | Inventor                     |
|--------------------------|--------------------------|------------------|------------|-------|---------------------------------|------------|------------------|------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | US 2002018777 A1 | 20021212   | 20    | Portable call management system | 455/417    | 455/445; 455/461 | Osterhout, Gregory T. et al. |



- Drafts
  - BRS:
- Pending
- Active
  - L1: (1498) 455/417 455/442 455/435.1 455/436 455/414.4 455/432.2 3
  - L2: (3) 1 and (registration, near 5 notice).clm.
- Failed
- Saved
  - S1: (1) ("6421436").PN.
  - S2: (1) "6421536"
  - S3: (1) S2 and pager
  - S4: (1) S3 and palm
  - S5: (0) S4 and hypertext
  - S6: (0) S4 and HTML
  - S7: (0) S4 and PDA
  - S8: (0) S2 and PDA
  - S9: (26261) process\$3 near3 call
  - S10: (1343) S9 and (PDA or "personal digital assistant")
  - S11: (0) S10 and "Palm VI"
  - S12: (202) S10 and Palm
  - S13: (189) S12 and (wireless or mobile)

US 2002/018777 A1

(us) United States  
(us) Patent Application Publication  
Osterhout et al. (us) Pub. Date: Dec. 12, 2002

(us) FORECABLE CALL MANAGEMENT SYSTEM

(us) Invention: Gregory T. Osterhout, Gregory T. Osterhout, et al. (us) Reg. No.: 01/200,477 (us) Pub. No.: US 2002/018777 A1 (us) Pub. Date: Dec. 12, 2002

(us) Applicant: Gregory T. Osterhout, Gregory T. Osterhout, et al. (us) Reg. No.: 01/200,477 (us) Pub. No.: US 2002/018777 A1 (us) Pub. Date: Dec. 12, 2002

(us) Abstract: A method of reducing a call from a data processing system to another system, the system comprising a server and a data processing system. The server and the data processing system are connected to each other via a network. The server and the data processing system are connected to each other via a network. The server and the data processing system are connected to each other via a network. The server and the data processing system are connected to each other via a network.

| U                        | 1                        | Document ID       | Issue Date | Pages | Title  | Current OR | Current Ret         | Inventor                     |
|--------------------------|--------------------------|-------------------|------------|-------|--|------------|---------------------|------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | US 20050101322 A1 | 20050512   | 11    | Digital cellular phone system and cellular phone applied | 455/435.1  | 455/435.2; 455/518; | Hsuan, Min-Chih              |
| <input type="checkbox"/> | <input type="checkbox"/> | US 20050014503 A1 | 20050120   | 39    | Scheme for registration and authentication in wireless   | 455/435.1  | 455/411             | Nakakita, Hideaki et al      |
| <input type="checkbox"/> | <input type="checkbox"/> | US 20020187777 A1 | 20021212   | 20    | Portable call management system                          | 455/417    | 455/445; 455/461    | Osterhout, Gregory T. et al. |

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4100 Alpha Road  
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Facsimile (972) 385-7766

**FACSIMILE COVER SHEET**

|  |  |
|--|--|
| <b>To: Commissioner for Patents for<br/>Examiner Thuan T. Nguyen<br/>Group Art Unit 2685</b>   | <b>Facsimile No. 571/273-8300</b>  |
| <b>From: Candace Crawford<br/>Legal Assistant to Ted Fay</b>   | <b>No. of Pages Including Cover Sheet: 14</b>  |
| <p>Enclosed herewith:</p> <ul style="list-style-type: none"> <li>• Transmittal; and</li> <li>• Response to Office Action.</li> </ul>                             |  |
| <b>Re: Application Serial No. 10/199,797<br/>Attorney Docket No. 11032RRUS04D</b>  |  |
| <b>Date: Friday, May 26, 2006</b>  |  |
| <b>Please contact us at (972) 385-8777 if<br/>you do not receive all pages<br/>indicated above or experience any<br/>difficulty in receiving this facsimile.</b> | <i>This Facsimile is intended only for the use of the addressee<br/>and, if the addressee is a client or their agent, contains<br/>privileged and confidential information. If you are not the<br/>intended recipient of this facsimile, you have received this<br/>facsimile inadvertently and in error. Any review,<br/>dissemination, distribution, or copying is strictly prohibited.<br/>If you received this facsimile in error, please notify us by<br/>telephone and return the facsimile to us immediately.</i> |

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MAY 26 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Osterhout et al.

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Group Art Unit: 2685

Serial No.: 10/199,797


Examiner: Thuan T. Nguyen

Filed: July 19, 2002

Attorney Docket No.: 11032RRUS04D

For: Portable Call Management System

35527  
PATENT TRADEMARK OFFICE  
CUSTOMER NUMBER

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By:   
Candace Crawford

TRANSMITTAL

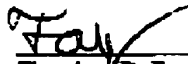
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:  
ENCLOSED HERewith:

- Response to Office Action

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Yee & Associates, P.C. Deposit Account No. 50-3157. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Yee & Associates, P.C. Deposit Account No. 50-3157.

Respectfully submitted,

  
Theodore D. Fay III  
Registration No. 48,504

Duke W. Yee  
Registration No. 34,285  
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ATTORNEYS FOR APPLICANTS

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

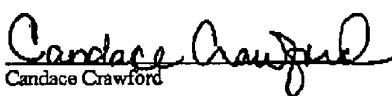
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Group Art Unit: **2685**

Examiner: **Thuan T. Nguyen**

Attorney Docket No.: **11032RRUS04D**

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By:   
 Candace Crawford

**35227**  
PATENT TRADEMARK OFFICE  
CUSTOMER NUMBER

Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

RESPONSE TO OFFICE ACTION

Sir:

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Yee & Associates, P.C. Deposit Account No. 50-3157. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Yee & Associates, P.C. Deposit Account No. 50-3157.

In response to the Office Action of February 27, 2006, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 5 of this paper.



**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-51. (Canceled)

52. (Previously Presented) A method in a communications system for processing a call, the method comprising:

- receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;
- identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;
- sending a first request to setup the call to the mobile data processing system associated with the user, wherein the mobile data processing system has a wireless communications capability;
- sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system; and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;
- receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and
- sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Previously Presented) The method as recited in claim 53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Previously Presented) A method for processing a call at a data processing system the method comprising:
- receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;
  - identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;
  - receiving a notification message at the data processing system indicating a request to setup the call;
  - presenting the notification to the user at the data processing system;
  - receiving the request to establish the call;
  - presenting caller information at the data processing system;
  - receiving user input from the user identifying an address to which the call is to be directed; and
  - responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.
57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.
58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.
59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.
60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.
61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.
62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.
- 63-65. (Canceled)

66. (Currently Amended) A method for initiating calls, comprising the steps of:  
receiving a registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second protocol to form a modified registration notice; and  
transmitting the modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.
67. (Original) The method as recited in claim 66, further comprising:  
selecting, at a session initiated protocol (SIP) server, an address to which the user has previously selected the call be sent from a database of preferred locations;  
receiving a location data with which to redirect the incoming call from the terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is formatted in the second protocol.
68. (Original) The method as recited in claim 66, wherein the first protocol is a session initiation protocol.
69. (Original) The method as recited in claim 66, wherein the second protocol is a hypertext markup language.

**REMARKS/ARGUMENTS**

Claims 52-62 and 66-69 are pending in the present application. Claim 66 is amended to correct a typographical error that does not affect the scope of the claim. Reconsideration of the claims is respectfully requested.

**I. Comments on Statement of Reasons for Allowance**

Regarding the allowance of claims 52-62, the examiner states that:

The closest prior arts of record issued to Wang and Pepe fails to combine to teach or suggest a method for processing a call as claimed in claim 52 and 56 including at least a step of receiving at a session initiated protocol (SIP) server a notice of a call for a mobile data processing system associated with a user and detailed steps as claimed therein.

Office Action of February 27, 2006, p. 2.

In response, Applicants point out that claims 52-62 contain other features not taught or suggested by the references. Thus, these claims also should be allowable for reasons other than those identified by the examiner.

**II. 35 U.S.C. § 102. Asserted Anticipation**

The examiner rejected claims 66 and 68-69 as anticipated by *Pirot et al.*, System and Method of Controlling and Managing Voice and Data Services in a Telecommunications Network, U.S. Patent 6,856,676 (February 15, 2005) (hereinafter "*Pirot*"). This rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case each and every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

Claim 66 is as follows:

66. (Currently Amended) A method for initiating calls, comprising the steps of:  
receiving a registration notice of an incoming call, wherein said  
registration notice is formatted in a first protocol;

translating said registration notice from the first protocol into a second protocol to form a modified registration notice; and  
transmitting the modified registration notice to a terminating device;  
wherein the modified registration notice is formatted in the second protocol.

Regarding claim 66, *Pirot* does not anticipate claim 66 because *Pirot* does not teach the features of claim 66. *Pirot* does not teach any of the claimed features because *Pirot* does not teach receiving a registration notice, translating the registration notice as claimed, or transmitting the modified registration notice as claimed.

The examiner asserts otherwise, stating that:

Claims 66 and 68-69 are rejected under 35 U.S.C. 102(e) as being anticipated by *Pirot et al.* (U.S. Patent No. 6,856,676 B1).

Regarding claim 66, *Pirot* discloses a method for initiating calls comprising the steps of receiving registration of an incoming call, which is formatted in a first protocol, and translating the registration from the first protocol to a second protocol to form a modified registration notice, and transmitting the modified registration notice to a terminating device, and the modified registration notice formatted in a second protocol (refer to Figs. 1 & 3, an incoming call is registered with the system in a first protocol -called registration admission status using a number of protocols including a first protocol session initiation protocol or SIP, refer to col. 5/lines 30- 40; and as the system receives the registration notice, the registration is being modified to form a modified registration notice with the use of service provisioning within a service management subsystem 52, refer to col. 11/lines 17-41, to a second protocol (col. 13/line 54-65); and the modified registration notice is sending to the terminating device in the format of the second protocol in HTML (see col. 13/line 49 to col. 14/line 13 for provisioning and modification of registration services into HTML-a second protocol; and col. 16/lines 36-48 for presentation to the customer using graphical screen layouts).

As for claims 68 and 69, as already noted and explained above, *Pirot* discloses wherein the first protocol is a session initiation protocol and the second protocol is a hypertext markup language.

Office Action dated February 27, 2006 pp. 3-4.

However, the examiner's characterization of *Pirot* is mistaken. Applicants address each of the examiner's assertions in turn. First, the examiner asserts that figures 1 and 3 of *Pirot* teach the claimed features. These figures are as follows:

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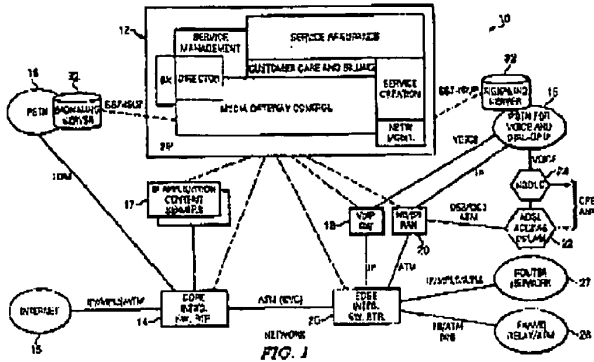


FIG. 1

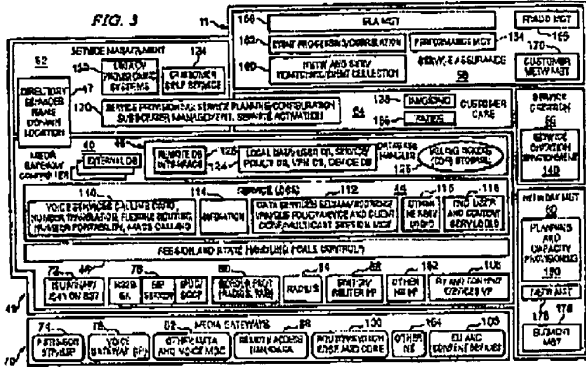


FIG. 3

These figures do not teach or suggest a registration notice. These features do not teach or suggest translating or transmitting a registration notice in the claimed manner. Other than referring to the text in *Pirot*, the examiner does not state where these figures show receiving, translating, or sending a translation notice in the claimed manner. However, as shown below, nothing in the text or figures of *Pirot* teaches these claimed features.

Instead, these figures teach an integrated communication system able to deal with both data and voice communications via media gateway control 12, as shown in figure 1. Figure 3 shows some of the operational details of the system shown in Figure 1. However, nothing in either figure mentions registration notices and nothing in either figure teaches translating or transmitting a registration notice, as claimed in claim 66.

Next, the examiner asserts that *Pirot* teaches that:

an incoming call is registered with the system in a first protocol -called registration admission status using a number of protocols including a first protocol session initiation protocol or SIP, refer to col. 5/lines 30- 40;

Office Action dated February 27, 2006 p. 3.

However, the examiner's characterization of *Pirot* is mistaken. The text cited by the examiner is as follows:

FIG. 3 is a more detailed block diagram of system and method of controlling and managing Internet protocol services in a voice/data telecommunications network 11. It may be seen that the lowest layer of media gateway controller 40 contains the interfaces to various media gateways 70. Media gateway interface 42 may include a first interface 72 which provides SS7 signaling to PSTN or switched circuit networks (SCN) 74 with ISUP (integrated services digital network user part) for interfacing to STP/SSP (signaling transfer point/service switching point) and INAP (intelligent network application protocol) and IS41 for interfacing to IN devices and HLR (home location register) systems. A second interface 76 provides interface functions to voice gateways 78 in a number of protocols, such as RAS (registration admission status) protocol interface for connecting to H.323 VoIP gateways and H.323 end-points. Other protocols interfacing to VOIP

*gateways may include SIP (session initiation protocol) and IP device control/simple gateway control protocol (IPDC/SGCP). SIP is targeted at IP services such as click-to-dial or real-time fax. IPDC and SGCP will be combined into a common protocol referred to as media gateway controller protocol (MGCP).*

*Pirot*, col. 5, ll. 19-40 (emphasis to show portion cited by the examiner).

This portion of *Pirot* teaches that media gateway controller 40 in figure 3 contains the interfaces to various media gateways. The media gateway interface can include first and second interfaces that allow communication of signals across different protocols. In the portion cited by the examiner, the second interface provides interface functions to voice gateways in a number of protocols, including registration admission status protocol. Registration admission status protocol is an interface for connecting to H.323 VoIP (voice over internet protocol) gateways and H.323 end-points. (H.323 is a protocol used for video telephone conferencing). *Pirot* also states that other protocols for interfacing VoIP gateways can include SIP (session initiated protocol) and IPDC/SGCP (Internet protocol device control/ simple gateway control protocol).

However, this portion of *Pirot* does not teach that an incoming call is *registered* with the system in registration admission status protocol, as the examiner asserts. *Pirot* does not teach this claimed feature. Instead, *Pirot* teaches that *registration admission status protocol* is used to provide an interface to a voice gateway. Similarly, this portion of *Pirot* does not teach "translating said *registration notice* from the first protocol into a second protocol to form a *modified registration notice*," as claimed. Similarly, this portion of *Pirot* does not teach "*transmitting the modified registration notice* to a terminating device," as claimed. As shown further below, nothing in *Pirot* teaches these claimed features.

Next, the examiner asserts that *Pirot* teaches that:

as the system receives the registration notice, the registration is being modified to form a modified registration notice with the use of service provisioning within a service management subsystem 52, refer to col. 11/lines 17-41, to a second protocol (col. 13/line 54-65);

Office Action dated February 27, 2006 pp. 3-4.

Again, the examiner's characterization of *Pirot* is mistaken. The first portion of text cited by the examiner is as follows:

A service management subsystem 52 provides easy entry of user and services data employing different interfaces, such as operator entry (service provisioning), import of files (legacy provisioning), and user self-registration (customer self service). Further, the service management subsystem 52 provides a link between users and services with very extensive authorization levels, i.e. access to different categories of services (e.g. using IP filtering) or different service quality levels (e.g. by managing access to virtual circuits and tunnels). The service management subsystem 52 also provides extended accounting, taking into

account time and volume based billing (billing tickets, rating and invoicing). Billing processing is performed in three steps. First, the billing tickets are generated and stored. Then rating is performed by converting raw format into "money tickets" by taking into account all kinds of telco-oriented parameters such as time, holiday and even access speed. Third, the invoice for each user is the computed. The service management subsystem 52 further provides interfaces to other systems to incorporate transaction-based billing from e-mail, WWW servers, etc. The data can be extracted by the operator on every level out of a standard database using service management functions. The service management subsystem 52 allows reporting of data by generating pre-formatted statistics reports and user-specified reports.

*Pivot*, col. 11, ll. 17-41.

This portion of *Pivot* does not teach that the registration of a call is being modified to form a modified registration notice with the use of service provisioning within a service management subsystem 52, as the examiner suggests. Instead, this portion of *Pivot* teaches that the service management subsystem 52 allows a user to "register," or enroll, with the subsystem in order to manipulate various aspects of the user's account, such as billing, level of service, or other aspects of the user's account. In fact, this portion of *Pivot* has absolutely nothing to do with modifying or translating a registration notice of a call. Thus, this portion of *Pivot* is wholly irrelevant to claim 66.

Nevertheless, the examiner asserts that the following portion of *Pivot* teaches translating the "first registration notice" to a "second protocol:"

The service management subsystem 52 also incorporates a powerful service packaging system which allows operators to identify and isolate a group of services (sites) on a network and offer this as a package to which subscribers can register. The service packaging application includes a GUI management program which allows a user to set up description records of service package(s) and the host that belong to this package. The system is hierarchical, this means that a package can have sub-categories, sub-categories can have further sub-categories etc. Definitions of services can be retrieved or modified from the host database if the service is already individually registered.

*Pivot*, col. 13, ll. 54-65.

This portion of *Pivot* does not teach translating the registration notice from a first protocol to a second protocol in the claimed manner. Instead, this portion of *Pivot* teaches that the service management subsystem 52 allows operators to identify and isolate a group of services on a network and offer the group of services as a package of service to which the subscribers can register. In this context, the term "to register" means "to enroll." Thus, *Pivot* is again describing the functionality of service management subsystem 52 in terms of a customer service interface that allows users to enroll in different service levels. This functionality of *Pivot* is wholly irrelevant to translating a registration notice of a call into a second protocol, as claimed in claim 66.



Nevertheless, the examiner goes on to assert that:

and the modified registration notice is sending to the terminating device in the format of the second protocol in HTML (see col. 13/line 49 to col. 14/line 13 for provisioning and modification of registration services into HTML-a second protocol...).

Office Action dated February 27, 2006 p. 4.

However, the examiner's characterization of *Pivot* again is mistaken. The text cited by the examiner is as follows:

It should be noted that owners of a host can themselves manipulate certain parameters of their host profile (those that the operator deems to be appropriate) via the embedded WWW/HTTP server using CGI programs and HTML forms or Java applets.

The service management subsystem 52 also incorporates a powerful service packaging system which allows operators to identify and isolate a group of services (sites) on a network and offer this as a package to which subscribers can register. The service packaging application includes a GUI management program which allows a user to set up description records of service package(s) and the host that belong to this package. The system is hierarchical, this means that a package can have sub-categories, sub-categories can have further sub-categories etc. Definitions of services can be retrieved or modified from the host database if the service is already individually registered.

Data that are stored in the service packaging tables includes name of the service, short description of what is offered, full description, hyper-link to the service, service provider name, opening hours, location, billing tariff, bitmap and HTML header and trailer for directory page, link to advertisement pages of service provider, and package membership of this service.

Based on this formation, an automatic HTML directory application is generated from the data stored in the RDBMS. This application can be in the limited individual for each user, so that each user enters in a complete customized welcome tree, from where he can select services from the service categories he has subscribed to. In practice a limited number of service packages will be created to fit the needs of certain groups of users.

*Pivot*, col. 13, l. 49 through col. 14, l. 13.

As pointed out above, the second paragraph quoted above teaches allowing customers to enroll with different services using service management subsystem 52. The expanded text also teaches that owners of a host can manipulate host profiles. The expanded text also teaches that data are stored in service packaging tables that include HTML header and trailers for directory pages, as well as links to other sites regarding a service. The expanded text also teaches that an automatic HTML directory application is generated from the data stored in the system. The HTML directory allows users to enter

into the system in a "complete customized welcome tree, from where he can select *services* from the *service categories* he has subscribed to" (emphasis supplied).

However, this portion of *Pivot* does not teach the claimed feature of "transmitting the modified *registration notice* to a terminating device; wherein the modified *registration notice* is formatted in the second protocol." In fact, this portion of *Pivot* only deals with the customer service aspects of *Pivot's* system. Therefore, this portion of *Pivot* is wholly irrelevant to claim 66.

Additionally, nothing else in *Pivot* teaches or suggests the features of claim 6. A simple "find" command with a word processor or browser will verify that *Pivot* never mentions the term "registration notice." *Pivot* never teaches translating or transmitting registration notices in the claimed manner.

Because *Pivot* does not teach any of the features of claim 66, *Pivot* does not anticipate claim 66. Additionally, *Pivot* teaches nothing that would suggest these claimed features. Thus, the rejection of claim 66 over *Pivot* is in error and should be withdrawn.

Because claims 68 and 69 depend from claim 66, the same distinctions between *Pivot* and claim 66 can be made for these claims. Additionally, claims 68 and 69 claim other additional combinations of features not suggested by the reference. For example, *Pivot* does not teach the feature that the second protocol is a hypertext markup protocol, as claimed in claim 69. Consequently, it is respectfully urged that the rejection of claims 68 and 69 have been overcome.

As shown above, *Pivot* does not teach the features of claims 66, 68, and 69. Therefore, the rejection of these claims under 35 U.S.C. § 102 has been overcome.

Furthermore, *Pivot* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Absent the examiner pointing out some teaching or incentive to implement *Pivot* and receiving, translating, and transmitting a registration notice as claimed in claim 66, one of ordinary skill in the art would not be led to modify *Pivot* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Pivot* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

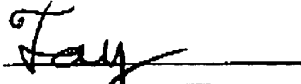
**III. Conclusion**

It is respectfully urged that the subject application is patentable over *Pitor* and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: May 26, 2006

Respectfully submitted,



Theodore D. Fay III  
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Dallas, TX 75380  
(972) 385-8777  
Attorney for Applicants

10/99797

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective November 10, 1998

Application or Docket Number  
10/199797 **EE**  
10/14/01

**CLAIMS AS FILED - PART I**

| FOR                              | (Column 1)<br>NUMBER FILED | (Column 2)<br>NUMBER EXTRA |
|----------------------------------|----------------------------|----------------------------|
| BASIC FEE                        |                            | 770                        |
| TOTAL CLAIMS :                   | 15 minus 20 =              |                            |
| INDEPENDENT CLAIMS               | 3 minus 3 =                |                            |
| MULTIPLE DEPENDENT CLAIM PRESENT |                            |                            |

| SMALL ENTITY TYPE <input type="checkbox"/> |     | OR   |       | OTHER THAN SMALL ENTITY |     |
|--|-----|------|-------|-------------------------|-----|
| RATE                                       | FEE | RATE | FEE   | RATE                    | FEE |
|  |     | OR   |       |                         | 770 |
|  |     | OR   |       |                         |     |
|  |     | OR   |       |                         |     |
|  |     | OR   |       |                         |     |
| TOTAL                                      |     | OR   | TOTAL |                         | 770 |

\* If the difference in column 1 is less than zero, enter "0" in column 2

4-15-05 **CLAIMS AS AMENDED - PART II**

| AMENDMENT A                                    | (Column 1)                       | (Column 2)                         | (Column 3) | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR |            |               |
| Total  | 15                               | Minus                              |            | 7             |
| Independent                                    | 3                                | Minus                              |            |               |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |            |               |

| SMALL ENTITY    |                | OR   |                 | OTHER THAN SMALL ENTITY |                |
|-----------------|----------------|------|-----------------|-------------------------|----------------|
| RATE            | ADDITIONAL FEE | RATE | ADDITIONAL FEE  | RATE                    | ADDITIONAL FEE |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
| TOTAL ADDT. FEE |                | OR   | TOTAL ADDT. FEE |                         |                |

| AMENDMENT B                                    | (Column 1)                       | (Column 2)                         | (Column 3) | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR |            |               |
| Total  | 15                               | Minus                              | 24         |               |
| Independent                                    | 3                                | Minus                              | 4          |               |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |            |               |

| SMALL ENTITY    |                | OR   |                 | OTHER THAN SMALL ENTITY |                |
|-----------------|----------------|------|-----------------|-------------------------|----------------|
| RATE            | ADDITIONAL FEE | RATE | ADDITIONAL FEE  | RATE                    | ADDITIONAL FEE |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
| TOTAL ADDT. FEE |                | OR   | TOTAL ADDT. FEE |                         |                |

| AMENDMENT C                                    | (Column 1)                       | (Column 2)                         | (Column 3) | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR |            |               |
| Total  | 15                               | Minus                              | 24         |               |
| Independent                                    | 3                                | Minus                              | 4          |               |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |            |               |

| SMALL ENTITY    |                | OR   |                 | OTHER THAN SMALL ENTITY |                |
|-----------------|----------------|------|-----------------|-------------------------|----------------|
| RATE            | ADDITIONAL FEE | RATE | ADDITIONAL FEE  | RATE                    | ADDITIONAL FEE |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
|                 |                | OR   |                 |                         |                |
| TOTAL ADDT. FEE |                | OR   | TOTAL ADDT. FEE |                         |                |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

FORM PTO-676  
Rev. 6/99  
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Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/199,797   | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |
| 35527  | 7590        | 02/27/2006           | EXAMINER            |                  |
| DUKE W. YEE<br>YEE & ASSOCIATES, P.C.<br>P.O. BOX 802333<br>DALLAS, TX 75380 |             |                      | NGUYEN, THUAN T     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2685                |                  |

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/199,797 | <b>Applicant(s)</b><br>OSTERHOUT ET AL. |  |
|                              | <b>Examiner</b><br>THUAN T. NGUYEN   | <b>Art Unit</b><br>2685                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 52-62 and 66-69 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) 52-62 is/are allowed.
- 6)  Claim(s) 66, 68 and 69 is/are rejected.
- 7)  Claim(s) 67 is/are objected to.
- 8)  Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:
1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Remarks*

1. Claims 52-62 and 66-69 are pending for examination. The examiner offered a suggestion to the applicants' representative to revise claim 66 on Feb 02, 2006 on a telephone discussion for this claim to be in a better condition for allowance, but the applicants' representative denies complying with the examiner's suggestion and prefers the claim stayed as it is.

### *Allowable Subject Matter*

2. Claims 52-62 are allowed.
3. The indicated allowability previously of claims 68 and 69 is withdrawn in view of the newly discovered reference(s) to Pirot et al. (US Patent no. 6,856,676 B1). Rejections based on the newly cited reference(s) follow.

### *Reasons for Allowance*

4. The following is an examiner's statement of reasons for allowance:

The closest prior arts of record issued to Wang and Pepe fails to combine to teach or suggest a method for processing a call as claimed in claim 52 and 56 including at least a step of receiving at a session initiated protocol (SIP) server a notice of a call for a mobile data processing system associated with a user and detailed steps as claimed therein.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

5. Applicant's arguments with respect to claims 66-69 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

7. Claims 66 and 68-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Pirot et al. (U.S. Patent No. 6,856,676 B1).

Regarding claim 66, Pirot discloses a method for initiating calls comprising the steps of receiving registration of an incoming call, which is formatted in a first protocol, and translating the registration from the first protocol to a second protocol to form a modified registration notice, and transmitting the modified registration notice to a terminating device, and the modified registration notice formatted in a second protocol (refer to Figs. 1 & 3, an incoming call is registered with the system in a first protocol –called registration admission status using a number of protocols including a first protocol session initiation protocol or SIP, refer to col. 5/lines 30-40; and as the system receives the registration notice, the registration is being modified to form a modified registration notice with the use of service provisioning within a service management



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subsystem 52, refer to col. 11/lines 17-41, to a second protocol (col. 13/line 54-65); and the modified registration notice is sending to the terminating device in the format of the second protocol in HTML (see col. 13/line 49 to col. 14/line 13 for provisioning and modification of registration services into HTML-a second protocol; and col. 16/lines 36-48 for presentation to the customer using graphical screen layouts).

As for claims 68 and 69, as already noted and explained above, Pirot discloses wherein the first protocol is a session initiation protocol and the second protocol is a hypertext markup language.

*Allowable Subject Matter*

8. Claims 67 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of Pirot does not further disclose the feature of claim 66 AND the steps as claimed in claim 67.

*Conclusion*

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to the New Central Fax number:**

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Art Unit: 2685

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TONY T. NGUYEN  
PATENT EXAMINER

Tony T. Nguyen  
Art Unit 2685  
February 17, 2006

|                                   |                                       |   |             |
|-----------------------------------|---------------------------------------|---|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/199,797 | Applicant(s)/Patent Under Reexamination<br>OSTERHOUT ET AL. |             |
|                                   | Examiner<br>THUAN T. NGUYEN           | Art Unit<br>2685  | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name         | Classification |
|---|--|-----------------|--------------|----------------|
| * | A US-6,856,676 B1                                | 02-2005         | Pirot et al. | 379/201.01     |
| B | US-  |                 |              |                |
| C | US-  |                 |              |                |
| D | US-  |                 |              |                |
| E | US-  |                 |              |                |
| F | US-  |                 |              |                |
| G | US-  |                 |              |                |
| H | US-  |                 |              |                |
| I | US-  |                 |              |                |
| J | US-  |                 |              |                |
| K | US-  |                 |              |                |
| L | US-  |                 |              |                |
| M | US-  |                 |              |                |

**FOREIGN PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|--|-----------------|---------|------|----------------|
| N |  |                 |         |      |                |
| O |  |                 |         |      |                |
| P |  |                 |         |      |                |
| Q |  |                 |         |      |                |
| R |  |                 |         |      |                |
| S |  |                 |         |      |                |
| T |  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|
| U |   |
| V |   |
| W |   |
| X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.





Commissioner for Patents  
Washington, DC 20231  
www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 1786

|                                    |   |                     |  |  |
|------------------------------------|---|---------------------|--|--|
| <b>SERIAL NUMBER</b><br>10/199,797 | <b>FILING DATE</b><br>07/19/2002<br><b>RULE</b> | <b>CLASS</b><br>455 | <b>GROUP ART UNIT</b><br><del>2684</del><br>2685 | <b>ATTORNEY DOCKET NO.</b><br>11032RRUS04D |
|------------------------------------|---|---------------------|--|--|

**APPLICANTS**  
Gregory T. Osterhout, Coppell, TX;  
Kim B. Holmes, Rowlett, TX;  
Mark Sosebee, Plano, TX;

**\*\* CONTINUING DATA \*\*\*\*\***  
This application is a DIV of 09/419,175 10/15/1999

**\*\* FOREIGN APPLICATIONS \*\*\*\*\*** *Yes, 8/02*  
*No / 7/02*

**IF REQUIRED, FOREIGN FILING LICENSE GRANTED**  
**\*\* 09/03/2002**

|   |   |                        |                      |                                 |                                     |
|---|---|------------------------|----------------------|---------------------------------|-------------------------------------|
| Foreign Priority claimed<br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no   | 35 USC 119 (a-d) conditions met<br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance | STATE OR COUNTRY<br>TX | SHEETS DRAWING<br>10 | TOTAL CLAIMS<br><i>24</i><br>15 | INDEPENDENT CLAIMS<br><i>3</i><br>3 |
| Verified and Acknowledged<br>Examiner's Signature: <i>[Signature]</i> Initials: <i>[Initials]</i> |   |                        |                      |                                 |                                     |

**ADDRESS**  
021498

**TITLE**  
Portable call management system

|                                   |   |  |
|-----------------------------------|---|--|
| <b>FILING FEE RECEIVED</b><br>896 | FEES: Authority has been given in Paper<br>No. _____ to charge/credit DEPOSIT ACCOUNT<br>No. _____ for following: | <input type="checkbox"/> All Fees                              |
|                                   |   | <input type="checkbox"/> 1.16 Fees ( Filing )                  |
|                                   |   | <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) |
|                                   |   | <input type="checkbox"/> 1.18 Fees ( Issue )                   |
|                                   |   | <input type="checkbox"/> Other _____                           |
|                                   |   | <input type="checkbox"/> Credit                                |

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| SEARCH                           |       |        |             |
|----------------------------------|-------|--------|-------------|
| Class                            | Sub.  | Date   | Exmr.       |
| 455<br>↓<br>709<br>↓<br>340<br>↓ | 417   | 9/2/03 | 885         |
|                                  | 412.1 |        |             |
|                                  | 412.2 |        |             |
|                                  | 414.1 |        |             |
|                                  | 415   |        |             |
|                                  | 425   |        |             |
|                                  | 458   |        |             |
|                                  | 459   |        |             |
|                                  | 463   |        |             |
|                                  | 466   |        |             |
|                                  | 556.1 |        |             |
|                                  | 556.2 |        |             |
|                                  | (1DA) |        |             |
|                                  | 217   | 9/3/03 | 875         |
|                                  | 219   |        |             |
| 220                              |       |        |             |
| 227                              |       |        |             |
| 3.52                             |       |        |             |
| 3.53                             |       |        |             |
| 3.54                             |       |        |             |
| 825.21                           |       |        |             |
| 7.46                             |       |        |             |
| 7.47                             |       |        |             |
| 7.52                             |       |        |             |
| updated above of 404             |       |        | 806         |
| updated above                    |       |        | 7/15/05 807 |

| INTERFERENCE SEARCHED |       |         |       |
|-----------------------|-------|---------|-------|
| Class                 | Sub.  | Date    | Exmr. |
| 455<br>↓              | 417   | 1/19/06 | 807   |
|                       | 442   |         |       |
|                       | 435.1 |         |       |
|                       | 436   |         |       |
|                       | 414.4 |         |       |
|                       | 432.2 |         |       |

| SEARCH NOTES  |         |         |    |
|---|---------|---------|----|
| (List databases searched. Attach search strategy inside.) |         |         |    |
|   | Date    | Exmr.   |    |
| Fast Search   | 9/2/03  | 80      |    |
| "   | 9/3/03  | 80      |    |
| Wynona  | 9/2/03  | 80      |    |
| Fast Search   | 10/4/04 | 80      |    |
| "   | 12/1/04 | 80      |    |
| "   | 7/11/05 | 80      |    |
| "   | 7/15/05 | 80      |    |
| Fast updated  | 1/13/06 | 80      |    |
| 455<br>↓<br>340<br>↓                                      | 442     | 1/13/06 | 80 |
|   | 445     |         |    |
|   | 435.1   |         |    |
|   | 435.2   |         |    |
|   | 435.3   |         |    |
|   | 436     |         |    |
|   | 438     |         |    |
|   | 439     |         |    |
|   | 414.4   |         |    |
|   | 432.2   |         |    |
|   | 825.22  |         |    |
|   | 7.5     |         |    |
|   | 3.52    |         |    |
|   | 3.53    |         |    |
|   | 3.54    |         |    |
| 7.45  |         |         |    |
| 7.46  |         |         |    |

340/3.5, 3.52, 3.53, 3.54, 7.45, 7.46/11906 9/15/05

Best Available Copy

## EAST Search History

| Ref # | Hits | Search Query   | DBs                                  | Default Operator | Plurals | Time Stamp       |
|-------|------|--|--------------------------------------|------------------|---------|------------------|
| L1    | 4700 | registration near5 (call or notice or acknowledg\$5)     | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:47 |
| L2    | 351  | 1 and "session initiation protocol"                      | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:45 |
| L3    | 13   | 2 and "second protocol"                                  | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:45 |
| L4    | 5    | 3 and ("hypertext markup language" or HTML)              | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:45 |
| L5    | 1762 | registration and ("session initiation protocol" or SIP)  | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:45 |
| L6    | 247  | 5 and ("hypertext markup language" or HTML)              | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:46 |
| L7    | 9    | 6 and "second protocol"                                  | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:45 |
| L8    | 1    | 6 and (modified near5 registration)                      | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:46 |
| L9    | 1    | 6 and (modified near5 notice)                            | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:46 |
| L10   | 7    | 6 and (modified near5 (call or notice or acknowledg\$5)) | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:48 |
| L11   | 195  | 6 and modif\$4   | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:49 |
| L12   | 46   | 6 and modif\$4   | USPAT                                | OR               | ON      | 2006/02/17 16:43 |
| L13   | 46   | 12 and protocol  | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2006/02/17 15:49 |
| L14   | 2    | 13 and (modif\$4 same registration)                      | USPAT                                | OR               | ON      | 2006/02/17 16:43 |
| S1    | 1    | ("6421436").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO | OR               | OFF     | 2006/02/17 15:41 |
| S2    | 1    | "6421536"  | US-PGPUB;<br>USPAT;<br>EPO           | OR               | ON      | 2003/09/08 14:22 |

## EAST Search History

|     |       |  |                            |    |    |                  |
|-----|-------|--|----------------------------|----|----|------------------|
| S3  | 1     | S2 and pager                                       | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:21 |
| S4  | 1     | S3 and palm  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:21 |
| S5  | 0     | S4 and hypertext                                   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:21 |
| S6  | 0     | S4 and HTML  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:21 |
| S7  | 0     | S4 and PDA   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:22 |
| S8  | 0     | S2 and PDA   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:22 |
| S9  | 26261 | process\$3 near3 call                              | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:22 |
| S10 | 1343  | S9 and (PDA or "personal digital assistant")       | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:23 |
| S11 | 0     | S10 and "Palm VI"                                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:23 |
| S12 | 202   | S10 and Palm                                       | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:24 |
| S13 | 189   | S12 and (wireless or mobile)                       | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:24 |
| S14 | 54    | S13 and setup                                      | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:24 |
| S15 | 72    | S13 and (set\$1up or setup or "setting up")        | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:25 |
| S16 | 60    | S15 and (protocol and address)                     | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:25 |
| S17 | 51    | S16 and (redirect\$3 or rerout\$3 or transferr\$3) | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:26 |



## EAST Search History

|     |    |  |                            |    |    |                  |
|-----|----|--|----------------------------|----|----|------------------|
| S18 | 47 | S17 and (request and response)                         | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:26 |
| S19 | 21 | S18 and ("caller ID" or (caller near2 identification)) | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:27 |
| S20 | 13 | S19 and pager  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 16:07 |
| S21 | 2  | S20 and hypertext                                      | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:27 |
| S22 | 2  | S20 and HTML   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:28 |
| S24 | 2  | S19 and "session initiation protocol"                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:50 |
| S25 | 4  | S18 and "session initiation protocol"                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:51 |
| S26 | 4  | S17 and "session initiation protocol"                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:52 |
| S27 | 7  | S16 and "session initiation protocol"                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:53 |
| S28 | 12 | S13 and "session initiation protocol"                  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 15:09 |
| S29 | 3  | S28 and (hypertext or HTML)                            | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 14:53 |
| S30 | 1  | "6421536"  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 15:09 |
| S31 | 0  | S30 and PDA  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 15:09 |
| S32 | 1  | S30 and pager  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 15:09 |
| S33 | 1  | S32 and palm   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2003/09/08 15:10 |

## EAST Search History

|     |       |   |                                      |    |     |                  |
|-----|-------|---|--------------------------------------|----|-----|------------------|
| S34 | 0     | S33 and "personal digital assistant"                | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 15:45 |
| S35 | 1     | S33 and (audio or audibly or vibrat\$3 or alert\$3) | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 15:47 |
| S36 | 12    | S28 and (audio or audibly or vibrat\$3 or alert\$3) | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:02 |
| S37 | 3     | S28 and (vibrat\$3 or alert\$3)                     | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:02 |
| S38 | 1     | ("6161134").PN.                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO | OR | OFF | 2003/09/08 16:02 |
| S39 | 0     | S38 and (vibrat\$3)                                 | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:03 |
| S40 | 0     | S39 and alert\$3                                    | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:03 |
| S41 | 0     | S38 and pager                                       | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:03 |
| S42 | 0     | S38 and pag\$3                                      | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:03 |
| S43 | 8     | S20 and vibrat\$3                                   | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2003/09/08 16:07 |
| S44 | 24318 | initiat\$3 near5 call                               | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2006/01/21 16:57 |
| S45 | 24    | S44 and "registration notice"                       | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2006/01/21 16:58 |
| S46 | 35    | S44 and (registration near5 notice)                 | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2006/01/21 17:43 |
| S47 | 31    | S46 and protocol                                    | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2006/01/21 16:58 |
| S48 | 1     | S47 and (modified near5 registration)               | US-PGPUB;<br>USPAT;<br>EPO           | OR | ON  | 2006/01/21 17:00 |

## EAST Search History

|     |      |   |                            |    |    |                  |
|-----|------|---|----------------------------|----|----|------------------|
| S49 | 1    | S47 and (second near5 protocol)   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:44 |
| S50 | 1    | S45 and (modified near5 registration)   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:41 |
| S51 | 1291 | 455/417 455/442 455/435.1<br>455/436 455/414.4 455/432.2<br>340/3.5 340/3.52 340/3.53 340/3.54<br>340/7.45 340/7.46 | US-PGPUB                   | OR | ON | 2006/01/21 17:43 |
| S52 | 3    | S51 and (registration near5 notice).<br>clm.  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:45 |
| S53 | 42   | S51 and (second near5 protocol).<br>clm.  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:44 |
| S54 | 1    | S53 and (registration near5 notice).<br>clm.  | US-PGPUB                   | OR | ON | 2006/01/21 17:45 |
| S55 | 0    | S51 and "session initiated protocol".<br>clm.   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:46 |
| S56 | 14   | S51 and SIP.clm.  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:46 |
| S57 | 6    | S56 and address.clm.  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:46 |
| S58 | 4    | S57 and message.clm.  | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:47 |
| S59 | 2    | S58 and notification.clm.   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:47 |
| S60 | 1    | S59 and call.clm.   | US-PGPUB;<br>USPAT;<br>EPO | OR | ON | 2006/01/21 17:47 |

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Associates, P.C.**

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Facsimile (972) 385-7766

## Facsimile Cover Sheet

|   |  |
|---|--|
| <b>To: Commissioner for Patents for<br/>Examiner Thuan T. Nguyen<br/>Group Art Unit 2685</b>  | <b>Facsimile No.: 571/273-8300</b>   |
| <b>From: Carrie Parker<br/>Legal Assistant to Ted Fay</b>   | <b>No. of Pages Including Cover Sheet: 12</b>  |
| <b>Message:</b><br><br><b>Transmitted herewith:</b> <ul style="list-style-type: none"> <li>• Transmittal Document; and</li> <li>• Response to Office Action.</li> </ul> |  |
| <b>Re: Application No. 10/199,797<br/>Attorney Docket No: 11032RRUS04D</b>  |  |
| <b>Date: Tuesday, November 22, 2005</b>   |  |
| <b>Please contact us at (972) 385-8777 if<br/>you do not receive all pages<br/>indicated above or experience any<br/>difficulty in receiving this facsimile.</b>        | <i>This Facsimile is intended only for the use of the addressee and, if the addressee is a client or their agent, contains privileged and confidential information. If you are not the intended recipient of this facsimile, you have received this facsimile inadvertently and in error. Any review, dissemination, distribution, or copying is strictly prohibited. If you received this facsimile in error, please notify us by telephone and return the facsimile to us immediately.</i> |

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NOV 22 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Osterhout et al.

§  
§  
§  
§  
§  
§

Group Art Unit: 2685

Serial No.: 10/199,797

Examiner: Nguyen, Thuan T.

Filed: July 19, 2002

Attorney Docket No.: 11032RRUS04D

For: Portable Call Management System

Certificate of Transmission Under 37 C.F.R. § 1.8(a)  
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By: Carrie Parker  
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35527

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CUSTOMER NUMBER

TRANSMITTAL DOCUMENT

Commissioner for Patents  
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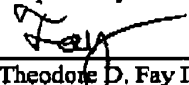
Sir:

ENCLOSED HEREWITH:

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No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Yee & Associates, P.C. Deposit Account No. 50-3157. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Yee & Associates, P.C. Deposit Account No. 50-3157.

Respectfully submitted,

  
Theodore D. Fay III  
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NOV 22 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

§  
§  
§  
§  
§  
§

Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

Certificate of Transmission Under 37 C.F.R. § 1.8(a)  
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By: Carrie Parker  
 Carrie Parker

**RESPONSE TO OFFICE ACTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Yee & Associates, P.C. Deposit Account No. 50-3157. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Yee & Associates, P.C. Deposit Account No. 50-3157.

In response to the Office Action dated August 23, 2005, please amend the above-identified application as follows:

**Amendments to the Claims begin on page 2 of this paper.**

**Remarks begin on page 5 of this paper.**

**IN THE CLAIMS:**

1-51. (Canceled)

52. (Previously Presented) A method in a communications system for processing a call, the method comprising:

- receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;
- identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;
- sending a first request to setup the call to the mobile data processing system associated with a the user, wherein the mobile data processing system has a wireless communications capability;
- sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system; and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;
- receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and
- sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Previously Presented) The method as recited in claim 53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Previously Presented) A method for processing a call at a data processing system the method comprising:
- receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;
  - identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;
  - receiving a notification message at the data processing system indicating a request to setup the call;
  - presenting the notification to the user at the data processing system;
  - receiving the request to establish the call;
  - presenting caller information at the data processing system;
  - receiving user input from the user identifying an address to which the call is to be directed; and
  - responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.
57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.
58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.
59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.
60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.
61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.



62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.
- 63-65. (Canceled)
66. (Currently Amended) A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second protocol to form a modified registration notice; and  
transmitting [[a]] the modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.
67. (Original) The method as recited in claim 66, further comprising:  
selecting, at a session initiated protocol (SIP) server, an address to which the user has previously selected the call be sent from a database of preferred locations;  
receiving a location data with which to redirect the incoming call from the terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is formatted in the second protocol.
68. (Original) The method as recited in claim 66, wherein the first protocol is a session initiation protocol.
69. (Original) The method as recited in claim 66, wherein the second protocol is a hypertext markup language.

**REMARKS**

Claims 52-62 and 66-69 are pending in the present application. Claim 66 is amended. Reconsideration of the claims is respectfully requested.

**I. 35 U.S.C. § 102, Anticipation**

The examiner rejects claim 66 as anticipated by *Buttitta et al.*, Arrangement for Providing a Call Hand-Off for a Mobile Station from a Land-Line Supported Private Base Station to a Cellular Base Station Operating in a Cellular System, U.S. Patent 5,913,166 (June 15, 1999) (hereinafter "*Buttitta*"). This rejection is respectfully traversed.

As to claim 66 the Office Action states:

Regarding claim 66, *Buttitta* discloses a method for initiating calls comprising the steps of receiving registration of an incoming call, which is formatted in a first protocol, and translating the registration from the first protocol to a second protocol, and transmitting a modified registration notice to a terminating device, and the modified registration notice formatted in a second protocol (refer to Fig. 1, 2A & 2B as the mobile terminal registers with its private system in a first protocol, and as the mobile hands off or transfers an active call to a public communication system, the system modifies the registration in a second protocol, which is the public communication system, and the acknowledgement or modified registration notice is sending to the terminal for call activation, see further details on col. 5/line 48 to col. 6/line 26 and col. 7/line 35 to col. 8/line 23).

Office Action of August 23, 2005, p. 3.

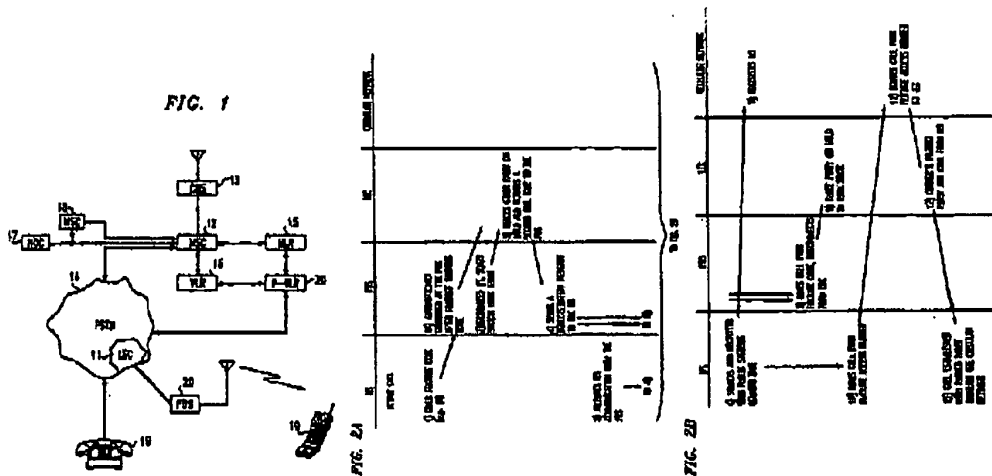
A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case each and every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

Claim 66 as amended is as follows:

66. A method for initiating calls, comprising the steps of:  
 receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
 translating said registration notice from the first protocol into a second protocol to form a modified registration notice; and  
 transmitting the modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.

*Buttitta* does not anticipate claim 66 because *Buttitta* does not teach the claimed feature of "translating said registration notice from the first protocol into a second protocol" *Buttitta* also does not teach translating the registration notice "to form a modified registration notice," in the manner claimed.

The examiner asserts otherwise, citing to figures 1, 2A, and 2B, as well as portions of the cited text. These figures are as follows:



These figures teach establishing a new call while a first call is on hold. The new call is placed on a public base station, whereas the old call is made on a private base station. After the new call is established, the old call is terminated. One of ordinary skill would not and can not interpret this process as "translating said registration notice from the first protocol into a second protocol to form a modified registration notice" as claimed. No translation of a registration notice takes place and no modified registration notice is formed; instead, a first call is ended and a second call is established. For this reason, *Buttitta* does not teach all of the features of claim 66.

In addition, the text cited by the examiner is as follows:

FIG. 2 shows a first protocol of a call hand-off process for handing-off an active call from the private wireless system to the public cellular system with minimal disruption to the parties conversing in the call. In the execution of the process, telephone communications are switched from a first path, which includes a wireless communications path between the mobile station 10 and the private base station 20, to a second path, which includes a wireless communications path between the mobile station 10 and the public base station 13, for maintaining the communications between the mobile station and a remote telephone station.

In the execution of the hand-off of telephone communications occurring in the mobile station from the private base station 20 to the cellular base station 13, in accordance with the first described protocol of the embodiment of the invention, the arrangement uses third party call and call park features presently available on a 5ESS.RTM. electronic switch manufactured by AT&T Corp. The 5ESS electronic switch is well known and is described in general in the AT&T Technical Journal, Volume 64, Number 6, Part 2, July-August 1985. The 5ESS electronic switch may easily function as the local exchange carrier switch 11, and thereby provide access for the private base station 20 to the public switched telephone network 14.

Available on most local exchange carrier switches, the third party call feature, like three-way calling, permits a subscriber at a first telephone to send a switch-hook flash signal to the local exchange carrier switch for placing the other party to the call in progress on hold in the switch and obtaining dial tone at the telephone. In the application of the third party call feature, the subscriber at the first telephone is able to make a telephone call to a second telephone number while leaving the other party to the call on hold.

*The call park feature is invoked by a code transmitted to the switch 11 from the private base station 20. This feature is described in detail in, for example, AT&T's 5ESS Switch Business and Residence Custom Services Feature Descriptions, Document Number 235-190-101, Issue 5, dated November 1993, pages 8-92 through 8-107. By way of general operation, the call park feature simply provides a way for a subscriber at a first telephone connected to the switch 11 to place a remote party to a conversation on hold in the switch, disconnect from the call, and then from a different telephone reconnect to the party placed on hold by dialing an appropriate call park feature access code recognized by the switch.*

...  
The execution of the hand-off process is conveniently described in the following steps, which may be more easily understood when read in conjunction with the flowchart shown in FIG. 2.

1) From an active call the user presses a feature code (e.g. #T). This sends to the PBS a hand-off trigger.

1a) The PBS detects low signal strength from the MS and sends to the MS hand-off warning tones, after which the PBS proceeds with the following process.

2) The PBS sends a switch-hook flash to the LEC.

3) The LEC places the other party on hold and returns a dial tone to the PBS.

4) *The PBS sends a deregistration message to the MS.*

5) *The MS ceases communications with the PBS and releases its channel.*

6) *The MS selects and registers With the public cellular system. The registration with the public system will automatically update the MS's Temporary Listed Directory Number (TLDN) with the corresponding HLR/VLR.*

7) The public cellular system accepts the MS registration.

8) After step 4, the PBS sends a call park feature code in order to invoke the call park feature and optionally a PIN at the LEC.

9) The LEC places the other party on hold into the parked state.

10) The MS dials the call park feature access number over the cellular network.

11) The cellular network routes the call park feature access number to the LEC.

12) The LEC connects the parked party and the call from the MS.

13) The call with parked party is established with MS through cellular network.

The entire hand-off process for the mobile station may be achieved within 5 seconds. This time is subject to the number of digits that are transmitted to the switch 11 by both the private base station 20 as well as the mobile station 10 during the hand-off process. The hand-off may be achieved in less time, for example, if the PIN and/or MIN are not provided to the switch 11.

Although numerous switches presently available in the art serve as the LEC switch 11, many do not have a call park capability. Nevertheless, it is possible to achieve a call hand-off for a private wire ess system which has a private base station connected to a switch without such feature.

In the execution of the hand-off of the mobile station from the private base station 20 to the cellular base station 13, in accordance with a second described protocol of the embodiment, the arrangement uses third party call and conference bridge features available at the local exchange carrier switch 11. This switch 11 also provides access for the private base station 20 to the public switched telephone network 14.

*Buttitta*, col. 5, l. 48 through col. 6, l. 26 and col. 7, l. 35 through col. 8, l. 23 (emphasis supplied).

The emphasized portions of the text shows that *Buttitta* does not perform a translation of a registration notice in the manner claimed. Instead, *Buttitta* teaches placing a first call on hold, placing a second call using a public base station, ending the first call, and continuing with the second call. In other words, *Buttitta* teaches terminating a first registration and then establishing an entirely new registration. One of ordinary skill would not and can not interpret this process as “translating said registration notice from the first protocol into a second protocol to form a modified registration notice” as claimed. No translation takes place and no modified registration notice is formed; instead, a first call is ended and a second call is established. Thus, at most, *Buttitta* might teach that a first registration notice is established and terminated and then a second registration notice is established. For this reason, *Buttitta* does not teach all of the features of claim 66. Accordingly, *Buttitta* does not anticipate claim 66. Therefore, the rejection of claim 66 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Buttitta* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Buttitta* et al. actually teaches away from the presently claimed invention because it teaches establishing first and second calls, as opposed to translating a first registration notice as in the presently claimed invention. Absent the examiner pointing out some teaching or incentive to implement *Buttitta* translating a first registration notice in the manner claimed, one of ordinary skill in the art would not be led to modify *Buttitta* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Buttitta* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using Applicants’ disclosure as a template to

make the necessary changes to reach the claimed invention.

## II. Objection to Claims

The examiner states that claims 67-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As shown above, claim 66 should be allowable over *Buttitta*. Thus, claims 67-69 should also be allowable in their present form.

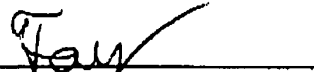
## III. Conclusion

It is respectfully urged that the subject application is patentable over *Buttitta* and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: November 22, 2005

Respectfully submitted,



Theodore D. Fay III  
Reg. No. 48,504  
Yee & Associates, P.C.  
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Dallas, TX 75380  
(972) 385-8777  
Attorney for Applicants

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective November 10, 1998

Application or Docket Number  
*10/199977 PEE*  
*10/14/01*

**CLAIMS AS FILED - PART I**

| FOR                              | (Column 1)<br>NUMBER FILED | (Column 2)<br>NUMBER EXTRA |
|----------------------------------|----------------------------|----------------------------|
| BASIC FEE                        |                            | <i>770</i>                 |
| TOTAL CLAIMS                     | <i>15</i> minus 20 = *     |                            |
| INDEPENDENT CLAIMS               | <i>3</i> minus 3 = *       |                            |
| MULTIPLE DEPENDENT CLAIM PRESENT |                            |                            |

\* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE  OR OTHER THAN SMALL ENTITY

| RATE  | FEE | OR | RATE  | FEE        |
|-------|-----|----|-------|------------|
|       |     | OR |       | <i>770</i> |
|       |     | OR |       |            |
|       |     | OR |       |            |
|       |     | OR |       |            |
| TOTAL |     | OR | TOTAL | <i>770</i> |

**CLAIMS AS AMENDED - PART II**

*4-15-05*

|  | (Column 1)<br>CLAIMS REMAINING AFTER AMENDMENT | (Column 2)<br>MINUS | (Column 3)<br>HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 4)<br>PRESENT EXTRA |
|--|--|---------------------|--|-----------------------------|
| AMENDMENT A                                    |  |                     |  |                             |
| Total  | <i>15</i>                                      | Minus               | **   | <i>1</i>                    |
| Independent                                    | <i>3</i>                                       | Minus               | ***  | <i>0</i>                    |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |  |                     |  |                             |

SMALL ENTITY OR OTHER THAN SMALL ENTITY

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|  | (Column 1)<br>CLAIMS REMAINING AFTER AMENDMENT | (Column 2)<br>MINUS | (Column 3)<br>HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 4)<br>PRESENT EXTRA |
|--|--|---------------------|--|-----------------------------|
| AMENDMENT B                                    |  |                     |  |                             |
| Total  | <i>15</i>                                      | Minus               | ** <i>24</i>                                     | <i>0</i>                    |
| Independent                                    | <i>3</i>                                       | Minus               | *** <i>4</i>                                     | <i>0</i>                    |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |  |                     |  |                             |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|  | (Column 1)<br>CLAIMS REMAINING AFTER AMENDMENT | (Column 2)<br>MINUS | (Column 3)<br>HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 4)<br>PRESENT EXTRA |
|--|--|---------------------|--|-----------------------------|
| AMENDMENT C                                    |  |                     |  |                             |
| Total  |  | Minus               | **   |                             |
| Independent                                    |  | Minus               | ***  |                             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |  |                     |  |                             |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
|                  |                | OR |                  |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 10/199,797   | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D                | 1786             |
| 35527  | 7590        | 08/23/2005           | EXAMINER<br>NGUYEN, THUAN T |                  |
| DUKE W. YEE<br>YEE & ASSOCIATES, P.C.<br>P.O. BOX 802333<br>DALLAS, TX 75380 |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 2685                        |                  |

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/199,797 | <b>Applicant(s)</b><br>OSTERHOUT ET AL. |  |
|                              | <b>Examiner</b><br>THUAN T. NGUYEN   | <b>Art Unit</b><br>2685                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 52-62 and 66-69 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) 52-62 is/are allowed.
- 6)  Claim(s) 66 is/are rejected.
- 7)  Claim(s) 67-69 is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 19 July 2002 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \*    c)  None of:
1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

*Remarks*

1. Claims 52-62 and 66-69 are pending for examination.

*Allowable Subject Matter*

2. Claims 52-62 are allowed.

*Reasons for Allowance*

3. The following is an examiner's statement of reasons for allowance:

The closest prior arts of record issued to Wang and Pepe fails to combine to teach or suggest a method for processing a call as claimed in claim 52 and 56 including at least a step of receiving at a session initiated protocol (SIP) server a notice of a call for a mobile data processing system associated with a user and detailed steps as claimed therein.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Claim Rejections - 35 USC 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 66 is rejected under 35 U.S.C. 102(e) as being anticipated by Buttitta et al. (U.S. Patent No. 5,913,166).

Regarding claim 66, Buttitta discloses a method for initiating calls comprising the steps of receiving registration of an incoming call, which is formatted in a first protocol, and translating the registration from the first protocol to a second protocol, and transmitting a modified registration notice to a terminating device, and the modified registration notice formatted in a second protocol (refer to Fig. 1, 2A & 2B as the mobile terminal registers with its private system in a first protocol, and as the mobile hands off or transfers an active call to a public communication system, the system modifies the registration in a second protocol, which is the public communication system, and the acknowledgement or modified registration notice is sending to the terminal for call activation, see further details on col. 5/line 48 to col. 6/line 26 and col. 7/line 35 to col. 8/line 23).

*Allowable Subject Matter*

6. Claims 67-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of Buttitta does not further disclose the steps as claimed in claims 67-69.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kulkarni et al and Zicker (PTO 892 attached) disclose systems related to hand offs using different approaches.

9. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9306, (for Technology Center 2600 only)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895.

The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Art Unit: 2685

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**TONY T. NGUYEN  
PATENT EXAMINER**

Tony T. Nguyen  
Art Unit 2685  
July 15, 2005

|                                   |                                       |  |             |
|-----------------------------------|---------------------------------------|--|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/199,797 | Applicant(s)/Patent Under<br>Reexamination<br>OSTERHOUT ET AL. |             |
|                                   | Examiner<br>THUAN T. NGUYEN           | Art Unit<br>2685   | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name            | Classification |
|---|--|-----------------|-----------------|----------------|
| A | US-5,913,166                                     | 06-1999         | Buttitta et al. | 455/436        |
| B | US-5,862,481                                     | 01-1999         | Kulkami et al.  | 455/432.2      |
| C | US-6,526,277 B1                                  | 02-2003         | Zicker et al.   | 455/426.2      |
| D | US-  |                 |                 |                |
| E | US-  |                 |                 |                |
| F | US-  |                 |                 |                |
| G | US-  |                 |                 |                |
| H | US-  |                 |                 |                |
| I | US-  |                 |                 |                |
| J | US-  |                 |                 |                |
| K | US-  |                 |                 |                |
| L | US-  |                 |                 |                |
| M | US-  |                 |                 |                |

**FOREIGN PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|--|-----------------|---------|------|----------------|
| N |  |                 |         |      |                |
| O |  |                 |         |      |                |
| P |  |                 |         |      |                |
| Q |  |                 |         |      |                |
| R |  |                 |         |      |                |
| S |  |                 |         |      |                |
| T |  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|
| U |   |
| V |   |
| W |   |
| X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.





### SEARCH

| Class | Sub.                  | Date   | Exmr.       |
|-------|-----------------------|--------|-------------|
| 455   | 417                   | 9/2/03 | 89%         |
|       | 412.1                 |        |             |
|       | 412.2                 |        |             |
|       | 414.1                 |        |             |
|       | 415                   |        |             |
|       | 425                   |        |             |
|       | 458                   |        |             |
|       | 459                   |        |             |
|       | 463                   |        |             |
|       | 466                   |        |             |
|       | 556.1                 |        |             |
|       | 556.2                 |        |             |
| 709   | (IDA) 217             | 9/3/03 | 87%         |
|       | 219                   |        |             |
|       | 220                   |        |             |
|       | 227                   |        |             |
| 340   | 3.52                  |        |             |
|       | 3.53                  |        |             |
|       | 3.54                  |        |             |
|       | 825.29                |        |             |
|       | 7.46                  |        |             |
|       | 7.47                  |        |             |
|       | 7.52                  |        |             |
|       | Updated since 10/4/04 |        | 86%         |
|       | updated above         |        | 7/15/05 87% |

#### INTERFERENCE SEARCHED

| Class | Sub. | Date | Exmr. |
|-------|------|------|-------|
|       |      |      |       |
|       |      |      |       |
|       |      |      |       |

### SEARCH NOTES

(List databases searched. Attach search strategy inside.)

|              | Date     | Exmr. |
|--------------|----------|-------|
| Fast Searchy | 9/2/03   | 86%   |
| u -          | 9/3/03   | 86%   |
| Wagner No    | 9/3/03   | 88%   |
| Fast Searchy | 10/4/04  | 86%   |
| u            | 12/12/04 | 86%   |
| u            | 7/11/05  | 89%   |
|              | 7/15/05  | 82%   |

Best Available Copy  
7/15/05



- Drafts
- Pending
- Active
  - L1: (121724) "455"/\$.ccls. or "379"/\$.ccls.
  - L2: (747) 1 and ((register\$3 or registration) near8 "incoming call")
  - L3: (8) 2 and "first protocol"
  - L4: (8) 3 and "second protocol"
  - L5: (1) 4 and "session initiation protocol"
  - L6: (1) 4 and HTML
- Failed
- Saved
  - S1: (1) ("6421436").PN.
  - S2: (1) "6421536"
  - S3: (1) S2 and pager
  - S4: (1) S3 and palm
  - S5: (0) S4 and hometext

Search List Browse Queue Clear

DBs US-PGPUB; USPAT; EPO  Plurals

Default operator: OR  Highlight all hit terms initially

3 and "second protocol"

BRS form IS&R form Image Text HTML

|   | U                        | I                                   | Document ID   | Issue Date | Pages | Title  | Current OR | Current             | Ret | Inventor                     | S                        |
|---|--------------------------|-------------------------------------|---------------|------------|-------|--|------------|---------------------|-----|------------------------------|--------------------------|
| 2 | <input type="checkbox"/> | <input type="checkbox"/>            | US 2002018777 | 20021212   | 20    | Portable call management system                        | 455/417    | 455/445; 455/461    |     | Osterhout, Gregory T. et al. | <input type="checkbox"/> |
| 3 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | US 6526277 B1 | 20030225   | 61    | Multiple mode personal wireless communications         | 455/426.2  | 455/465             |     | Zicker, Robert G. et al.     | <input type="checkbox"/> |
| 4 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | US 6097966 A  | 20000801   | 15    | Wireless access for local exchange carriers            | 455/555    | 455/422.1; 455/461; |     | Hanley, Donald V.            | <input type="checkbox"/> |
| 5 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | US 6014379 A  | 20000111   | 21    | Telecommunications custom calling services             | 370/389    | 370/352; 370/401;   |     | White, Patrick E. et al.     | <input type="checkbox"/> |
| 6 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | US 5913166 A  | 19990615   | 16    | Arrangement for providing a call hand-off for a mobile | 455/436    | 455/444; 455/461;   |     | Buttitta, Anthony et al.     | <input type="checkbox"/> |
| 7 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | US 5862481 A  | 19990119   | 22    | Inter-technology roaming proxy                         | 455/432.2  | 455/432.3; 455/445  |     | Kulkarni, Sanjay et al.      | <input type="checkbox"/> |

EAST - [10199797.wsp:1]

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Drafts  
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 Active
 

- ☞ L1: (121724) "455"/\$.cls. or "379"/\$.cls.
- ☞ L2: (747) 1 and ((register\$3 or registration) near8 "incoming call")
- ☞ L3: (8) 2 and "first protocol"
- ☞ L4: (8) 3 and "second protocol"
- ☞ L5: (1) 4 and "session initiation protocol"

 Failed  
 Saved
 

- ☞ S1: (1) ("6421436").PN.
- ☞ S2: (1) "6421536"
- ☞ S3: (1) S2 and pager
- ☞ S4: (1) S3 and palm
- ☞ S5: (0) S4 and hypertext
- ☞ S6: (0) S4 and HTML
- ☞ S7: (0) S4 and PDA
- ☞ S8: (0) S2 and PDA
- ☞ S9: (26261) process\$3 near3 call
- ☞ S10: (1343) S9 and (PDA or "personal digital assistant")
- ☞ S11: (0) S10 and "Palm VI"
- ☞ S12: (202) S10 and Palm
- ☞ S13: (189) S12 and (wireless or mobile)

US 2002/018777A1

(a) United States  
**Patent Application Publication** (a) Pub. No.: US 2002/018777 A1  
 Osterhout et al. (c) Pub. Date: Dec. 12, 2002

(4) PORTABLE CALL MANAGEMENT SYSTEM Publication Classification

(5) Invention: Gregory T. Osterhout, Cypress, TX (51) Int. Cl.<sup>7</sup> H04M 2/42  
 (10) Kim B. Shuman, Houston, TX (52) U.S. Cl. 484/17, 455/441, 455/461, 455/462  
 (15) Mark S. Jordan, Houston, TX (53)

Correspondence Address: NORTTEL NETWORKS CORPORATION, INTELLECTUAL PROPERTY LAW GROUP, P.O. BOX 62128, RICHARDSON, TX 75080 (57) ABSTRACT

(21) Appl. No.: 09/094,997  
 (22) Filed: Jul. 11, 2002  
 (30) Related U.S. Application Data  
 (43) Process of application No. 08/419,173, filed on Oct. 13, 1999.


A method of reducing a call from a first processing system to another system by performing call forwarding, a number of call forwarding calls received from a source is a call processing system. This system may include a call identification information as well. The user of the first processing system is prompted for a selection to reach the user system the call to be forwarded. The user then identifies and sends to the source a new address to which the incoming call is to be forwarded. The source then routes the call to the new address.

BRS form  IS&R form  Image  Text  HTML

|   | U                        | 1                        | Document ID            | Issue Date | Pages | Title                           | Current OR | Current Ret         | Inventor                        | S                                   |
|---|--------------------------|--------------------------|------------------------|------------|-------|---------------------------------|------------|---------------------|---------------------------------|-------------------------------------|
| 1 | <input type="checkbox"/> | <input type="checkbox"/> | US<br>2002018777<br>A1 | 20021212   | 20    | Portable call management system | 455/417    | 455/445;<br>455/461 | Osterhout, Gregory T.<br>et al. | <input checked="" type="checkbox"/> |

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- ☐ Drafts
- ☐ Pending
- ☐ Active
  - ☐ L1: (121724) "455"/\$.ccls. or "379"/\$.ccls.
  - ☐ L2: (747) 1 and ((register\$3 or registration) near8 "incoming call")
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  - ☐ L5: (1) 4 and "session initiation protocol"
  - ☐ L6: (1) 4 and HTML
- ☐ Failed
- ☐ Saved
  - ☐ S1: (1) ("6421436").PN.
  - ☐ S2: (1) "6421536"
  - ☐ S3: (1) S2 and pager
  - ☐ S4: (1) S3 and palm
  - ☐ S5: (0) S4 and hypertext
  - ☐ S6: (0) S4 and HTML
  - ☐ S7: (0) S4 and PDA
  - ☐ S8: (0) S2 and PDA
  - ☐ S9: (26261) process\$3 near3 call
  - ☐ S10: (1343) S9 and (PDA or "personal digital assistant")
  - ☐ S11: (0) S10 and "Palm VI"
  - ☐ S12: (202) S10 and Palm



US 2002/187777 A1

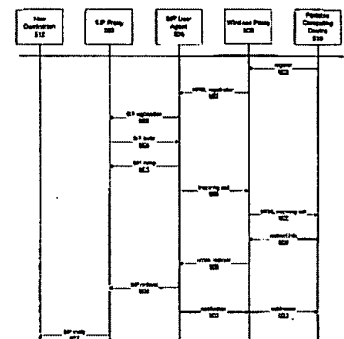
(en) United States  
 (ca) Patent Application Publication (en) Pub. No.: US 2002/187777 A1  
 Osterhout et al. (ca) Pub. Date: Dec. 12, 2002

(40) PORTABLE CALL MANAGEMENT SYSTEM Publication Classification  
 (70) Inventor: Gregory T. Osterhout, Cypress, TX (51) Int. Cl.<sup>7</sup> H04M 3/44  
 (US), Gary B. Bohlen, Houston, TX (52) U.S. Cl. 455/441; 455/461;  
 (US), Mark A. Swanson, Palm, TX (54) Title: PORTABLE CALL MANAGEMENT SYSTEM

Correspondence Address:  
 INTELLECTUAL PROPERTY LAW GROUP  
 P.O. BOX 62124  
 RICHARDSON, TX 75081-0212 (57) ABSTRACT

(21) Appl. No.: 08/194,397  
 (22) Filed: Jul. 14, 2000  
 Related U.S. Application Data  
 (20) Division of application No. 08/491,173, filed on Oct. 15, 1996.

A method of managing a call from a call processing system to another address. In a preferred embodiment, a method of managing call services from a server in a call processing system. This method may include call identification techniques as well. The flow of the data processing system is described by a flowchart to which the user may refer to find a method. The user may identify and search for the server's name address to which the incoming call is to be processed. The server then returns the call to the user address.



BRS form  
  IS&R form  
  Image  
  Text  
  HTML

|   | U                        | 1                        | Document ID             | Issue Date | Pages | Title                           | Current OR | Current Ret         | Inventor                        | S                                   |
|---|--------------------------|--------------------------|-------------------------|------------|-------|---------------------------------|------------|---------------------|---------------------------------|-------------------------------------|
| 1 | <input type="checkbox"/> | <input type="checkbox"/> | US<br>20020187777<br>A1 | 20021212   | 20    | Portable call management system | 455/417    | 455/445;<br>455/461 | Osterhout, Gregory T.<br>et al. | <input checked="" type="checkbox"/> |

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective November 10, 1998

Application or Docket Number

10/199977 *lee*  
11/14/01

**CLAIMS AS FILED - PART I**

(Column 1) (Column 2)

| FOR                              | NUMBER FILED    | NUMBER EXTRA |
|----------------------------------|-----------------|--------------|
| BASIC FEE                        |                 | 770          |
| TOTAL CLAIMS                     | 15 minus 20 = * |              |
| INDEPENDENT CLAIMS               | 3 minus 3 = *   |              |
| MULTIPLE DEPENDENT CLAIM PRESENT |                 |              |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

4-15-05 (Column 1) (Column 2) (Column 3)

| AMENDMENT A                                    | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|---------------|
| Total  | * 15 Minus                       | **                                 | =             |
| Independent                                    | * 3 Minus                        | ***                                | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

| AMENDMENT B                                    | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|---------------|
| Total  | * Minus                          | **                                 | =             |
| Independent                                    | * Minus                          | ***                                | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

| AMENDMENT C                                    | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|--|----------------------------------|------------------------------------|---------------|
| Total  | * Minus                          | **                                 | =             |
| Independent                                    | * Minus                          | ***                                | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE  OR OTHER THAN SMALL ENTITY

| RATE  | FEE | RATE  | FEE |
|-------|-----|-------|-----|
|       |     |       | 770 |
|       |     |       |     |
|       |     |       |     |
|       |     |       |     |
| TOTAL |     | TOTAL | 770 |

SMALL ENTITY OR OTHER THAN SMALL ENTITY

| RATE             | ADDITIONAL FEE | RATE             | ADDITIONAL FEE |
|------------------|----------------|------------------|----------------|
|                  |                |                  |                |
|                  |                |                  |                |
|                  |                |                  |                |
| TOTAL ADDIT. FEE |                | TOTAL ADDIT. FEE |                |

| RATE             | ADDITIONAL FEE | RATE             | ADDITIONAL FEE |
|------------------|----------------|------------------|----------------|
|                  |                |                  |                |
|                  |                |                  |                |
|                  |                |                  |                |
| TOTAL ADDIT. FEE |                | TOTAL ADDIT. FEE |                |

| RATE             | ADDITIONAL FEE | RATE             | ADDITIONAL FEE |
|------------------|----------------|------------------|----------------|
|                  |                |                  |                |
|                  |                |                  |                |
|                  |                |                  |                |
| TOTAL ADDIT. FEE |                | TOTAL ADDIT. FEE |                |



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

§  
§  
§  
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§  
§  
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§  
§  
§

Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

**Certificate of Mailing Under 37 C.F.R. § 1.8(a)**  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 22, 2005.  
By: Carrie Parker  
Carrie Parker

**RESPONSE TO OFFICE ACTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-3157. A one-month extension of time is believed to be necessary and a check in the amount of \$120.00 is enclosed. No additional extension of time is believed to be necessary. If, however, an additional extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-3157.

In response to the Office Action dated October 20, 2004, please amend the above-identified application as follows:

**Claims Listing** begins on page 2 of this paper.

**Remarks/Arguments** begin on page 5 of this paper.

**IN THE CLAIMS:**

1-51. (Canceled)

52. (Previously presented) A method in a communications system for processing a call, the method comprising:

- receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;
- identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;
- sending a first request to setup the call to the mobile data processing system associated with a the user, wherein the mobile data processing system has a wireless communications capability;
- sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system; and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;
- receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message;
- and
- sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Previously Presented) The method as recited in claim 53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Previously presented) A method for processing a call at a data processing system the method comprising:

receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;  
identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;  
receiving a notification message at the data processing system indicating a request to setup the call;  
presenting the notification to the user at the data processing system;  
receiving the request to establish the call;  
presenting caller information at the data processing system;  
receiving user input from the user identifying an address to which the call is to be directed; and  
responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.

57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.

58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.

59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.

60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.

61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.



62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.

63-65. (Canceled)

66. (Original) A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second protocol;  
and  
transmitting a modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.

67. (Original) The method as recited in claim 66, further comprising:  
selecting, at a session initiated protocol (SIP) server, an address to which the user has previously selected the call be sent from a database of preferred locations;  
receiving a location data with which to redirect the incoming call from the terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is formatted in the second protocol.

68. (Original) The method as recited in claim 66, wherein the first protocol is a session initiation protocol.

69. (Original) The method as recited in claim 66, wherein the second protocol is a hypertext markup language.

## REMARKS

Claims 52-62 and 66-69 are pending in the present application. Applicants maintain all arguments presented in the previous responses to office actions. Reconsideration of the claims is respectfully requested in the light of the previous office action arguments and in light of the following arguments.

### **I. 35 U.S.C. § 103, Obviousness**

The office action has rejected claims 52-62 and 66-69 under 35 U.S.C. § 103(a) as being obvious over Wang et al, Method, Apparatus and Communications System for Companion Information and Network Appliances, U.S. Patent 6,161,134 (Dec. 12, 2000) in view of Pepe et al, Personal Communications Internetworking, U.S. Patent 5,742,905 (Apr. 21, 1998). This rejection is respectfully traversed.

### **I.A The Office Action Has Failed To State Prima Facie Obviousness Rejections**

#### **I.A.1 The Proposed Combination Does Not Result in the Claimed Inventions**

The office action asserts that:

Regarding claims 52 and 56, Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, Figs 10-11 for call initialization process; Figs. 16-17 for the user intention to transfer the call to another number; Figs. 18-19 for transferring status and then completed; and Figs. 21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer). Furthermore, Wang further discloses “sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed” and then receiving, “prior to establishing the call”, a response to the request, wherein the response includes the address “input by the user of the mobile data processing system in response to receiving the notification message; and sending a second request to set up the call to the user using the address, for instance, the user of the mobile data processing system or a palm

pilot receives an incoming call with a notification message such as call information coming from caller name and caller ID waiting as a first request to setup the call for call connection (as shown in Fig. 25), the user has options to answer it right way, reject or OK meaning answer it at a later time (col. 15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in Fig. 15) and waiting for answering, then the procedure to transfer the call is followed during the active call by the user input at the time with the address for the transfer (col. 40/line 43 to col. 41/line 4, and Figs. 20-22 for "hold" active calls and then forwards them; and col. 38/line 65 to col. 39/line 5 for either entering a telephone number or entering a network address for the destination if desired) as a fifth feature of the wireless device (col. 24/lines 16-17); and as soon as the user already enters the address for the destination for forwarding, the second request for setup the call for call connection is sent to the system as the user hits the forward button (Figs. 21-22, item 2110).

Wang does not clearly show that the receiving of a notice of a call for a mobile data processing system associated with the user is at a session initiated protocol, and the user can identify an address to which the call is to be sent from a database of preferred location as preamended; however, this feature is taught by Pepe as Pepe shows that at a PCI server associated with a PCI database, the user can identify the address that he/she would like to forward the call to based on his/her own preference or from a default setup, and the server handles session protocols for TCP/IP functions (see Pepe, Figs. 1-4 & 24, col. 9/lines 33-55, col. 11/line 55 to col. 12/line 33, col. 14/line 12-65, and col. 30/lines 28-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang's system with the disclosed technique as taught by Pepe in order to forward or route the call effectively to a desired address identified by the user via the server of the service system.

As for claims 53-54, Wang discloses that the palm top device is a personal digital assistant (col. 1/lines 13-46 & col. 10/lines 8-25) and a Palm top computer. (The Palm version number is not a significant patentability weight herein because Palm Computing, Inc develops these devices).

As for claims 55 and 59, Wang further discloses "wherein the request and response are session initiation protocol messages" (col. 11/lines 13-21 for SIP addressed).

As for claim 57-58, Wang discloses that caller identification is provided to the user (Fig. 25) and the user can set up audio elements depending on user's preferences (col. 38/lines 15-28).

As for claim 60, Wang discloses that the data processing system is a wireless device (Figs. 10-35).

Office Action of October 20, 2004, pp. 2-5.

The office action has failed to state prima facie obviousness rejections because the proposed combination does not result in the claimed inventions. Pepe does not show the limitation of "receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user," as asserted by the office action. Thus, the proposed combination does not result in the claimed inventions.

The office action asserts that Pepe does show the claimed feature, referring to numerous citations from Pepe. Applicants address each citation below and show that Pepe does not show the claimed limitation.

As a first matter, the office action cites Figures 1 through 4 and 24. Figure 1 is as follows:

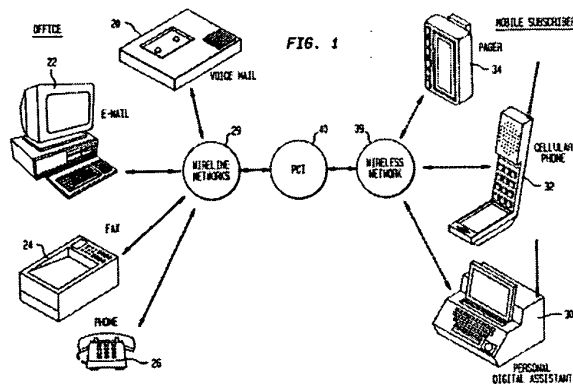
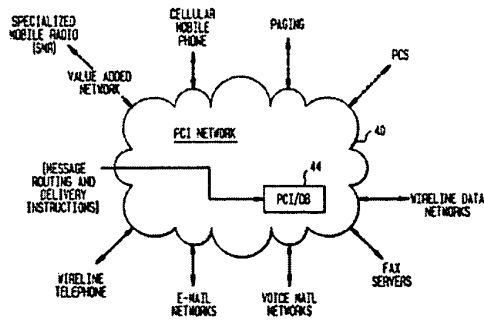


Figure 1 shows a set of communications equipment connected via wireless networks and PCI (personal communications internetworking). However, Figure 1 does not show "receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user," as claimed. Figure 1 provides no indication of use of a session initiated protocol server or use of session initiated protocol.

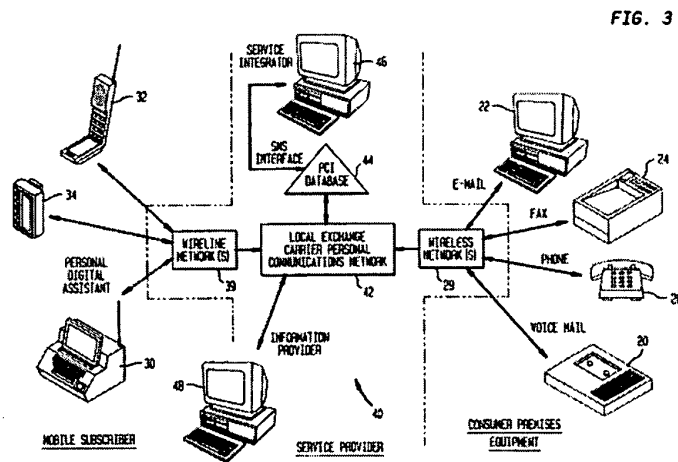
Figure 2 is as follows:

FIG. 2



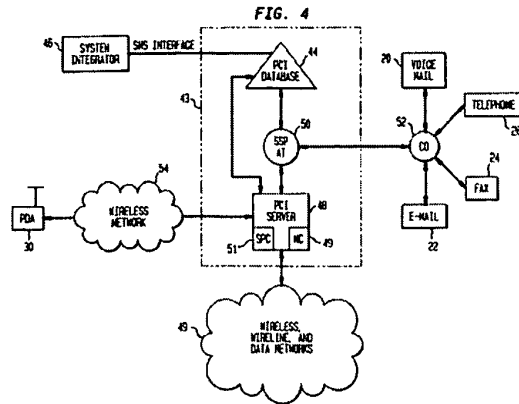
Again, Figure 2 shows a variety of communications equipment connected via a PCI network. However, Figure 2 does not show “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user,” as claimed. Figure 2 provides no indication of use of a session initiated protocol server or use of session initiated protocol.

Figure 3 is as follows:



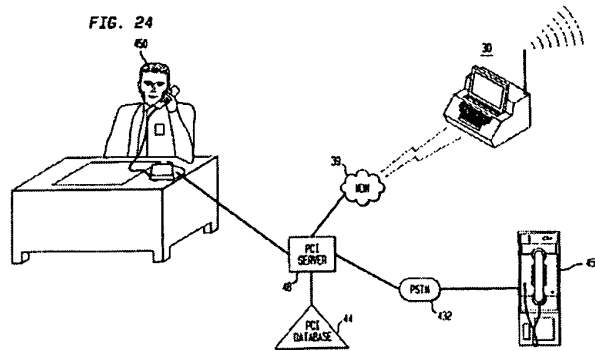
Again, Figure 3 shows a variety of communications equipment connected via wireless networks, a local exchange carrier personal communications network and a PCI database. However, Figure 3 does not show “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user,” as claimed. Figure 3 provides no indication of use of a session initiated protocol server or use of session initiated protocol.

Figure 4 is as follows:



Again, Figure 4 shows a variety of communications equipment connected via wireless networks, a PCI database and server, and an SSP AT (Service Switching Point Access Tandem) switch. However, Figure 4 does not show “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user,” as claimed. Figure 4 provides no indication of use of a session initiated protocol server or use of session initiated protocol.

Figure 24 is as follows:



Again, Figure 24 shows a variety of communications equipment connected via a PCI server, a PCI database, a PSTN (Public Switched Telephone Networks), and a WDN (wireless networks). However, Figure 24 does not show “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user,” as claimed. Figure 24 provides no indication of use of a session initiated protocol server or use of session initiated protocol.

Similarly, Pepe does not describe “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user,” as claimed. The office action asserts otherwise, citing from Pepe as follows:

The call processor 110 also includes an IP Functions Server 130. The IP Function Server 130 manages CallCommand applications. This server is also connected to the PCI database protocol handler 126 for communication with the PCI database 44 and the PDA protocol handler 115 for communication with the wireless network 54. The PCI database protocol handler 126 handles both interfaces between the PCI database and the PCI server, as described below.

Thus, the two main application servers in the call processor 110 are the IP Function server 130 for CallCommand applications and the PCI applications server 114 for wireless messaging services.

The call processor 110 also includes a plurality of communication interfaces. The protocol handlers 115 and 126 have already been discussed. The alphanumeric paging server (APS) 132 gives the call processor 110 the ability to provide alphanumeric paging services. The APS 132 includes one or more modems to communicate with terminal equipment of a network 134 maintained by a paging service provider. The APS communicates with the paging service provider using, for example, the TAP protocol (Telocator Alphanumeric Protocol).

Pepe, col. 9, ll. 33-55.

Although Pepe does discuss protocols, and names some protocols used, Pepe does not show or suggest the claimed protocol. Nevertheless, the office action continues to cite from Pepe as follows:

A PCI Database 44 maintains the subscriber profile, controls the Call Command functions, and handles DTMF-based subscriber profile updates.

The PCI database architecture shown in FIG. 6 comprises several application and support components. The application components include Multiple Services Application Platform (MSAP) 202; Service Provisioning and Creation Environment (SPACE) 204; and Data and Report Subsystem (DRS) 206.

The service components include the Maintenance and Operation Console (MOC) 208; the Intelligence Peripheral Interface (IPI) 210; the Generic Data Interface (GDI) 212; the Service Network Interface (SNI) 214; and the Data and Report database (D&R) 218.

The service network interface (SNI) 214 provides a communication interface to external systems such as switch 50 and PCI server 48. These interfaces include the IPI 210 and GDI 212 which connect the PCI database to the PCI server via the TCP/IP network 213. The GDI 212 is used for uploading and downloading a subscriber profile to the PCI server 48. The IPI 210 is used for transmitting DTMF commands from a user via the PCI server 48. For redundancy, each intelligent peripheral interface (IPI) and generic data interface (GDI) processor preferably requires two logical connections to the PCI server.

The Multiple Services Application Platform (MSAP) 202 includes a call processor 220, a first call process request (CPR) database 222, an MSAP common 224, a shared memory 226, and a call contact database (CCDB) 228. The call processor 220 receives messages from and sends messages to a message distributor 219 in the SNI 214. The message distributor determines whether the message received from the call processor 220 is to be sent to the IPI 210 or the GDI 212. The call processor receives messages from the message distributor and sends them to the first CPR database, the CCDB 228, and/or the shared memory 226. The first CPR database 222 stores the subscriber profiles. The MSAP 224 connects the first CPR database 222 with the second CPR 230, which resides in SPACE 204. MSAP common 224 updates one of the CPR databases 222, 230 when changes have been made to the other CPR database. The CCDB 228 is a temporary, dynamic storage for storing subscriber profiles, and related data during profile update procedures. The shared memory 226 allows different processors to use the same data.

Pepe, col. 11, l. 55 through col. 12, l.33.

Nowhere does the cited text show or suggest the claimed session initiated protocol. Instead, the cited text only describes Pepe's PCI architecture. Nevertheless, the office action continues to cite from Pepe as follows:

The interface between the PCI server 48 and the PCI database 44 is based on two protocols. The first protocol is 1129+. This protocol will be used to support the PCI Call Command feature and for subscriber initiated profile manipulation using DTMF. The second protocol is Generic Data Interface. The GDI is used for subscriber profile management, specifically downloading a subscriber profile from the PCI database 44 to the PCI server 48 and for applying updates to the profile stored in the PCI database 44.

FIG. 7 shows the logical links from the PCI database 44 to the PCI server 48. The PCI database 44 consists of a mated pair of PCI



databases 44a, 44b, each containing three call processors 220 which each share the load. The links 250 are TCP/IP links between Intelligent Peripheral Interface (IPI) 210 and the Generic Data Interface (GDI) 212 processors on the PCI database 44 to the PCI server call processor. Two logical connections are made from each IPI 210 and GDI 212 processors to the PCI server for redundancy. Thus, a full SCP configuration supporting PCI would preferably require 24 logical links, as shown in FIG. 7. The PCI database initiates the opening of the logical links.

In this illustrative embodiment, the CallCommand feature employs the 1129+ protocol. For the wireless messaging feature, PCI uses the GDI protocol. The GDI tag IDs assigned for the PCI subscriber profile elements are provided in Appendix B.

Appendix B also shows the PCI profile data, including the profile elements, their data types, maximum lengths, and GDI tag IDs. An \* indicates elements which were shortened to 32 bytes because of GDI byte limitations. The description of the types and lengths of these elements is as follows:

dN BCD-encoded digits. The number N represents the maximum number of BCD digits, not octets.

cN Up to N ASCII characters.

cN Binary integer N bytes in length, in network byte order (highest order bit transmitted first).

Because the portion of the PCI subscriber profile downloaded to the PCI server is large (preferably approximately 1,000 bytes), and a maximum Transaction Capable Application Program (TCAP) message size is 256 bytes, the profile must be managed in segments. The service profile is divided into six segments as shown in Table 1. Each segment is assigned a unique numeric identifier.

Pepe, col. 14, ll. 12-65 (table omitted).

Again, the cited text does not describe the claimed protocol. The cited text does describe basing the interface between the PCI server and the PCI database based on two protocols: an 1129+ protocol and a GDI (generic data interface) protocol. However, the cited text is devoid of disclosure regarding the claimed protocol. Nevertheless, the office action continues to cite from Pepe as follows:

FIG. 24 is an illustrative example of a CallCommand service network. A caller, Joe 450, wishes to speak with Mary. Mary, who is away from the office, is a PCI subscriber having the CallCommand service. She has a PDA 30, which is turned on and registered at a visiting location. Joe dials Mary's office phone number. This phone number connects Joe's call to the PCI server 48. The PCI server 48 network instructs Joe to type in his telephone number. The PCI server 48 puts Joe on hold and plays back a message using synthesized speech informing Joe that the network is trying to locate Mary. The network recognizes that Mary is registered at a visiting location and sends a phone notification over a wireless data network 39. Mary is notified on a PDA 30 that a phone call is coming from a particular phone number. If Mary has already programmed a name corresponding to that phone number in a directory on her PDA 30, that name will also appear. Therefore, she is aware that she has a phone call from Joe Smith. Mary has several options. She may type or select a preselected message to be sent from the PDA 30 to the PCI network which converts the message into synthesized speech and play it back to Joe; she may forward the call to a nearby telephone, such as a cellular phone or a nearby pay phone 452 or forward the call to her secretary or colleagues's phone number; she may send a message and forward the call; or she may direct the call to her voice mail. In this illustration, Mary selects that the call be routed to a local public pay telephone 452. The call is routed over public switched telephone networks 432 to the selected telephone and Mary and Joe speak.

Pepe, col. 30, ll. 28-56

Again, the cited text does not show the claimed feature of “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user.” The cited text does describe the operation of Pepe’s system; however, nothing in the cited text discloses the claimed limitation. Furthermore, nothing in Pepe shows or suggests the claimed limitation. Thus, the proposed combination does not result in the claimed invention. Accordingly, the office action has failed to state prima facie obviousness rejections of any of the claims.

#### **I.A.2 The Office Action Has Failed to State a Proper Motivation to Combine the References**

In addition, the office action has failed to state prima facie obviousness rejections because the office action has failed to state a proper motivation to combine the

references. A proper *prima facie* case of obviousness cannot be established by combining the teachings of the prior art absent some teaching, incentive, or suggestion supporting the combination. *In re Napier*, 55 F.3d 610, 613, 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995); *In re Bond*, 910 F.2d 831, 834, 15 U.S.P.Q.2d 1566, 1568 (Fed. Cir. 1990). The office action states that, “it would have been obvious... to modify Wang’s system with the disclosed technique as taught by Pepe in order to forward or route the call effectively to a desired address identified by the user via the server of the service system.” However, as shown above, Pepe does not disclose the claimed limitation. Thus, the office action’s statement makes no sense and cannot serve as a motivation to combine the references.

In addition, even if the statement were accurate, the statement is too broad to serve as a motivation to combine the references. The statement merely indicates that Pepe’s techniques may be used to forward a call to a desired address effectively. However, the office action provides no indication why one of ordinary skill would recognize that the claimed method should be used or why one of ordinary skill would select the claimed method at all. In the light of Pepe’s teaching that many, many different protocols may be used to forward a call, the office action’s statement that the claimed method is merely an effective technique is insufficient to motivate one of only ordinary skill to combine or otherwise modify the references. The over-breadth of the office action’s statement is exacerbated by the fact that Pepe does not disclose the claimed technique. Because the office action’s statement is overly broad, it does not serve as a proper motivation to combine the references.

In addition, the office action’s statement merely recites a purported advantage to combining the references and does not actually state a motivation at all. For example, the office action has provided no reason why one of ordinary skill would recognize the advantage and be motivated to implement it as claimed. Thus, the office action has failed to state any motivation to combine the references.

The office action’s statement is not a motivation to combine the references and the office action has failed to state a motivation to combine the references. Thus, the office action has failed to state *prima facie* obviousness rejections of the claims.

**I.B The Claims Are Non-Obvious Over the Cited References**

The claims are non-obvious in view of the references when the references are viewed as a whole. Wang is directed to an information appliance and a network appliance that function independently as well as with each other. Pepe is directed to a network subscriber with the ability to control remotely the receipt and delivery of wireless and wireline voice and text messages. Both references disclose a plethora of protocols and methods for performing their respective methods. However, neither reference shows the claimed limitation of “receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user.” Given the vast number of protocols described in both references, there is no reason to assume that one of ordinary skill would have found it obvious to use one that neither reference discloses. Thus, the claims are non-obvious when the references are considered as a whole.

Furthermore, Wang issued in 2000 and Pepe issued in 1998. In the intervening five years since Wang issued, no one has made, used, or suggested devices or processes incorporating the claimed methods. Given the very rapid pace of technological development in communications and given the value of the claimed methods, had the claimed methods been obvious, then one of ordinary skill would have already implemented them. Because, to Applicants’ knowledge, no one has done so, the claims are non-obvious.

**I.C Claims 61 and 62**

Regarding claims 61-62, the office action states that:

Wang does not specifically disclose that the information appliance device 210 for using in the network 200 (Fig. 2) is a two-way pager and providing a vibrating alert in the step of presenting caller information; however, Wang does suggest that the information appliance device can be any device capable of storing user information and exchanging information with the network (col. 9/lines 32-42). It inherently suggests that a two-way pager is not limited to use within this system; and the vibrating alert of a pager when an incoming call with caller ID is a function that is well known in the art. Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Wang's system with a two-way pager and its known vibrating alert function plugged-in for use within the system instead or in addition of a palmtop computer/PDA device in order to provide additional communication device to users such as a two-way pager or any other form of communication device for communication in a broader network, for instance, including a pager network in this scenario.

Office Action of October 20, 2004, p. 5

The office action has failed to state prima facie obviousness rejections of claims 61 and 62 because the office action has failed to state a proper motivation to combine the references. In summary, the office action asserts that it would have been obvious to present caller information as a vibrating alert and to use a two-way pager with the claimed methods because such technologies are well known and "in order to provide additional communication device to users." However, the office action did not actually provide a motivation to modify Wang. Because the office action must provide a motivation to combine or modify the references to state a prima facie obviousness rejection, the office action has failed to state prima facie obviousness rejections of claims 61 and 62.

#### **I.D Claims 66-69**

Regarding claims 66 through 69, the office action asserts that:

As for claims 66-69, these claims are rejected for the reasons given in the scope of claims 52-60 as already discussed above, with an additional understanding that, as for a first protocol as a session initiation protocol and a second protocol is a hypertext markup language, i.e., a session initiation protocol (as shown in Fig. 25 for initiating a connection call between a caller and a called party, or in Figs. 16 and 17 for a session protocol while inputs are needed for entering into the Palmtop device) and Internet access with a protocol such as TCP/IP is well known for including a protocol using a hypertext markup language (col. 21/lines 5-40).

Office Action of October 20, 2004, p. 5.

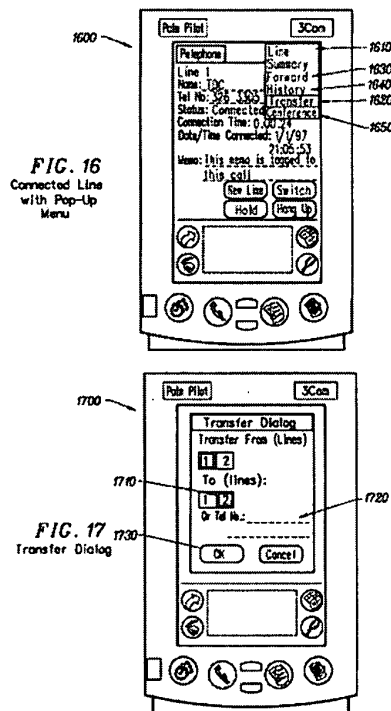
The office action asserts that claims 66 through 69 are rejected for the reasons given regarding the rejection of claims 52 through 60. However, as pointed out above, claims 52 through 60 are patentable over Wang and Pepe. Thus, claims 66 through 69 are also patentable over Wang and Pepe.

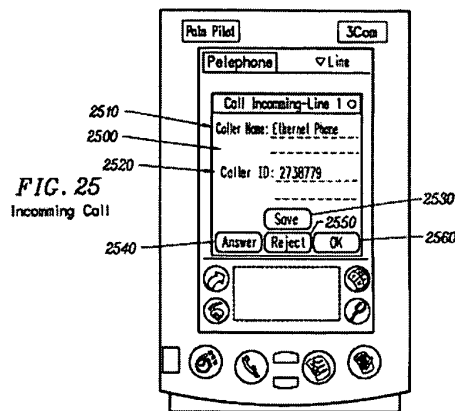
In addition, the office action misapprehends Wang in relation to claims 66 through 69. Wang does not show the limitations of claim 66, which provides as follows:

66. A method for initiating calls, comprising the steps of:  
 receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
 translating said registration notice from the first protocol into a second protocol; and  
 transmitting a modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.

Wang does not show the method of translating a registration notice as claimed.

The office action asserts otherwise, citing figures 16, 17, and 25, which provide as follows:





None of the cited figures actually shows translating a registration notice from a first protocol to a second protocol. Thus, the cited figures do not show the claimed limitations. Nevertheless, the office action also points to the following text in Wang:

#### Internet Access

The combination of the information appliance 210 and the telephone 240 can also be used to provide Internet access. The communications protocol hierarchy for Internet access, otherwise referred to as the software architecture, used to support Internet access depends on the capabilities that exist in the information appliance 210. In one embodiment, the information appliance 210 is a palm-sized computer 343 that includes a Transmission control protocol (TCP)/Internet Protocol (IP)/PPP stack (as is the case for the 3Com Palm III and the PalmPilot Professional). This embodiment is referred to herein as the palm-sized computer 343 Internet access execution option. For the first case, as shown in FIG. 3C, the protocol stack can be represented as a palm-sized computer 343 running the Internet applications protocol stack 350. The protocol stack can be located in any information appliance 210 to provide Internet access according to the invention.

The palm-sized computer 343 running the Internet applications protocol stack 350 includes the following software layers, in descending order, for Internet access for the palm-sized computer 343: an Internet applications 367 layer, a TCP 359/User Datagram Protocol (UDP) layer, an Internet protocol 356 layer, a PPP 330 layer, and an HDLC 326 layer. The Internet applications 367 include electronic mail, web browsing, terminal emulation (telnet), file transfer protocol (ftp) and other applications providing access to data provided by the Internet. The palm-sized computer 343 running the Internet applications protocol stack 350 for the Ethernet telephone 310 is the same as the protocol stack for the

palm-sized computer except that: (1) the PPP 330 and HDLC layers are replaced by an IEEE 802-3 Carrier Sense Multiple Access/Collision Detection (CSMA/CD) 368 layer, and (2) the top layer of the Ethernet telephone 310 stack includes only Internet access applications 369.

Again, the cited text does not show the translation feature claimed in claim 66.

The cited text does describe stacked protocols, but does not describe, “Translating said registration notice from the first protocol into a second protocol,” as claimed. Because Wang does not show all the claimed limitations of claim 66, the proposed combination does not result in the claimed inventions. Accordingly, the office action has failed to state prima facie obviousness rejections of claim 66, or its dependent claims 67 through 69.

#### **I.E Summary**

The office action has failed to state prima facie obviousness rejections of the claims because the proposed combination does not result in the claimed inventions and because the office action has failed to state proper motivations to combine or modify the references. In addition, the claims are non-obvious in view of the references when considered as a whole for the reasons given above. Therefore, the rejection of claims 52-62 and 66-69 under 35 U.S.C. § 103 has been overcome.



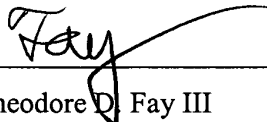
**II. Conclusion**

It is respectfully urged that the subject application is patentable over Wang and Pepe and is now in condition for allowance.

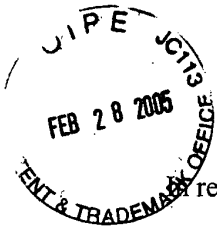
The office action is invited to call the undersigned at the below-listed telephone number if in the opinion of the office action such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: February 22, 2005

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re application: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

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Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

**Certificate of Mailing Under 37 C.F.R. § 1.8(a)**  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 22, 2005.  
By: Carrie Parker  
Carrie Parker

**PETITION FOR EXTENSION OF TIME WITHIN THE FIRST MONTH**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

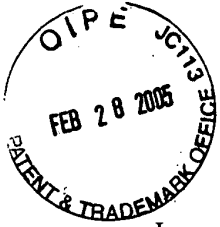
Sir:

Applicant respectfully petitions for a one-month extension of time in which to respond to the outstanding Office Action in the above case, pursuant to 37 CFR Section 1.17(a). Enclosed is a check in the amount of \$120.00 for the extension fee. No additional extension of time is believed to be necessary. If, however, an additional extension of time is required, the extension is requested and, I authorize the Commissioner to charge these additional fees which may be required to Deposit Account No. 50-3157.

Respectfully submitted,

Theodore D. Fay III  
Theodore D. Fay III  
Registration. No. 48,504  
Duke W. Yee  
Registration No. 34,285  
Yee & Associates, P.C.  
P.O. Box 802333  
Dallas, Texas 75380  
(972) 385-8777  
ATTORNEYS FOR APPLICANTS

03/01/2005 EABUBAK1 00000040 10199797  
01 FC:1251 120.00 OP



JPW 2685

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

**35527**  
PATENT TRADEMARK OFFICE  
CUSTOMER NUMBER

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Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

Certificate of Mailing Under 37 C.F.R. § 1.8(a)  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-14501 on February 22, 2005.  
By: Carrie Parker  
Carrie Parker

TRANSMITTAL DOCUMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

ENCLOSED HEREWITH:

- Response to Office Action;
- Petition for Extension of Time within the First Month;
- Check in the amount of \$120.00; and
- Our return postcard.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-3157. A one-month extension of time is believed to be necessary and a check in the amount of \$120.00 is enclosed. No additional extension of time is believed to be necessary. If, however, an additional extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-3157.

Respectfully submitted,

Theodore D. Fay III  
Theodore D. Fay III  
Reg. No. 48,504  
Duke W. Yee  
Registration No. 34,285  
**YEE & ASSOCIATES, P.C.**  
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ATTORNEYS FOR APPLICANTS



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

33

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/199,797      | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |

35527 7590 10/20/2004  
DUKE W. YEE  
YEE & ASSOCIATES, P.C.  
P.O. BOX 802333  
DALLAS, TX 75380

EXAMINER  
NGUYEN, THUAN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2685     | 14           |

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

**Application No.**

10/199,797

**Applicant(s)**

OSTERHOUT ET AL.

**Examiner**

THUAN T. NGUYEN

**Art Unit**

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 52-62 and 66-69 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 52-62, and 66-69 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some \*    c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/14/04 has been entered.

### *Remarks*

2. Claims 1-51, and 63-65 were previously canceled. Pending claims are claims 52-62, and 66-69.

### *Claim Rejections - 35 USC 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

4. Claims 52-62 and 66-69 are rejected under 35 U.S.C. 103(a) as being obvious over Wang et al (U.S. Patent No. 6,161,134) in view of Pepe (U.S. Patent 5,742,905).

Regarding claims 52 and 56, Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, Figs 10-11 for call initialization

Art Unit: 2685

process; Figs. 16-17 for the user intention to transfer the call to another number; Figs. 18-19 for transferring status and then completed; and Figs. 21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer). Furthermore, Wang further discloses “sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed” and then receiving, “prior to establishing the call”, a response to the request, wherein the response includes the address “input by the user of the mobile data processing system in response to receiving the notification message; and sending a second request to set up the call to the user using the address, for instance, the user of the mobile data processing system or a palm pilot receives an incoming call with a notification message such as call information coming from caller name and caller ID waiting as a first request to setup the call for call connection (as shown in Fig. 25), the user has options to answer it right way, reject or OK meaning answer it at a later time (col. 15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in Fig. 15) and waiting for answering, then the procedure to transfer the call is followed during the active call by the user input at the time with the address for the transfer (col. 40/line 43 to col. 41/line 4, and Figs. 20-22 for “hold” active calls and then forwards them; and col. 38/line 65 to col. 39/line 5 for either entering a telephone number or entering a network address for the destination if desired) as a fifth feature of the wireless device (col. 24/lines 16-17); and as soon as the user already enters the address for the destination for

Art Unit: 2685

forwarding, the second request for setup the call for call connection is sent to the system as the user hits the forward button (Figs. 21-22, item 2110).

Wang does not clearly show that the receiving of a notice of a call for a mobile data processing system associated with the user is at a session initiated protocol, and the user can identify an address to which the call is to be sent from a database of preferred location as pre-amended; however, this feature is taught by Pepe as Pepe shows that at a PCI server associated with a PCI database, the user can identify the address that he/she would like to forward the call to based on his/her own preference or from a default setup, and the server handles session protocols for TCP/IP functions (see Pepe, Figs. 1-4 & 24, col. 9/lines 33-55, col. 11/line 55 to col. 12/line 33, col. 14/line 12-65, and col. 30/lines 28-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang's system with the disclosed technique as taught by Pepe in order to forward or route the call effectively to a desired address identified by the user via the server of the service system.

As for claims 53-54, Wang discloses that the palm top device is a personal digital assistant (col. 1/lines 13-46 & col. 10/lines 8-25) and a Palm top computer. (The Palm version number is not a significant patentability weight herein because Palm Computing, Inc develops these devices).

As for claims 55 and 59, Wang further discloses "wherein the request and response are session initiation protocol messages" (col. 11/lines 13-21 for SIP addressed).

As for claim 57-58, Wang discloses that caller identification is provided to the user (Fig. 25) and the user can set up audio elements depending on user's preferences (col. 38/lines 15-28).



Art Unit: 2685

As for claim 60, Wang discloses that the data processing system is a wireless device (Figs. 10-35).

Regarding claims 61-62, Wang does not specifically disclose that the information appliance device 210 for using in the network 200 (Fig. 2) is a two-way pager and providing a vibrating alert in the step of presenting caller information; however, Wang does suggest that the information appliance device can be any device capable of storing user information and exchanging information with the network (col. 9/lines 32-42). It inherently suggests that a two-way pager is not limited to use within this system; and the vibrating alert of a pager when an incoming call with caller ID is a function that is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang's system with a two-way pager and its known vibrating alert function plugged-in for use within the system instead or in addition of a palmtop computer/PDA device in order to provide additional communication device to users such as a two-way pager or any other form of communication device for communication in a broader network, for instance, including a pager network in this scenario.

As for claims 66-69, these claims are rejected for the reasons given in the scope of claims 52-60 as already discussed above, with an additional understanding that, as for a first protocol as a session initiation protocol and a second protocol is a hypertext markup language, i.e., a session initiation protocol (as shown in Fig. 25 for initiating a connection call between a caller and a called party, or in Figs. 16 and 17 for a session protocol while inputs are needed for entering into the Palmtop device) and Internet access with a protocol such as TCP/IP is well known for including a protocol using a hypertext markup language (col. 21/lines 5-40).

Art Unit: 2685

***Conclusion***

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

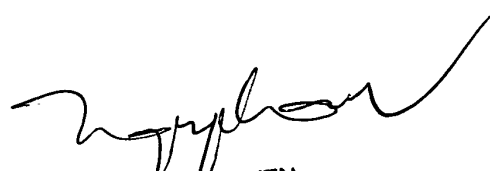
**(703) 872-9306, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,*

*2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



TONY T. NGUYEN  
PATENT EXAMINER

Tony T. Nguyen  
Art Unit 2685  
October 12, 2004

#130  
9/21/04  
at



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

§ Group Art Unit: **2685**  
§  
§ Examiner: **Nguyen, Thuan T.**  
§  
§ Attorney Docket No.: **11032RRUS04D**  
§

§ Certificate of Mailing Under 37 C.F.R. § 1.8(a)  
§ I hereby certify this correspondence is being deposited with the United  
§ States Postal Service as First Class mail in an envelope addressed to:  
§ Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on  
§ June 10, 2004.  
§  
§ By: Carrie Parker  
§ Carrie Parker

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JUN 21 2004

Technology Center 2600

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees to Deposit Account No. 50-3157. No extension of time is believed to be necessary. If, however, an extension of time is necessary, I authorize the Commissioner to charge the necessary extension fees to Deposit Account No. 50-3157.

Prior to continued examination of this application, please amend the above-identified application as follows:

**IN THE CLAIMS:**

---

1-51. (Canceled)

52. (Currently Amended) A method in a communications system for processing a call, the method comprising:

receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data processing system associated with a user;

identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;

sending a first request to setup the call to a the mobile data processing system associated with a the user, wherein the mobile data processing system has a wireless communications capability;

① sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system; and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;

receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and

sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Previously Presented) The method as recited in claim 53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Currently Amended) A method for processing a call at a data processing system the method comprising:

receiving, at a session initiated protocol (SIP) server, a notice of a call for a mobile data

processing system associated with a user;

identifying an address to which the call is to be sent from a database of preferred locations, wherein the user has previously indicated a preferred location;

receiving a notification message at a the data processing system indicating a request to setup the call;

presenting the notification to a the user at the data processing system;

receiving the request to establish the call;

presenting caller information at the data processing system;

receiving user input from the user identifying an address to which the call is to be directed; and

responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.

57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.

58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.

59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.

60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.

61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.

62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.

63-65. (Canceled)

66. (Original) A method for initiating calls, comprising the steps of:

receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;

translating said registration notice from the first protocol into a second protocol; and

transmitting a modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.

D 67. (Original) The method as recited in claim 66, further comprising:

receiving selecting, at a session initiated protocol (SIP) server, an address to which the user has previously selected the call be sent from a database of preferred locations;

receiving a location data with which to redirect the incoming call from the terminating device; wherein the location data is formatted in the second protocol; and

translating the location data to a second location data; and

transmitting the second location data, wherein the second location data is formatted in the second protocol.

68. (Original) The method as recited in claim 66, wherein the first protocol is a session initiation protocol.

69. (Original) The method as recited in claim 66, wherein the second protocol is a hypertext markup language.

---

**REMARKS**

Claims 52-62 and 56-69 are pending in the present application. Claims 52, 56, and 67 are hereby amended. No new matter is added by these amendments. Favorable reconsideration of the claims is respectfully requested.

Date: 6-10-04

Respectfully submitted,



Patrick C. R. Holmes  
*Registration No. 46,380*  
**YEE & ASSOCIATES, P.C.**  
P.O. Box 802333  
Dallas, Texas 75380  
(972) 367-2001  
ATTORNEY FOR APPLICANTS

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective November 10, 1998

Application or Docket Number  
10/19997 R0E  
12/14/01

D

**CLAIMS AS FILED - PART I**

| FOR                              | (Column 1)<br>NUMBER FILED | (Column 2)<br>NUMBER EXTRA |
|----------------------------------|----------------------------|----------------------------|
| BASIC FEE                        |                            | 770                        |
| TOTAL CLAIMS                     | 15 minus 20 = *            |                            |
| INDEPENDENT CLAIMS               | 3 minus 3 = *              |                            |
| MULTIPLE DEPENDENT CLAIM PRESENT |                            |                            |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**CLAIMS AS AMENDED - PART II**

| AMENDMENT A                                    | (Column 1)                       | (Column 2)                         | (Column 3)    |
|--|----------------------------------|------------------------------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
| Total  | *                                | Minus **                           | =             |
| Independent                                    | *                                | Minus ***                          | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

| AMENDMENT B                                    | (Column 1)                       | (Column 2)                         | (Column 3)    |
|--|----------------------------------|------------------------------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
| Total  | *                                | Minus **                           | =             |
| Independent                                    | *                                | Minus ***                          | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

| AMENDMENT C                                    | (Column 1)                       | (Column 2)                         | (Column 3)    |
|--|----------------------------------|------------------------------------|---------------|
|  | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
| Total  | *                                | Minus **                           | =             |
| Independent                                    | *                                | Minus ***                          | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM |                                  |                                    |               |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

| SMALL ENTITY TYPE <input type="checkbox"/> |     | OR | OTHER THAN SMALL ENTITY |     |
|--|-----|----|-------------------------|-----|
| RATE                                       | FEE |    | RATE                    | FEE |
|  |     | OR |                         | 770 |
|  |     | OR |                         |     |
|  |     | OR |                         |     |
|  |     | OR |                         |     |
| TOTAL                                      |     | OR | TOTAL                   | 770 |

| SMALL ENTITY TYPE <input type="checkbox"/> |                | OR | OTHER THAN SMALL ENTITY |                |
|--|----------------|----|-------------------------|----------------|
| RATE                                       | ADDITIONAL FEE |    | RATE                    | ADDITIONAL FEE |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
| TOTAL ADDIT. FEE                           |                | OR | TOTAL ADDIT. FEE        |                |

| SMALL ENTITY TYPE <input type="checkbox"/> |                | OR | OTHER THAN SMALL ENTITY |                |
|--|----------------|----|-------------------------|----------------|
| RATE                                       | ADDITIONAL FEE |    | RATE                    | ADDITIONAL FEE |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
| TOTAL ADDIT. FEE                           |                | OR | TOTAL ADDIT. FEE        |                |

| SMALL ENTITY TYPE <input type="checkbox"/> |                | OR | OTHER THAN SMALL ENTITY |                |
|--|----------------|----|-------------------------|----------------|
| RATE                                       | ADDITIONAL FEE |    | RATE                    | ADDITIONAL FEE |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
|  |                | OR |                         |                |
| TOTAL ADDIT. FEE                           |                | OR | TOTAL ADDIT. FEE        |                |





RCE/2685

\$ #12  
9/27/04  
DH

PTO/SB/30 (09-03)  
Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |                               |                  |
|--|-------------------------------|------------------|
| <b>Request<br/>for<br/>Continued Examination (RCE)<br/>Transmittal</b><br><br>Address to:<br>Mail Stop RCE<br>Commissioner for Patents<br>P.O. Box 1450<br>Alexandria, VA 22313-1450 | <b>Application Number</b>     | 10/199,797       |
|  | <b>Filing Date</b>            | July 19, 2002    |
|  | <b>First Named Inventor</b>   | Osterhout et al. |
|  | <b>Art Unit</b>               | 2685             |
|  | <b>Examiner Name</b>          | Nguyen, Thuan T. |
|  | <b>Attorney Docket Number</b> | 11032RRUS04D/RCE |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**  
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a.  Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
  - i.  Consider the arguments in the Appeal Brief or Rely Brief previously filed on \_\_\_\_\_
  - ii.  Other \_\_\_\_\_
- b.  Enclosed
  - i.  Amendment/Reply
  - ii.  Affidavit(s)/ Declaration(s)
  - iii.  Information Disclosure Statement (IDS)
  - iv.  Other Preliminary Amendment

2. **Miscellaneous**

- a.  Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of \_\_\_\_\_ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
- b.  Other \_\_\_\_\_

3. **Fees**

- The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
- The Director is hereby authorized to charge the following fees, or credit any overpayments, to
- a.  Deposit Account No. 50-3157
  - i.  RCE fee required under 37 CFR 1.17(e)
  - ii.  Extension of time fee (37 CFR 1.136 and 1.17)
  - iii.  Other \_\_\_\_\_
- b.  Check in the amount of \$ \_\_\_\_\_ enclosed
- c.  Payment by credit card (Form PTO-2038 enclosed)

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**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

|                   |                    |                                   |               |
|-------------------|--------------------|-----------------------------------|---------------|
| Name (Print/Type) | Duke W. Yee        | Registration No. (Attorney/Agent) | 34,285        |
| Signature         | <i>Duke W. Yee</i> | Date                              | June 10, 2004 |

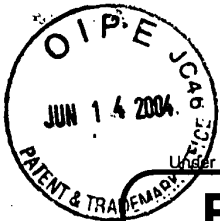
**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

|                   |                      |      |               |
|-------------------|----------------------|------|---------------|
| Name (Print/Type) | Carrie Parker        | Date | June 10, 2004 |
| Signature         | <i>Carrie Parker</i> |      |               |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 770.00

| Complete if Known    |                  |
|----------------------|------------------|
| Application Number   | 10/199,797       |
| Filing Date          | 07/19/2002       |
| First Named Inventor | Osterhout et al. |
| Examiner Name        | Nguyen, Thuan T. |
| Art Unit             | 2685             |
| Attorney Docket No.  | 11032RRUS04D/RCE |

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| METHOD OF PAYMENT (check all that apply)   |                            | FEE CALCULATION (continued)   |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
|--|----------------------------|---|----------------------------|--|----------|----------|----------|-----------------|----------|------|-----|----------|----|-------------------------------------|-----|----------|----|------|-----|--|--|------|-----|---------|-----|---------------------------|--|------|-----------|---|-------|--|--------------|----------------|----------|-------------|---------|--|---|--------------------|--------|------|--------|---|----------------------------|-----------------|----------|------|----|--|--|------|-----|---------|-----|---|-----|----------|-----|------|-----|--|--|------|-------|--------|-----|---|--|------|-----------|------|-------|--|--|------|-----|------|-----|------------------|--|------|-----|------|-----|--|--|------|-----|------|-----|--------------------------|--|------|-------|------|-------|---|--|------|-----|------|----|----------------------------------|--|------|-------|------|-----|------------------------------------|--|------|-------|------|-----|--------------------------------|--|------|-----|------|-----|------------------|--|------|-----|------|-----|-----------------|--|------|-----|------|-----|-------------------------------|--|------|----|------|----|-------------------------------------|--|------|-----|------|-----|---|--|------|----|------|----|--|--|------|-----|------|-----|---|--|------|-----|------|-----|--|--|------|-----|------|-----|---|--------|------|-----|------|-----|---|--|
| <input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None<br><input checked="" type="checkbox"/> Deposit Account:<br>Deposit Account Number: <u>Yee &amp; Associates, P.C.</u><br>Deposit Account Name: <u>50-3157</u>   |                            | <b>3. ADDITIONAL FEES</b><br>Large Entity   Small Entity<br><table border="1"> <thead> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>1252</td><td>420</td><td>2252</td><td>210</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>1253</td><td>950</td><td>2253</td><td>475</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>1254</td><td>1,480</td><td>2254</td><td>740</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>1255</td><td>2,010</td><td>2255</td><td>1,005</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>1401</td><td>330</td><td>2401</td><td>165</td><td>Notice of Appeal</td><td></td></tr> <tr><td>1402</td><td>330</td><td>2402</td><td>165</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>1403</td><td>290</td><td>2403</td><td>145</td><td>Request for oral hearing</td><td></td></tr> <tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>1453</td><td>1,330</td><td>2453</td><td>665</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>1501</td><td>1,330</td><td>2501</td><td>665</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>1502</td><td>480</td><td>2502</td><td>240</td><td>Design issue fee</td><td></td></tr> <tr><td>1503</td><td>640</td><td>2503</td><td>320</td><td>Plant issue fee</td><td></td></tr> <tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>1809</td><td>770</td><td>2809</td><td>385</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>1810</td><td>770</td><td>2810</td><td>385</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> <tr><td>1801</td><td>770</td><td>2801</td><td>385</td><td>Request for Continued Examination (RCE)</td><td>770.00</td></tr> <tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> </tbody> </table> |                            | Fee Code   | Fee (\$) | Fee Code | Fee (\$) | Fee Description | Fee Paid | 1051 | 130 | 2051     | 65 | Surcharge - late filing fee or oath |     | 1052     | 50 | 2052 | 25  | Surcharge - late provisional filing fee or cover sheet |  | 1053 | 130 | 1053    | 130 | Non-English specification |  | 1812 | 2,520     | 1812  | 2,520 | For filing a request for <i>ex parte</i> reexamination |              | 1804           | 920*     | 1804        | 920*    | Requesting publication of SIR prior to Examiner action |   | 1805               | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action |                            | 1251            | 110      | 2251 | 55 | Extension for reply within first month |  | 1252 | 420 | 2252    | 210 | Extension for reply within second month |     | 1253     | 950 | 2253 | 475 | Extension for reply within third month |  | 1254 | 1,480 | 2254   | 740 | Extension for reply within fourth month |  | 1255 | 2,010     | 2255 | 1,005 | Extension for reply within fifth month |  | 1401 | 330 | 2401 | 165 | Notice of Appeal |  | 1402 | 330 | 2402 | 165 | Filing a brief in support of an appeal |  | 1403 | 290 | 2403 | 145 | Request for oral hearing |  | 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding |  | 1452 | 110 | 2452 | 55 | Petition to revive - unavoidable |  | 1453 | 1,330 | 2453 | 665 | Petition to revive - unintentional |  | 1501 | 1,330 | 2501 | 665 | Utility issue fee (or reissue) |  | 1502 | 480 | 2502 | 240 | Design issue fee |  | 1503 | 640 | 2503 | 320 | Plant issue fee |  | 1460 | 130 | 1460 | 130 | Petitions to the Commissioner |  | 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17(q) |  | 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt |  | 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) |  | 1809 | 770 | 2809 | 385 | Filing a submission after final rejection (37 CFR 1.129(a)) |  | 1810 | 770 | 2810 | 385 | For each additional invention to be examined (37 CFR 1.129(b)) |  | 1801 | 770 | 2801 | 385 | Request for Continued Examination (RCE) | 770.00 | 1802 | 900 | 1802 | 900 | Request for expedited examination of a design application |  |
| Fee Code   | Fee (\$)                   | Fee Code  | Fee (\$)                   | Fee Description  | Fee Paid |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1051   | 130                        | 2051  | 65                         | Surcharge - late filing fee or oath  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1052   | 50                         | 2052  | 25                         | Surcharge - late provisional filing fee or cover sheet                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1053   | 130                        | 1053  | 130                        | Non-English specification  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1812   | 2,520                      | 1812  | 2,520                      | For filing a request for <i>ex parte</i> reexamination                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1804   | 920*                       | 1804  | 920*                       | Requesting publication of SIR prior to Examiner action                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1805   | 1,840*                     | 1805  | 1,840*                     | Requesting publication of SIR after Examiner action                        |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1251   | 110                        | 2251  | 55                         | Extension for reply within first month                                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1252   | 420                        | 2252  | 210                        | Extension for reply within second month                                    |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1253   | 950                        | 2253  | 475                        | Extension for reply within third month                                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1254   | 1,480                      | 2254  | 740                        | Extension for reply within fourth month                                    |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1255   | 2,010                      | 2255  | 1,005                      | Extension for reply within fifth month                                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1401   | 330                        | 2401  | 165                        | Notice of Appeal   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1402   | 330                        | 2402  | 165                        | Filing a brief in support of an appeal                                     |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1403   | 290                        | 2403  | 145                        | Request for oral hearing   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1451   | 1,510                      | 1451  | 1,510                      | Petition to institute a public use proceeding                              |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1452   | 110                        | 2452  | 55                         | Petition to revive - unavoidable   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1453   | 1,330                      | 2453  | 665                        | Petition to revive - unintentional   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1501   | 1,330                      | 2501  | 665                        | Utility issue fee (or reissue)   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1502   | 480                        | 2502  | 240                        | Design issue fee   |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1503   | 640                        | 2503  | 320                        | Plant issue fee  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1460   | 130                        | 1460  | 130                        | Petitions to the Commissioner  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1807   | 50                         | 1807  | 50                         | Processing fee under 37 CFR 1.17(q)  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1806   | 180                        | 1806  | 180                        | Submission of Information Disclosure Stmt                                  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 8021   | 40                         | 8021  | 40                         | Recording each patent assignment per property (times number of properties) |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1809   | 770                        | 2809  | 385                        | Filing a submission after final rejection (37 CFR 1.129(a))                |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1810   | 770                        | 2810  | 385                        | For each additional invention to be examined (37 CFR 1.129(b))             |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1801   | 770                        | 2801  | 385                        | Request for Continued Examination (RCE)                                    | 770.00   |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1802   | 900                        | 1802  | 900                        | Request for expedited examination of a design application                  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| <b>FEE CALCULATION</b><br><b>1. BASIC FILING FEE</b><br><table border="1"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>1001</td><td>770</td><td>2001 385</td><td></td></tr> <tr><td>1002</td><td>340</td><td>2002 170</td><td></td></tr> <tr><td>1003</td><td>530</td><td>2003 265</td><td></td></tr> <tr><td>1004</td><td>770</td><td>2004 385</td><td></td></tr> <tr><td>1005</td><td>160</td><td>2005 80</td><td></td></tr> <tr><td colspan="3">SUBTOTAL (1)</td><td>(\$) 0.00</td></tr> </tbody> </table> |                            | Large Entity Fee Code (\$)  | Small Entity Fee Code (\$) | Fee Description  | Fee Paid | 1001     | 770      | 2001 385        |          | 1002 | 340 | 2002 170 |    | 1003                                | 530 | 2003 265 |    | 1004 | 770 | 2004 385   |  | 1005 | 160 | 2005 80 |     | SUBTOTAL (1)              |  |      | (\$) 0.00 | <b>2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE</b><br><table border="1"> <thead> <tr> <th>Total Claims</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Independent</td> <td>-20** =</td> <td>X</td> <td>=</td> </tr> <tr> <td>Multiple Dependent</td> <td>-3** =</td> <td>X</td> <td>=</td> </tr> </tbody> </table><br><table border="1"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>1202</td><td>18</td><td>2202 9</td><td></td></tr> <tr><td>1201</td><td>86</td><td>2201 43</td><td></td></tr> <tr><td>1203</td><td>290</td><td>2203 145</td><td></td></tr> <tr><td>1204</td><td>86</td><td>2204 43</td><td></td></tr> <tr><td>1205</td><td>18</td><td>2205 9</td><td></td></tr> <tr><td colspan="3">SUBTOTAL (2)</td><td>(\$) 0.00</td></tr> </tbody> </table> |       | Total Claims   | Extra Claims | Fee from below | Fee Paid | Independent | -20** = | X  | = | Multiple Dependent | -3** = | X    | =      | Large Entity Fee Code (\$)                          | Small Entity Fee Code (\$) | Fee Description | Fee Paid | 1202 | 18 | 2202 9                                 |  | 1201 | 86  | 2201 43 |     | 1203                                    | 290 | 2203 145 |     | 1204 | 86  | 2204 43                                |  | 1205 | 18    | 2205 9 |     | SUBTOTAL (2)                            |  |      | (\$) 0.00 |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description   | Fee Paid                   |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1001   | 770                        | 2001 385  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1002   | 340                        | 2002 170  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1003   | 530                        | 2003 265  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1004   | 770                        | 2004 385  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1005   | 160                        | 2005 80   |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| SUBTOTAL (1)   |                            |   | (\$) 0.00                  |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| Total Claims   | Extra Claims               | Fee from below  | Fee Paid                   |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| Independent  | -20** =                    | X   | =                          |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| Multiple Dependent   | -3** =                     | X   | =                          |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description   | Fee Paid                   |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1202   | 18                         | 2202 9  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1201   | 86                         | 2201 43   |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1203   | 290                        | 2203 145  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1204   | 86                         | 2204 43   |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| 1205   | 18                         | 2205 9  |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| SUBTOTAL (2)   |                            |   | (\$) 0.00                  |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |
| *or number previously paid, if greater. For Reissues, see above  |                            | Other fee (specify) _____<br>*Reduced by Basic Filing Fee Paid<br><b>SUBTOTAL (3) (\$) 770.00</b>   |                            |  |          |          |          |                 |          |      |     |          |    |                                     |     |          |    |      |     |  |  |      |     |         |     |                           |  |      |           |   |       |  |              |                |          |             |         |  |   |                    |        |      |        |   |                            |                 |          |      |    |  |  |      |     |         |     |   |     |          |     |      |     |  |  |      |       |        |     |   |  |      |           |      |       |  |  |      |     |      |     |                  |  |      |     |      |     |  |  |      |     |      |     |                          |  |      |       |      |       |   |  |      |     |      |    |                                  |  |      |       |      |     |                                    |  |      |       |      |     |                                |  |      |     |      |     |                  |  |      |     |      |     |                 |  |      |     |      |     |                               |  |      |    |      |    |                                     |  |      |     |      |     |   |  |      |    |      |    |  |  |      |     |      |     |   |  |      |     |      |     |  |  |      |     |      |     |   |        |      |     |      |     |   |  |

| SUBMITTED BY      |                    | (Complete if applicable)          |               |
|-------------------|--------------------|-----------------------------------|---------------|
| Name (Print/Type) | Duke W. Yee        | Registration No. (Attorney/Agent) | 34,285        |
| Signature         | <i>Duke W. Yee</i> | Telephone                         | 972-367-2001  |
|                   |                    | Date                              | June 10, 2004 |

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

MAY 10 2004

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In re application: **Osterhout et al.**

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Serial No.: **10/199,797**

Group Art Unit: **2685**

Filed: **July 19, 2002**

Examiner: **Nguyen, Thuan T.**

For: **Portable Call Management System**

Attorney Docket No.: **11032RRUS04D**

**Certificate of Transmission Under 37 C.F.R. § 1.8(a)**  
 I hereby certify this correspondence is being transmitted via facsimile to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, facsimile number (703) 872-9306, on May 10, 2004.

By: Carrie Parker  
 Carrie Parker

**RESPONSE TO FINAL OFFICE ACTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-0392.

In response to the Final Office Action dated March 10, 2004, please amend the above-identified application as follows:

Listing of Claims begin on page 2 of this paper.

Remarks begin on page 5 of this paper.

IN THE CLAIMS:

1-51. (Canceled)

52. (Previously Presented) A method in a communications system for processing a call, the method comprising:

    sending a first request to setup the call to a mobile data processing system associated with a user, wherein the mobile data processing system has a wireless communications capability;

    sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;

    receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and

    sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Previously Presented) The method as recited in claim 53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Previously Presented) A method for processing a call at a data processing system the method comprising:

    receiving a notification message at a data processing system indicating a request to setup the call;

presenting the notification to a user at the data processing system;  
receiving the request to establish the call;  
presenting caller information at the data processing system;  
receiving user input from the user identifying an address to which the call is to be directed; and  
responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.

57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.

58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.

59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.

60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.

61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.

62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.

63-65. (Canceled)

66. (Original) A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;

translating said registration notice from the first protocol into a second protocol;  
and  
transmitting a modified registration notice to a terminating device; wherein the  
modified registration notice is formatted in the second protocol.

67. (Original) The method as recited in claim 66, further comprising:  
receiving a location data with which to redirect the incoming call from the  
terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is  
formatted in the second protocol.

68. (Original) The method as recited in claim 66, wherein the first protocol is a  
session initiation protocol.

69. (Original) The method as recited in claim 66, wherein the second protocol is a  
hypertext markup language.

---

**REMARKS**

Claims 52-62 and 66-69 are pending in the present application. Reconsideration of the claims is respectfully requested.

**I. 35 U.S.C. § 102, Anticipation**

The examiner has rejected claims 52-60 and 66-69 under 35 U.S.C. § 102 as being anticipated by Wang et al., USPN 6161134. This rejection is respectfully traversed.

In rejecting the claims, Examiner states:

Regarding claims 52 and 56, Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, figs 10-11 for call initialization process; Figs 16-17 for the user intention to transfer the call to another number; Figs. 18-19 for transferring status and then completed; and Figs. 21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer). Furthermore, Wang further discloses "sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed" and then receiving, "prior to establishing the call", a response to the request, wherein the response includes the address "input by the user of the mobile data processing system in response to receiving the notification message, and sending a second request to set up the call to the user using the address, for instance, the user of the mobile data processing system or a palm pilot receives an incoming call with a notification message such as call information coming from caller name and caller ID waiting as a first request to setup the call for call connection (as shown in Fig. 25), the user has options to answer it right away, reject or OK meaning answer it at a later time (col. 15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in Fig. 15) and waiting for answering, then the procedure to transfer the call is followed during the active call by the user input at the time with the address for the transfer (col. 40/line 43 to col. 41/line 4, and Figs. 20-22 for "hold" active calls and then forwards them; and col. 38/line 65 to col. 39/line 5 for either entering a telephone number

or entering a network address for the destination if desired) as a fifth feature of the wireless device (col. 24/lines 16-17); and as soon as the user already enters the address for the destination for forwarding, the second request for setup the call for call connection is sent to the system as the user hits the forward button (Figs. 21-22, item 2110).

Independent Claim 52 is reproduced for discussion:

52. A method in a communications system for processing a call, the method comprising:

    sending a first request to setup the call to a mobile data processing system associated with a user, wherein the mobile data processing system has a wireless communications capability;

    sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;

    receiving, prior to establishing the call, a response to the request, wherein the response includes the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and

    sending a second request to setup the call to the user using the address.

Wang appears to teach a system where a phone (such as an Ethernet phone) and a computer system (such as a handheld computer) work together to allow a user to set preferences for receiving calls. However, there are important differences between the teaching of Wang and the present claims, as discussed below.

Wang does not appear to teach sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed. Examiner refers to Figures 21 and 22 for options to forward calls. The sections of Wang, related to Figures 21 and 22, teach that the forwarding feature is set up



in advance of a call being received and that all calls coming into the information appliance are diverted to the forwarded phone.

Examiner states in the Response to Arguments of the final Office action that the teaching of Wang is in the context of receiving an incoming call, in response to which the user may take various actions including forwarding the call to a specified location. Applicant respectfully disagrees with this interpretation of Wang. In support of Examiner's argument, Examiner cites Wang at col. 15, lines 15-31 as teaching that

...the user has options to answer it right away, reject or OK meaning answer it at a later time (col.15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in FIG. 15)....

Applicant respectfully submits that the cited passage of Wang does not teach forwarding an incoming call before answering it. The cited passage (col. 15, lines 20-31) states in part:

The incoming call screen includes user selection for saving the caller name and the caller identification to the address database.... For some of these incoming call embodiments, the incoming call screen includes user selections for processing the incoming call. The user selections include rejecting the incoming call (shown in FIG. 25 as "reject" button 2550), answering the incoming call (shown in FIG. 25 as the "answer" button 2540), and answering the call at a later time....

This passage fails to teach forwarding an incoming call. Examiner also cites FIG. 15 as teaching the forwarding of an incoming call. However, Applicant notes that FIG. 15 does not show or depict forwarding an incoming call as claimed, and the text referring to FIG. 15, namely col. 39, lines 49-65, also does not teach forwarding an incoming call. The text does appear to teach transferring an existing, already connected call, but this feature is not what claim 52 claims. Col. 39, lines 49-65 state:

In the connected line screen 1500, the user can choose to place another call...by tapping the "New Line" button 1540. The "Hold" button 1550 and the "Hang up" button 1560 hold and hang up calls respectively. If there are two or more calls active at the same time, the "Switch" button 1570 will also appear on

the connected line screen 1500 so that the user can switch from one active call to another active call.

The line pop-up menu button 1580 is disposed at the top right corner of the connected line screen 1500, and appears as a downward arrow next to and to the left of "Line". When the line pop-up menu button 1580 is tapped, a line pop-up menu 1610 list of choices appears, as shown in the connected line screen with line pop-up menu window 1600, shown in FIG. 16. User selection of the "transfer" prompt 1620 will result in the display of the transfer dialog screen 1700, shown in FIG. 17.

[Emphasis added.]

According to the above text of Wang, Wang only teaches transferring an existing, already connected call to another line. This common feature differs significantly from what the current claim 52 claims, namely, forwarding the call prior to establishing the call.

Hence, Applicant respectfully submits that Wang fails to teach or suggest all limitations of claim 52.

Nowhere in the cited sections of Wang, or any other sections, is it taught to sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed and receiving, prior to establishing the call, a response to the request, wherein the response includes the address input by the user of the mobile data processing system in response to receiving the notification message.

Thus, in view of the above, Wang does not teach each and every feature of independent claim 52 as is required under 35 U.S.C. § 102(e). At least by virtue of their dependency on independent claim 52, Wang does not teach each and every feature of dependent claims 53-55. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 52-55 under 35 U.S.C. § 102(e).

Examiner rejects claim 56 under the same reasoning as claim 52. Claim 56 states:

56. A method for processing a call at a data processing system the method comprising:

- receiving a notification message at a data processing system indicating a request to setup the call;
- presenting the notification to a user at the data processing system;
- receiving the request to establish the call;
- presenting caller information at the data processing system;
- receiving user input from the user identifying an address to which the call is to be directed; and
- responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.

Nowhere in Wang is it taught to receive user input from the user identifying an address to which the call is to be directed and, responsive to an identification of the address for the call, return a response including the address to which the call is to be directed. As shown above, neither the call forwarding feature nor the transfer feature of Wang allow the user to receive a notification of an incoming call and in response to that notification identify the address to which the call is to be directed.

Examiner does not address the merits of claims 66-69 in the Office action, except to state:

As for claims 66-69, these claims are rejected for the reasons given in the scope of claims 52-60 as already discussed above, with an additional understanding that, as for a first protocol as a session initiation protocol and a second protocol is a hypertext markup language, i.e., a session initiation protocol (as shown in FIG. 25 for initiating a connection call between a caller and a called party, or in FIGs. 16 and 17 for a session protocol while inputs are needed for entering into the palmtop device) and Internet access with a protocol such as TCP/IP is well known for including a protocol using a hypertext markup language (col. 21, lines 5-40).

This statement by Examiner does not appear to show that Wang teaches the limitations of claim 66, which claims:

66. A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second protocol; and  
transmitting a modified registration notice to a terminating device;  
wherein the modified registration notice is formatted in the second protocol.

Claims 66-69 have different scope than claims 52-60. For example, claim 66 recites receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol, translating said registration notice from the first protocol into a second protocol, and transmitting a modified registration notice to a terminating device, wherein the modified registration notice is formatted in the second protocol. As an additional example, claim 67 recites receiving a location data with which to redirect the incoming call from the terminating device, wherein the location data is formatted in the second protocol, translating the location data to a second location data and transmitting the second location data, wherein the second location data is formatted in the second protocol. None of these features are addressed in the rejection of claims 52-60. Thus, the Office Action has failed to establish a case of anticipation based on Wang. Claims 60-62 are dependent on claim 56, and thus, these claims distinguish over Wang for at least the reasons noted above with regard to claim 56. Therefore, all claims have been addressed and are believed to be in condition for allowance. Favorable reconsideration of the claims is respectfully requested.

**II. Conclusion**

It is respectfully urged that the subject application is patentable over Wang and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: \_\_\_\_\_

5.10.04

Respectfully submitted,



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| <p>From: Carrie Parker<br/>Legal Assistant to Patrick C. R. Holmes</p>  | <p>No. of Pages Including Cover Sheet: 13</p>   |
| <p>Message:</p> <p>Enclosed herewith:</p> <ul style="list-style-type: none"> <li>• Transmittal Document; and</li> <li>• Response to Final Office Action.</li> </ul> |   |
| <p>Re: Application No. 10/199,797<br/>Attorney Docket No: 11032RRUS04D</p>  |   |
| <p>Date: Monday, May 10, 2004</p>   |   |
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Osterhout et al.

Serial No.: 10/199,797

Filed: July 19, 2002

For: Portable Call Management System

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Group Art Unit: 2685

Examiner: Nguyen, Thuan T.

Attorney Docket No.: 11032RRUS04D

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Respectfully submitted,

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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/199,797   | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |
| 35527  | 7590        | 03/10/2004           | EXAMINER            |                  |
| DUKE W. YEE<br>CARSTENS, YEE & CAHOON, L.L.P.<br>P.O. BOX 802334<br>DALLAS, TX 75380 |             |                      | NGUYEN, THUAN T     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2685                |                  |

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/199,797 | <b>Applicant(s)</b><br>OSTERHOUT ET AL. |  |
|                              | <b>Examiner</b><br>THUAN T. NGUYEN   | <b>Art Unit</b><br>2685                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 52-62 and 66-69 is/are pending in the application.  
    4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 52-62 and 66-69 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 7/19/02 is/are: a)  accepted or b)  objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a)  All    b)  Some \*    c)  None of:
1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Remarks*

1. Claims 1-51, and 63-65 were previously canceled. Pending claims are claims 52-62, and 66-69.

### *Claim Rejections - 35 USC ' 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --*

*(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

3. Claims 52-60 and 66-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (U.S. Patent No. 6,161,134).

Regarding claims 52 and 56, Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, Figs 10-11 for call initialization process; Figs. 16-17 for the user intention to transfer the call to another number; Figs. 18-19 for transferring status and then completed; and Figs.

Art Unit: 2685

21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer). Furthermore, Wang further discloses “sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed” and then receiving, “prior to establishing the call”, a response to the request, wherein the response includes the address “input by the user of the mobile data processing system in response to receiving the notification message; and sending a second request to set up the call to the user using the address, for instance, the user of the mobile data processing system or a palm pilot receives an incoming call with a notification message such as call information coming from caller name and caller ID waiting as a first request to setup the call for call connection (as shown in Fig. 25), the user has options to answer it right way, reject or OK meaning answer it at a later time (col. 15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in Fig. 15) and waiting for answering, then the procedure to transfer the call is followed during the active call by the user input at the time with the address for the transfer (col. 40/line 43 to col. 41/line 4, and Figs. 20-22 for “hold” active calls and then forwards them; and col. 38/line 65 to col. 39/line 5 for either entering a telephone number or entering a network address for the destination if desired) as a fifth feature of the wireless device (col. 24/lines 16-17); and as soon as the user already enters the address for the destination for forwarding, the second request for setup the call for call connection is sent to the system as the user hits the forward button (Figs. 21-22, item 2110).

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As for claims 53-54, Wang discloses that the palm top device is a personal digital assistant (col. 1/lines 13-46 & col. 10/lines 8-25) and a Palm top computer. (The Palm version number is not a significant patentability weight herein because Palm Computing, Inc develops these devices).

As for claims 55 and 59, Wang further discloses "wherein the request and response are session initiation protocol messages" (col. 11/lines 13-21 for SIP addressed).

As for claim 57-58, Wang discloses that caller identification is provided to the user (Fig. 25) and the user can set up audio elements depending on user's preferences (col. 38/lines 15-28).

As for claim 60, Wang discloses that the data processing system is a wireless device (Figs. 10-35).

As for claims 66-69, these claims are rejected for the reasons given in the scope of claims 52-60 as already discussed above, with an additional understanding that, as for a first protocol as a session initiation protocol and a second protocol is a hypertext markup language, i.e., a session initiation protocol (as shown in Fig. 25 for initiating a connection call between a caller and a called party, or in Figs. 16 and 17 for a session protocol while inputs are needed for entering into the Palmtop device) and Internet access with a protocol such as TCP/IP is well known for including a protocol using a hypertext markup language (col. 21/lines 5-40).

***Claim Rejections - 35 USC 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

5. Claims 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. Patent No. 6,161,134).

Regarding claims 61-62, Wang does not specifically disclose that the information appliance device 210 for using in the network 200 (Fig. 2) is a two-way pager and providing a vibrating alert in the step of presenting caller information; however, Wang does suggest that the information appliance device can be any device capable of storing user information and exchanging information with the network (col. 9/lines 32-42). It inherently suggests that a two-way pager is not limited to use within this system; and the vibrating alert of a pager when an incoming call with caller ID is a function that is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang's system with a two-way pager and its known vibrating alert function plugged-in for use within the system instead or in addition of a palmtop computer/PDA device in order to provide additional communication device to users such as a two-way pager or any other form of communication device for communication in a broader network, for instance, including a pager network in this scenario.

*Response to Arguments*

6. Applicant's arguments filed on 12/17/03 have been fully considered but they are not persuasive.

Applicants basically argues that Wang does not teach presenting a notification of an incoming call to the user, and in response to the notification, allowing the user to input the address to which the call is to be directed (page 7, 2<sup>nd</sup> paragraph, and as shown in Figs 6C-6D of the present application) and by amending the claim languages of claims 52 and 56. The Examiner respectfully disagrees with Applicants and would like to invite Applicants to take a closer look at Wang's reference and as explaining in details below.

The user of the mobile data processing system or a palm pilot receives an incoming call with a notification message such as call information coming from caller name and caller ID waiting as a first request to setup the call for call connection (as shown in Fig. 25), the user has options to answer it right way, reject or OK meaning answer it at a later time (col. 15/lines 15-31) or choose to transfer the call to another destination before answering the call while the call is being connected (as shown in Fig. 15) and waiting for answering, then the procedure to transfer the call is followed during the active call by the user input at the time with the address for the transfer (col. 40/line 43 to col. 41/line 4, and Figs. 20-22 for "hold" active calls and then forwards them; and col. 38/line 65 to col. 39/line 5 for either entering a telephone number or entering a network address for the destination if desired) as a fifth feature of the wireless device (col. 24/lines 16-17); and as soon as the user already enters the address for the destination for forwarding, the second request for setup the call for call connection is sent to the system as the user hits the forward button (Figs. 21-22, item 2110).

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9306, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,*

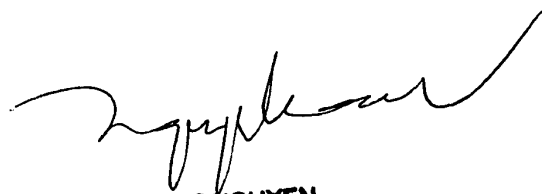
*2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

Art Unit: 2685

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



TONY T. NGUYEN  
PATENT EXAMINER, FSA

Tony T. Nguyen  
Art Unit 2685  
March 3, 2004





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

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Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

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15:04  
OK

**Certificate of Mailing Under 37 C.F.R. § 1.8(a)**  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 17, 2003.  
By: Michele Morrow  
Michele Morrow

**RECEIVED**

DEC 29 2003

Technology Center 2600

**RESPONSE TO OFFICE ACTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-0392.

In response to the Office Action dated September 17, 2003, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims, which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 5 of this paper.

**IN THE CLAIMS:**

---

1-51. (Canceled)

52. (Currently Amended) A method in a communications system for processing a call, the method comprising:

~~receiving at a mobile data processing system a call for a user;~~

sending a first request to setup the call to ~~[[the]]~~a mobile data processing system associated with a user, wherein the mobile data processing system has a wireless communications capability;

sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;

receiving, prior to establishing the call, a response to the request, wherein the response includes [[an]]the address for the call input by the user of the mobile data processing system in response to receiving the notification message; and

sending a second request to setup the call to the user using the address.

53. (Original) The method as recited in claim 52, wherein the data processing system is a personal digital assistant.

54. (Currently amended) The method as recited in claim ~~[[52]]~~53, wherein the personal digital assistant is a Palm VII.

55. (Original) The method as recited in claim 52, wherein the request and the response are session initiation protocol messages.

56. (Currently amended) A method for processing a call at a data processing system the method comprising:

receiving a notification message at a data processing system indicating a request to setup the call;

presenting the notification to a user at the data processing system;

receiving [[a]]the request to establish [[a]]the call;

presenting caller information at the data processing system;

receiving user input from the user identifying an address to which the call is to be directed; and

responsive to an identification of [[an]]the address for the call, returning a response including the address to which the call is to be directed.

57. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises displaying the caller information.

58. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises presenting the caller information audibly.

59. (Original) The method as recited in claim 56, wherein the request and the response are session initiation protocol messages.

60. (Original) The method as recited in claim 56, wherein the data processing system is a wireless device.

61. (Original) The method as recited in claim 56, wherein the step of presenting caller information comprises a vibrating alert.

62. (Original) The method as recited in claim 56, wherein the data processing system is a two-way pager.

63-65. (Canceled)

66. (Original) A method for initiating calls, comprising the steps of:

receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol;

translating said registration notice from the first protocol into a second protocol;  
and

transmitting a modified registration notice to a terminating device; wherein the modified registration notice is formatted in the second protocol.

67. (Original) The method as recited in claim 66, further comprising:

receiving a location data with which to redirect the incoming call from the terminating device; wherein the location data is formatted in the second protocol; and

translating the location data to a second location data; and

transmitting the second location data, wherein the second location data is formatted in the second protocol.

68. (Original) The method as recited in claim 66, wherein the first protocol is a session initiation protocol.

69. (Original) The method as recited in claim 66, wherein the second protocol is a hypertext markup language.

## REMARKS

Claims 52-62 and 66-69 are pending in the present application. By this Response, claims 52, 54 and 56 are amended. Claim 52 is amended to recite sending a notification message to the mobile data processing system indicating the first request to setup the call and receiving prior to establishing the call a response to the request, wherein the response includes an address for the call selected by the user of the mobile data processing system in response to receiving the notification message. Claim 56 is amended to recite receiving a notification message at a data processing system indicating a request to setup a call. Support for the amendments to claims 52 and 56 may be found at least at page 14, lines 7-22 and page 17, line 21 to page 18, line 10 of the present specification. Claim 54 is amended to correct for antecedent basis. Reconsideration of the claims in view of the above amendments and the following remarks is respectfully requested.

### **I. 35 U.S.C. § 102, Alleged Anticipation, Claims 52-60 and 66-69**

The Office Action rejects claims 52-60 and 66-69 under 35 U.S.C. § 102(e) as being allegedly anticipated by Wang et al. (U.S. Patent No. 6,161,134). This rejection is respectfully traversed.

As to independent claims 52 and 56, the Office Action states:

Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, Figs 10-11 for call initialization process; Figs. 16-17 for the user intention to transfer the call to another number; Figs 18-19 for transferring status and then completed; and Figs 21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer.

Office Action dated September 17, 2003, page 2.

Claim 52 reads as follows:

52. A method in a communications system for processing a call, the method comprising:

sending a first request to setup the call to a mobile data processing system associated with a user, wherein the mobile data processing system has a wireless communications capability;

sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed;

receiving, prior to establishing the call, a response to the request, wherein the response includes the address input by the user of the mobile data processing system in response to receiving the notification message; and

sending a second request to setup the call to the user using the address. (emphasis added)

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. In re Bond, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. In re Lowry, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). Applicants respectfully submit that Wang does not identically show each and every element of the claimed invention arranged as they are in the claims. Specifically, Wang does not teach sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed.

Wang is directed to an information appliance and a telephone that function independently as well as with each other as companion appliances. The information appliance stores user information and the telephone is linked to a network. The companion appliances are capable of simultaneously exchanging voice and data messages with devices connected to the network. The companion appliances are connected to each other physically through a communications port, and exchange user personalized information, user commands, and responses corresponding to action of the network-

connected devices. Aspects of the invention include: a method for exchanging voice and data messages between a telephone and devices connected to a network, a portable computer adapted for connection to a telephone, a telephone adapted for connection to a portable computer, and a communications system including the telephone connected to the portable computer.

Nowhere in Wang is it taught to send a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed. The Office Action refers to Figures 21 and 22 for options to forward calls. The sections of Wang, related to Figures 21 and 22, teach that the forwarding feature is set up in advance of a call being received and that all calls coming into the information appliance are diverted to the forwarded phone. Furthermore, once the call forwarding setup is completed the information appliance sends a message to the physically connected phone and the information appliance is no longer accessed when an incoming call is detected, as the telephone automatically forwards all calls until the user discontinues the forwarding feature. Thus, Wang does not teach presenting a notification of an incoming call to the user and, in response to the notification, allowing the user to input the address to which the call is to be directed.

Additionally, the Office Action refers to Figures 16 and 17 for options to transfer calls. The sections of Wang, related to Figures 16 and 17, teach that the call must already be connected before it can be transferred. The transfer process of Wang allows the user to transfer an already connected call to any device that is connected to the LAN link to which the telephone is already connected. Thus, this feature of Wang, does not teach presenting a notification of an incoming call to the user and, in response to the notification, allowing the user to input the address to which the call is to be directed.

Nowhere in the cited sections of Wang, or any other sections, is it taught to sending a notification message to the mobile data processing system indicating the first request to setup the call, wherein the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed and receiving, prior to

establishing the call, a response to the request, wherein the response includes the address input by the user of the mobile data processing system in response to receiving the notification message.

Thus, in view of the above, Wang does not teach each and every feature of independent claim 52 as is required under 35 U.S.C. § 102(e). At least by virtue of their dependency on independent claim 52, Wang does not teach each and every feature of dependent claims 53-55. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 52-55 under 35 U.S.C. § 102(e).

In addition to the above, Wang does not teach or suggest the specific features of independent claim 56 which reads as follows:

56. A method for processing a call at a data processing system the method comprising:  
receiving a notification message at a data processing system  
indicating a request to setup the call;  
presenting the notification to a user at the data processing system;  
receiving the request to establish the call;  
presenting caller information at the data processing system;  
receiving user input from the user identifying an address to which the call is to be directed; and  
responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed.  
(emphasis added)

Nowhere in Wang is it taught to receive user input from the user identifying an address to which the call is to be directed and, responsive to an identification of the address for the call, return a response including the address to which the call is to be directed. As shown above, neither the call forwarding feature nor the transfer feature of Wang allow the user to receive a notification of an incoming call and in response to that notification identify the address to which the call is to be directed.

Thus, in view of the above, Wang does not teach each and every feature of independent claim 56 as is required under 35 U.S.C. § 102(e). At least by virtue of their dependency on independent claim 52, Wang does not teach each and every feature of dependent claims 57-60. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 57-60 under 35 U.S.C. § 102(e).



The Office Action fails to address the specific features of claim 66-69 and instead merely rejects claims 66-69 for reasons given in addressing the scope of claims 52-60. However, claims 66-69 have different scope than claims 52-60. For example, claim 66 recites receiving registration notice of an incoming call, wherein said registration notice is formatted in a first protocol, translating said registration notice from the first protocol into a second protocol, and transmitting a modified registration notice to a terminating device, wherein the modified registration notice is formatted in the second protocol. As an additional example, claim 67 recites receiving a location data with which to redirect the incoming call from the terminating device, wherein the location data is formatted in the second protocol, translating the location data to a second location data and transmitting the second location data, wherein the second location data is formatted in the second protocol. None of these features are addressed in the rejection of claims 52-60. Thus, the Office Action has failed to establish a case of anticipation based on Wang since the Office Action fails to even address these features.

Thus, in view of the above, Wang does not teach each and every feature of independent claim 66 as is required under 35 U.S.C. § 102(e). At least by virtue of their dependency on independent claim 66, Wang does not teach each and every feature of dependent claims 67-69. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 66-69 under 35 U.S.C. § 102(e).

Furthermore, Wang does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Absent the Examiner pointing out some teaching or incentive to implement Wang send a notification message to the mobile data processing system indicating the first request to setup the call, where the notification is presented to the user via the mobile data processing system and, in response to the notification, user input is received from the user identifying an address to which the call is to be directed, one of ordinary skill in the art would not be led to modify Wang to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify Wang in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

**II. 35 U.S.C. § 103, Alleged Obviousness, Claims 60-62**

The Office Action rejects claims 60-62 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wang et al. (U.S. Patent No. 6,161,134). This rejection is respectfully traversed.

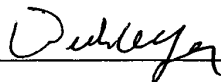
Claims 60-62 are dependent on claim 56, and thus, these claims distinguish over Wang for at least the reasons noted above with regard to claim 56. Moreover, the alleged knowledge of a data processing systems being wireless or a two-way pager and presenting caller information using a vibrating alert would not be sufficient to reject claim 56 or claims 60-62 by virtue of their dependency. That is, the knowledge of a data processing systems being wireless or a two-way pager and presenting caller information using a vibrating alert, does not teach receiving user input from the user identifying an address to which the call is to be directed and responsive to an identification of the address for the call, returning a response including the address to which the call is to be directed, as recited in claim 56 from which claims 60-62 depend. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 60-62 under 35 U.S.C. § 103(a).

**III. Conclusion**

It is respectfully urged that the subject application is patentable over Wang and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,

DATE: 12/17/05

  
\_\_\_\_\_

Duke W. Yee  
Reg. No. 34,285

Stephen J. Walder, Jr.  
Reg. No. 41,534  
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P.O. Box 802334  
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Attorneys for Applicants

SJW/fl



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

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Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

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Add  
1-504  
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CHANGE OF ATTORNEY'S ADDRESS IN APPLICATION

Please send all correspondence for this application to the following:

USPTO Customer Number 35527  
Duke W. Yee  
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P.O. Box 802334  
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**RECEIVED**  
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Please direct telephone calls to:

(972) 367-2001

W. Yee  
Duke W. Yee  
Reg. No. 34,285  
Carstens, Yee & Cahoon, L.L.P.  
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Dallas, TX 75380  
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*I hereby certify this correspondence is being deposited with the United States Postal service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450*  
on December 17, 2003 by Michele Morrow

2685



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

**35527**

PATENT TRADEMARK OFFICE  
CUSTOMER NUMBER

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Group Art Unit: **2685**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

Certificate of Mailing Under 37 C.F.R. § 1.8(a)  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 17, 2003.  
By: Michele Morrow  
Michele Morrow

TRANSMITTAL DOCUMENT

**RECEIVED**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

DEC 29 2003

Technology Center 2600

Sir:  
ENCLOSED HEREWITH:

- Change of Attorney's Address in Application;
- Response to Office Action; and
- Our return postcard.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-0392.

Respectfully submitted,

Duke W. Yee

Duke W. Yee  
Registration No. 34,285  
CARSTENS, YEE & CAHOON, LLP  
P.O. Box 802334  
Dallas, Texas 75380  
(972) 367-2001  
ATTORNEY FOR APPLICANTS



**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/199,797      | 07/19/2002  | Gregory T. Osterhout | 11032RRUS04D        | 1786             |

21498      7590      09/17/2003

NORTEL NETWORKS CORPORATION  
INTELLECTUAL PROPERTY LAW GROUP  
P O BOX 832130  
RICHARDSON, TX 750832130

EXAMINER

NGUYEN, THUAN T

ART UNIT      PAPER NUMBER

2685

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

|                 |             |                      |                     |
|-----------------|-------------|----------------------|---------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|

|          |
|----------|
| EXAMINER |
|----------|

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

DATE MAILED:

7

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

*See Attachments*

**Office Action Summary**

**Application No.**

10/199,797

**Applicant(s)**

OSTERHOUT ET AL.

**Examiner**

THUAN T. NGUYEN

**Art Unit**

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 52-62 and 66-69 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_ is/are allowed.
- 6)  Claim(s) 52-62 and 66-69 is/are rejected.
- 7)  Claim(s) \_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 19 July 2002 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All   b)  Some \*   c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).\* See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other:



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --*

*(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

2. Claims 52-60 and 66-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (U.S. Patent No. 6,161,134).

Regarding claims 52 and 56, Wang discloses this limitation for a method to process a call as the user can set up the call using his palm top device with the mobile system with a preferred address to receive the call from a called party; in other words, the call is redirected or rerouted to another address which is specified by the user (see Wang, Figs 10-11 for call initialization process; Figs. 16-17 for the user intention to transfer the call to another number; Figs. 18-19 for transferring status and then completed; and Figs. 21-22 for options to forward incoming calls; see col. 36/line 10 to col. 37/line 11 for call forwarding and call transfer).

As for claims 53-54, Wang discloses that the palm top device is a personal digital assistant (col. 1/lines 13-46 & col. 10/lines 8-25) and a Palm top computer. (The Palm

version number is not a significant patentability weight herein because Palm Computing, Inc develops these devices).

As for claims 55 and 59, Wang further discloses “wherein the request and response are session initiation protocol messages” (col. 11/lines 13-21 for SIP addressed).

As for claim 57-58, Wang discloses that caller identification is provided to the user (Fig. 25) and the user can set up audio elements depending on user’s preferences (col. 38/lines 15-28).

As for claim 60, Wang discloses that the data processing system is a wireless device (Figs. 10-35).

As for claims 66-69, these claims are rejected for the reasons given in the scope of claims 52-60 as already discussed above, and as for claim 69 alone, with the second protocol is a hypertext markup language, i.e., Internet access with a protocol such as TCP/IP is well known for a protocol using a hypertext markup language (col. 21/lines 5-40).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Art Unit: 2685

4. Claims <sup>61</sup>60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. Patent No. 6,161,134).

Regarding claims <sup>62</sup>60-62, Wang does not specifically disclose that the information appliance device 210 for using in the network 200 (Fig. 2) is a two-way pager and providing a vibrating alert in the step of presenting caller information; however, Wang does suggest that the information appliance device can be any device capable of storing user information and exchanging information with the network (col. 9/lines 32-42). It inherently suggests that a two-way pager is not limited to use within this system; and the vibrating alert of a pager when an incoming call with caller ID is a function that is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang's system with a two-way pager and its known vibrating alert function plugged-in for use within the system instead or in addition of a palmtop computer/PDA device in order to provide additional communication device to users such as a two-way pager or any other form of communication device for communication in a broader network, for instance, including a pager network in this scenario.

#### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Uranaka et al (US Patent 6,421,536 B1) & Martinez et al (US Patent PUB 2002/0118800

A1) disclose systems related to call transfer and/or call forwarding with caller ID.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**


**(703) 872-9314, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



**TONY T. NGUYEN  
PATENT EXAMINER**

Tony T. Nguyen  
Art Unit 2685  
September 5, 2003

|                                   |                                       |   |             |
|-----------------------------------|---------------------------------------|---|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/199,797 | Applicant(s)/Patent Under Reexamination<br>OSTERHOUT ET AL. |             |
|                                   | Examiner<br>THUAN T. NGUYEN           | Art Unit<br>2685  | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name            | Classification |
|---|--|-----------------|-----------------|----------------|
| A | US-6,161,134                                     | 12-2000         | Wang et al.     | 709/220        |
| B | US-6,421,536 B1                                  | 07-2002         | Uranaka et al.  | 455/417        |
| C | US-2002/0118800 A1                               | 08-2002         | Martinez et al. | 379/67.1       |
| D | US-  |                 |                 |                |
| E | US-  |                 |                 |                |
| F | US-  |                 |                 |                |
| G | US-  |                 |                 |                |
| H | US-  |                 |                 |                |
| I | US-  |                 |                 |                |
| J | US-  |                 |                 |                |
| K | US-  |                 |                 |                |
| L | US-  |                 |                 |                |
| M | US-  |                 |                 |                |

**FOREIGN PATENT DOCUMENTS**

| * | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country | Name | Classification |
|---|--|-----------------|---------|------|----------------|
| N |  |                 |         |      |                |
| O |  |                 |         |      |                |
| P |  |                 |         |      |                |
| Q |  |                 |         |      |                |
| R |  |                 |         |      |                |
| S |  |                 |         |      |                |
| T |  |                 |         |      |                |

**NON-PATENT DOCUMENTS**

| * | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|
| U |   |
| V |   |
| W |   |
| X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

|   |  |                                   |
|---|--|-----------------------------------|
| <b>Form PTO-1449</b><br><br><b>LIST OF PRIOR ART CITED BY APPLICANT</b><br><i>(Use several sheets if necessary)</i> | ATTORNEY DOCKET NO.<br><b>11032RRUS04D</b> | SERIAL NO.<br><b>Not Assigned</b> |
| APPLICANT <b>Osterhout et al.</b>   |  | FILING DATE <b>July 19, 2002</b>  |
|   |  | GROUP ART UNIT <b>2684</b>        |

1c715 U.S. PTO  
 10/199797  
 07/19/02

**U.S. PATENT DOCUMENTS**

| EXAMINER INITIAL | DOCUMENT NO. | PUBLICATION DATE | INVENTOR NAME | CLASS/SUBCLASS | FILING DATE |
|------------------|--------------|------------------|---------------|----------------|-------------|
|                  |              |                  |               |                |             |
|                  |              |                  |               |                |             |
|                  |              |                  |               |                |             |
|                  |              |                  |               |                |             |

**FOREIGN PATENT DOCUMENTS**

| EXAMINER INITIAL | DOCUMENT NO. | PUBLICATION DATE | COUNTRY | CLASS/SUBCLASS | TRANSLATION |
|------------------|--------------|------------------|---------|----------------|-------------|
|                  |              |                  |         |                | YES NO      |
|                  |              |                  |         |                |             |
|                  |              |                  |         |                |             |

**OTHER PRIOR ART (including author, title, date, pertinent page, etc.)**

|            |           |  |
|------------|-----------|--|
| <i>8/6</i> | <b>AA</b> | Handley et al., "SIP: Session Initiation Protocol; March 1999, pp. 1-134.                                  |
| <i>8/4</i> | <b>AB</b> | 3Com Corporation, "Web Clipping Developer's Guide", Document Number 3009-001; Print Date 8/7/99, pp. 1-93. |

**RELATED PATENT APPLICATIONS**

| EXAMINER INITIAL | APPLICATION NO./ ATTY. DOCKET NO. | APPLICANT | TITLE | FILING DATE |
|------------------|-----------------------------------|-----------|-------|-------------|
|                  |                                   |           |       |             |
|                  |                                   |           |       |             |

DATE CONSIDERED **08/28/03** EXAMINER *[Signature]*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

# 6/B  
B.J.  
RECEIVED  
NOV 15 2002  
Technology Center 2600

In re application of: **Osterhout et al.**

Serial No.: **10/199,797**

Filed: **July 19, 2002**

For: **Portable Call Management System**

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§  
§  
§  
§

Group Art Unit: **2684**

Examiner: **Nguyen, Thuan T.**

Attorney Docket No.: **11032RRUS04D**

Certificate of Mailing Under 37 C.F.R. § 1.8(a)  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on November 8, 2002.  
By: Dell Whitton  
Dell Whitton

**PRELIMINARY AMENDMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is necessary, the extension is requested and I authorize the Commissioner to charge the necessary extension fees to Deposit Account No. 50-0392.

Prior to examination of this application, please amend the above-identified application as follows:

**IN THE CLAIMS:**

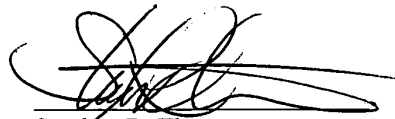
Please cancel claims 43-51.

**REMARKS**

Claims 43-51 are canceled. Claims 52-62 and 66-69 remain in the application. These claims are believed to be in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: Nov. 8, 2002

Respectfully submitted,



Stephen R. Tkacs  
*Registration No. 46,430*  
**CARSTENS YEE & CAHOON, LLP**  
P.O. Box 802334  
Dallas, Texas 75380  
(972) 367-2001  
AGENT FOR APPLICANTS





2684

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

NOV 15 2002

Technology Center 2600

In re application of: **Osterhout et al.**

§ Group Art Unit: **2684**

Serial No.: **10/199,797**

§  
§ Examiner: **Nguyen, Thuan T.**

Filed: **July 19, 2002**

§  
§ Attorney Docket No.: **11032RRUS04D**

For: **Portable Call Management System**

Certificate of Mailing Under 37 C.F.R. § 1.8(a)

I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on November 8, 2002.

By: *Dell Whitton*  
Dell Whitton

**TRANSMITTAL DOCUMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:  
ENCLOSED HEREWITH:

- Preliminary Amendment; and
- Our return postcard.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Deposit Account No. 50-0392.

Respectfully submitted,

*Duke W. Yee*  
Duke W. Yee  
Registration No. 34,285  
CARSTENS, YEE & CAHOON, LLP  
P.O. Box 802334  
Dallas, Texas 75380  
(972) 367-2001  
ATTORNEY FOR APPLICANTS



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20540  
www.uspto.gov

Handwritten initials: JKB

September 19, 2002

Duke W. Lee  
Carstens Yee & Cahoon, LLP  
P.O. Box 802334  
Dallas, Texas 75380

We regret to inform you that your refund request for \$156.00 on application number 10/199797, cannot be granted for the reason specified below.

- Refund based upon subsequent establishment of small entity status: A refund based on establishment of small entity status may be granted only if a written assertion of entitlement to small entity status under 37 CFR 1.27 and a request for refund of the excess amount are filed within three months of payment and of the fee (37 CFR 1.28). Three-month period for establishing small entity status and requesting a refund has expired.
- Refund of application filing or petition fee: Filing fees paid for an application that is entitled to a filing date and required petition fees are not fees paid by mistake or in excess. If an application is **not** entitled to a filing date and proceedings are terminated on the application, any filing fees (less the \$130 handling fee) will be refunded (37 CFR 1.53(e)(3)).
- Refund of overpayment: There was no overpayment made by applicant. All fees were calculated and assessed properly. **\*\*See below\*\***
- The payment for which the refund is requested has not been applied to the application. The payment check was returned to applicant for the following reason:
  - Not filled out properly. (See attached copy of notice.)
  - Not made payable in U.S. funds.
  - No explanation was given as to purpose.
  - Payment was previously received and applied by Office.
  - Check was returned by bank for insufficient funds.

**\*\*Any request for reconsideration or review of this decision must be by way of a petition filed within two months of this decision, which decision must set forth with particularity why a refund is due (see 37 CFR 1.181(b) and (f)).**

The extra charges were for the claims. You had multiple claims ,See claims 98, 99, 100, each claim is worth 55. plus the multiple claim fee of \$140.00

If there are any further questions, please contact me at (703) 308-3642

Sincerely,

Eleanor F. Kurtz  
Office of Initial Patent Examination

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Osterhout et al.

Serial No.: Not Assigned

Filed: July 19, 2002

For: Portable Call Management System

§  
§  
§  
§  
§  
§

Group Art Unit: 2684

Examiner: Nguyen, Thuan T.

Attorney Docket No.: 11032RRUS04D

Certificate of Mailing Under 37 C.F.R. § 1.8(a)

I hereby certify this correspondence is being deposited with the United States Postal Service as Express mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on July 19, 2002.

By:

  
Krista Douthitt

**PRELIMINARY AMENDMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is necessary, the extension is requested and I authorize the Commissioner to charge the necessary extension fees to Deposit Account No. 50-0392.

Prior to examination of this application, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

On page one, before the BACKGROUND OF THE INVENTION, please insert the following paragraph:

This application is a divisional of application number 09/419,175,  
filed October 15, 1999, status pending.

**IN THE CLAIMS:**

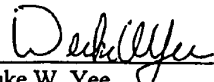
Please cancel claims 1-42 and 63-65.

**REMARKS**

Claims 1-42 and 63-65 have been canceled. Claims 52-62 and 66-69 remain in the application. These claims are believed to be in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: July 19, 2002

Respectfully submitted,

  
Duke W. Yee  
Registration No. 34,285  
CARSTENS YEE & CAHOON, LLP  
P.O. Box 802334  
Dallas, Texas 75380  
(972) 367-2001  
ATTORNEY FOR APPLICANT

CARSTENS, YEE & CAHOON, L.L.P.  
ATTORNEYS AND COUNSELORS

Duke W. Yee  
Telephone: (972) 367-2001  
Facsimile: (972) 367-2002

E-Mail: yee@cyclaw.com

# 21 Reg 800 Refund  
13760 Noel Road  
Suite 900  
Dallas, Texas 75240  
09-13-02

Mailing Address  
Post Office Box 802334  
Dallas, Texas 75380

August 14, 2002

Via Fax No. (703) 308-6778  
and Via First Class Mail

United States Patent and Trademark Office  
Deposit Accounts  
Washington, D.C. 20231

RE: Deposit Account No. 50-0392  
Carstens, Yee & Cahoon, L.L.P.  
Customer No. 022858

Ladies and Gentlemen,

We are in receipt of your July 2002 Statement for Deposit Account No. 50-0392. There are two (2) charges which were made in error, as follows:

| <u>Date</u> | <u>Control No.</u> | <u>Description</u> | <u>Docket No.</u> | <u>Fee Code</u> | <u>Charges</u> |
|-------------|--------------------|--------------------|-------------------|-----------------|----------------|
| 07/25/02    | 117                | 10/199,797         | 11032RRUS04D      | 102             | \$84.00        |
| 07/25/02    | 118                | 10/199,797         | 11032RRUS04D      | 103             | \$72.00        |

We did not authorize these charges to our deposit account and request that such funds be refunded as soon as possible.

As indicated by the attached Preliminary Amendment as filed on 07/19/02, and the attached Fee Transmittal Document, there are 15 total claims and 3 independent claims. There was an error on the Fee Transmittal originally filed which stated that there are 2 independent claims. Actually, there are 3, but still no fee should be required. Therefore, please credit the amount of \$156.00 to Deposit Account No. 50-0392.

Please feel free to contact me or my Paralegal, Krista Douthitt, at the number shown above should you have any questions concerning this matter.

Very truly yours,



Duke W. Yee

DWY/kdd  
Enclosure

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|   |                      |                  |
|---|----------------------|------------------|
| <h1 style="margin: 0;">FEE TRANSMITTAL</h1> <h2 style="margin: 0;">for FY 2002</h2> <p style="font-size: small; margin: 5px 0;">Patent fees are subject to annual revision.</p> | Complete if Known    |                  |
|   | Application Number   | Not Assigned     |
|   | Filing Date          | 07/19/2002       |
|   | First Named Inventor | Osterhout et al. |
|   | Examiner Name        | Nguyen, Thuan T. |
|   | Group Art Unit       | 2684             |
| TOTAL AMOUNT OF PAYMENT   | (\$) 740.00          |                  |
| Attorney Docket No.   | 11032RRUS04D         |                  |

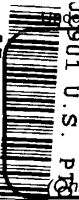
| METHOD OF PAYMENT   | FEE CALCULATION (continued)   |                            |                            |  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
|---|---|----------------------------|----------------------------|--|----------------------------|-----------------|----------|----------|-------------|-----|--------------------|-------------------------------------|-----|-----|-----|-----|-------------------|--|-----|-----|-----|-----|------------------|---------------------------|-----|-----|-------|-----|--------------------|--|-----|-----|------|-----|------------------------|--|---------------------|-----|--------|-----|--------|---|--------------|-----------|---------|----------|----|--|--------------|-----|----------|-------------|--------------------|---|--------|----------|-----|----------------|--------------|--|----------|-------------|--------------------|----------|-----|---|--|----------------|---------------|-----|----------|--|----------------------------|----------------------------|----------------------------|----------------------------|-----------------|------------------|-----|-----|-----|-----|------------------------|--|-----|-----|-----|-----|-----------------------------------|--------------------------|-----|-----|-------|-----|---------------------------------------|---|-----|-----|-----|-----|--|----------------------------------|-----|-----|-------|-----|--|------------------------------------|---------------------|-----|-------|-----|-----|--------------------------------|---------------------------------|-----|-----|-----|-----|------------------|--|-----|-----|-----|-----|-----------------|--|-----|-----|-----|-----|-------------------------------|--|-----|----|-----|----|-------------------------------------|--|-----|-----|-----|-----|---|--|-----|----|-----|----|--|--|-----|-----|-----|-----|---|--|-----|-----|-----|-----|--|--|-----|-----|-----|-----|---|--|-----|-----|-----|-----|---|--|---------------------|--|--|--|--|--|
| <p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number: <u>50-0392</u></p> <p>Deposit Account Name: <u>Carstens, Yee &amp; Cahoon</u></p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p> <p>2. <input checked="" type="checkbox"/> Payment Enclosed:</p> <p><input checked="" type="checkbox"/> Check    <input type="checkbox"/> Credit card    <input type="checkbox"/> Money Order    <input type="checkbox"/> Other</p>   | <p>3. ADDITIONAL FEES</p> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,440</td><td>218</td><td>720</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,960</td><td>228</td><td>980</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,280</td><td>241</td><td>640</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,280</td><td>242</td><td>640</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>460</td><td>243</td><td>230</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>620</td><td>244</td><td>310</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>146</td><td>740</td><td>246</td><td>370</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>179</td><td>740</td><td>279</td><td>370</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> <tr><td colspan="5">Other fee (specify)</td><td></td></tr> </tbody> </table> | Large Entity Fee Code (\$) | Large Entity Fee Code (\$) | Small Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description | Fee Paid | 105      | 130         | 205 | 65                 | Surcharge - late filing fee or oath |     | 127 | 50  | 227 | 25                | Surcharge - late provisional filing fee or cover sheet |     | 139 | 130 | 139 | 130              | Non-English specification |     | 147 | 2,520 | 147 | 2,520              | For filing a request for <i>ex parte</i> reexamination |     | 112 | 920* | 112 | 920*                   | Requesting publication of SIR prior to Examiner action |                     | 113 | 1,840* | 113 | 1,840* | Requesting publication of SIR after Examiner action |              | 115       | 110     | 215      | 55 | Extension for reply within first month |              | 116 | 400      | 216         | 200                | Extension for reply within second month |        | 117      | 920 | 217            | 460          | Extension for reply within third month |          | 118         | 1,440              | 218      | 720 | Extension for reply within fourth month |  | 128            | 1,960         | 228 | 980      | Extension for reply within fifth month |                            | 119                        | 320                        | 219                        | 160             | Notice of Appeal |     | 120 | 320 | 220 | 160                    | Filing a brief in support of an appeal |     | 121 | 280 | 221 | 140                               | Request for oral hearing |     | 138 | 1,510 | 138 | 1,510                                 | Petition to institute a public use proceeding |     | 140 | 110 | 240 | 55   | Petition to revive - unavoidable |     | 141 | 1,280 | 241 | 640  | Petition to revive - unintentional |                     | 142 | 1,280 | 242 | 640 | Utility issue fee (or reissue) |                                 | 143 | 460 | 243 | 230 | Design issue fee |  | 144 | 620 | 244 | 310 | Plant issue fee |  | 122 | 130 | 122 | 130 | Petitions to the Commissioner |  | 123 | 50 | 123 | 50 | Processing fee under 37 CFR 1.17(q) |  | 126 | 180 | 126 | 180 | Submission of Information Disclosure Stmt |  | 581 | 40 | 581 | 40 | Recording each patent assignment per property (times number of properties) |  | 146 | 740 | 246 | 370 | Filing a submission after final rejection (37 CFR § 1.129(a)) |  | 149 | 740 | 249 | 370 | For each additional invention to be examined (37 CFR § 1.129(b)) |  | 179 | 740 | 279 | 370 | Request for Continued Examination (RCE) |  | 169 | 900 | 169 | 900 | Request for expedited examination of a design application |  | Other fee (specify) |  |  |  |  |  |
| Large Entity Fee Code (\$)  | Large Entity Fee Code (\$)  | Small Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description  | Fee Paid                   |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 105   | 130   | 205                        | 65                         | Surcharge - late filing fee or oath  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 127   | 50  | 227                        | 25                         | Surcharge - late provisional filing fee or cover sheet                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 139   | 130   | 139                        | 130                        | Non-English specification  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 147   | 2,520   | 147                        | 2,520                      | For filing a request for <i>ex parte</i> reexamination                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 112   | 920*  | 112                        | 920*                       | Requesting publication of SIR prior to Examiner action                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 113   | 1,840*  | 113                        | 1,840*                     | Requesting publication of SIR after Examiner action                        |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 115   | 110   | 215                        | 55                         | Extension for reply within first month                                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 116   | 400   | 216                        | 200                        | Extension for reply within second month                                    |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 117   | 920   | 217                        | 460                        | Extension for reply within third month                                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 118   | 1,440   | 218                        | 720                        | Extension for reply within fourth month                                    |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 128   | 1,960   | 228                        | 980                        | Extension for reply within fifth month                                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 119   | 320   | 219                        | 160                        | Notice of Appeal   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 120   | 320   | 220                        | 160                        | Filing a brief in support of an appeal                                     |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 121   | 280   | 221                        | 140                        | Request for oral hearing   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 138   | 1,510   | 138                        | 1,510                      | Petition to institute a public use proceeding                              |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 140   | 110   | 240                        | 55                         | Petition to revive - unavoidable   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 141   | 1,280   | 241                        | 640                        | Petition to revive - unintentional   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 142   | 1,280   | 242                        | 640                        | Utility issue fee (or reissue)   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 143   | 460   | 243                        | 230                        | Design issue fee   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 144   | 620   | 244                        | 310                        | Plant issue fee  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 122   | 130   | 122                        | 130                        | Petitions to the Commissioner  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 123   | 50  | 123                        | 50                         | Processing fee under 37 CFR 1.17(q)  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 126   | 180   | 126                        | 180                        | Submission of Information Disclosure Stmt                                  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 581   | 40  | 581                        | 40                         | Recording each patent assignment per property (times number of properties) |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 146   | 740   | 246                        | 370                        | Filing a submission after final rejection (37 CFR § 1.129(a))              |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 149   | 740   | 249                        | 370                        | For each additional invention to be examined (37 CFR § 1.129(b))           |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 179   | 740   | 279                        | 370                        | Request for Continued Examination (RCE)                                    |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 169   | 900   | 169                        | 900                        | Request for expedited examination of a design application                  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Other fee (specify)   |   |                            |                            |  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| <p><b>FEE CALCULATION</b></p> <p>1. BASIC FILING FEE</p> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>740</td><td>201</td><td>370</td><td>Utility filing fee</td><td>740.00</td></tr> <tr><td>106</td><td>330</td><td>206</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>510</td><td>207</td><td>255</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>740</td><td>208</td><td>370</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>160</td><td>214</td><td>80</td><td>Provisional filing fee</td><td></td></tr> <tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (1)</b></td><td><b>(\$) 740.00</b></td></tr> </tbody> </table> <p>2. EXTRA CLAIM FEES</p> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <tr> <td>Total Claims</td> <td><u>15</u></td> <td>-20** =</td> <td><u>0</u></td> <td>×</td> <td>Fee from below</td> <td><u>18.00</u></td> <td>=</td> <td>Fee Paid</td> <td><u>0.00</u></td> </tr> <tr> <td>Independent Claims</td> <td><u>13</u></td> <td>-3** =</td> <td><u>0</u></td> <td>×</td> <td>Fee from below</td> <td><u>84.00</u></td> <td>=</td> <td>Fee Paid</td> <td><u>0.00</u></td> </tr> <tr> <td>Multiple Dependent</td> <td><u>2</u></td> <td></td> <td></td> <td></td> <td>Fee from below</td> <td><u>280.00</u></td> <td>=</td> <td>Fee Paid</td> <td><u>0.00</u></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>102</td><td>84</td><td>202</td><td>42</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>104</td><td>280</td><td>204</td><td>140</td><td>Multiple dependent claim, if not paid</td><td></td></tr> <tr><td>109</td><td>84</td><td>209</td><td>42</td><td>** Reissue independent claims over original patent</td><td></td></tr> <tr><td>110</td><td>18</td><td>210</td><td>9</td><td>** Reissue claims in excess of 20 and over original patent</td><td></td></tr> <tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (2)</b></td><td><b>(\$) 0.00</b></td></tr> </tbody> </table> | Large Entity Fee Code (\$)  | Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Small Entity Fee Code (\$)   | Fee Description            | Fee Paid        | 101      | 740      | 201         | 370 | Utility filing fee | 740.00                              | 106 | 330 | 206 | 165 | Design filing fee |  | 107 | 510 | 207 | 255 | Plant filing fee |                           | 108 | 740 | 208   | 370 | Reissue filing fee |  | 114 | 160 | 214  | 80  | Provisional filing fee |  | <b>SUBTOTAL (1)</b> |     |        |     |        | <b>(\$) 740.00</b>                                  | Total Claims | <u>15</u> | -20** = | <u>0</u> | ×  | Fee from below                         | <u>18.00</u> | =   | Fee Paid | <u>0.00</u> | Independent Claims | <u>13</u>                               | -3** = | <u>0</u> | ×   | Fee from below | <u>84.00</u> | =                                      | Fee Paid | <u>0.00</u> | Multiple Dependent | <u>2</u> |     |   |  | Fee from below | <u>280.00</u> | =   | Fee Paid | <u>0.00</u>                            | Large Entity Fee Code (\$) | Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description | Fee Paid         | 103 | 18  | 203 | 9   | Claims in excess of 20 |  | 102 | 84  | 202 | 42  | Independent claims in excess of 3 |                          | 104 | 280 | 204   | 140 | Multiple dependent claim, if not paid |   | 109 | 84  | 209 | 42  | ** Reissue independent claims over original patent |                                  | 110 | 18  | 210   | 9   | ** Reissue claims in excess of 20 and over original patent |                                    | <b>SUBTOTAL (2)</b> |     |       |     |     | <b>(\$) 0.00</b>               | <p><b>SUBTOTAL (3)</b> (\$)</p> |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Large Entity Fee Code (\$)  | Large Entity Fee Code (\$)  | Small Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description  | Fee Paid                   |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 101   | 740   | 201                        | 370                        | Utility filing fee   | 740.00                     |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 106   | 330   | 206                        | 165                        | Design filing fee  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 107   | 510   | 207                        | 255                        | Plant filing fee   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 108   | 740   | 208                        | 370                        | Reissue filing fee   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 114   | 160   | 214                        | 80                         | Provisional filing fee   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| <b>SUBTOTAL (1)</b>   |   |                            |                            |  | <b>(\$) 740.00</b>         |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Total Claims  | <u>15</u>   | -20** =                    | <u>0</u>                   | ×  | Fee from below             | <u>18.00</u>    | =        | Fee Paid | <u>0.00</u> |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Independent Claims  | <u>13</u>   | -3** =                     | <u>0</u>                   | ×  | Fee from below             | <u>84.00</u>    | =        | Fee Paid | <u>0.00</u> |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Multiple Dependent  | <u>2</u>  |                            |                            |  | Fee from below             | <u>280.00</u>   | =        | Fee Paid | <u>0.00</u> |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| Large Entity Fee Code (\$)  | Large Entity Fee Code (\$)  | Small Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description  | Fee Paid                   |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 103   | 18  | 203                        | 9                          | Claims in excess of 20   |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 102   | 84  | 202                        | 42                         | Independent claims in excess of 3  |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 104   | 280   | 204                        | 140                        | Multiple dependent claim, if not paid                                      |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 109   | 84  | 209                        | 42                         | ** Reissue independent claims over original patent                         |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| 110   | 18  | 210                        | 9                          | ** Reissue claims in excess of 20 and over original patent                 |                            |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |
| <b>SUBTOTAL (2)</b>   |   |                            |                            |  | <b>(\$) 0.00</b>           |                 |          |          |             |     |                    |                                     |     |     |     |     |                   |  |     |     |     |     |                  |                           |     |     |       |     |                    |  |     |     |      |     |                        |  |                     |     |        |     |        |   |              |           |         |          |    |  |              |     |          |             |                    |   |        |          |     |                |              |  |          |             |                    |          |     |   |  |                |               |     |          |  |                            |                            |                            |                            |                 |                  |     |     |     |     |                        |  |     |     |     |     |                                   |                          |     |     |       |     |                                       |   |     |     |     |     |  |                                  |     |     |       |     |  |                                    |                     |     |       |     |     |                                |                                 |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |                     |  |  |  |  |  |

|                     |             |                                   |                |
|---------------------|-------------|-----------------------------------|----------------|
| <b>SUBMITTED BY</b> |             | Complete (if applicable)          |                |
| Name (Print/Type)   | Duke W. Yee | Registration No. (Attorney/Agent) | 34,285         |
| Signature           |             | Telephone                         | (972) 367-2001 |
|                     |             | Date                              | 07/19/2002     |

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A

# UTILITY PATENT APPLICATION TRANSMITTAL

|                        |                                 |
|------------------------|---------------------------------|
| Attorney Docket No.    | 11032RRUS04D                    |
| First Inventor         | Osterhout et al.                |
| Title                  | Portable Call Management System |
| Express Mail Label No. | EV082028113US                   |

Only for new nonprovisional applications under 37 CFR 1.53(b)

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original and a duplicate for fee processing)*
- Applicant claims small entity status.  
See 37 CFR 1.27.
- Specification [Total Pages  ]  
*(preferred arrangement set forth below)*
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings *(if filed)*
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [ Total Sheets  ]
- Oath or Declaration [ Total Pages  ]
  - Newly executed (original or copy)  
Copy from a prior application (37 CFR 1.63 (d))
  - DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)
- Application Data Sheet. See 37 CFR 1.76

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Box Patent Application  
Washington, DC 20231

- CD-ROM or CD-R in duplicate, large table or Computer Program *(Appendix)*
- Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
  - Computer Readable Form (CRF)
  - Specification Sequence Listing on:
    - CD-ROM or CD-R (2 copies); or
    - paper
  - Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

- Assignment Papers (cover sheet & document(s))
- 37 CFR 3.73(b) Statement  Power of Attorney *(when there is an assignee)*
- English Translation Document *(if applicable)*
- Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
- Preliminary Amendment
- Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
- Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
- Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
- Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No. 09, 419,175

Prior application information Examiner: Nguyen, Thuan T. Group Art Unit 2684

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

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|                   |                    |                                   |            |
|-------------------|--------------------|-----------------------------------|------------|
| Name (Print/Type) | Duke W. Yee        | Registration No. (Attorney/Agent) | 34,285     |
| Signature         | <i>Duke W. Yee</i> | Date                              | 07/19/2002 |

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|   |                      |                  |
|---|----------------------|------------------|
| <h1 style="margin: 0;">FEE TRANSMITTAL</h1> <h2 style="margin: 0;">for FY 2002</h2> <p style="font-size: small; margin: 5px 0;">Patent fees are subject to annual revision.</p> | Complete if Known    |                  |
|   | Application Number   | Not Assigned     |
|   | Filing Date          | 07/19/2002       |
|   | First Named Inventor | Osterhout et al. |
|   | Examiner Name        | Nguyen, Thuan T. |
|   | Group Art Unit       | 2684             |
| <b>TOTAL AMOUNT OF PAYMENT</b>  | (\$)                 | <b>740.00</b>    |
| Attorney Docket No.   | 11032RRUS04D         |                  |

| <p style="text-align: center; font-weight: bold;">METHOD OF PAYMENT</p> <p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number: <input type="text" value="50-0392"/></p> <p>Deposit Account Name: <input type="text" value="Carstens, Yee &amp; Cahoon"/></p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant claims small entity status See 37 CFR 1.27</p> <p>2. <input checked="" type="checkbox"/> <b>Payment Enclosed:</b></p> <p><input checked="" type="checkbox"/> Check    <input type="checkbox"/> Credit card    <input type="checkbox"/> Money Order    <input type="checkbox"/> Other</p>  | <p style="text-align: center; font-weight: bold;">FEE CALCULATION (continued)</p> <p>3. <b>ADDITIONAL FEES</b></p> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Fee Code</th> <th>Large Entity (\$)</th> <th>Small Entity (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,440</td><td>218</td><td>720</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,960</td><td>228</td><td>980</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,280</td><td>241</td><td>640</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,280</td><td>242</td><td>640</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>460</td><td>243</td><td>230</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>620</td><td>244</td><td>310</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>146</td><td>740</td><td>246</td><td>370</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>179</td><td>740</td><td>279</td><td>370</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> <tr><td colspan="5">Other fee (specify) _____</td></tr> <tr> <td colspan="4" style="text-align: right;"><b>SUBTOTAL (3)</b></td> <td style="text-align: center;">(\$)</td> </tr> </tbody> </table> | Fee Code                   | Large Entity (\$) | Small Entity (\$)  | Fee Description | Fee Paid | 105  | 130    | 205                | 65     | Surcharge - late filing fee or oath |     | 127 | 50  | 227               | 25 | Surcharge - late provisional filing fee or cover sheet |     | 139 | 130 | 139              | 130 | Non-English specification |     | 147 | 2,520 | 147                | 2,520 | For filing a request for <i>ex parte</i> reexamination |     | 112 | 920* | 112                    | 920* | Requesting publication of SIR prior to Examiner action |  | 113 | 1,840* | 113 | 1,840*      | Requesting publication of SIR after Examiner action |    | 115     | 110 | 215 | 55    | Extension for reply within first month |      | 116                | 400 | 216    | 200 | Extension for reply within second month |       | 117 | 920  | 217                | 460 | Extension for reply within third month |  | 118 | 1,440 | 218 | 720 | Extension for reply within fourth month |       | 128                        | 1,960                      | 228             | 980      | Extension for reply within fifth month |    | 119 | 320 | 219                    | 160 | Notice of Appeal |    | 120 | 320 | 220                               | 160 | Filing a brief in support of an appeal |     | 121 | 280 | 221                                   | 140 | Request for oral hearing |    | 138 | 1,510 | 138  | 1,510 | Petition to institute a public use proceeding |    | 140 | 110 | 240  | 55 | Petition to revive - unavoidable |  | 141 | 1,280 | 241 | 640       | Petition to revive - unintentional   |                            | 142                        | 1,280           | 242      | 640 | Utility issue fee (or reissue) |     | 143 | 460                | 243    | 230 | Design issue fee |     | 144 | 620               | 244 | 310 | Plant issue fee |     | 122 | 130              | 122 | 130 | Petitions to the Commissioner |     | 123 | 50                 | 123 | 50  | Processing fee under 37 CFR 1.17(q) |     | 126 | 180                    | 126 | 180                 | Submission of Information Disclosure Stmt |  | 581 | 40 | 581         | 40           | Recording each patent assignment per property (times number of properties) |         | 146 | 740 | 246   | 370 | Filing a submission after final rejection (37 CFR § 1.129(a)) |                    | 149 | 740    | 249 | 370 | For each additional invention to be examined (37 CFR § 1.129(b)) |   | 179  | 740                | 279 | 370 | Request for Continued Examination (RCE) |  | 169 | 900 | 169 | 900    | Request for expedited examination of a design application |                            | Other fee (specify) _____  |                 |          |     |    | <b>SUBTOTAL (3)</b> |   |                        |  | (\$) |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
|--|--|----------------------------|-------------------|--|-----------------|----------|------|--------|--------------------|--------|-------------------------------------|-----|-----|-----|-------------------|----|--|-----|-----|-----|------------------|-----|---------------------------|-----|-----|-------|--------------------|-------|--|-----|-----|------|------------------------|------|--|--|-----|--------|-----|-------------|---|----|---------|-----|-----|-------|--|------|--------------------|-----|--------|-----|---|-------|-----|------|--------------------|-----|--|--|-----|-------|-----|-----|---|-------|----------------------------|----------------------------|-----------------|----------|--|----|-----|-----|------------------------|-----|------------------|----|-----|-----|-----------------------------------|-----|--|-----|-----|-----|---------------------------------------|-----|--------------------------|----|-----|-------|--|-------|---|----|-----|-----|--|----|----------------------------------|--|-----|-------|-----|-----------|--|----------------------------|----------------------------|-----------------|----------|-----|--------------------------------|-----|-----|--------------------|--------|-----|------------------|-----|-----|-------------------|-----|-----|-----------------|-----|-----|------------------|-----|-----|-------------------------------|-----|-----|--------------------|-----|-----|-------------------------------------|-----|-----|------------------------|-----|---------------------|---|--|-----|----|-------------|--------------|--|---------|-----|-----|-------|-----|---|--------------------|-----|--------|-----|-----|--|---|------|--------------------|-----|-----|---|--|-----|-----|-----|--------|---|----------------------------|----------------------------|-----------------|----------|-----|----|---------------------|---|------------------------|--|------|----|-----|----|-----------------------------------|--|-----|-----|-----|-----|---------------------------------------|--|-----|----|-----|----|--|--|-----|----|-----|---|--|--|---------------------|--|--|--|--|-----------|
| Fee Code   | Large Entity (\$)  | Small Entity (\$)          | Fee Description   | Fee Paid   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 105  | 130  | 205                        | 65                | Surcharge - late filing fee or oath  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 127  | 50   | 227                        | 25                | Surcharge - late provisional filing fee or cover sheet                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 139  | 130  | 139                        | 130               | Non-English specification  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 147  | 2,520  | 147                        | 2,520             | For filing a request for <i>ex parte</i> reexamination                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 112  | 920*   | 112                        | 920*              | Requesting publication of SIR prior to Examiner action                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 113  | 1,840*   | 113                        | 1,840*            | Requesting publication of SIR after Examiner action                        |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 115  | 110  | 215                        | 55                | Extension for reply within first month                                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 116  | 400  | 216                        | 200               | Extension for reply within second month                                    |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 117  | 920  | 217                        | 460               | Extension for reply within third month                                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 118  | 1,440  | 218                        | 720               | Extension for reply within fourth month                                    |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 128  | 1,960  | 228                        | 980               | Extension for reply within fifth month                                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 119  | 320  | 219                        | 160               | Notice of Appeal   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 120  | 320  | 220                        | 160               | Filing a brief in support of an appeal                                     |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 121  | 280  | 221                        | 140               | Request for oral hearing   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 138  | 1,510  | 138                        | 1,510             | Petition to institute a public use proceeding                              |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 140  | 110  | 240                        | 55                | Petition to revive - unavoidable   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 141  | 1,280  | 241                        | 640               | Petition to revive - unintentional   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 142  | 1,280  | 242                        | 640               | Utility issue fee (or reissue)   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 143  | 460  | 243                        | 230               | Design issue fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 144  | 620  | 244                        | 310               | Plant issue fee  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 122  | 130  | 122                        | 130               | Petitions to the Commissioner  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 123  | 50   | 123                        | 50                | Processing fee under 37 CFR 1.17(q)  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 126  | 180  | 126                        | 180               | Submission of Information Disclosure Stmt                                  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 581  | 40   | 581                        | 40                | Recording each patent assignment per property (times number of properties) |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 146  | 740  | 246                        | 370               | Filing a submission after final rejection (37 CFR § 1.129(a))              |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 149  | 740  | 249                        | 370               | For each additional invention to be examined (37 CFR § 1.129(b))           |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 179  | 740  | 279                        | 370               | Request for Continued Examination (RCE)                                    |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 169  | 900  | 169                        | 900               | Request for expedited examination of a design application                  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Other fee (specify) _____  |  |                            |                   |  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| <b>SUBTOTAL (3)</b>  |  |                            |                   | (\$)   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| <p style="text-align: center; font-weight: bold;">FEE CALCULATION</p> <p>1. <b>BASIC FILING FEE</b></p> <table border="1" style="width:100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>740</td><td>201</td><td>370</td><td>Utility filing fee</td><td style="text-align: center;">740.00</td></tr> <tr><td>106</td><td>330</td><td>206</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>510</td><td>207</td><td>255</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>740</td><td>208</td><td>370</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>160</td><td>214</td><td>80</td><td>Provisional filing fee</td><td></td></tr> <tr><td colspan="5" style="text-align: right;"><b>SUBTOTAL (1)</b></td><td style="text-align: center;">(\$) 740.00</td></tr> </tbody> </table> <p>2. <b>EXTRA CLAIM FEES</b></p> <table border="1" style="width:100%; 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| 106  | 330  | 206                        | 165               | Design filing fee  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 107  | 510  | 207                        | 255               | Plant filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 108  | 740  | 208                        | 370               | Reissue filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 114  | 160  | 214                        | 80                | Provisional filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
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| Total Claims   | 15   | -20** =                    | 0                 | x  | 18.00           | =        | 0.00 |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Independent Claims   | 2  | -3** =                     | 0                 | x  | 84.00           | =        | 0.00 |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Multiple Dependent   |  |                            |                   |  |                 |          |      | 280.00 | =0.00              |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$)   | Fee Description            | Fee Paid          |  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 103  | 18   | 203                        | 9                 | Claims in excess of 20   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 102  | 84   | 202                        | 42                | Independent claims in excess of 3  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 104  | 280  | 204                        | 140               | Multiple dependent claim, if not paid                                      |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 109  | 84   | 209                        | 42                | ** Reissue independent claims over original patent                         |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 110  | 18   | 210                        | 9                 | ** Reissue claims in excess of 20 and over original patent                 |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| <b>SUBTOTAL (2)</b>  |  |                            |                   |  | (\$) 0.00       |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$)   | Fee Description            | Fee Paid          |  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 101  | 740  | 201                        | 370               | Utility filing fee   | 740.00          |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 106  | 330  | 206                        | 165               | Design filing fee  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 107  | 510  | 207                        | 255               | Plant filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 108  | 740  | 208                        | 370               | Reissue filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 114  | 160  | 214                        | 80                | Provisional filing fee   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| <b>SUBTOTAL (1)</b>  |  |                            |                   |  | (\$) 740.00     |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Total Claims   | 15   | -20** =                    | 0                 | x  | 18.00           | =        | 0.00 |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Independent Claims   | 2  | -3** =                     | 0                 | x  | 84.00           | =        | 0.00 |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Multiple Dependent   |  |                            |                   |  |                 |          |      | 280.00 | =0.00              |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$)   | Fee Description            | Fee Paid          |  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 103  | 18   | 203                        | 9                 | Claims in excess of 20   |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 102  | 84   | 202                        | 42                | Independent claims in excess of 3  |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 104  | 280  | 204                        | 140               | Multiple dependent claim, if not paid                                      |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 109  | 84   | 209                        | 42                | ** Reissue independent claims over original patent                         |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| 110  | 18   | 210                        | 9                 | ** Reissue claims in excess of 20 and over original patent                 |                 |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |
| <b>SUBTOTAL (2)</b>  |  |                            |                   |  | (\$) 0.00       |          |      |        |                    |        |                                     |     |     |     |                   |    |  |     |     |     |                  |     |                           |     |     |       |                    |       |  |     |     |      |                        |      |  |  |     |        |     |             |   |    |         |     |     |       |  |      |                    |     |        |     |   |       |     |      |                    |     |  |  |     |       |     |     |   |       |                            |                            |                 |          |  |    |     |     |                        |     |                  |    |     |     |                                   |     |  |     |     |     |                                       |     |                          |    |     |       |  |       |   |    |     |     |  |    |                                  |  |     |       |     |           |  |                            |                            |                 |          |     |                                |     |     |                    |        |     |                  |     |     |                   |     |     |                 |     |     |                  |     |     |                               |     |     |                    |     |     |                                     |     |     |                        |     |                     |   |  |     |    |             |              |  |         |     |     |       |     |   |                    |     |        |     |     |  |   |      |                    |     |     |   |  |     |     |     |        |   |                            |                            |                 |          |     |    |                     |   |                        |  |      |    |     |    |                                   |  |     |     |     |     |                                       |  |     |    |     |    |  |  |     |    |     |   |  |  |                     |  |  |  |  |           |

|                   |                |                                   |            |
|-------------------|----------------|-----------------------------------|------------|
| SUBMITTED BY      |                | Complete (if applicable)          |            |
| Name (Print/Type) | Duke W. Yee    | Registration No. (Attorney/Agent) | 34,285     |
| Telephone         | (972) 367-2001 | Date                              | 07/19/2002 |
| Signature         |                |                                   |            |

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**

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Group Art Unit: **2684**

Serial No.: **Not Assigned**

Examiner: **Nguyen, Thuan T.**

Filed: **July 19, 2002**


Attorney Docket No.: **11032RRUS04D**

For: **Portable Call Management System**

**Certificate of Mailing Under 37 C.F.R. § 1.8(a)**

I hereby certify this correspondence is being deposited with the United States Postal Service as Express mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on July 19, 2002

By

  
Krista Douthitt

**PRELIMINARY AMENDMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is necessary, the extension is requested and I authorize the Commissioner to charge the necessary extension fees to Deposit Account No. 50-0392.

Prior to examination of this application, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

On page one, before the BACKGROUND OF THE INVENTION, please insert the following paragraph:

This application is a divisional of application number 09/419,175,  
filed October 15, 1999, status pending.

**IN THE CLAIMS:**

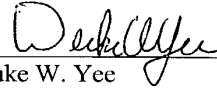
Please cancel claims 1-42 and 63-65.

**REMARKS**

Claims 1-42 and 63-65 have been canceled. Claims 52-62 and 66-69 remain in the application. These claims are believed to be in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: July 19, 2002

Respectfully submitted,



Duke W. Yee

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ATTORNEY FOR APPLICANT

Docket No. 11032RR

**PORTABLE CALL MANAGEMENT SYSTEM**5 **1. Field of the Invention:**

The present invention relates to telecommunications systems and, more specifically, to methods of transferring calls real time from one device to another.

10 **2. Background of the Invention:**

Historically, when a caller telephoned a party, if the party to which the caller wished to speak with did not answer the phone or if the line was busy, the caller had to hang up and redial at a later time hoping that the second call would reach the intended party. Often times, the caller would need to attempt to contact the party multiple times in order to reach that party. If the caller had urgent  
15 information in which time was of the essence, this method was unsatisfactory and often resulted in the intended party missing important business or other opportunities.

Some of these problems were alleviated with the introduction of answering machines and voice mail systems. However, even these solutions were not  
20 completely satisfactory. For instance, utilizing answering machines and voice mail systems required the called party to actively retrieve their messages. Thus, either many important messages were still not received in a timely manner if the called party did not retrieve their messages frequently or the called party was required to check their voice mail or answering machine quite frequently when the  
25 party was out of the office or home in order to insure that messages were retrieved quickly. Thus, this results in the same problem as having the caller repeatedly call the intended party, except that in this case it is the called party that must waste its time insuring that no messages are missed.

A more recent solution to this problem is the introduction of subscriber's  
30 static reach list. A static reach list enabled a subscriber (i.e., called party) to enter a list of telephone numbers (or IP addresses, etc.) where the subscriber might be reached. The subscriber would enter these numbers in the order of preference in



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### SUMMARY OF THE INVENTION

The present invention solves the problem of preventing a called party from  
5 missing calls without having to know in advance the number at which they will be  
by providing a method and apparatus for redirecting a call from a data processing  
system to another address. In a preferred embodiment, a notice of an incoming  
call received from a server at a data processing system. This notice may include  
caller identification information as well. The user of the data processing system is  
10 prompted for an address to which the user wishes the call to be redirected. The  
user then identifies and sends to the server a new address to which the incoming  
call is to be redirected.

In another aspect of the present invention, an SIP server receives a notice  
of a call and forwards the notice to a SIP user agent. The SIP proxy server then  
15 identifies the address to which the called party wishes the call sent from a  
database of preferred locations. The called party has previously registered their  
preferred location to this database. The SIP user agent then sends a message to  
the called party that they have an incoming call. The called party then identifies a  
phone number or IP address to which the called party wishes the call to be  
20 redirected. Thus, the called party can have their calls originally directed to their  
handheld personal digital assistant or other data processing device. Thus, when a  
call is received, the called party can determine at that time how to dispose of the  
call.

Other aspects and features of the present invention will become apparent  
25 to those ordinarily skilled in the art upon review of the following description of  
specific embodiments of the invention in conjunction with the accompanying  
figures.

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### BRIEF DESCRIPTION OF THE DRAWINGS

5           The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

10           **Figure 1** depicts a block diagram illustrating a communications network in which the present invention may be implemented;

**Figure 2** depicts a block diagram of a data processing system which may be implemented as a server in accordance with the present invention;

15           **Figure 3** depicts a block diagram of a portable device such as a personal digital assistant (PDA) in which the present invention may be implemented;

**Figure 4** depicts a block diagram of a data processing system in which the present invention may be implemented;

**Figure 5** depicts a message flow chart illustrating the processes of redirecting a call in real time from according to the present invention;

20           **Figures 6A-6E** illustrate examples of sample HTML or web pages displayed to a user of a portable computing device;

**Figure 7** depicts a flowchart illustrating the methods executed on a portable computing device in accordance with a preferred embodiment of the present invention;

25           **Figure 8** depicts a flowchart illustrating the processes of redirecting a call which are implemented on a server within the communications network in accordance with the present invention;

**Figure 9** depicts a flowchart illustrating a method of converting HTML to SIP as performed by a SIP User Agent in accordance with the present invention;  
30           and

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Express Mail No.: EL356872801US

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**Figure 10** depicts a flowchart illustrating a method of converting an SIP signal into an HTML message in accordance with the present invention.



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### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

5

With-reference now to the figures, and in particular with reference to **Figure 1**, a system diagram illustrating a plurality of interconnected heterogeneous networks in which a the present invention may be implemented is depicted. As illustrated, an Internet Protocol (IP) network **102**, a Local Area Network (LAN) / Wide Area Network (WAN) **104**, the Public Switched Telephone Network (PSTN) **109**, a cellular wireless network **112**, and a satellite communication network **116** make up the plurality of heterogeneous networks serviced by the personal mobility system of the present invention.

IP network **102** may be the publicly available IP network, a private IP network, or a combination of public and private IP networks. In any case, IP network **102** operates according to the Internet Protocol and routes packets among its many switches and through its many transmission paths. IP networks are generally known in the art to be expandable, fairly easy to use and heavily supported. Coupled to IP network **102** is a Domain Name Server (DNS) **108** to which queries may be sent, such queries each requesting an IP address based upon a Uniform Resource Locator (URL). IP network **102** supports 32 bit IP addresses as well as 128 bit IP addresses, which are currently in the planning stage.

LAN/WAN **104** couples to IP network **102** via a proxy server **106** (or another connection). LAN/WAN **104** may operate according to various communication protocols, such as the Internet Protocol, the Asynchronous Transfer Mode (ATM) protocol, or other known packet switched protocols. Proxy server **106** serves to route data between IP network **102** and LAN/WAN **104**. A firewall that precludes unwanted communications from entering LAN/WAN **104** may also be located at the location of proxy server **106**.

Computer **120** couples to LAN/WAN **104** and supports communications with LAN/WAN **104**. Computer **120** may employ the LAN/WAN and proxy

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server **106** to communicate with other devices across IP network **102**. Such communications are generally known in the art and will not be further described herein except to expand upon the teachings of the present invention. As is also shown, phone **122** couples to computer **120** and may be employed to initiate IP  
5 Telephony communications with another phone or voice terminal using IP Telephony. In such an IP telephony system, a gatekeeper **152** is deployed by a service provider to manage IP telephony for its users. An IP phone **154** connected to IP network **102** (or other phone, e.g., phone **124**) may communicate with phone **122** using IP telephony.

10 PSTN **109** is a circuit switched network that is primarily employed for voice communications, such as those enabled by a standard phone **124**. However, PSTN **109** also supports the transmission of data. Data transmissions may be supported to a tone based terminal, such as a FAX machine **125**, to a tone based modem contained in computer **126**, or to another device that couples to PSTN **109**  
15 via a digital connection, such as an Integrated Services Digital Network (ISDN) line, an Asynchronous Digital Subscriber Line (ADSL), or another digital connection to a terminal that supports such a connection. As illustrated, a voice terminal, such as phone **128**, may couple to PSTN **109** via computer **126** rather than being supported directly by PSTN **109**, as is the case with phone **124**. Thus,  
20 computer **126** may support IP telephony with voice terminal **128**, for example.

Cellular network **112** supports wireless communications with terminals operating in its service area (which may cover a city, county, state, country, etc.). As is known, cellular network **112** includes a plurality of towers, e.g., **130**, that each service communications within a respective cell. Wireless terminals that  
25 may operate in conjunction with cellular network **112** include wireless handsets **132** and wirelessly enabled laptop computers **134**, for example. Wireless handsets **132** could be, for example, personal digital assistants, wireless or cellular telephones, or two-way pagers. Cellular network **112** couples to IP network **102** via gateway **114**.

30 Wireless handsets **132** and wirelessly enabled laptop computers **134** may communicate with cellular network **112** using a wireless application protocol

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(WAP). WAP is an open, global specification that allows mobile users with wireless devices, such as, for example, mobile phones, pagers, two-way radios, smartphones, communicators, personal digital assistants, and portable laptop computers, to easily access and interact with information and services almost  
5 instantly. WAP is a communications protocol and application environment and can be built on any operating system including, for example, Palm OS, EPOC, Windows CE, FLEXOS, OS/9, and JavaOS. WAP provides interoperability even between different device families.

WAP is the wireless equivalent of Hypertext Transfer Protocol (HTTP)  
10 and Hypertext Markup Language (HTML). The HTTP-like component defines the communication protocol between the handheld device and a server or gateway. This component addresses characteristics that are unique to wireless devices, such as data rate and round-trip response time. The HTML-like component, Wireless Markup Language (WML), defines new markup and scripting languages for  
15 displaying information to and interacting with the user. This component is highly focused on the limited display size and limited input devices available on small, handheld devices. For example, a typical cell phone may have only a 4x10-character display with 16-gray levels and only a numeric keypad plus up/down volume keys.

20 Cellular network **112** operates according to an operating standard, which may be the Advanced Mobile Phone System (AMPS) standard, the Code Division Multiple Access (CDMA) standard, the Time Division Multiple Access (TDMA) standard, or the Global System for Mobile Communications or Groupe Speciale Mobile (GSM), for example. Independent of the standard(s) supported by cellular  
25 network **112**, cellular network **112** supports voice and data communications with terminal units, e.g., **132** and **134**.

Satellite network **116** includes at least one satellite dish **136** that operates in conjunction with a satellite **138** to provide satellite communications with a plurality of terminals, e.g., laptop computer **142** and satellite handset **140**.  
30 Satellite handset **140** could also be a two-way pager. Satellite network **116** may be serviced by one or more geosynchronous orbiting satellites, a plurality of

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medium earth orbit satellites, or a plurality of low earth orbit satellites. In any case, satellite network 116 services voice and data communications and couples to IP network 102 via gateway 118.

Wireless Proxy 160 is coupled to IP network 102 and is coupled to a plurality of towers, e.g., 162, which each provide wireless communications with wireless devices such as wireless device 164. Wireless Proxy 160 provides access to IP network 102 to wireless device 164, such as personal digital assistants (PDAs), that may require proprietary or other special protocols in order to communicate with IP network 102. For example, wireless proxy server 160 may be a 3Com server utilizing 3Com protocols for communicating with a Palm VII, a handheld portable computing device available from 3Com Corporation in Santa Clara, California.

In a preferred embodiment of the present invention, wireless proxy 160 is a 3Com proxy server supporting communications with Palm VII personal organizer and portable computing device 164 is a Palm VII personal organizer. In this embodiment, communications between wireless proxy server 160 and portable computing device 164 is facilitated by the use of Palm Query Applications (PQAs). A PQA is like a mini-Web site that resides on portable computing device 164. That is, a PQA is a special kind of record database. A typical PQA contains an HTML form or a list of hyperlinks that request additional information either locally — on personal computing device 164 — or remotely — on the Internet.

Much of the content on the Internet is designed to take advantage of the power of Pentium/RISC-class computers with large, high resolution color monitors and fast and cheap Internet access. In these circumstances, there is little reason to economize on the abundant connect time and large file size that make Web browsing such a rich, multimedia experience from a desktop or notebook computer.

However, this model is not the best model for a small, low-power computer like the Palm VII organizer with its tiny screen, battery powered operation, and relatively slow and expensive wireless connection to the Internet.

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Rather than duplicate the Web browsing model on a handheld computer, PQAs are developed that access targeted bits of Internet information — like clippings from a newspaper. Typically, a handheld computer user does not focus on following hyperlinks to the Internet (although this is available), but instead, they  
5 compose a simple query in the PQA (for example a request for a stock quote) and then send that query over the air.

Also included in network **100** is a Session Initiation Protocol (SIP) proxy **170**. SIP proxy **170** is connected to IP network **102** and provides switching and routing for communication over IP network **102**. SIP proxy **170** also maintains a  
10 static list of preferred locations to which a user wishes telephone calls or other communication types sent. When a request to initiate a communications session is received, SIP proxy **170** retrieves the static list of the called party and routes the call to the top address in the static list. If the communications session is not established with the top address in the static list, then SIP proxy **170** may attempt  
15 to access the next address in the list and so on until the called party is reached or until the addresses in the static list are exhausted.

SIP is a textual based signaling protocol for creating, modifying and terminating sessions. These sessions can be multimedia conferences, Internet telephone calls and similar applications consisting of one or more media types  
20 such as, for example, audio, video, or whiteboard. SIP invitations are used to create sessions and carry session descriptions, which allow participants to agree on a set of compatible media types. SIP requests can be sent either over TCP or UDP.

SIP User Agent **172** is also connected with IP Network **102**. SIP User  
25 Agent **172** translates between SIP communications and Hypertext Transfer Protocol (HTTP) and other extensible markup language (XML) based protocols such as Voice XML (VOXML) and Wireless Application Protocol (WAP).

**Figure 1** is intended as an example and not as an architectural limitation for the processes of the present invention.

30 In a preferred embodiment, a user registers an address to which they wish their voice calls or other communications to be sent. The address can be an IP

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address, a PSTN address or other type of address for locating an electronic device such as a data processing system or telephone. As an example, consider a user of portable device **164** wishing to have all of their calls routed to the portable device. The user of portable device **164** sends an HTML registration request to Wireless  
5 Proxy **160**, which then forwards the HTML registration request to SIP User Agent **172**. SIP User Agent **172** translates the HTML registration request from HTML into an SIP registration statement and sends the SIP registration statement to SIP Proxy **170**. SIP Proxy **170** then updates the user's static list and inserts the newly received address into the top of the static list as the first address to attempt  
10 to establish a connection with if a request to initiate communications with that user is received. If the user does not have a static list, SIP Proxy **170** can create one and then place the received address in the newly created static list. The registration request does not have to initiate from a portable wireless device such as portable device **164** but may initiate with a LAN based data processing system  
15 such as client **120** or with some other type of wireless device.

When SIP Proxy **170** receives a request to initiate communications, such as a voice telephone call, with a user, SIP Proxy **170** retrieves the static list for the called party and determines the first address to contact. SIP Proxy **170** then sends an SIP Invite message to SIP User Agent **172**. SIP User Agent **172** translates the  
20 SIP Invite message into an HTML message and sends the HTML message to Wireless Proxy **160** which then forwards the HTML message to portable device **164**.

Once the HTML invite message is received at portable device **164**, the user may then determine how to dispose of the call. If portable device **164** is a  
25 telephone (or supports voice communications), the user may choose to take the call if it is someone to which the user wishes to speak. The user may also redirect the call elsewhere to a nearby PSTN address, to a voice mailbox, or to an IP address. Portable device **164** may even suggest options as to disposal of the incoming communication. For example, if the incoming communication is video,  
30 rather than a voice call, portable device **164** may suggest routing the

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communication to client **120** on LAN/WAN **104**, which may be the nearest device capable of receiving such communication.

If the user decides to redirect the call to some other device, then redirection information in HTML format indicating the address of the new device is sent from portable device **164** to wireless proxy **160**. Wireless proxy **160** then forwards the HTML redirect information to SIP User Agent **172**, which converts the HTML redirect information into an SIP redirect and send the SIP redirect to SIP proxy **170**. SIP User Agent **172** also sends an HTML notification to portable device **164** via wireless proxy **160** indicating that the communication is being redirected. SIP proxy **170** then redirects the communication to the new address and takes down the connection with portable device **164**. If SIP proxy **170** is unable to make a connection with the new address (e.g., incorrect address, device off-line, etc.), then the communication must be terminated or the next address in the user's static list contacted. This is because the connection to portable device **164** has already been taken down thus preventing an attempt to request a new address to which to redirect the communication.

As an example of uses of such redirection methods and systems according to the present invention, consider a family consisting of a husband, wife, and children. Perhaps the husband has registered his wireless telephone as the device to which incoming calls to his home telephone should be delivered. If notification of an incoming call is received by the husband on his wireless telephone, he can look at the display to see who the caller is. If the husband determines that the call is for his wife, he can redirect the call to her work phone or to her wireless phone. If the call is for one of the children, the call can be redirected to the home phone. However, if the call is for the husband, he can choose to take the call on his wireless telephone. Alternatively, if the call is for the husband, but he does not wish to speak with the caller, the call can be forwarded to his voice mailbox.

As another example of the use of redirection methods and systems according to the present invention, consider a person travelling on business and away from the office. The business person can register a personal digital assistant (PDA) as the device to which incoming calls are directed. Thus, wherever the

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business person is, no calls will be missed because of being away from the office. If notification of a call is received, the business person can have the call redirected to a phone near where the business person is presently located. Such phone could be the room phone of the hotel where the person is currently staying or it could be  
5 the office phone of the person with which the business person is meeting.

Referring now to **Figure 2**, a block diagram of a data processing system which may be implemented as a server, such as server **106, 108, 160, or 170** in **Figure 1**, is depicted in accordance with the present invention. Data processing system **200** may be a symmetric multiprocessor (SMP) system including a  
10 plurality of processors **202 and 204** connected to system bus **206**. Alternatively, a single processor system may be employed. Also connected to system bus **206** is memory controller/cache **208**, which provides an interface to local memory **209**. I/O bus bridge **210** is connected to system bus **206** and provides an interface to I/O bus **212**. Memory controller/cache **208** and I/O bus bridge **210** may be  
15 integrated as depicted.

Peripheral component interconnect (PCI) bus bridge **214** connected to I/O bus **212** provides an interface to PCI local bus **216**. A number of modems **218-220** may be connected to PCI bus **216**. Typical PCI bus implementations will support four PCI expansion slots or add-in connectors. Communications links to  
20 network computers **120, 126, 134, and 142** in **Figure 1** may be provided through modem **218** and network adapter **220** connected to PCI local bus **216** through add-in boards.

Additional PCI bus bridges **222 and 224** provide interfaces for additional PCI buses **226 and 228**, from which additional modems or network adapters may  
25 be supported. In this manner, server **200** allows connections to multiple network computers. A memory mapped graphics adapter **230** and hard disk **232** may also be connected to I/O bus **212** as depicted, either directly or indirectly.

Those of ordinary skill in the art will appreciate that the hardware depicted in **Figure 2** may vary. For example, other peripheral devices, such as optical disk  
30 drives and the like, also may be used in addition to or in place of the hardware



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depicted. The depicted example is not meant to imply architectural limitations with respect to the present invention.

The data processing system depicted in **Figure 2** may be, for example, an IBM RS/6000, a product of International Business Machines Corporation in Armonk, New York, running the Advanced Interactive Executive (AIX) operating system.

Turning now to **Figure 3**, a block diagram of a personal digital assistant (PDA), such as portable device **164** in **Figure 1**, is illustrated in which the present invention may be implemented. The PDA is typically a palmtop computer, such as, for example, a Palm VII, a product of 3Com Corporation in Santa Clara, California, connected to a wireless communications network and which may provide voice, fax, e-mail, and/or other types of communication. The PDA **300** may have one or more processors **302**, such as a microprocessor, a main memory **304**, a disk memory **306**, and an I/O **308** such as a mouse, keyboard, or pen-type input, and a screen or monitor. The PDA **300** may also have a wireless transceiver **310** connected to an antenna **312** configured to transmit and receive wireless communications. The processor **302**, memories **304**, **306**, I/O **308**, and transceiver are connected to a bus **304**. The bus transfers data, i.e., instructions and information, between each of the devices connected to it. The I/O **308** may permit faxes, e-mail, or optical images to be displayed on a monitor or printed out by a printer. The I/O **308** may be connected to a microphone **316** and a speaker **318** so that voice or sound information may be sent and received.

With reference now to **Figure 4**, a block diagram of a data processing system in which the present invention may be implemented is illustrated. Data processing system **400** is an example of a client computer such as client **120**, **126**, **134**, or **142** in **Figure 1**. Data processing system **400** employs a peripheral component interconnect (PCI) local bus architecture. Although the depicted example employs a PCI bus, other bus architectures, such as Micro Channel and ISA, may be used. Processor **402** and main memory **404** are connected to PCI local bus **406** through PCI bridge **408**. PCI bridge **408** may also include an integrated memory controller and cache memory for processor **402**. Additional

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connections to PCI local bus 406 may be made through direct component interconnection or through add-in boards. In the depicted example, SCSI host bus adapter 412 and expansion bus interface 414 are connected to PCI local bus 406 by direct component connection. In contrast, audio adapter 416, graphics adapter 5 418, and audio/video adapter (A/V) 419 are connected to PCI local bus 406 by add-in boards inserted into expansion slots. Expansion bus interface 414 provides a connection for a keyboard and mouse adapter 420, modem 422, and additional memory 424. In the depicted example, SCSI host bus adapter 412 provides a connection for hard disk drive 426, tape drive 428, CD-ROM drive 430, and 10 digital video disc read only memory drive (DVD-ROM) 432. Typical PCI local bus implementations will support three or four PCI expansion slots or add-in connectors.

An operating system runs on processor 402 and is used to coordinate and provide control of various components within data processing system 400 in 15 **Figure 4**. The operating system may be a commercially available operating system, such as OS/2, which is available from International Business Machines Corporation. "OS/2" is a trademark of International Business Machines Corporation. An object oriented programming system, such as Java, may run in conjunction with the operating system, providing calls to the operating system 20 from Java programs or applications executing on data processing system 400. Instructions for the operating system, the object-oriented operating system, and applications or programs are located on a storage device, such as hard disk drive 426, and may be loaded into main memory 404 for execution by processor 402.

Those of ordinary skill in the art will appreciate that the hardware in 25 **Figure 4** may vary depending on the implementation. For example, other peripheral devices, such as optical disk drives and the like, may be used in addition to or in place of the hardware depicted in **Figure 4**. The depicted example is not meant to imply architectural limitations with respect to the present invention. For example, the processes of the present invention may be applied to 30 multiprocessor data processing systems.

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Turning now to **Figure 5**, a message flow chart is depicted illustrating the processes of redirecting a call in real time from a wireless device according to the present invention. In this example, a redirect from a wireless device utilizing a wireless proxy is illustrated. A similar flow would result if the redirect were being sent from a LAN/WAN connected device except for the omission of wireless proxy 508.

A user of a portable computing device such as a PDA or laptop computer initiates a registration by entering a proxy ID, a proxy port, and an address, such as, for example, a PSTN number or an IP address, and sending this information to wireless proxy 508 (step **M01**). **Figures 6A** illustrates an example of a sample HTML screen displayed to a user to initiate registration. The user may pull up the registration page by selecting the word "register" 601 on the page. **Figure 6B** illustrates an example of a sample HTML screen allowing a user to register by providing prompts to enter an user name 602, a proxy identification 604, and a proxy port 606.

Wireless Proxy 508 receives the HTML registration web page and forwards it to SIP user agent 506 (step **M02**). User agent 506 receives the HTML page and sends a SIP registration to SIP proxy 502 (step **M03**). SIP proxy 502 updates its destination list for the user with the address for portable computing device 510. Next, an SIP invite signal is sent to user agent 506 (step **M04**).

User agent 506 then sends an SIP 100-trying signal back to SIP proxy 502 (step **M05**). When a call for the user at portable computing device 510 is received by user agent 506, user agent 506 sends an HTML page to 3Com proxy 508 to indicate an incoming call for the user at portable computing device 510 (step **M06**). 3Com proxy 508 forwards the HTML page to portable computing device 510 (step **M07**). The HTML page is displayed the user of portable computing device 510 to indicate that the user has an incoming call. An example of such an HTML page is illustrated in **Figure 6C**. A hot button 608 is supplied which the user may select to redirect the incoming call. Other hot buttons 614, 616, and 618 allow the user to place the call on hold, terminate the call without answering, or send the call to voice mail respectively. If redirection is chosen, the user of the

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portable computing device **510** then redirects the call to another destination by entering and sending a PSTN, IP, or other address as the new destination (step **M08**). **Figure 6D** illustrates an example of a sample HTML page in which the user may enter the new destination for the incoming phone call in destination box  
5 **610** and then send the new destination by selecting the “submit” hot button **612**.

Wireless proxy **508** receives the HTML page containing the new destination and this page is forwarded to user agent **506** (step **M09**). User agent **506** sends a SIP 300 signal to SIP proxy **502** containing the new destination (step **M10**). User agent **506** also sends an HTML page to portable computing device  
10 **510** via 3Com proxy **508** indicating that the call was redirected (step **M11**). A message is displayed to the user of portable computing device **510** indicating that the call was redirected. An example of such a HTML page is illustrated in **Figure 6E**. SIP proxy **502** receives the 300 signal and sends out an invite to the new destination (step **M12**).

15 If portable computing device **510** does not respond to the message indicating that the user has an incoming call (step **M07**), then a SIP 480 Temporarily not available signal is sent from user agent **506** back to SIP proxy server **502**. SIP proxy **502** can then decide how to process the call. For example, for calls to which the portable computing device does not respond, SIP proxy **502**  
20 could forward the call to a predefined destination or take the call down.

Turning now to **Figure 7**, a flowchart illustrating the methods executed on a portable computing device in accordance with a preferred embodiment of the present invention is depicted. To start, a user of a data processing device registers the address of their data processing device that they wish their calls to be  
25 delivered to (step **702**). Typically, when the data processing device is activated, it performs an SIP registration with a SIP registration server, effectively causing all future calls to route to this device as the first selection. On deactivation of the device, the shutdown processing unregisters with the SIP registration server thereby restoring the defaults on how the called party is to be reached (i.e., the  
30 subscriber’s static reach list). Next, when a call is made to the user, a notification of the incoming call is received at their data processing device (step **704**).

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Included in the notification may be caller identification information such as PSTN or IP address from where the call originated. The user then identifies a new destination for the incoming call to be sent (step 706). For example, if the user has traveled to a hotel, the user may enter the phone number of the room at the hotel. As another example, if the user is near a pay phone, the user may enter the phone number of the pay phone. Once the user has identified a new destination for the incoming call to be redirected to, this new destination is sent back to a SIP proxy via a SIP User Agent (step 708). Once the SIP User Agent receives the redirect request, the user will receive a notice indicating the call is being redirected (step 710).

Turning now to **Figure 8**, a flowchart illustrating the processes of redirecting a call which are implemented on a server within the communications network is depicted in accordance with the present invention. To start, a server within the communications network receives a request for call initiation from a PSTN (step 802). The server accesses a database to which the called party has registered the current device to which they wish their calls directed (step 804). The current device is registered at the top of a static reach list of numbers to try in order to reach the called party. Once the current device is identified, a notice is sent to the called parties current location indicating that the party has an incoming call and requesting information about where to direct the call (step 806). Next, a determination is made as to whether the user has responded to the request (step 808). If the user does not respond after a given period of time, then the call is disposed of according to a predetermined procedure (step 810). For example, if the user does not respond to the request, then the server may redirect the call to the next address in the called party's static reach list of preferred locations or if there are no more preferred locations stored in a database, the server may end the call. If the user does respond to the request, then the call is redirected to the new location and a confirmation is sent to the user indicating such (step 812). The call may be redirected to a cell phone, to a nearby wire-line device, to the called party's voice mailbox, or the party initiating the call may be placed on temporary hold. If the party initiating the call is placed on hold, a standard greeting will be

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sent to the calling party to make them aware that the called party is attempting to find an appropriate method to receive the call or is on another call and to stay on the call because the called party will answer momentarily.

Turning now to **Figure 9**, a flowchart illustrating a method of converting HTML to SIP as performed by a SIP User Agent is depicted in accordance with the present invention. To start, a SIP User Agent receives an HTML message (step **902**). The SIP User Agent then parses the HTML message for class and content (step **904**). The SIP User Agent then analyzes the message class and content (step **906**) to create an SIP signal from the HTML message (step **908**). The newly formed SIP signal is then sent to an SIP Proxy (step **910**) and the process stops.

Turning now to **Figure 10**, a flowchart illustrating a method of converting an SIP signal into an HTML message is depicted in accordance with the present invention. First, the SIP User Agent receives an SIP signal from the SIP Proxy (step **1002**). The SIP signal is then parsed for message type (step **1004**) and the content, calling party, and called party are extracted from the SIP signal (step **1006**). Using the extracted information, the SIP User Agent generates an appropriate HTML page (step **1008**) and sends the HTML message to the called party (step **1010**) ending the process.

Although the present invention has been described primarily with reference to redirecting telephony communications. Other forms of media streams may be redirected as well. For example, a client such as client **120** or portable device **164**, that has previously performed an SIP registration, receives a notification of incoming data streams. The notification will include information about what types of data streams are included. This will be encoded into the notification at either SIP Proxy **170** or at User Agent **172**. The notice displayed to the user will inform the user of whether there are multiple types of data streams and what types of data streams are in the incoming communication. Once the notification is displayed to the user of the client, the client may then decide how to dispose of the incoming data streams. If the user selects one device, such as telephone **124** to send the data stream to, then the name or address of telephone

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**124** will be sent back to SIP Proxy **170**, which will then redirect the call to telephone **124**. The user may select more than one device to send the data streams to as well. If the data stream consists of multiple data types, the user may instruct SIP Proxy **170** to send each data stream to a different type of device.

5 Furthermore, the user may instruct SIP Proxy **170** to send all of the data streams to several locations (forking) such that multiple parties may be connected (such as for a conference call) or to several locations, but have only the first to “pick up” or “answer” be connected. This last alternative might be useful if the user wished to redirect the data stream to another person, but was unsure of that person’s location  
10 but did know of several possible locations of that person.

To help illustrate the present invention, consider the following example of a user’s device receiving multiple types of data streams at a single device. For example, a user might have registered their personal digital assistant as the device to which to have incoming data streams routed. The SIP Proxy **170** receives an  
15 incoming data stream intended for this user and generates and routes a message to the user indicating the types of message streams and from what party. The types of message streams include audio, video (in MPEG format), text and a JPEG picture. The user of the personal digital assistant might decide to route the audio to speakers or to a telephone such as telephone **124**, route the video to a desktop  
20 computer such as client **120** or to a television attached to a set top box, the text routed to a printer (perhaps connected to client **120**), and the JPEG picture routed to a second computer such as client **126** or to a device dedicated to generating and displaying still pictures. Thus, each of the data streams were directed to a device which was best able to utilize and present the information to the user.

25 To illustrate “forking”, consider a person receiving a data stream (perhaps a phone call, but not necessarily). The person after determining what the data stream is and/or who it is from, decides that other people within an organization should participate as well. The person would then enter several names or addresses for the SIP Proxy **170** to use to redirect the data stream. This list of  
30 several names could include the user originally receiving the notification. In that way several people could participate, such as on a conference call.





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communications with the SIP proxy does not need to be facilitated with a translating user agent. In this case, the SIP proxy becomes the agent.

Furthermore, the SIP proxy does not have to be a proxy. Any device or software which can perform the functionality of the SIP proxy will suffice, wherein the  
5 primary functions performed by the SIP proxy are address lookup (determining the IP or other type address based on information received, i.e., converting john@nortel.com into an IP address) and redirecting calls.

It should also be noted that although the present invention has been described primarily with reference to voice calls, it applies to other types of  
10 communication as well, including, but not limited to for example, video conferencing or text messages. For example, a portable computing device could receive a notification of an incoming video call or video message and a user could redirect that incoming video message to a laptop or desktop computer, a television, or other video display terminal such that the video could be viewed by  
15 the called party. The device receiving the request could even suggest alternative destinations to redirect the call to based on the type of call (e.g. video, voice, text) the request corresponds to.

It is important to note that while the present invention has been described in the context of a fully functioning data processing system, those of ordinary skill  
20 in the art will appreciate that the processes of the present invention are capable of being distributed in the form of a computer readable medium of instructions and a variety of forms and that the present invention applies equally regardless of the particular type of signal bearing media actually used to carry out the distribution. Examples of computer readable media include recordable-type media such a  
25 floppy disc, a hard disk drive, a RAM, and CD-ROMs and transmission-type media such as digital and analog communications links.

The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be  
30 apparent to those of ordinary skill in the art. For example, the present invention is not limited to SIP and Palm VII's. Other types of call initiation protocols other

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than SIP may be utilized. Furthermore, other types of portable devices other than  
Palm VII's may be utilized including, but not limited to, portable computers,  
laptop computers, other types of personal digital assistants (PDAs), and other  
handheld data processing systems. The embodiment was chosen and described in  
5 order to best explain the principles of the invention, the practical application, and  
to enable others of ordinary skill in the art to understand the invention for various  
embodiments with various modifications as are suited to the particular use  
contemplated.

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1

2 **CLAIMS:**

3 What is claimed is:

1 1. A method of redirecting a call from a data processing system to another  
2 address, comprising the steps of:  
3 receiving at a data processing system a registration notice of an incoming call  
4 from a server; and  
5 responsive to determination of a new address; transmitting a new address to  
6 which the incoming call is to be redirected.

1 2. The method as recited in claim 1, wherein said data processing system is a  
2 personal digital assistant.

1 3. The method as recited in claim 1, wherein said data processing system is a  
2 laptop computer.

1 4. The method as recited in claim 1, wherein said data processing system is a  
2 portable computing device.

1 5. The method as recited in claim 1, wherein said data processing system is a  
2 wireless device.

1 6. The method as recited in claim 1, wherein the registration notice is a session  
2 initiation protocol registration notice.

1 7. The method as recited in claim 1, wherein the incoming call comprises video  
2 and the new address corresponds to a video display terminal.

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- 1 8. The method as recited in claim 1, wherein said data processing system is a
- 2 wire-line connected device.

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- 1 9. A computer program product in computer readable media for use in a data  
2 processing system for redirecting a call from a data processing system to another  
3 address, the computer program product comprising:  
4 first instructions for receiving at a data processing system a registration notice  
5 of an incoming call from a server; and  
6 second instructions, responsive to determination of a new address; for  
7 transmitting a new address to which the incoming call is to be redirected.
  
- 1 10. The computer program product as recited in claim 9, wherein said data  
2 processing system is a personal digital assistant.
  
- 1 11. The computer program product as recited in claim 9, wherein said data  
2 processing system is a laptop computer.
  
- 1 12. The computer program product as recited in claim 9, wherein said data  
2 processing system is a portable computing device.
  
- 1 13. The computer program product as recited in claim 9, wherein said data  
2 processing system is a wireless device.
  
- 1 14. The computer program product as recited in claim 9, wherein the registration  
2 notice is a session initiation protocol registration notice.
  
- 1 15. The computer program product as recited in claim 9, wherein the incoming  
2 call comprises video and the new address corresponds to a video display terminal.
  
- 1 16. The computer program product as recited in claim 9, wherein said data  
2 processing system is a wire-line connected device.



Docket No. 11032RR

- 1 25. A method for redirecting calls to a data processing system to a second  
2 location; comprising the steps of:  
3 sending a registration notification to a called party's preferred location; and  
4 responsive to receipt of a new address from the called party, redirecting the  
5 incoming call to the new address.
- 1 26. The method as recited in claim 25, further comprising:  
2 prior to said sending step, receiving a request to initiate a call with a called  
3 party; and  
4 determining a preferred location of the called party.
- 1 27. The method as recited in claim 25, wherein the registration notification is a  
2 session initiation protocol registration.
- 1 28. The method as recited in claim 25, wherein the preferred location is a personal  
2 digital assistant.
- 1 29. The method as recited in claim 28, wherein the personal digital assistant is a  
2 Palm VII utilizing a Palm Query Application to provide a user interface.
- 1 30. The method as recited in claim 25, wherein the new address corresponds to a  
2 voice mailbox.
- 1 31. The method as recited in claim 25, wherein the new address corresponds to  
2 placing the incoming call on hold.
- 1 32. The method as recited in claim 25, wherein communication with the preferred  
2 device is provided utilizing a wireless application protocol.

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Express Mail No.: EL356872801US

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- 1 33. The method as recited in claim 25, wherein the new address corresponds to a
- 2 wire-line device.



Docket No. 11032RR

- 1 34. A computer program product in computer readable media for use in a data  
2 processing system for redirecting calls to a data processing system to a second  
3 location; the computer program product comprising:  
4 first instructions for sending a registration notification to a called party's  
5 preferred location; and  
6 second instructions, responsive to receipt of a new address from the called  
7 party, for redirecting the incoming call to the new address.
- 1 35. The computer program product as recited in claim 34, further comprising:  
2 prior to said sending step, third instructions for receiving a request to initiate a  
3 call with a called party; and  
4 fourth instructions for determining a preferred location of the called party.
- 1 36. The computer program product as recited in claim 34, wherein the registration  
2 notification is a session initiation protocol registration.
- 1 37. The computer program product as recited in claim 34, wherein the preferred  
2 location is a personal digital assistant.
- 1 38. The computer program product as recited in claim 37, wherein the personal  
2 digital assistant is a Palm VII utilizing a Palm Query Application to provide a user  
3 interface.
- 1 39. The computer program product as recited in claim 34, wherein the new  
2 address corresponds to a voice mailbox.
- 1 40. The computer program product as recited in claim 34, wherein the new  
2 address corresponds to placing the incoming call on hold.



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- 1 43. A system for redirecting calls to a data processing system to a second  
2 location; comprising:  
3 means for sending a registration notification to a called party's preferred  
4 location; and  
5 means, responsive to receipt of a new address from the called party, for  
6 redirecting the incoming call to the new address.
- 1 44. The system as recited in claim 43, further comprising:  
2 prior to said sending step, means for receiving a request to initiate a call with a  
3 called party; and  
4 means for determining a preferred location of the called party.
- 1 45. The system as recited in claim 43, wherein the registration notification is a  
2 session initiation protocol registration.
- 1 46. The system as recited in claim 43, wherein the preferred location is a personal  
2 digital assistant.
- 1 47. The system as recited in claim 46, wherein the personal digital assistant is a  
2 Palm VII utilizing a Palm Query Application to provide a user interface.
- 1 48. The system as recited in claim 43, wherein the new address corresponds to a  
2 voice mailbox.
- 1 49. The system as recited in claim 43, wherein the new address corresponds to  
2 placing the incoming call on hold.
- 1 50. The system as recited in claim 43, wherein communication with the preferred  
2 device is provided utilizing a wireless application protocol.

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Express Mail No. : EL356872801US

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- 1 51. The system as recited in claim 43, wherein the new address corresponds to a
- 2 wire-line device.

Docket No. 11032RR

- 1 52. A method in a communications system for processing a call, the method  
2 comprising:  
3 receiving at a mobile data processing system a call for a user;  
4 sending a first request to setup the call to the mobile data processing system  
5 associated with a user, wherein the mobile data processing system has a wireless  
6 communications capability;  
7 receiving a response to the request, wherein the response includes an address  
8 for the call; and  
9 sending a second request to setup the call to the user using the address.
- 1 53. The method as recited in claim 52, wherein the data processing system is a  
2 personal digital assistant.
- 1 54. The method as recited in claim 52, wherein the personal digital assistant is a  
2 Palm VII.
- 1 55. The method as recited in claim 52, wherein the request and the response are  
2 session initiation protocol messages.

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- 1 56. A method for processing a call at a data processing system the method  
2 comprising:  
3 receiving a request to establish a call;  
4 presenting caller information at the data processing system; and  
5 responsive to an identification of an address for the call, returning a response  
6 including the address.
  
- 1 57. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises displaying the caller information.
  
- 1 58. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises presenting the caller information audibly.
  
- 1 59. The method as recited in claim 56, wherein the request and the response are  
2 session initiation protocol messages.
  
- 1 60. The method as recited in claim 56, wherein the data processing system is a  
2 wireless device.
  
- 1 61. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises a vibrating alert.
  
- 1 62. The method as recited in claim 56, wherein the data processing system is a  
2 two-way pager.

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63. A communications network for redirecting communications; comprising:  
a proxy server for performing address lookup and directing calls;  
a user agent functionally connected to the aid proxy server to provide protocol  
translation between a protocol recognized by the proxy server and a protocol  
5 recognized by a terminal unit and to provide a communication link between the proxy  
server and the terminal unit; wherein  
the proxy server, responsive to an indication from the terminal unit to redirect  
a call, redirects calls to a new location.
64. The network as recited in claim 63, wherein the proxy server is a session  
10 initiation protocol proxy server and the user agent is a session initiation protocol user  
agent for translating between session initiation protocol and a second protocol.
65. The network as recited in claim 64, wherein the second protocol is HTML.

Docket No. 11032RR

66. A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration  
notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second  
5 protocol; and  
transmitting a modified registration notice to a terminating device; wherein  
the modified registration notice is formatted in the second protocol.
67. The method as recited in claim 66, further comprising:  
receiving a location data with which to redirect the incoming call from the  
10 terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is  
formatted in the second protocol.
68. The method as recited in claim 66, wherein the first protocol is a session  
15 initiation protocol.
69. The method as recited in claim 66, wherein the second protocol is a hypertext  
markup language.

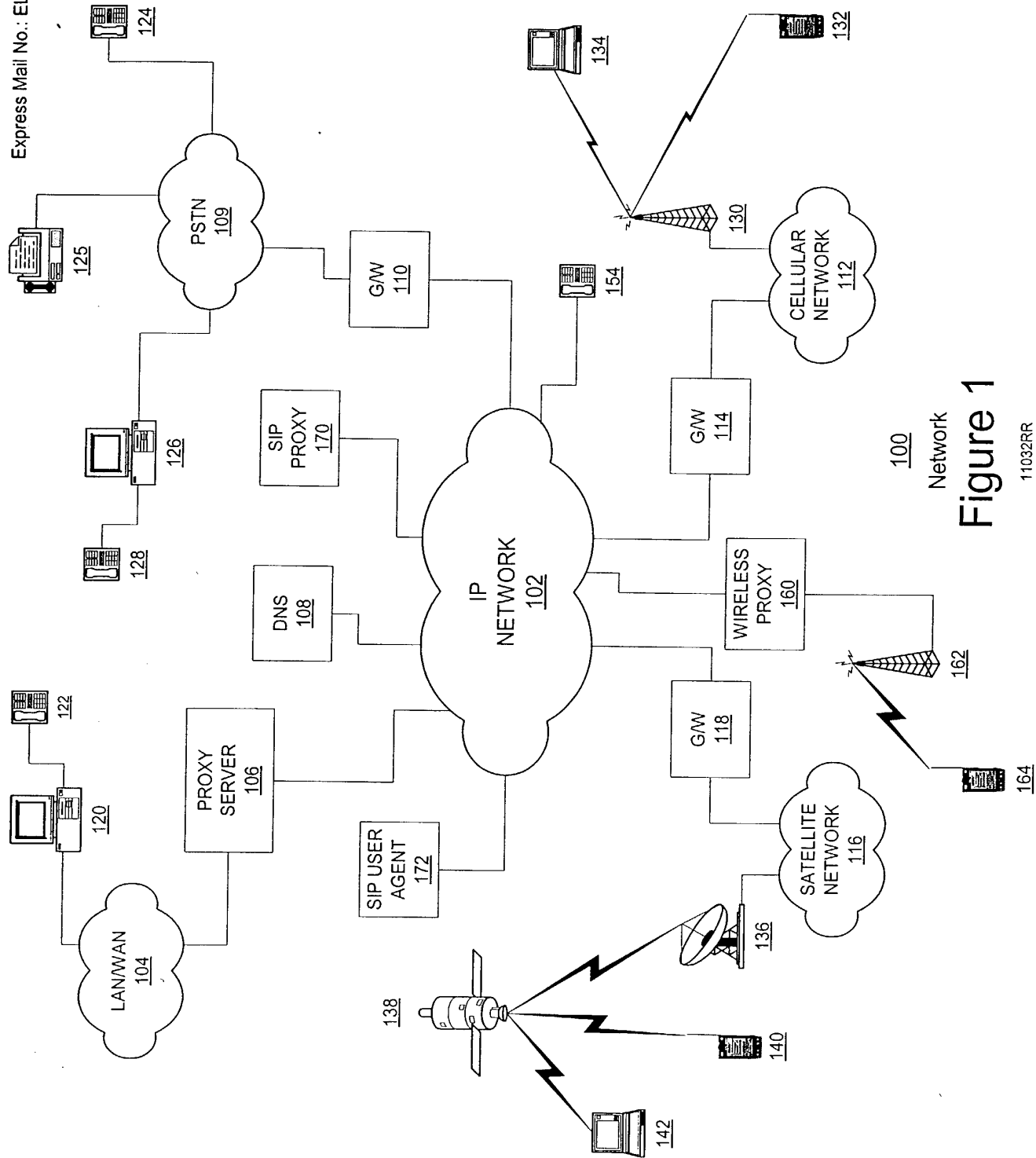


Docket No. 11032RR

**ABSTRACT OF THE DISCLOSURE**

**PORTABLE CALL MANAGEMENT SYSTEM**

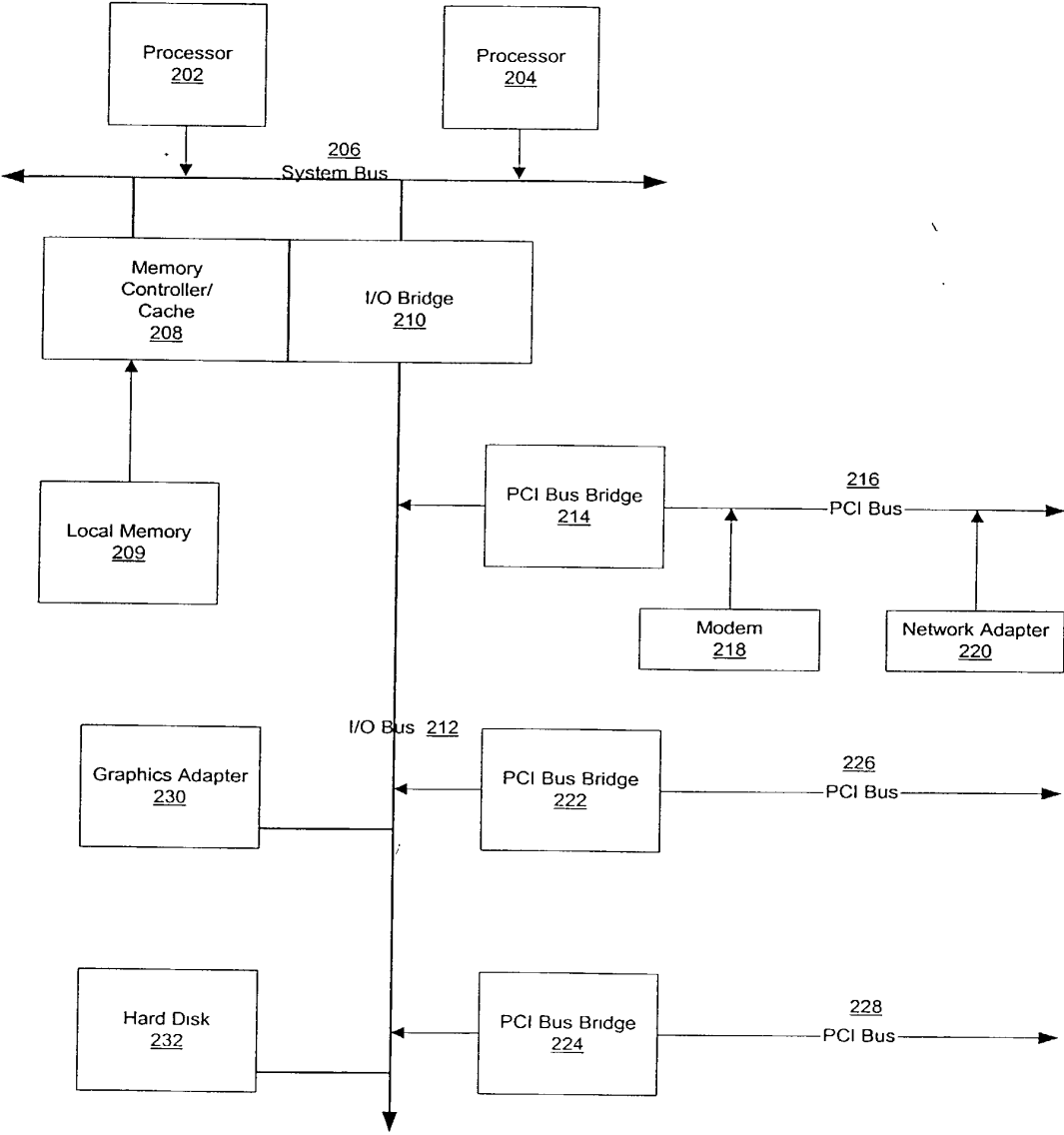
5           A method of redirecting a call from a data processing system to another  
address. In a preferred embodiment, a notice of an incoming call received from a  
server at a data processing system. This notice may include caller identification  
information as well. The user of the data processing system is prompted for an  
address to which the user wishes the call to be redirected. The user then identifies  
10 and sends to the server a new address to which the incoming call is to be redirected.  
The server then redirects the call to the new address.



100 Network  
Figure 1

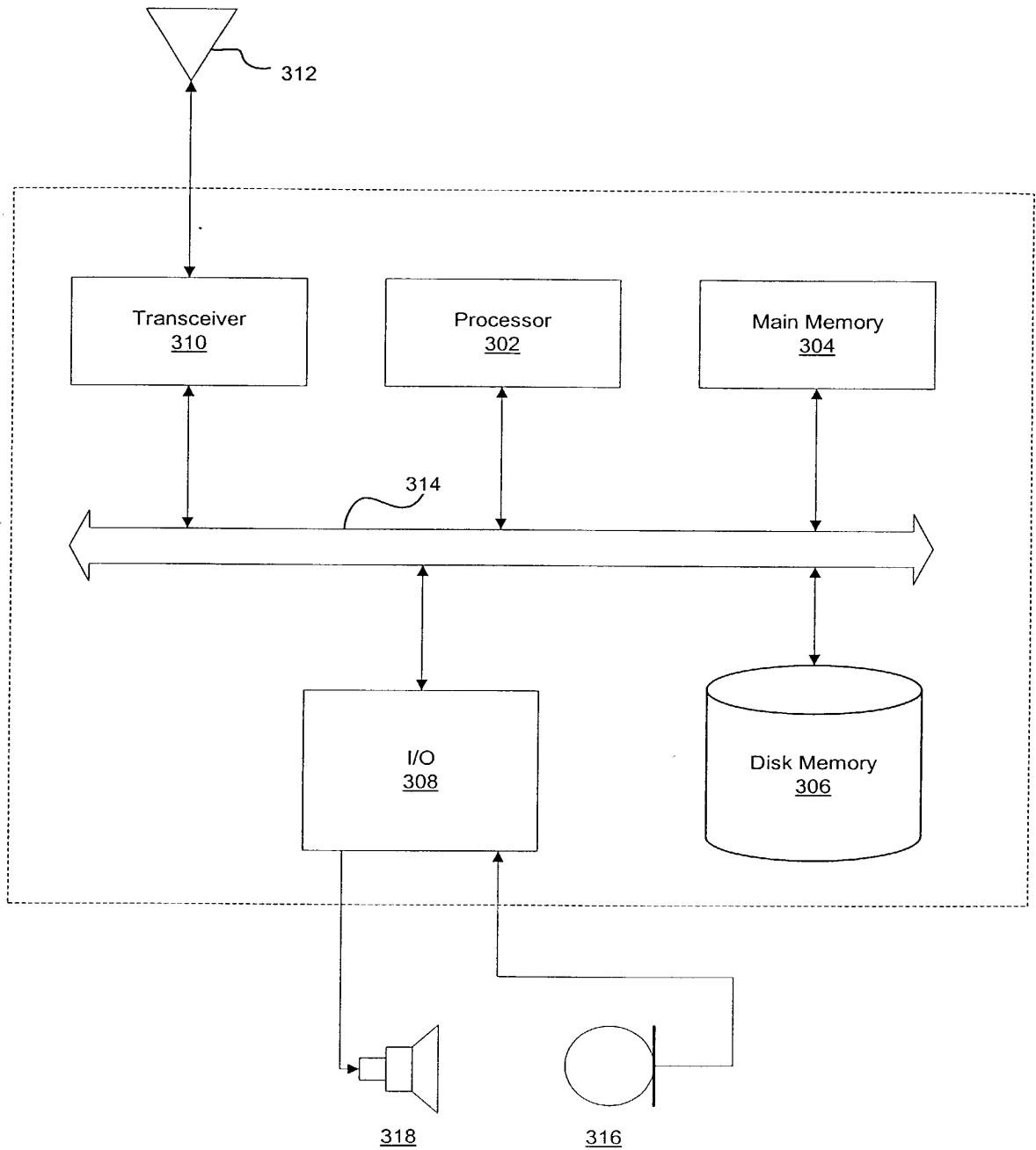
11032RR

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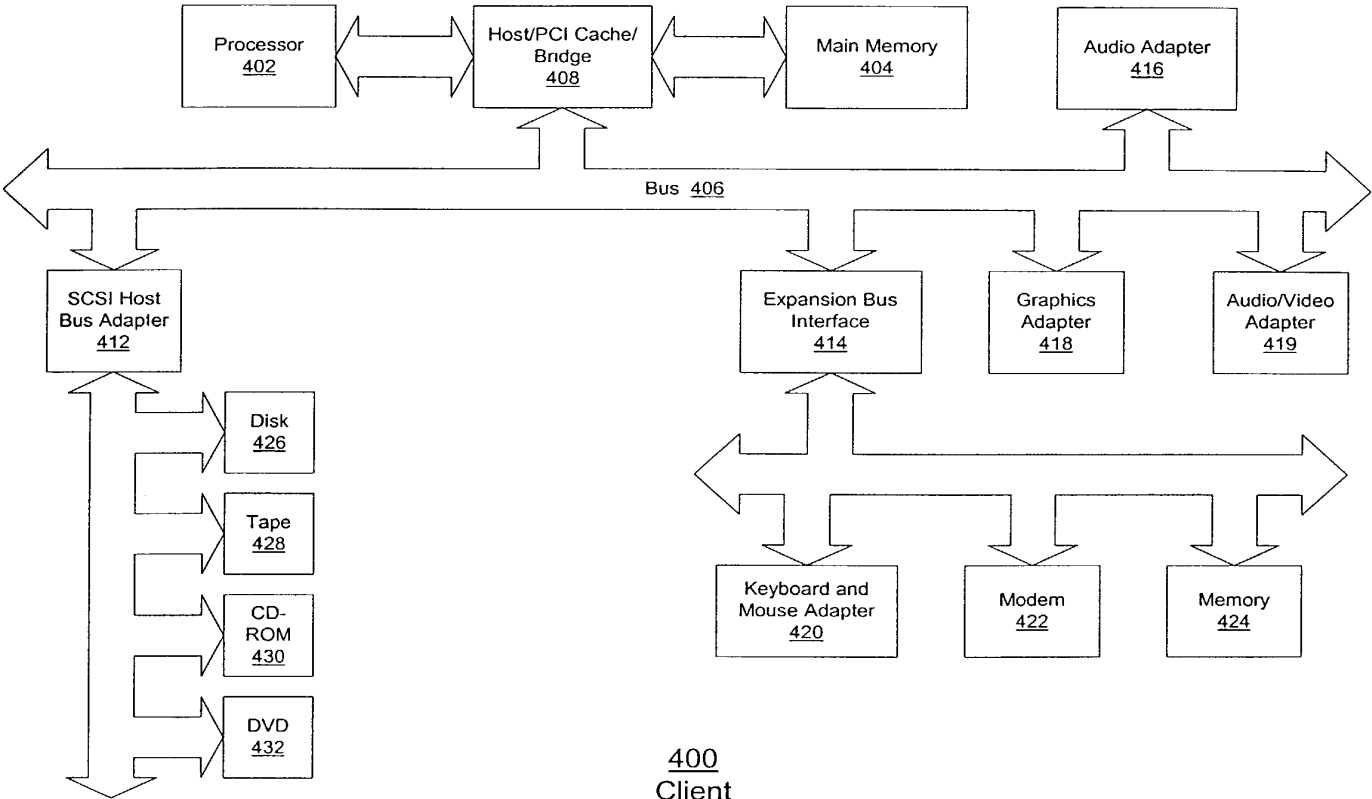


200  
Server  
**Figure 2**  
11032RR

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300  
**Figure 3**  
11032RR



400  
Client  
**Figure 4**  
11032RR

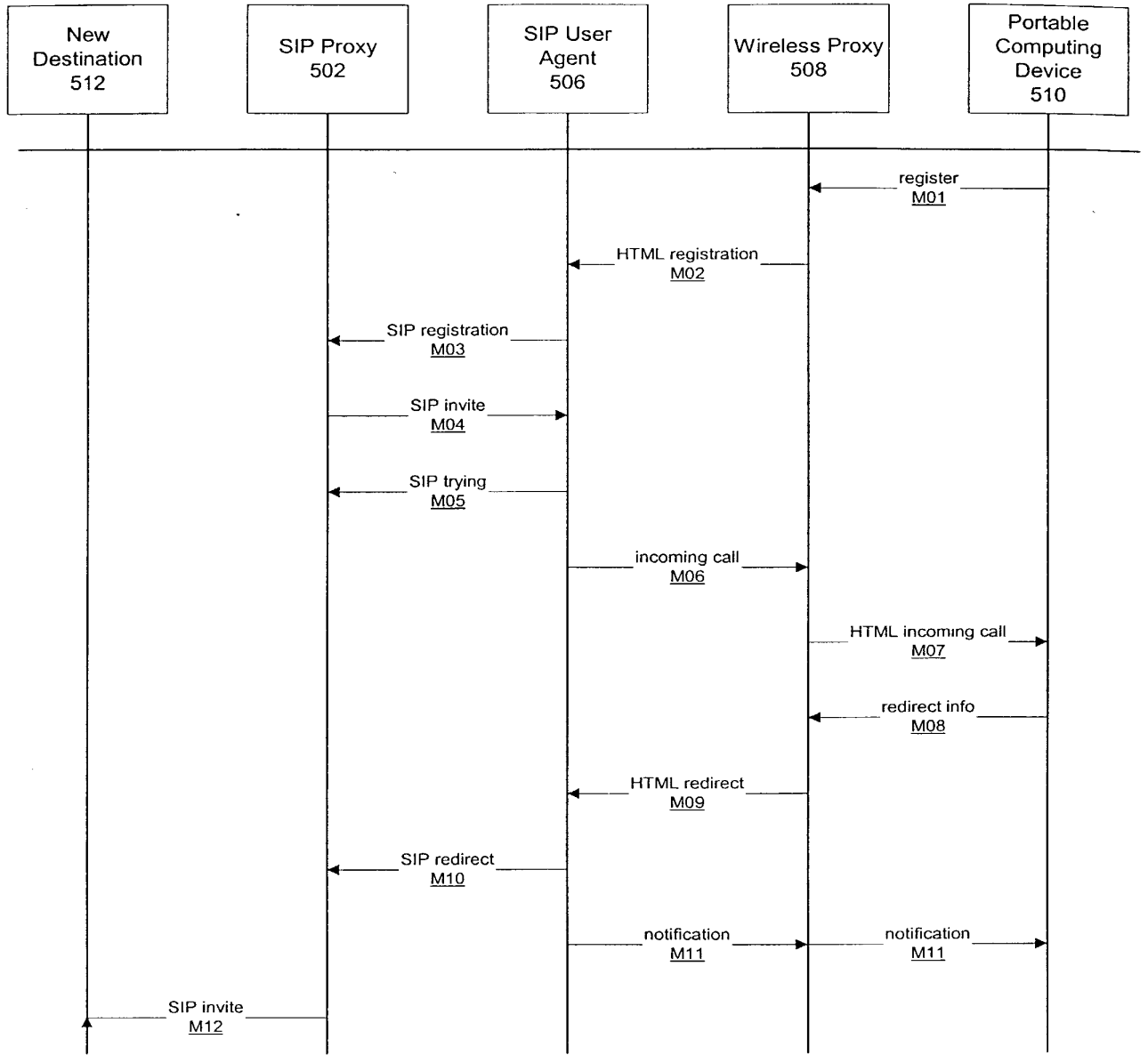


Figure 5

11032RR

Express Mail No.: EL356872801US

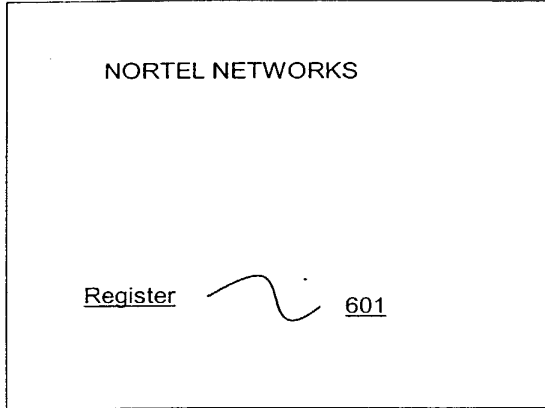


Figure 6A

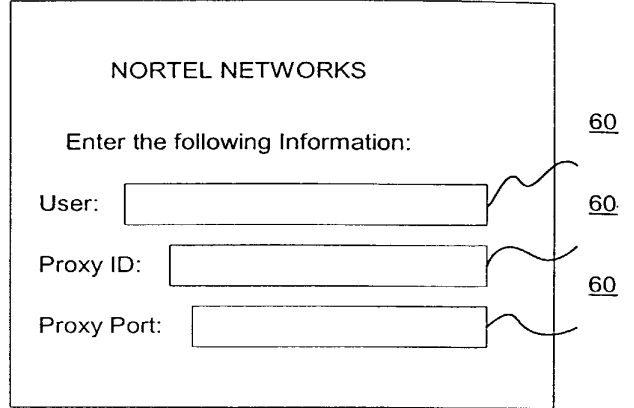


Figure 6B

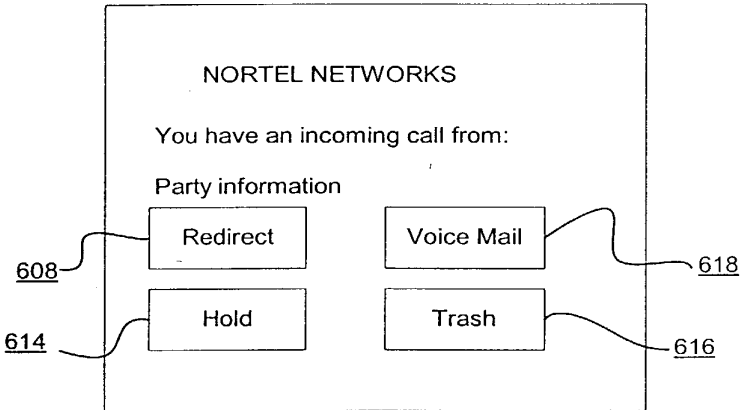


Figure 6C

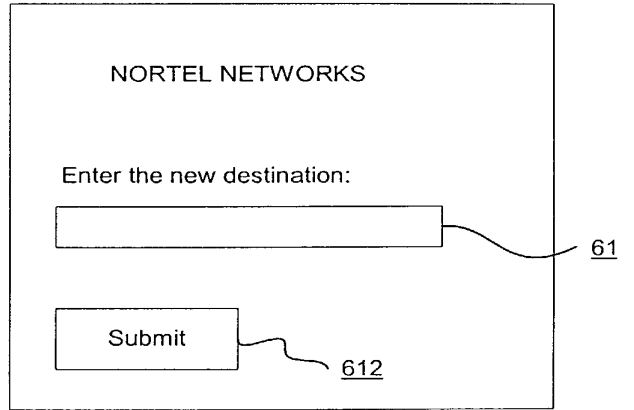


Figure 6D

11032RR

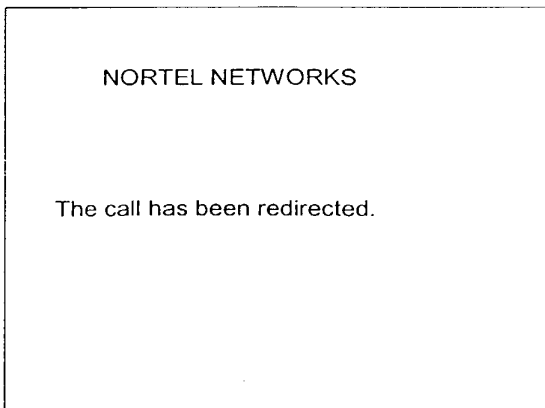


Figure 6E

Express Mail No.: EL356872801US

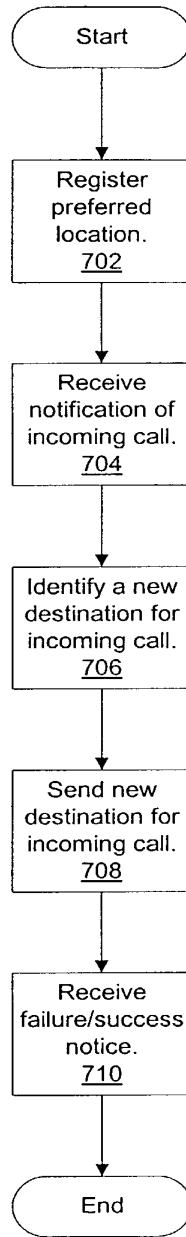


Figure 7  
11032RR



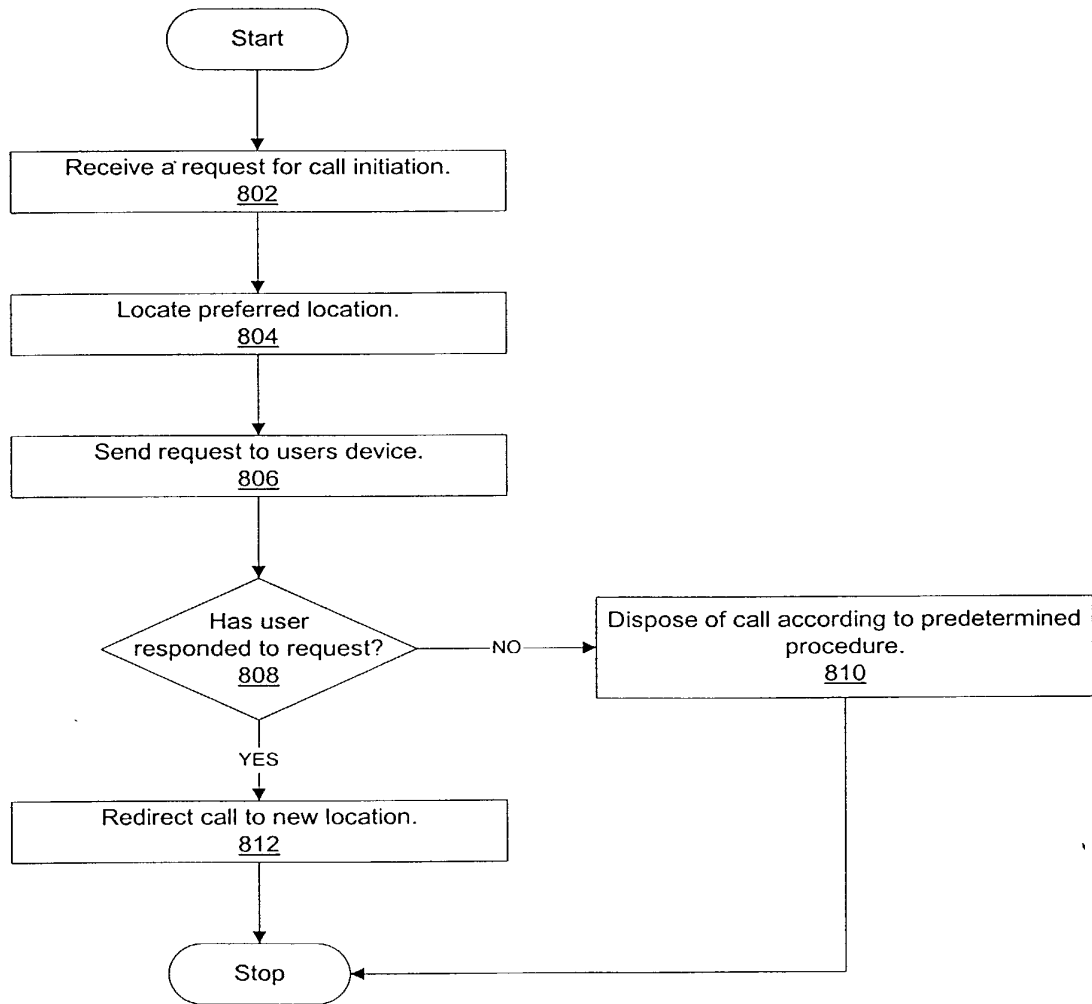


Figure 8

11032RR

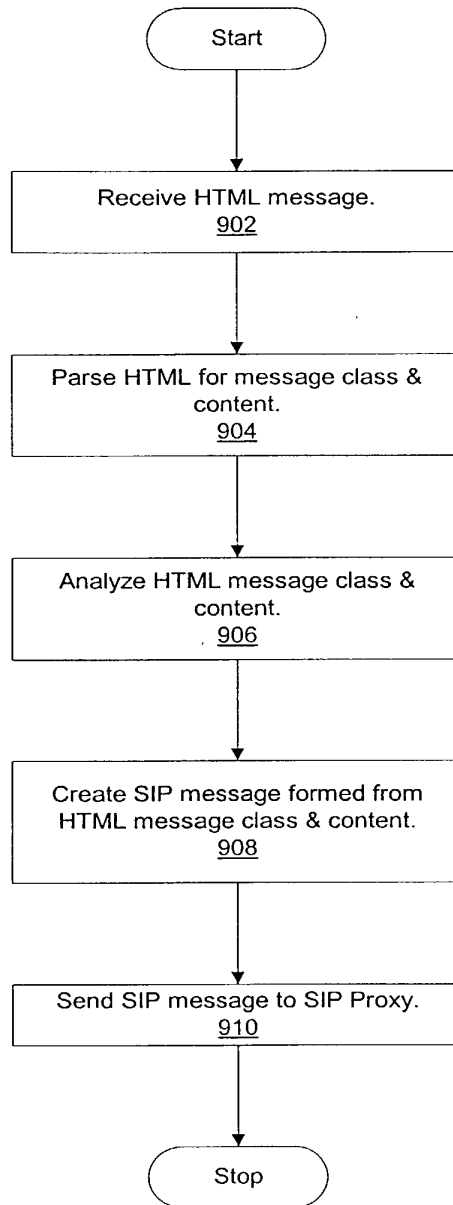


Figure 9

11032RR

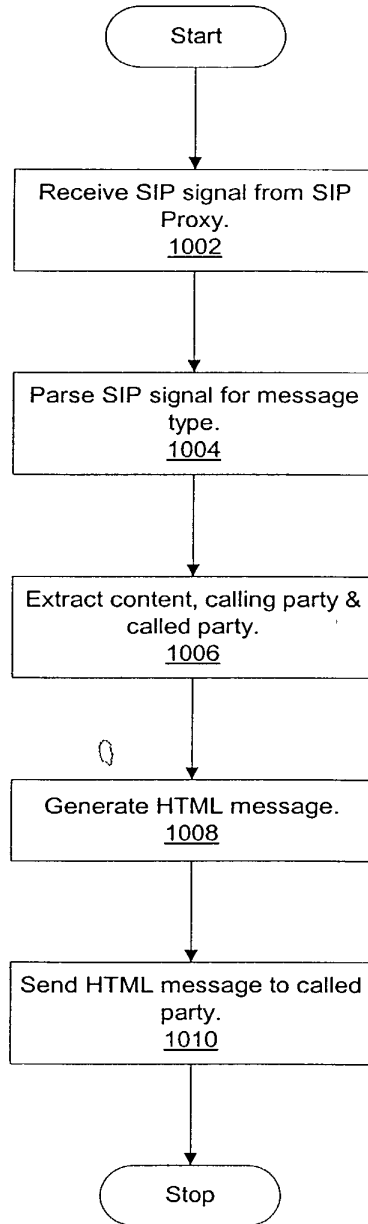


Figure 10

11032RR

\*\*\*\*\*

Docket Number, **11032RR**  
Page 1 of 3

**DECLARATION AND POWER OF ATTORNEY FOR  
PATENT APPLICATION**

As below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name;

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled as set forth below, which is described in the specification of which: (check one)

filed herewith under Attorney's Docket Number 11032RR

**PORTABLE CALL MANAGEMENT SYSTEM**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 CFR 1.56.

I hereby claim the benefit under Title 35 United States Code section 120 of the provisional application filed under 111b of this title as listed below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

3 1 3 4 0 5 2 5 2 7 4 1 2 1 1 4 5 6 2

Docket Number: **11032RR**  
Page 2 of 3

**POWER OF ATTORNEY.** As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John D. Crane, Reg. No. 25,231;  
Christopher O. Edwards, Reg. No. 36,127; Robert C. Klinger, Reg. No. 34,365;  
James A. Harrison, Reg. No. 40,401; W. Glen Johnson, Reg. No. 39,525; Duke W. Yee, Reg. No. 34,285;  
Rudolph J. Buchel, Reg. No. 43,448. Joseph R. Burwell, Reg. No. 44,468, Stephen R. Loe, Reg. No. 43,757.

Send correspondence to John D. Crane, Nortel Networks Corporation, Patent Department; P.O. Box 833858, Mail Stop 488/05/B10; Richardson, Texas 75083-3858 and direct all telephone calls to John D. Crane, telephone. (972) 695-8442.

=====

(1) FULL NAME OF INVENTOR: Gregory T. Osterhout

INVENTOR'S SIGNATURE: *Gregory T. Osterhout* DATE: 10/15/99

RESIDENCE: 313 Falcon Court, Coppell, TX 75019

COUNTY: Dallas

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

(2) FULL NAME OF INVENTOR: Kim B. Holmes

INVENTOR'S SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

RESIDENCE: 5408 Scenic Drive, Rowlett, TX 75086

COUNTY: Dallas

CITIZENSHIP: Canada

POST OFFICE ADDRESS: Same As Above

(3) FULL NAME OF INVENTOR: Mark Sosebee

INVENTOR'S SIGNATURE: \_\_\_\_\_

DATE:

RESIDENCE: 920 Goodwin Drive, Plano, TX 75023

COUNTY: Collin

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

**DECLARATION AND POWER OF ATTORNEY FOR  
PATENT APPLICATION**

As below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name;

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled as set forth below, which is described in the specification of which: (check one)

was filed on October 15, 1999, under Attorney's Docket Number 11032RR as Application No. 09/419,175

**PORTABLE CALL MANAGEMENT SYSTEM**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 CFR 1.56.

I hereby claim the benefit under Title 35 United States Code section 120 of the provisional application filed under 111b of this title as listed below:

---

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\*\*\*\*\*

Docket Number: **11032RR**

Page 2 of 3

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Christopher O. Edwards, Reg. No. 36,127; Robert C. Klinger, Reg. No. 34,365;  
James A. Harrison, Reg. No. 40,401; W. Glen Johnson, Reg. No. 39,525; Duke W. Yee, Reg. No. 34,285;  
Rudolph J. Buchel, Reg. No. 43,448, Joseph R. Burwell, Reg. No. 44,468, Stephen R. Loe, Reg. No. 43,757.

Send correspondence to John D. Crane, Nortel Networks Corporation, Patent Department; P.O. Box 833858, Mail Stop 468/05/B10; Richardson, Texas 75083-3858 and direct all telephone calls to John D. Crane, telephone: (972) 695-8442.

=====

(1) FULL NAME OF INVENTOR: **Gregory T. Osterhout**

INVENTOR'S SIGNATURE: \_\_\_\_\_

DATE:

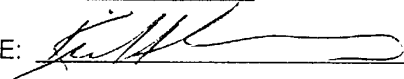
RESIDENCE: 313 Falcon Court, Coppell, TX 75019

COUNTY: Dallas

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

(2) FULL NAME OF INVENTOR: **Kim B. Holmes**

INVENTOR'S SIGNATURE: 

DATE: 11/17/99.

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COUNTY: Rockwall

CITIZENSHIP: Canada

POST OFFICE ADDRESS: Same As Above





\*\*\*\*\*

Docket Number: 11032RR

Page 3 of 3

(3) FULL NAME OF INVENTOR: Mark Sosebee

INVENTOR'S SIGNATURE: Mark Sosebee

DATE: 11/17/99

RESIDENCE: 920 Goodwin Drive, Plano, TX 75023

COUNTY: Collin

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above



10/1999  
07/19/02

P

PATENT NUMBER and  
ISSUE DATE

U.S. UTILITY Patent Application

T-5/53

| APPL NUM | FILING DATE | CLASS | SUBCLASS | GAU  | EXAMINER  |
|----------|-------------|-------|----------|------|-----------|
| 10199797 | 07/19/2002  | 455   | 417      | 2625 | Nguyen, T |

**\*\*APPLICANTS:** Osterhout Gregory; Holmes Kim; Gosabee Mark;

**\*\*CONTINUING DATA VERIFIED:**  
This application is a DIV of 09/419,175 10/15/1999  
T. Nguyen

**\*\* FOREIGN APPLICATIONS VERIFIED:**

|  |  |                                  |  |
|--|--|----------------------------------|--|
| PG-PUB   | DO NOT PUBLISH <input type="checkbox"/>                  | RESCIND <input type="checkbox"/> |  |
| Foreign priority claimed                       | <input type="checkbox"/> yes <input type="checkbox"/> no | ATTORNEY DOCKET NO               |  |
| 35 USC 119 conditions met                      | <input type="checkbox"/> yes <input type="checkbox"/> no | 11032RRUS04D                     |  |
| Verified and Acknowledged Examiners's initials |  |                                  |  |
| TITLE : Portable coil management system        |  |                                  |  |

U.S. DEPT. OF COMM. / PAT. & TM. PTO 4351 (Rev. 12-94)

|   |           |                           |              |                      |
|---|-----------|---------------------------|--------------|----------------------|
| <b>NOTICE OF ALLOWANCE MAILED</b>   |           | <b>CLAIMS ALLOWED</b>     |              |                      |
|   |           | Assistant Examiner        |              | Total Claims         |
|   |           |                           |              | Print Claim for O.G. |
| <b>ISSUE FEE</b>  |           | <b>DRAWING</b>            |              |                      |
| Amount Due  | Date Paid | Sheet Drawg.              | Figs. Drawg. | Print Fig.           |
|   |           | Application Examiner      |              |                      |
| <input type="checkbox"/> <b>TERMINAL<br/>DISCLAIMER</b>   |           | <b>PREPARED FOR ISSUE</b> |              |                      |
| <b>WARNING:</b> The information disclosed herein may be restricted.<br>Unauthorized disclosure may be prohibited by the United States Code Title 35,<br>Sections 122, 181 and 368, Possession outside the U.S. Patent & Trademark<br>Office is restricted to authorized employees and contractors only. |           |                           |              |                      |

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(Attached in pocket on right inside flap)

### SEARCH

| Class | Sub.                  | Date   | Exmr. |
|-------|-----------------------|--------|-------|
| 455   | 417                   | 9/2/03 | 805   |
|       | 412.1                 |        |       |
|       | 412.2                 |        |       |
|       | 414.1                 |        |       |
|       | 415                   |        |       |
|       | 425                   |        |       |
|       | 458                   |        |       |
|       | 459                   |        |       |
|       | 463                   |        |       |
|       | 466                   |        |       |
|       | 556.1                 |        |       |
|       | 556.2                 |        |       |
|       | (IDA)                 |        |       |
| 709   | 217                   | 9/3/03 | 875   |
|       | 219                   |        |       |
|       | 220                   |        |       |
|       | 227                   |        |       |
| 340   | 3.52                  |        |       |
|       | 3.53                  |        |       |
|       | 3.54                  |        |       |
|       | 825.29                |        |       |
|       | 7.46                  |        |       |
|       | 7.47                  |        |       |
|       | 7.52                  |        |       |
|       | Updated since 10/4/04 |        | 876   |

### INTERFERENCE SEARCHED

| Class | Sub. | Date | Exmr. |
|-------|------|------|-------|
|       |      |      |       |
|       |      |      |       |
|       |      |      |       |

### SEARCH NOTES

(List databases searched. Attach search strategy inside.)

|             | Date    | Exmr. |
|-------------|---------|-------|
| Fast Search | 9/2/03  | 806   |
| "           | 9/3/03  | 876   |
| Wynen No    | 9/3/03  | 878   |
| Fast Search | 10/4/04 | 876   |
| "           | 12/04   | 876   |

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07/19/02

1901 U.S. P.

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PTO/SB/05 (03-01)

Approved for Release through 10/31/2002. OMB 0654-0032

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A

# UTILITY PATENT APPLICATION TRANSMITTAL

|                        |                                 |
|------------------------|---------------------------------|
| Attorney Docket No.    | 11032RRUS04D                    |
| First Inventor         | Osterhout et al.                |
| Title                  | Portable Call Management System |
| Express Mail Label No. | EV082028113US                   |

Only for new nonprovisional applications under 37 CFR 1.53(b)

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original and a duplicate for fee processing)*
- Applicant claims small entity status.  
See 37 CFR 1.27.
- Specification [Total Pages  ]  
*(preferred arrangement set forth below)*
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [ Total Sheets  ]
- Oath or Declaration [ Total Pages  ]
  - Newly executed (original or copy)
  - Copy from a prior application (37 CFR 1.63 (d))  
*(for continuation/divisional with Box 18 completed)*
    - DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

- CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - Computer Readable Form (CRF)
  - Specification Sequence Listing on:
    - CD-ROM or CD-R (2 copies); or
    - paper
  - Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

- Assignment Papers (cover sheet & document(s))
- 37 CFR 3.73(b) Statement of Power of Attorney  
*(when there is an assignee)*
- English Translation Document (if applicable)
- Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
- Preliminary Amendment
- Return Receipt Postcard (MPEP 503)  
*(Should be specifically itemized)*
- Certified Copy of Priority Document(s)  
*(if foreign priority is claimed)*
- Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
- Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No.: 09, 419,175

Prior application information: Examiner: Nguyen, Thuan T. Group Art Unit: 2684

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

Customer Number or Bar Code Label  or  Correspondence address below  
*(Insert Customer No. or Attach bar code label here)*

|         |           |          |  |  |
|---------|-----------|----------|--|--|
| Name    |           |          |  |  |
| Address |           |          |  |  |
| City    | State     | Zip Code |  |  |
| Country | Telephone | Fax      |  |  |

|                   |                  |                                   |            |
|-------------------|------------------|-----------------------------------|------------|
| Name (Print/Type) | Duke W. Yee      | Registration No. (Attorney/Agent) | 34,285     |
| Signature         | <i>Dubell...</i> | Date                              | 07/19/2002 |

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# FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

### Complete if Known

|                      |                  |
|----------------------|------------------|
| Application Number   | Not Assigned     |
| Filing Date          | 07/19/2002       |
| First Named Inventor | Osterhout et al. |
| Examiner Name        | Nguyen, Thuan T. |
| Group Art Unit       | 2684             |
| Attorney Docket No.  | 11032RRUS04D     |

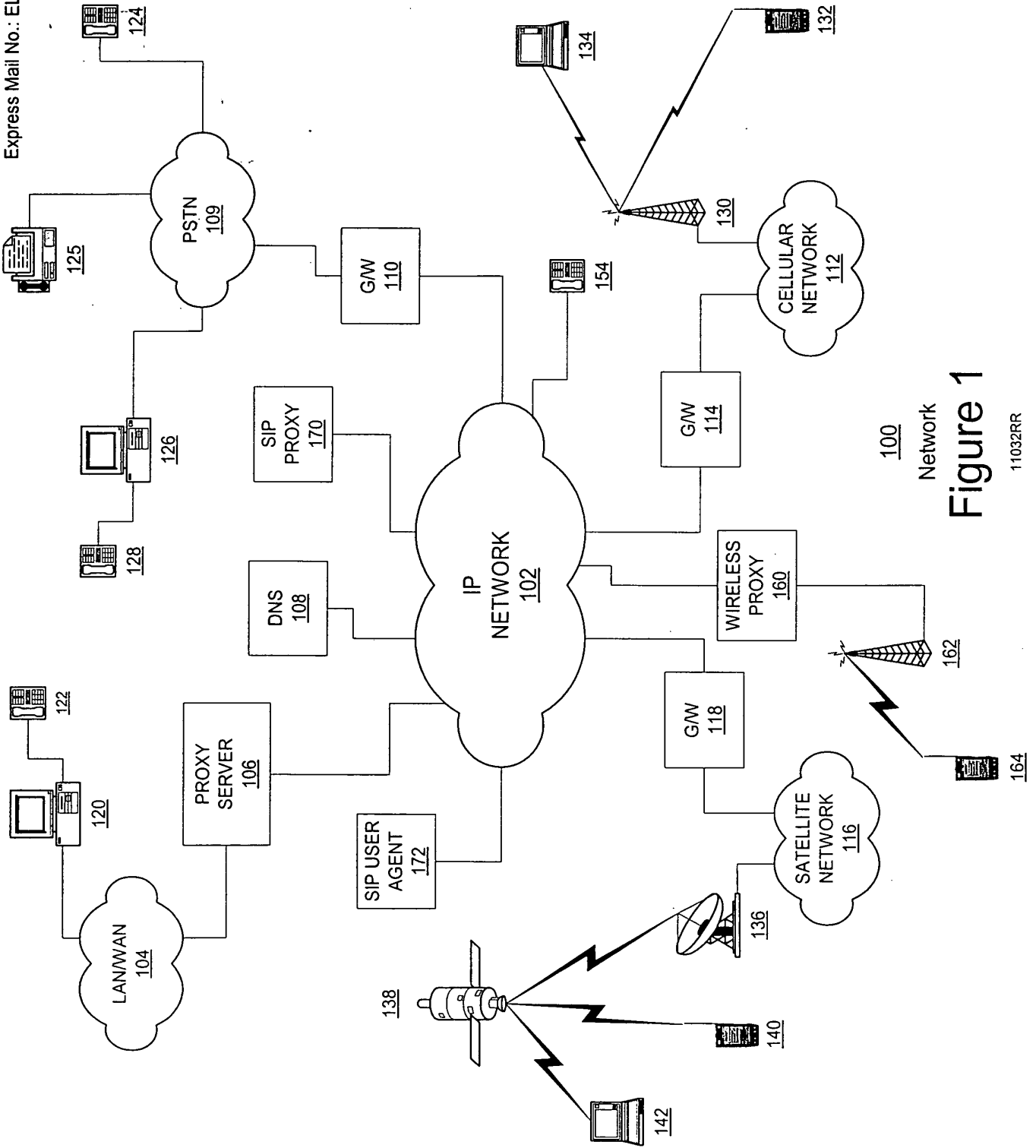
TOTAL AMOUNT OF PAYMENT (\$) 740.00

| METHOD OF PAYMENT  |                            | FEE CALCULATION (continued)  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
|--|----------------------------|--|-------------------|--|----------------------------|-------------------|-------------------|-----------------|----------|----------------------------|----------|-------|------|-------------------------------------|--|--------|------|---|----|--|----------------------------|----------------------------|----------|-----|-----|-------------------------------|--|--------------|-------|--|-------------|--|-----|---|------|-----|------|---|--|-----|--------|--|--------|---|--|-----|-----------|-----|----|--|--|-----|-----|-----|-----|---|--|-----|-----|-----|-----|--|--|-----|-------|-----|-----|---|--|-----|-------|-----|-----|--|--|-----|-----|-----|-----|------------------|--|-----|-----|-----|-----|--|--|-----|-----|-----|-----|--------------------------|--|-----|-------|-----|-------|---|--|-----|-----|-----|----|----------------------------------|--|-----|-------|-----|-----|------------------------------------|--|-----|-------|-----|-----|--------------------------------|--|-----|-----|-----|-----|------------------|--|-----|-----|-----|-----|-----------------|--|-----|-----|-----|-----|-------------------------------|--|-----|----|-----|----|-------------------------------------|--|-----|-----|-----|-----|---|--|-----|----|-----|----|--|--|-----|-----|-----|-----|---|--|-----|-----|-----|-----|--|--|-----|-----|-----|-----|---|--|-----|-----|-----|-----|---|--|
| <p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number: 50-0392</p> <p>Deposit Account Name: Carstens, Yee &amp; Cahoon</p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p> |                            | <p>3. ADDITIONAL FEES</p> <table border="1"> <thead> <tr> <th>Fee Code</th> <th>Large Entity (\$)</th> <th>Small Entity Code</th> <th>Small Entity (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>920</td><td>217</td><td>460</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,440</td><td>218</td><td>720</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,960</td><td>228</td><td>980</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>320</td><td>219</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>320</td><td>220</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>280</td><td>221</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,280</td><td>241</td><td>640</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,280</td><td>242</td><td>640</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>460</td><td>243</td><td>230</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>620</td><td>244</td><td>310</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>146</td><td>740</td><td>246</td><td>370</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>149</td><td>740</td><td>249</td><td>370</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>179</td><td>740</td><td>279</td><td>370</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> </tbody> </table> |                   | Fee Code   | Large Entity (\$)          | Small Entity Code | Small Entity (\$) | Fee Description | Fee Paid | 105                        | 130      | 205   | 65   | Surcharge - late filing fee or oath |  | 127    | 50   | 227   | 25 | Surcharge - late provisional filing fee or cover sheet |                            | 139                        | 130      | 139 | 130 | Non-English specification     |  | 147          | 2,520 | 147                                      | 2,520       | For filing a request for <i>ex parte</i> reexamination |     | 112   | 920* | 112 | 920* | Requesting publication of SIR prior to Examiner action    |  | 113 | 1,840* | 113  | 1,840* | Requesting publication of SIR after Examiner action |  | 115 | 110       | 215 | 55 | Extension for reply within first month |  | 116 | 400 | 216 | 200 | Extension for reply within second month |  | 117 | 920 | 217 | 460 | Extension for reply within third month |  | 118 | 1,440 | 218 | 720 | Extension for reply within fourth month |  | 128 | 1,960 | 228 | 980 | Extension for reply within fifth month |  | 119 | 320 | 219 | 160 | Notice of Appeal |  | 120 | 320 | 220 | 160 | Filing a brief in support of an appeal |  | 121 | 280 | 221 | 140 | Request for oral hearing |  | 138 | 1,510 | 138 | 1,510 | Petition to institute a public use proceeding |  | 140 | 110 | 240 | 55 | Petition to revive - unavoidable |  | 141 | 1,280 | 241 | 640 | Petition to revive - unintentional |  | 142 | 1,280 | 242 | 640 | Utility issue fee (or reissue) |  | 143 | 460 | 243 | 230 | Design issue fee |  | 144 | 620 | 244 | 310 | Plant issue fee |  | 122 | 130 | 122 | 130 | Petitions to the Commissioner |  | 123 | 50 | 123 | 50 | Processing fee under 37 CFR 1.17(q) |  | 126 | 180 | 126 | 180 | Submission of Information Disclosure Stmt |  | 581 | 40 | 581 | 40 | Recording each patent assignment per property (times number of properties) |  | 146 | 740 | 246 | 370 | Filing a submission after final rejection (37 CFR § 1.129(a)) |  | 149 | 740 | 249 | 370 | For each additional invention to be examined (37 CFR § 1.129(b)) |  | 179 | 740 | 279 | 370 | Request for Continued Examination (RCE) |  | 169 | 900 | 169 | 900 | Request for expedited examination of a design application |  |
| Fee Code   | Large Entity (\$)          | Small Entity Code  | Small Entity (\$) | Fee Description  | Fee Paid                   |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 105  | 130                        | 205  | 65                | Surcharge - late filing fee or oath  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 127  | 50                         | 227  | 25                | Surcharge - late provisional filing fee or cover sheet                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 139  | 130                        | 139  | 130               | Non-English specification  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 147  | 2,520                      | 147  | 2,520             | For filing a request for <i>ex parte</i> reexamination                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 112  | 920*                       | 112  | 920*              | Requesting publication of SIR prior to Examiner action                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 113  | 1,840*                     | 113  | 1,840*            | Requesting publication of SIR after Examiner action                        |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 115  | 110                        | 215  | 55                | Extension for reply within first month                                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 116  | 400                        | 216  | 200               | Extension for reply within second month                                    |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 117  | 920                        | 217  | 460               | Extension for reply within third month                                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 118  | 1,440                      | 218  | 720               | Extension for reply within fourth month                                    |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 128  | 1,960                      | 228  | 980               | Extension for reply within fifth month                                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 119  | 320                        | 219  | 160               | Notice of Appeal   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 120  | 320                        | 220  | 160               | Filing a brief in support of an appeal                                     |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 121  | 280                        | 221  | 140               | Request for oral hearing   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 138  | 1,510                      | 138  | 1,510             | Petition to institute a public use proceeding                              |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 140  | 110                        | 240  | 55                | Petition to revive - unavoidable   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 141  | 1,280                      | 241  | 640               | Petition to revive - unintentional   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 142  | 1,280                      | 242  | 640               | Utility issue fee (or reissue)   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 143  | 460                        | 243  | 230               | Design issue fee   |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 144  | 620                        | 244  | 310               | Plant issue fee  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 122  | 130                        | 122  | 130               | Petitions to the Commissioner  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 123  | 50                         | 123  | 50                | Processing fee under 37 CFR 1.17(q)  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 126  | 180                        | 126  | 180               | Submission of Information Disclosure Stmt                                  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 581  | 40                         | 581  | 40                | Recording each patent assignment per property (times number of properties) |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 146  | 740                        | 246  | 370               | Filing a submission after final rejection (37 CFR § 1.129(a))              |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 149  | 740                        | 249  | 370               | For each additional invention to be examined (37 CFR § 1.129(b))           |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 179  | 740                        | 279  | 370               | Request for Continued Examination (RCE)                                    |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 169  | 900                        | 169  | 900               | Request for expedited examination of a design application                  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| <p>2. <input checked="" type="checkbox"/> Payment Enclosed:</p> <p><input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>  |                            | <p>1. BASIC FILING FEE</p> <table border="1"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>740</td><td>201 370 Utility filing fee</td><td>740.00</td></tr> <tr><td>106</td><td>330</td><td>206 165 Design filing fee</td><td></td></tr> <tr><td>107</td><td>510</td><td>207 255 Plant filing fee</td><td></td></tr> <tr><td>108</td><td>740</td><td>208 370 Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>160</td><td>214 80 Provisional filing fee</td><td></td></tr> <tr><td colspan="3">SUBTOTAL (1)</td><td>(\$ 740.00)</td></tr> </tbody> </table>  |                   | Large Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description   | Fee Paid          | 101             | 740      | 201 370 Utility filing fee | 740.00   | 106   | 330  | 206 165 Design filing fee           |  | 107    | 510  | 207 255 Plant filing fee  |    | 108  | 740                        | 208 370 Reissue filing fee |          | 114 | 160 | 214 80 Provisional filing fee |  | SUBTOTAL (1) |       |  | (\$ 740.00) |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description  | Fee Paid          |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 101  | 740                        | 201 370 Utility filing fee   | 740.00            |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 106  | 330                        | 206 165 Design filing fee  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 107  | 510                        | 207 255 Plant filing fee   |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 108  | 740                        | 208 370 Reissue filing fee   |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 114  | 160                        | 214 80 Provisional filing fee  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| SUBTOTAL (1)   |                            |  | (\$ 740.00)       |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| <p>2. EXTRA CLAIM FEES</p> <table border="1"> <thead> <tr> <th>Total Claims</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>15</td><td>-20** = 0</td><td>18.00</td><td>0.00</td></tr> <tr><td>2</td><td>-3** = 0</td><td>84.00</td><td>0.00</td></tr> <tr><td colspan="2">Multiple Dependent</td><td>280.00</td><td>0.00</td></tr> </tbody> </table>                                   |                            | Total Claims   | Extra Claims      | Fee from below   | Fee Paid                   | 15                | -20** = 0         | 18.00           | 0.00     | 2                          | -3** = 0 | 84.00 | 0.00 | Multiple Dependent                  |  | 280.00 | 0.00 | <p>2. EXTRA CLAIM FEES (continued)</p> <table border="1"> <thead> <tr> <th>Large Entity Fee Code (\$)</th> <th>Small Entity Fee Code (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203 9 Claims in excess of 20</td><td></td></tr> <tr><td>102</td><td>84</td><td>202 42 Independent claims in excess of 3</td><td></td></tr> <tr><td>104</td><td>280</td><td>204 140 Multiple dependent claim, if not paid</td><td></td></tr> <tr><td>109</td><td>84</td><td>209 42 ** Reissue independent claims over original patent</td><td></td></tr> <tr><td>110</td><td>18</td><td>210 9 ** Reissue claims in excess of 20 and over original patent</td><td></td></tr> <tr><td colspan="3">SUBTOTAL (2)</td><td>(\$ 0.00)</td></tr> </tbody> </table> |    | Large Entity Fee Code (\$)                             | Small Entity Fee Code (\$) | Fee Description            | Fee Paid | 103 | 18  | 203 9 Claims in excess of 20  |  | 102          | 84    | 202 42 Independent claims in excess of 3 |             | 104  | 280 | 204 140 Multiple dependent claim, if not paid |      | 109 | 84   | 209 42 ** Reissue independent claims over original patent |  | 110 | 18     | 210 9 ** Reissue claims in excess of 20 and over original patent |        | SUBTOTAL (2)  |  |     | (\$ 0.00) |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| Total Claims   | Extra Claims               | Fee from below   | Fee Paid          |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 15   | -20** = 0                  | 18.00  | 0.00              |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 2  | -3** = 0                   | 84.00  | 0.00              |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| Multiple Dependent   |                            | 280.00   | 0.00              |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| Large Entity Fee Code (\$)   | Small Entity Fee Code (\$) | Fee Description  | Fee Paid          |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 103  | 18                         | 203 9 Claims in excess of 20   |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 102  | 84                         | 202 42 Independent claims in excess of 3   |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 104  | 280                        | 204 140 Multiple dependent claim, if not paid  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 109  | 84                         | 209 42 ** Reissue independent claims over original patent  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| 110  | 18                         | 210 9 ** Reissue claims in excess of 20 and over original patent   |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| SUBTOTAL (2)   |                            |  | (\$ 0.00)         |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |
| <p>**or number previously paid, if greater; For Reissues, see above</p>  |                            | <p>*Reduced by Basic Filing Fee Paid</p> <p>SUBTOTAL (3) (\$)</p>  |                   |  |                            |                   |                   |                 |          |                            |          |       |      |                                     |  |        |      |   |    |  |                            |                            |          |     |     |                               |  |              |       |  |             |  |     |   |      |     |      |   |  |     |        |  |        |   |  |     |           |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |       |     |     |   |  |     |       |     |     |  |  |     |     |     |     |                  |  |     |     |     |     |  |  |     |     |     |     |                          |  |     |       |     |       |   |  |     |     |     |    |                                  |  |     |       |     |     |                                    |  |     |       |     |     |                                |  |     |     |     |     |                  |  |     |     |     |     |                 |  |     |     |     |     |                               |  |     |    |     |    |                                     |  |     |     |     |     |   |  |     |    |     |    |  |  |     |     |     |     |   |  |     |     |     |     |  |  |     |     |     |     |   |  |     |     |     |     |   |  |

| SUBMITTED BY      |             | Complete (if applicable)          |                |
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|                   |             | Date                              | 07/19/2002     |

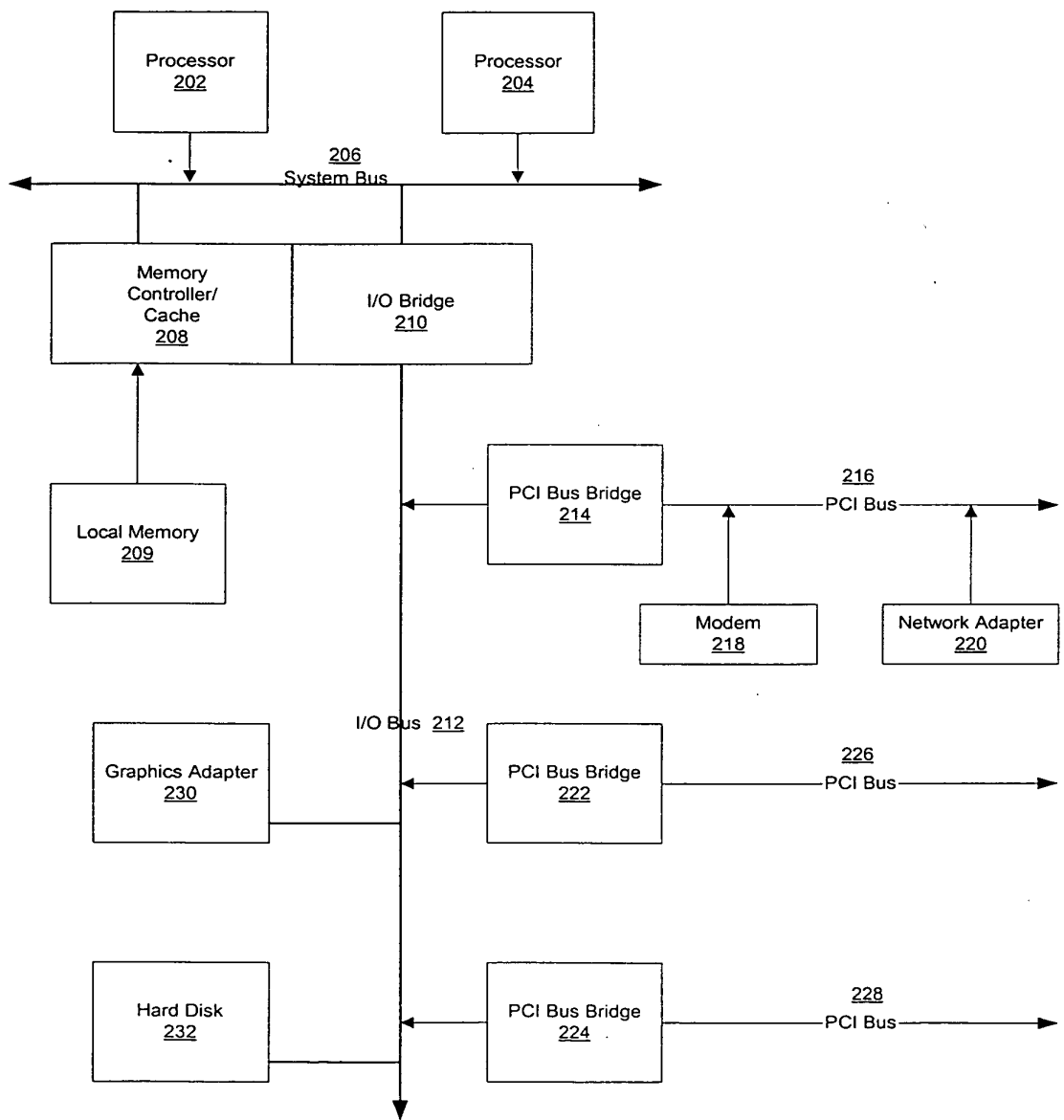
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Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



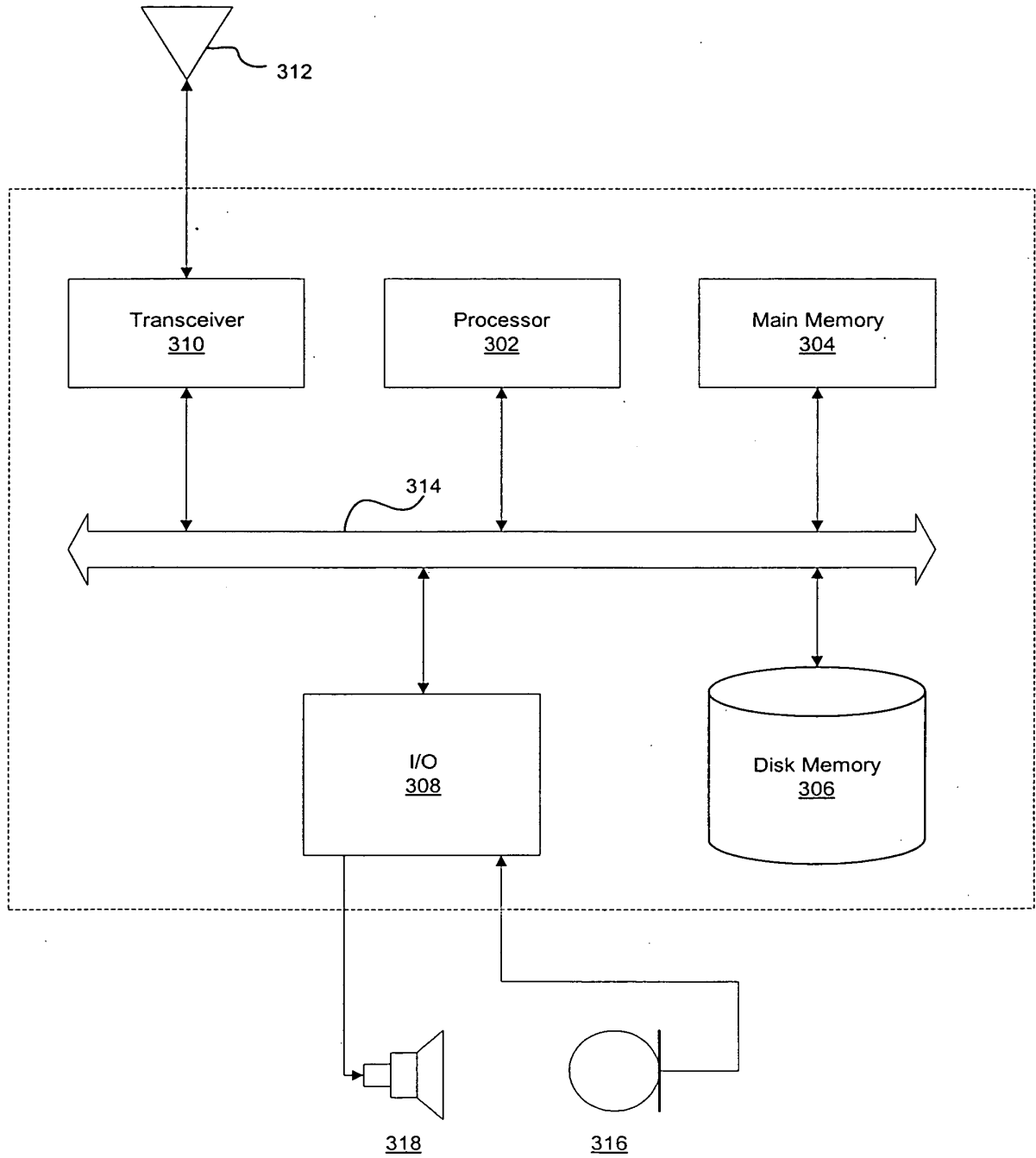
100 Network  
Figure 1

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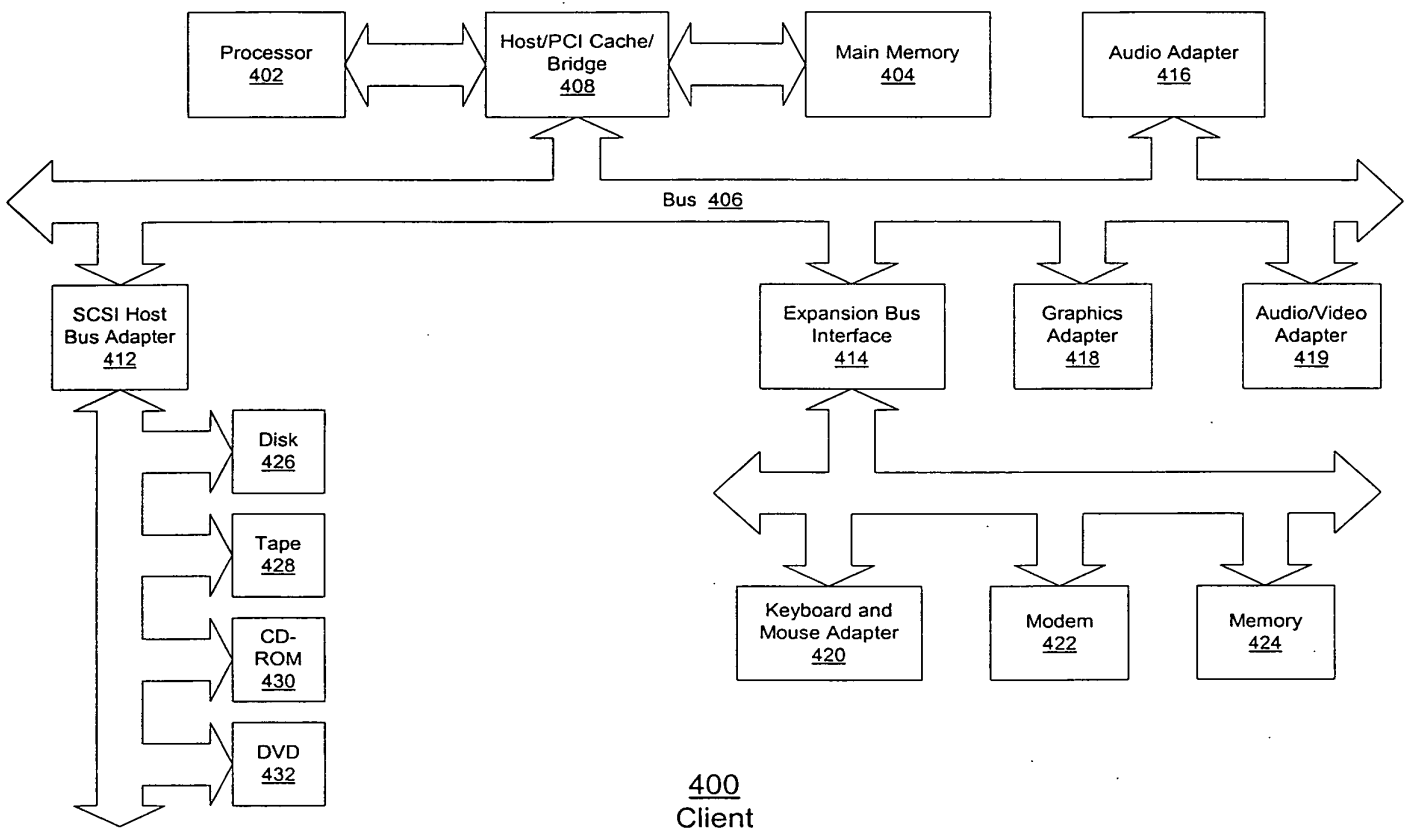


200  
Server  
**Figure 2**  
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300  
**Figure 3**  
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400  
Client  
**Figure 4**  
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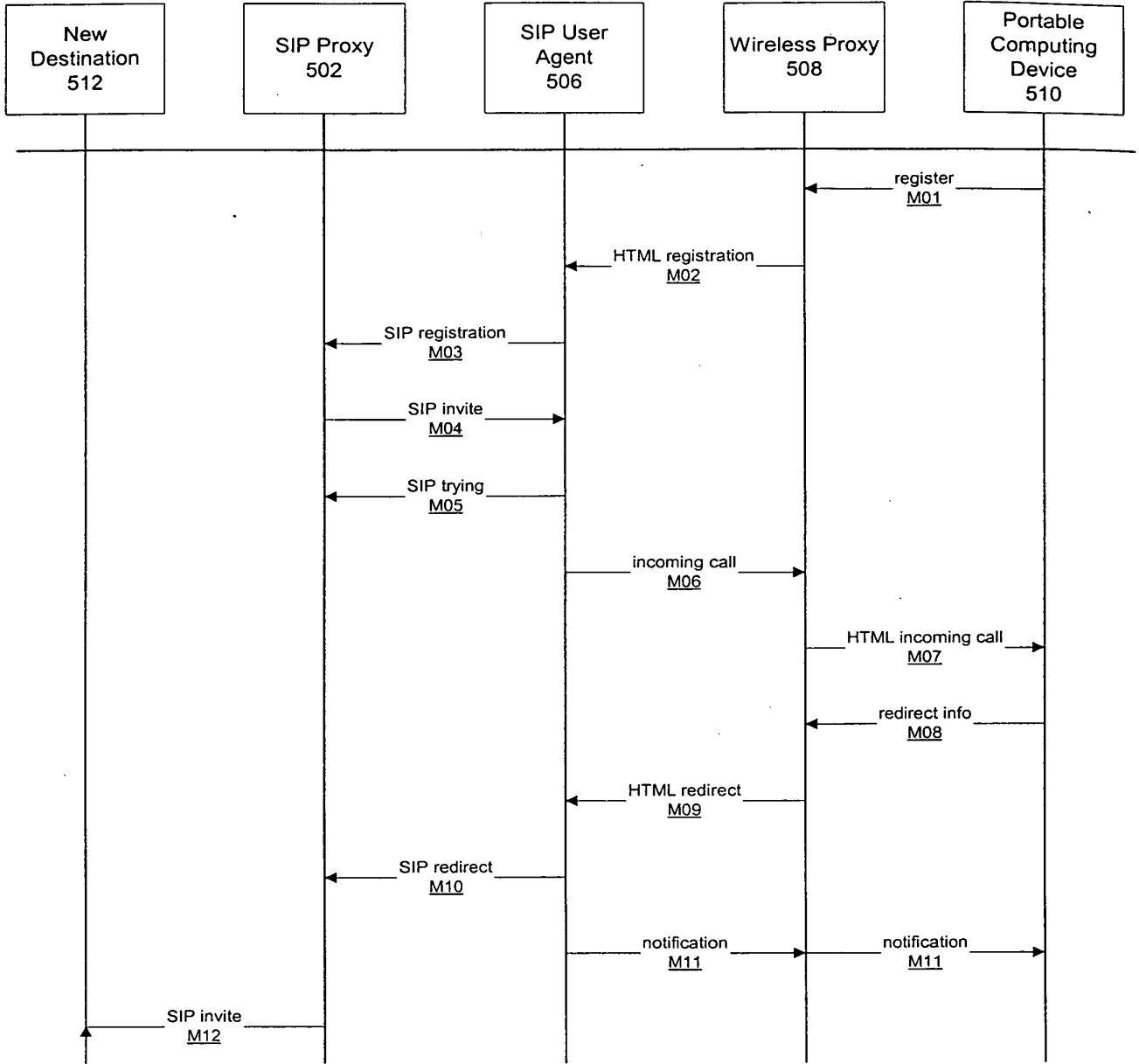


Figure 5  
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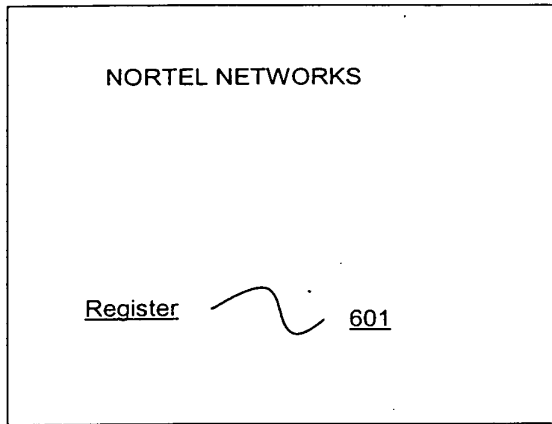


Figure 6A

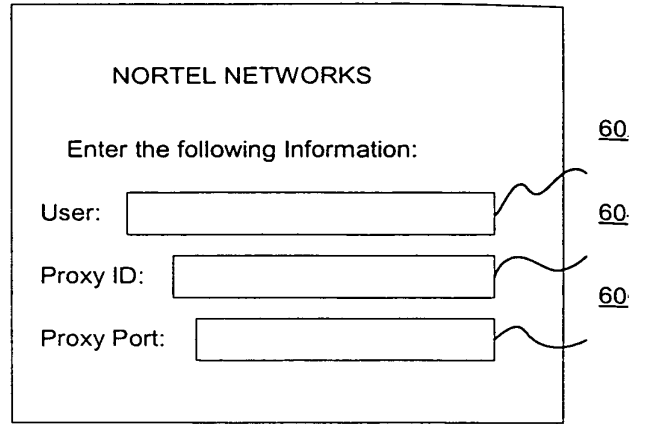


Figure 6B

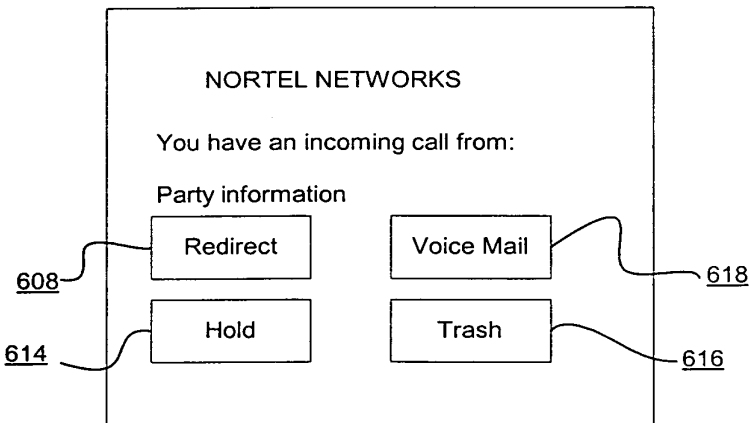


Figure 6C

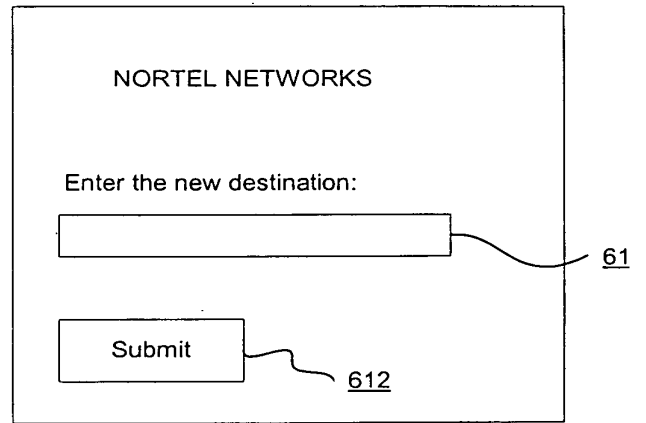


Figure 6D

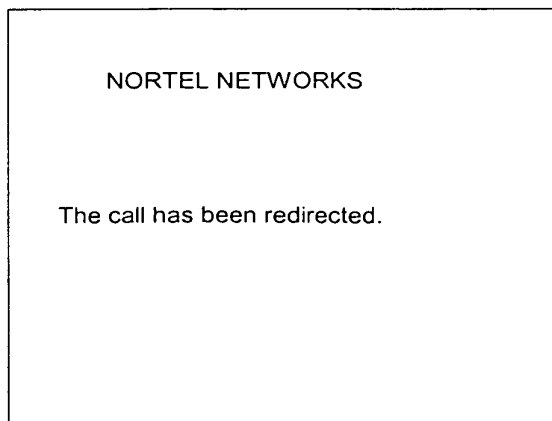


Figure 6E

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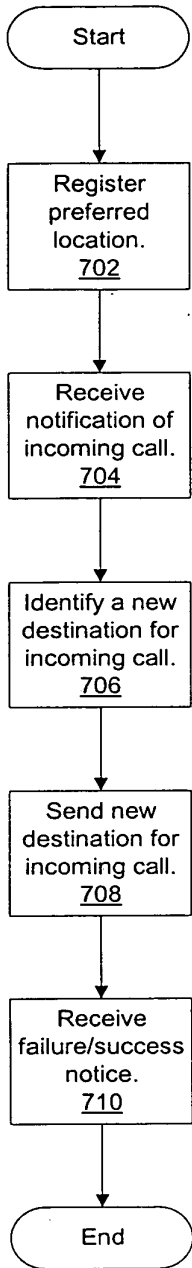


Figure 7  
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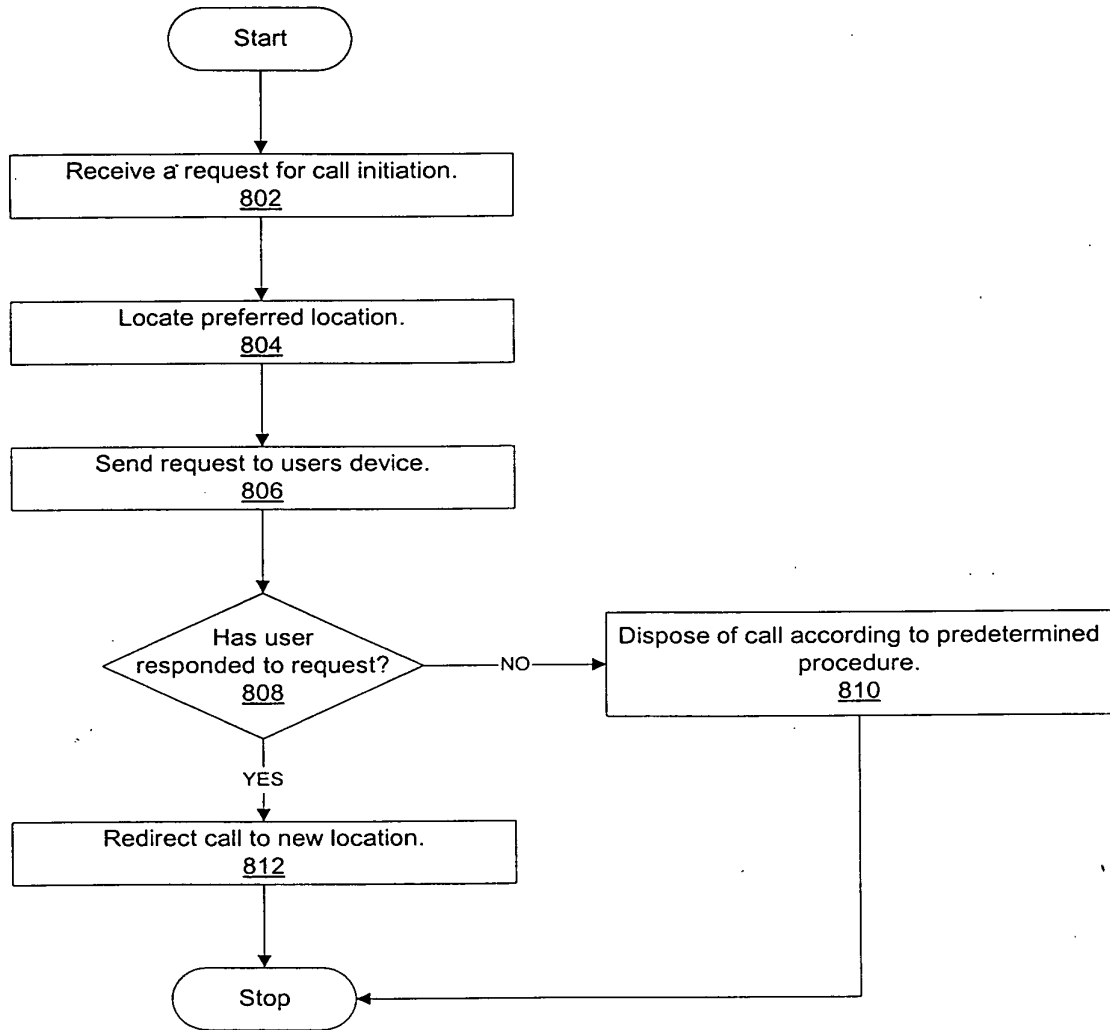


Figure 8

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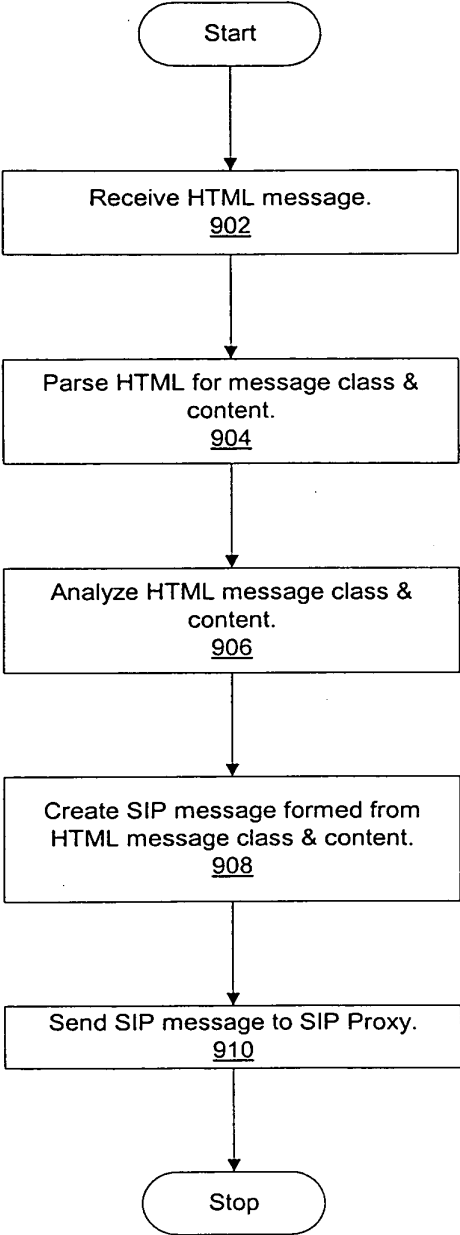


Figure 9

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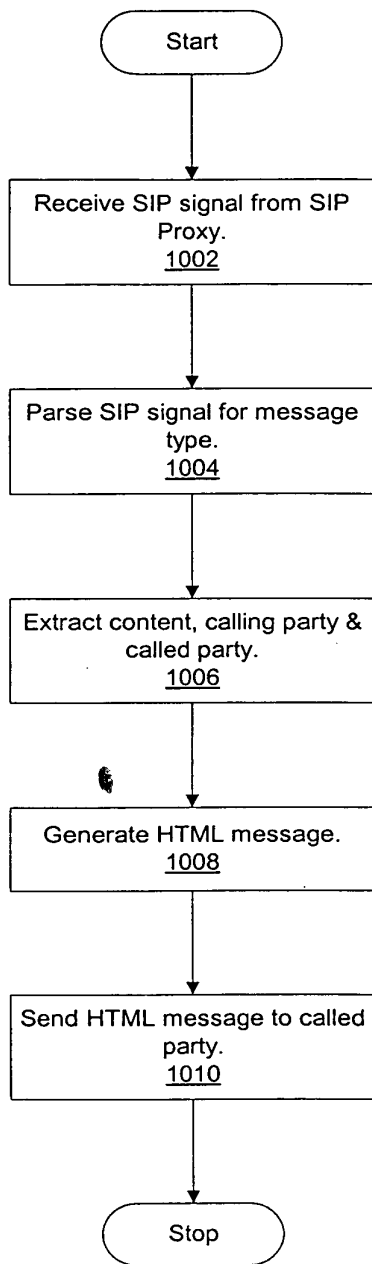


Figure 10

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**PORTABLE CALL MANAGEMENT SYSTEM**

5 **1. Field of the Invention:**

The present invention relates to telecommunications systems and, more specifically, to methods of transferring calls real time from one device to another.

IFS  
AI

A>

**2. Background of the Invention:**

10 Historically, when a caller telephoned a party, if the party to which the caller wished to speak with did not answer the phone or if the line was busy, the caller had to hang up and redial at a later time hoping that the second call would reach the intended party. Often times, the caller would need to attempt to contact the party multiple times in order to reach that party. If the caller had urgent  
15 information in which time was of the essence, this method was unsatisfactory and often resulted in the intended party missing important business or other opportunities.

Some of these problems were alleviated with the introduction of answering machines and voice mail systems. However, even these solutions were not  
20 completely satisfactory. For instance, utilizing answering machines and voice mail systems required the called party to actively retrieve their messages. Thus, either many important messages were still not received in a timely manner if the called party did not retrieve their messages frequently or the called party was required to check their voice mail or answering machine quite frequently when the  
25 party was out of the office or home in order to insure that messages were retrieved quickly. Thus, this results in the same problem as having the caller repeatedly call the intended party, except that in this case it is the called party that must waste its time insuring that no messages are missed.

A more recent solution to this problem is the introduction of subscriber's  
30 static reach list. A static reach list enabled a subscriber (i.e., called party) to enter a list of telephone numbers (or IP addresses, etc.) where the subscriber might be reached. The subscriber would enter these numbers in the order of preference in

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which the subscriber wished the telecommunications system to try to reach the subscriber. Therefore, if the subscriber were going to be away from the location of the subscriber's normal telephone number, if a call were received for the subscriber, the telecommunications system would redirect the subscriber's calls to  
5 the next number on the static reach list until the subscriber were reached or until the list of numbers was exhausted.

However, this method required the subscriber to know in advance the telephone number or other communications address at which the subscriber would be while traveling. Many times such information is unknowable either because  
10 the person does not know a number at the location to which they are travelling or because the person does not know sufficiently in advance where they will be in order to update the static reach list with the appropriate number. Therefore, it would be beneficial to have a method of to prevent a called party from missing calls without being required to know the number of a phone at which they will be  
15 in advance.

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### SUMMARY OF THE INVENTION

The present invention solves the problem of preventing a called party from  
5 missing calls without having to know in advance the number at which they will be  
by providing a method and apparatus for redirecting a call from a data processing  
system to another address. In a preferred embodiment, a notice of an incoming  
call received from a server at a data processing system. This notice may include  
10 caller identification information as well. The user of the data processing system is  
prompted for an address to which the user wishes the call to be redirected. The  
user then identifies and sends to the server a new address to which the incoming  
call is to be redirected.

In another aspect of the present invention, an SIP server receives a notice  
of a call and forwards the notice to a SIP user agent. The SIP proxy server then  
15 identifies the address to which the called party wishes the call sent from a  
database of preferred locations. The called party has previously registered their  
preferred location to this database. The SIP user agent then sends a message to  
the called party that they have an incoming call. The called party then identifies a  
20 phone number or IP address to which the called party wishes the call to be  
redirected. Thus, the called party can have their calls originally directed to their  
handheld personal digital assistant or other data processing device. Thus, when a  
call is received, the called party can determine at that time how to dispose of the  
call.

Other aspects and features of the present invention will become apparent  
25 to those ordinarily skilled in the art upon review of the following description of  
specific embodiments of the invention in conjunction with the accompanying  
figures.

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### BRIEF DESCRIPTION OF THE DRAWINGS

- 5           The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:
- 10           **Figure 1** depicts a block diagram illustrating a communications network in which the present invention may be implemented;
- Figure 2** depicts a block diagram of a data processing system which may be implemented as a server in accordance with the present invention;
- Figure 3** depicts a block diagram of a portable device such as a personal  
15       digital assistant (PDA) in which the present invention may be implemented;
- Figure 4** depicts a block diagram of a data processing system in which the present invention may be implemented;
- Figure 5** depicts a message flow chart illustrating the processes of redirecting a call in real time from according to the present invention;
- 20           **Figures 6A-6E** illustrate examples of sample HTML or web pages displayed to a user of a portable computing device;
- Figure 7** depicts a flowchart illustrating the methods executed on a portable computing device in accordance with a preferred embodiment of the present invention;
- 25           **Figure 8** depicts a flowchart illustrating the processes of redirecting a call which are implemented on a server within the communications network in accordance with the present invention;
- Figure 9** depicts a flowchart illustrating a method of converting HTML to SIP as performed by a SIP User Agent in accordance with the present invention;
- 30       and

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**Figure 10** depicts a flowchart illustrating a method of converting an SIP signal into an HTML message in accordance with the present invention.

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**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

5

With-reference now to the figures, and in particular with reference to **Figure 1**, a system diagram illustrating a plurality of interconnected heterogeneous networks in which a the present invention may be implemented is depicted. As illustrated, an Internet Protocol (IP) network **102**, a Local Area Network (LAN) / Wide Area Network (WAN) **104**, the Public Switched Telephone Network (PSTN) **109**, a cellular wireless network **112**, and a satellite communication network **116** make up the plurality of heterogeneous networks serviced by the personal mobility system of the present invention.

IP network **102** may be the publicly available IP network, a private IP network, or a combination of public and private IP networks. In any case, IP network **102** operates according to the Internet Protocol and routes packets among its many switches and through its many transmission paths. IP networks are generally known in the art to be expandable, fairly easy to use and heavily supported. Coupled to IP network **102** is a Domain Name Server (DNS) **108** to which queries may be sent, such queries each requesting an IP address based upon a Uniform Resource Locator (URL). IP network **102** supports 32 bit IP addresses as well as 128 bit IP addresses, which are currently in the planning stage.

LAN/WAN **104** couples to IP network **102** via a proxy server **106** (or another connection). LAN/WAN **104** may operate according to various communication protocols, such as the Internet Protocol, the Asynchronous Transfer Mode (ATM) protocol, or other known packet switched protocols. Proxy server **106** serves to route data between IP network **102** and LAN/WAN **104**. A firewall that precludes unwanted communications from entering LAN/WAN **104** may also be located at the location of proxy server **106**.

Computer **120** couples to LAN/WAN **104** and supports communications with LAN/WAN **104**. Computer **120** may employ the LAN/WAN and proxy

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server 106 to communicate with other devices across IP network 102. Such communications are generally known in the art and will not be further described herein except to expand upon the teachings of the present invention. As is also shown, phone 122 couples to computer 120 and may be employed to initiate IP  
5 Telephony communications with another phone or voice terminal using IP Telephony. In such an IP telephony system, a gatekeeper 152 is deployed by a service provider to manage IP telephony for its users. An IP phone 154 connected to IP network 102 (or other phone, e.g., phone 124) may communicate with phone 122 using IP telephony.

10 PSTN 109 is a circuit switched network that is primarily employed for voice communications, such as those enabled by a standard phone 124. However, PSTN 109 also supports the transmission of data. Data transmissions may be supported to a tone based terminal, such as a FAX machine 125, to a tone based modem contained in computer 126, or to another device that couples to PSTN 109  
15 via a digital connection, such as an Integrated Services Digital Network (ISDN) line, an Asynchronous Digital Subscriber Line (ADSL), or another digital connection to a terminal that supports such a connection. As illustrated, a voice terminal, such as phone 128, may couple to PSTN 109 via computer 126 rather than being supported directly by PSTN 109, as is the case with phone 124. Thus,  
20 computer 126 may support IP telephony with voice terminal 128, for example.

Cellular network 112 supports wireless communications with terminals operating in its service area (which may cover a city, county, state, country, etc.). As is known, cellular network 112 includes a plurality of towers, e.g., 130, that each service communications within a respective cell. Wireless terminals that  
25 may operate in conjunction with cellular network 112 include wireless handsets 132 and wirelessly enabled laptop computers 134, for example. Wireless handsets 132 could be, for example, personal digital assistants, wireless or cellular telephones, or two-way pagers. Cellular network 112 couples to IP network 102 via gateway 114.

30 Wireless handsets 132 and wirelessly enabled laptop computers 134 may communicate with cellular network 112 using a wireless application protocol

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(WAP). WAP is an open, global specification that allows mobile users with wireless devices, such as, for example, mobile phones, pagers, two-way radios, smartphones, communicators, personal digital assistants, and portable laptop computers, to easily access and interact with information and services almost  
5 instantly. WAP is a communications protocol and application environment and can be built on any operating system including, for example, Palm OS, EPOC, Windows CE, FLEXOS, OS/9, and JavaOS. WAP provides interoperability even between different device families.

WAP is the wireless equivalent of Hypertext Transfer Protocol (HTTP)  
10 and Hypertext Markup Language (HTML). The HTTP-like component defines the communication protocol between the handheld device and a server or gateway. This component addresses characteristics that are unique to wireless devices, such as data rate and round-trip response time. The HTML-like component, Wireless Markup Language (WML), defines new markup and scripting languages for  
15 displaying information to and interacting with the user. This component is highly focused on the limited display size and limited input devices available on small, handheld devices. For example, a typical cell phone may have only a 4x10-character display with 16-gray levels and only a numeric keypad plus up/down volume keys.

20 Cellular network 112 operates according to an operating standard, which may be the Advanced Mobile Phone System (AMPS) standard, the Code Division Multiple Access (CDMA) standard, the Time Division Multiple Access (TDMA) standard, or the Global System for Mobile Communications or Groupe Speciale Mobile (GSM), for example. Independent of the standard(s) supported by cellular  
25 network 112, cellular network 112 supports voice and data communications with terminal units, e.g., 132 and 134.

Satellite network 116 includes at least one satellite dish 136 that operates in conjunction with a satellite 138 to provide satellite communications with a plurality of terminals, e.g., laptop computer 142 and satellite handset 140.  
30 Satellite handset 140 could also be a two-way pager. Satellite network 116 may be serviced by one or more geosynchronous orbiting satellites, a plurality of



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medium earth orbit satellites, or a plurality of low earth orbit satellites. In any case, satellite network **116** services voice and data communications and couples to IP network **102** via gateway **118**.

Wireless Proxy **160** is coupled to IP network **102** and is coupled to a  
5 plurality of towers, e.g., **162**, which each provide wireless communications with wireless devices such as wireless device **164**. Wireless Proxy **160** provides access to IP network **102** to wireless device **164**, such as personal digital assistants (PDAs), that may require proprietary or other special protocols in order to communicate with IP network **102**. For example, wireless proxy server **160** may  
10 be a 3Com server utilizing 3Com protocols for communicating with a Palm VII, a handheld portable computing device available from 3Com Corporation in Santa Clara, California.

In a preferred embodiment of the present invention, wireless proxy **160** is a 3Com proxy server supporting communications with Palm VII personal  
15 organizer and portable computing device **164** is a Palm VII personal organizer. In this embodiment, communications between wireless proxy server **160** and portable computing device **164** is facilitated by the use of Palm Query Applications (PQAs). A PQA is like a mini-Web site that resides on portable computing device **164**. That is, a PQA is a special kind of record database. A  
20 typical PQA contains an HTML form or a list of hyperlinks that request additional information either locally — on personal computing device **164** — or remotely — on the Internet.

Much of the content on the Internet is designed to take advantage of the power of Pentium/RISC-class computers with large, high resolution color  
25 monitors and fast and cheap Internet access. In these circumstances, there is little reason to economize on the abundant connect time and large file size that make Web browsing such a rich, multimedia experience from a desktop or notebook computer.

However, this model is not the best model for a small, low-power  
30 computer like the Palm VII organizer with its tiny screen, battery powered operation, and relatively slow and expensive wireless connection to the Internet.

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Rather than duplicate the Web browsing model on a handheld computer, PQAs are developed that access targeted bits of Internet information — like clippings from a newspaper. Typically, a handheld computer user does not focus on following hyperlinks to the Internet (although this is available), but instead, they  
5 compose a simple query in the PQA (for example a request for a stock quote) and then send that query over the air.

Also included in network 100 is a Session Initiation Protocol (SIP) proxy 170. SIP proxy 170 is connected to IP network 102 and provides switching and routing for communication over IP network 102. SIP proxy 170 also maintains a  
10 static list of preferred locations to which a user wishes telephone calls or other communication types sent. When a request to initiate a communications session is received, SIP proxy 170 retrieves the static list of the called party and routes the call to the top address in the static list. If the communications session is not established with the top address in the static list, then SIP proxy 170 may attempt  
15 to access the next address in the list and so on until the called party is reached or until the addresses in the static list are exhausted.

SIP is a textual based signaling protocol for creating, modifying and terminating sessions. These sessions can be multimedia conferences, Internet telephone calls and similar applications consisting of one or more media types  
20 such as, for example, audio, video, or whiteboard. SIP invitations are used to create sessions and carry session descriptions, which allow participants to agree on a set of compatible media types. SIP requests can be sent either over TCP or UDP.

SIP User Agent 172 is also connected with IP Network 102. SIP User  
25 Agent 172 translates between SIP communications and Hypertext Transfer Protocol (HTTP) and other extensible markup language (XML) based protocols such as Voice XML (VOXML) and Wireless Application Protocol (WAP).

**Figure 1** is intended as an example and not as an architectural limitation for the processes of the present invention.

30 In a preferred embodiment, a user registers an address to which they wish their voice calls or other communications to be sent. The address can be an IP

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address, a PSTN address or other type of address for locating an electronic device such as a data processing system or telephone. As an example, consider a user of portable device 164 wishing to have all of their calls routed to the portable device. The user of portable device 164 sends an HTML registration request to Wireless  
5 Proxy 160, which then forwards the HTML registration request to SIP User Agent 172. SIP User Agent SIP 172 translates the HTML registration request from HTML into an SIP registration statement and sends the SIP registration statement to SIP Proxy 170. SIP Proxy 170 then updates the user's static list and inserts the newly received address into the top of the static list as the first address to attempt  
10 to establish a connection with if a request to initiate communications with that user is received. If the user does not have a static list, SIP Proxy 170 can create one and then place the received address in the newly created static list. The registration request does not have to initiate from a portable wireless device such as portable device 164 but may initiate with a LAN based data processing system  
15 such as client 120 or with some other type of wireless device.

When SIP Proxy 170 receives a request to initiate communications, such as a voice telephone call, with a user, SIP Proxy 170 retrieves the static list for the called party and determines the first address to contact. SIP Proxy 170 then sends an SIP Invite message to SIP User Agent 172. SIP User Agent 172 translates the  
20 SIP Invite message into an HTML message and sends the HTML message to Wireless Proxy 160 which then forwards the HTML message to portable device 164.

Once the HTML invite message is received at portable device 164, the user may then determine how to dispose of the call. If portable device 164 is a  
25 telephone (or supports voice communications), the user may choose to take the call if it is someone to which the user wishes to speak. The user may also redirect the call elsewhere to a nearby PSTN address, to a voice mailbox, or to an IP address. Portable device 164 may even suggest options as to disposal of the incoming communication. For example, if the incoming communication is video,  
30 rather than a voice call, portable device 164 may suggest routing the

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communication to client **120** on LAN/WAN **104**, which may be the nearest device capable of receiving such communication.

If the user decides to redirect the call to some other device, then redirection information in HTML format indicating the address of the new device is sent from portable device **164** to wireless proxy **160**. Wireless proxy **160** then forwards the HTML redirect information to SIP User Agent **172**, which converts the HTML redirect information into an SIP redirect and send the SIP redirect to SIP proxy **170**. SIP User Agent **172** also sends an HTML notification to portable device **164** via wireless proxy **160** indicating that the communication is being redirected. SIP proxy **170** then redirects the communication to the new address and takes down the connection with portable device **164**. If SIP proxy **170** is unable to make a connection with the new address (e.g., incorrect address, device off-line, etc.), then the communication must be terminated or the next address in the user's static list contacted. This is because the connection to portable device **164** has already been taken down thus preventing an attempt to request a new address to which to redirect the communication.

As an example of uses of such redirection methods and systems according to the present invention, consider a family consisting of a husband, wife, and children. Perhaps the husband has registered his wireless telephone as the device to which incoming calls to his home telephone should be delivered. If notification of an incoming call is received by the husband on his wireless telephone, he can look at the display to see who the caller is. If the husband determines that the call is for his wife, he can redirect the call to her work phone or to her wireless phone. If the call is for one of the children, the call can be redirected to the home phone. However, if the call is for the husband, he can choose to take the call on his wireless telephone. Alternatively, if the call is for the husband, but he does not wish to speak with the caller, the call can be forwarded to his voice mailbox.

As another example of the use of redirection methods and systems according to the present invention, consider a person travelling on business and away from the office. The business person can register a personal digital assistant (PDA) as the device to which incoming calls are directed. Thus, wherever the

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business person is, no calls will be misses because of being away from the office. If notification of a call is received, the business person can have the call redirected to a phone near where the business person is presently located. Such phone could be the room phone of the hotel where the person is currently staying or it could be  
5 the office phone of the person with which the business person is meeting.

Referring now to **Figure 2**, a block diagram of a data processing system which may be implemented as a server, such as server **106**, **108**, **160**, or **170** in **Figure 1**, is depicted in accordance with the present invention. Data processing system **200** may be a symmetric multiprocessor (SMP) system including a  
10 plurality of processors **202** and **204** connected to system bus **206**. Alternatively, a single processor system may be employed. Also connected to system bus **206** is memory controller/cache **208**, which provides an interface to local memory **209**. I/O bus bridge **210** is connected to system bus **206** and provides an interface to I/O bus **212**. Memory controller/cache **208** and I/O bus bridge **210** may be  
15 integrated as depicted.

Peripheral component interconnect (PCI) bus bridge **214** connected to I/O bus **212** provides an interface to PCI local bus **216**. A number of modems **218-220** may be connected to PCI bus **216**. Typical PCI bus implementations will support four PCI expansion slots or add-in connectors. Communications links to  
20 network computers **120**, **126**, **134**, and **142** in **Figure 1** may be provided through modem **218** and network adapter **220** connected to PCI local bus **216** through add-in boards.

Additional PCI bus bridges **222** and **224** provide interfaces for additional PCI buses **226** and **228**, from which additional modems or network adapters may  
25 be supported. In this manner, server **200** allows connections to multiple network computers. A memory mapped graphics adapter **230** and hard disk **232** may also be connected to I/O bus **212** as depicted, either directly or indirectly.

Those of ordinary skill in the art will appreciate that the hardware depicted in **Figure 2** may vary. For example, other peripheral devices, such as optical disk  
30 drives and the like, also may be used in addition to or in place of the hardware

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depicted. The depicted example is not meant to imply architectural limitations with respect to the present invention.

The data processing system depicted in **Figure 2** may be, for example, an IBM RS/6000, a product of International Business Machines Corporation in Armonk, New York, running the Advanced Interactive Executive (AIX) operating system.

Turning now to **Figure 3**, a block diagram of a personal digital assistant (PDA), such as portable device 164 in **Figure 1**, is illustrated in which the present invention may be implemented. The PDA is typically a palmtop computer, such as, for example, a Palm VII, a product of 3Com Corporation in Santa Clara, California, connected to a wireless communications network and which may provide voice, fax, e-mail, and/or other types of communication. The PDA 300 may have one or more processors 302, such as a microprocessor, a main memory 304, a disk memory 306, and an I/O 308 such as a mouse, keyboard, or pen-type input, and a screen or monitor. The PDA 300 may also have a wireless transceiver 310 connected to an antenna 312 configured to transmit and receive wireless communications. The processor 302, memories 304, 306, I/O 308, and transceiver are connected to a bus 304. The bus transfers data, i.e., instructions and information, between each of the devices connected to it. The I/O 308 may permit faxes, e-mail, or optical images to be displayed on a monitor or printed out by a printer. The I/O 308 may be connected to a microphone 316 and a speaker 318 so that voice or sound information may be sent and received.

With reference now to **Figure 4**, a block diagram of a data processing system in which the present invention may be implemented is illustrated. Data processing system 400 is an example of a client computer such as client 120, 126, 134, or 142 in **Figure 1**. Data processing system 400 employs a peripheral component interconnect (PCI) local bus architecture. Although the depicted example employs a PCI bus, other bus architectures, such as Micro Channel and ISA, may be used. Processor 402 and main memory 404 are connected to PCI local bus 406 through PCI bridge 408. PCI bridge 408 may also include an integrated memory controller and cache memory for processor 402. Additional

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connections to PCI local bus 406 may be made through direct component interconnection or through add-in boards. In the depicted example, SCSI host bus adapter 412 and expansion bus interface 414 are connected to PCI local bus 406 by direct component connection. In contrast, audio adapter 416, graphics adapter 5 418, and audio/video adapter (A/V) 419 are connected to PCI local bus 406 by add-in boards inserted into expansion slots. Expansion bus interface 414 provides a connection for a keyboard and mouse adapter 420, modem 422, and additional memory 424. In the depicted example, SCSI host bus adapter 412 provides a connection for hard disk drive 426, tape drive 428, CD-ROM drive 430, and 10 digital video disc read only memory drive (DVD-ROM) 432. Typical PCI local bus implementations will support three or four PCI expansion slots or add-in connectors.

An operating system runs on processor 402 and is used to coordinate and provide control of various components within data processing system 400 in 15 **Figure 4**. The operating system may be a commercially available operating system, such as OS/2, which is available from International Business Machines Corporation. "OS/2" is a trademark of International Business Machines Corporation. An object oriented programming system, such as Java, may run in conjunction with the operating system, providing calls to the operating system 20 from Java programs or applications executing on data processing system 400. Instructions for the operating system, the object-oriented operating system, and applications or programs are located on a storage device, such as hard disk drive 426, and may be loaded into main memory 404 for execution by processor 402.

Those of ordinary skill in the art will appreciate that the hardware in 25 **Figure 4** may vary depending on the implementation. For example, other peripheral devices, such as optical disk drives and the like, may be used in addition to or in place of the hardware depicted in **Figure 4**. The depicted example is not meant to imply architectural limitations with respect to the present invention. For example, the processes of the present invention may be applied to 30 multiprocessor data processing systems.

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Turning now to **Figure 5**, a message flow chart is depicted illustrating the processes of redirecting a call in real time from a wireless device according to the present invention. In this example, a redirect from a wireless device utilizing a wireless proxy is illustrated. A similar flow would result if the redirect were being sent from a LAN/WAN connected device except for the omission of wireless proxy 508.

A user of a portable computing device such as a PDA or laptop computer initiates a registration by entering a proxy ID, a proxy port, and an address, such as, for example, a PSTN number or an IP address, and sending this information to wireless proxy 508 (step M01). **Figure 6A** illustrates an example of a sample HTML screen displayed to a user to initiate registration. The user may pull up the registration page by selecting the word "register" 601 on the page. **Figure 6B** illustrates an example of a sample HTML screen allowing a user to register by providing prompts to enter an user name 602, a proxy identification 604, and a proxy port 606.

Wireless Proxy 508 receives the HTML registration web page and forwards it to SIP user agent 506 (step M02). User agent 506 receives the HTML page and sends a SIP registration to SIP proxy 502 (step M03). SIP proxy 502 updates its destination list for the user with the address for portable computing device 510. Next, an SIP invite signal is sent to user agent 506 (step M04).

User agent 506 then sends an SIP 100-trying signal back to SIP proxy 502 (step M05). When a call for the user at portable computing device 510 is received by user agent 506, user agent 506 sends an HTML page to 3Com proxy 508 to indicate an incoming call for the user at portable computing device 510 (step M06). 3Com proxy 508 forwards the HTML page to portable computing device 510 (step M07). The HTML page is displayed the user of portable computing device 510 to indicate that the user has an incoming call. An example of such an HTML page is illustrated in **Figure 6C**. A hot button 608 is supplied which the user may select to redirect the incoming call. Other hot buttons 614, 616, and 618 allow the user to place the call on hold, terminate the call without answering, or send the call to voice mail respectively. If redirection is chosen, the user of the



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portable computing device **510** then redirects the call to another destination by entering and sending a PSTN, IP, or other address as the new destination (step **M08**). **Figure 6D** illustrates an example of a sample HTML page in which the user may enter the new destination for the incoming phone call in destination box **610** and then send the new destination by selecting the “submit” hot button **612**.

Wireless proxy **508** receives the HTML page containing the new destination and this page is forwarded to user agent **506** (step **M09**). User agent **506** sends a SIP 300 signal to SIP proxy **502** containing the new destination (step **M10**). User agent **506** also sends an HTML page to portable computing device **510** via 3Com proxy **508** indicating that the call was redirected (step **M11**). A message is displayed to the user of portable computing device **510** indicating that the call was redirected. An example of such a HTML page is illustrated in **Figure 6E**. SIP proxy **502** receives the 300 signal and sends out an invite to the new destination (step **M12**).

If portable computing device **510** does not respond to the message indicating that the user has an incoming call (step **M07**), then a SIP 480 Temporarily not available signal is sent from user agent **506** back to SIP proxy server **502**. SIP proxy **502** can then decide how to process the call. For example, for calls to which the portable computing device does not respond, SIP proxy **502** could forward the call to a predefined destination or take the call down.

Turning now to **Figure 7**, a flowchart illustrating the methods executed on a portable computing device in accordance with a preferred embodiment of the present invention is depicted. To start, a user of a data processing device registers the address of their data processing device that they wish their calls to be delivered to (step **702**). Typically, when the data processing device is activated, it performs an SIP registration with a SIP registration server, effectively causing all future calls to route to this device as the first selection. On deactivation of the device, the shutdown processing unregisters with the SIP registration server thereby restoring the defaults on how the called party is to be reached (i.e., the subscriber’s static reach list). Next, when a call is made to the user, a notification of the incoming call is received at their data processing device (step **704**).

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Included in the notification may be caller identification information such as PSTN or IP address from where the call originated. The user then identifies a new destination for the incoming call to be sent (step 706). For example, if the user has traveled to a hotel, the user may enter the phone number of the room at the hotel. As another example, if the user is near a pay phone, the user may enter the phone number of the pay phone. Once the user has identified a new destination for the incoming call to be redirected to, this new destination is sent back to a SIP proxy via a SIP User Agent (step 708). Once the SIP User Agent receives the redirect request, the user will receive a notice indicating the call is being redirected (step 710).

Turning now to **Figure 8**, a flowchart illustrating the processes of redirecting a call which are implemented on a server within the communications network is depicted in accordance with the present invention. To start, a server within the communications network receives a request for call initiation from a PSTN (step 802). The server accesses a database to which the called party has registered the current device to which they wish their calls directed (step 804). The current device is registered at the top of a static reach list of numbers to try in order to reach the called party. Once the current device is identified, a notice is sent to the called parties current location indicating that the party has an incoming call and requesting information about where to direct the call (step 806). Next, a determination is made as to whether the user has responded to the request (step 808). If the user does not respond after a given period of time, then the call is disposed of according to a predetermined procedure (step 810). For example, if the user does not respond to the request, then the server may redirect the call to the next address in the called party's static reach list of preferred locations or if there are no more preferred locations stored in a database, the server may end the call. If the user does respond to the request, then the call is redirected to the new location and a confirmation is sent to the user indicating such (step 812). The call may be redirected to a cell phone, to a nearby wire-line device, to the called party's voice mailbox, or the party initiating the call may be placed on temporary hold. If the party initiating the call is placed on hold, a standard greeting will be

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sent to the calling party to make them aware that the called party is attempting to find an appropriate method to receive the call or is on another call and to stay on the call because the called party will answer momentarily.

Turning now to **Figure 9**, a flowchart illustrating a method of converting HTML to SIP as performed by a SIP User Agent is depicted in accordance with the present invention. To start, a SIP User Agent receives an HTML message (step **902**). The SIP User Agent then parses the HTML message for class and content (step **904**). The SIP User Agent then analyzes the message class and content (step **906**) to create an SIP signal from the HTML message (step **908**). The newly formed SIP signal is then sent to an SIP Proxy (step **910**) and the process stops.

Turning now to **Figure 10**, a flowchart illustrating a method of converting an SIP signal into an HTML message is depicted in accordance with the present invention. First, the SIP User Agent receives an SIP signal from the SIP Proxy (step **1002**). The SIP signal is then parsed for message type (step **1004**) and the content, calling party, and called party are extracted from the SIP signal (step **1006**). Using the extracted information, the SIP User Agent generates an appropriate HTML page (step **1008**) and sends the HTML message to the called party (step **1010**) ending the process.

Although the present invention has been described primarily with reference to redirecting telephony communications. Other forms of media streams may be redirected as well. For example, a client such as client **120** or portable device **164**, that has previously performed an SIP registration, receives a notification of incoming data streams. The notification will include information about what types of data streams are included. This will be encoded into the notification at either SIP Proxy **170** or at User Agent **172**. The notice displayed to the user will inform the user of whether there are multiple types of data streams and what types of data streams are in the incoming communication. Once the notification is displayed to the user of the client, the client may then decide how to dispose of the incoming data streams. If the user selects one device, such as telephone **124** to send the data stream to, then the name or address of telephone

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124 will be sent back to SIP Proxy 170, which will then redirect the call to telephone 124. The user may select more than one device to send the data streams to as well. If the data stream consists of multiple data types, the user may instruct SIP Proxy 170 to send each data stream to a different type of device.

5 Furthermore, the user may instruct SIP Proxy 170 to send all of the data streams to several locations (forking) such that multiple parties may be connected (such as for a conference call) or to several locations, but have only the first to “pick up” or “answer” be connected. This last alternative might be useful if the user wished to redirect the data stream to another person, but was unsure of that person’s location  
10 but did know of several possible locations of that person.

To help illustrate the present invention, consider the following example of a user’s device receiving multiple types of data streams at a single device. For example, a user might have registered their personal digital assistant as the device to which to have incoming data streams routed. The SIP Proxy 170 receives an  
15 incoming data stream intended for this user and generates and routes a message to the user indicating the types of message streams and from what party. The types of message streams include audio, video (in MPEG format), text and a JPEG picture. The user of the personal digital assistant might decide to route the audio to speakers or to a telephone such as telephone 124, route the video to a desktop  
20 computer such as client 120 or to a television attached to a set top box, the text routed to a printer (perhaps connected to client 120), and the JPEG picture routed to a second computer such as client 126 or to a device dedicated to generating and displaying still pictures. Thus, each of the data streams were directed to a device which was best able to utilize and present the information to the user.

25 To illustrate “forking”, consider a person receiving a data stream (perhaps a phone call, but not necessarily). The person after determining what the data stream is and/or who it is from, decides that other people within an organization should participate as well. The person would then enter several names or addresses for the SIP Proxy 170 to use to redirect the data stream. This list of  
30 several names could include the user originally receiving the notification. In that way several people could participate, such as on a conference call.

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In yet another example of forking, the user could receive notification of an incoming call and determine that that call was for another person. However, the user does not know the exact location of the other person, but does know of several locations where that person might be. The user in this case would enter  
5 several location names and instruct the proxy to redirect the call to each of them and connect the location which "picked up" first. In that manner the call is forwarded to the correct party even though the user receiving the notification knew no more than several possibilities of locations.

Although the present invention has been described primarily with  
10 reference to presenting call notification information to the called party through means of a display, other methods are also possible. Such methods include, but are not limited to, notifying the called party of an incoming call through the use of sounds or through a voice synthesizer if the portable device supported such options. Furthermore, as another option, the portable computing device could  
15 vibrate to indicate that the user had an incoming call. The use of sounds and vibrations could also be used to alert the called party of an incoming call such that they could direct their attention to a visual display which would indicate the nature and origin of the call.

Although described primarily with reference to SIP, an SIP proxy and an  
20 SIP user agent, other communications initiation and routing protocols, such as H.323 Protocol, can be utilized as well. Furthermore, other text based or XML based protocols may be utilized rather than HTTP and HTML. Examples of other protocols include, but are not limited to, Voice XML (VOXML), Speech Markup Language (SML), WAP, and XHTML. In such cases the SIP user agent would be  
25 replaced with a user agent which translated between the appropriate protocols.

It should be noted that although the present invention has been described with reference to utilizing a SIP proxy, a proxy of any kind is not necessary if the complete IP address of the device to which the call is to be directed is known and used. Furthermore, the SIP user agent is not necessary if all of the terminal  
30 devices (e.g., portable data processing systems, personal digital assistants, phones, desk top computers, cell phones) involved in a calling process utilize SIP such that

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communications with the SIP proxy does not need to be facilitated with a translating user agent. In this case, the SIP proxy becomes the agent. Furthermore, the SIP proxy does not have to be a proxy. Any device or software which can perform the functionality of the SIP proxy will suffice, wherein the  
5 primary functions performed by the SIP proxy are address lookup (determining the IP or other type address based on information received, i.e., converting john@nortel.com into an IP address) and redirecting calls.

It should also be noted that although the present invention has been described primarily with reference to voice calls, it applies to other types of  
10 communication as well, including, but not limited to for example, video conferencing or text messages. For example, a portable computing device could receive a notification of an incoming video call or video message and a user could redirect that incoming video message to a laptop or desktop computer, a television, or other video display terminal such that the video could be viewed by  
15 the called party. The device receiving the request could even suggest alternative destinations to redirect the call to based on the type of call (e.g. video, voice, text) the request corresponds to.

It is important to note that while the present invention has been described in the context of a fully functioning data processing system, those of ordinary skill  
20 in the art will appreciate that the processes of the present invention are capable of being distributed in the form of a computer readable medium of instructions and a variety of forms and that the present invention applies equally regardless of the particular type of signal bearing media actually used to carry out the distribution. Examples of computer readable media include recordable-type media such a  
25 floppy disc, a hard disk drive, a RAM, and CD-ROMs and transmission-type media such as digital and analog communications links.

The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be  
30 apparent to those of ordinary skill in the art. For example, the present invention is not limited to SIP and Palm VII's. Other types of call initiation protocols other

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than SIP may be utilized. Furthermore, other types of portable devices other than Palm VII's may be utilized including, but not limited to, portable computers, laptop computers, other types of personal digital assistants (PDAs), and other handheld data processing systems. The embodiment was chosen and described in order to best explain the principles of the invention, the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

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2 **CLAIMS:**

3 What is claimed is:

1 1. A method of redirecting a call from a data processing system to another  
 2 address, comprising the steps of:  
 3 receiving at a data processing system a registration notice of an incoming call  
 4 from a server; and  
 5 responsive to determination of a new address; transmitting a new address to  
 6 which the incoming call is to be redirected.

1 2. The method as recited in claim 1, wherein said data processing system is a  
 2 personal digital assistant.

1 3. The method as recited in claim 1, wherein said data processing system is a  
 2 laptop computer.

1 4. The method as recited in claim 1, wherein said data processing system is a  
 2 portable computing device.

1 5. The method as recited in claim 1, wherein said data processing system is a  
 2 wireless device.

1 6. The method as recited in claim 1, wherein the registration notice is a session  
 2 initiation protocol registration notice.

1 7. The method as recited in claim 1, wherein the incoming call comprises video  
 2 and the new address corresponds to a video display terminal.



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- 1 8. The method as recited in claim 1, wherein said data processing system is a
- 2 wire-line connected device.

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- 1 9. A computer program product in computer readable media for use in a data  
2 processing system for redirecting a call from a data processing system to another  
3 address, the computer program product comprising:  
4 first instructions for receiving at a data processing system a registration notice  
5 of an incoming call from a server; and  
6 second instructions, responsive to determination of a new address; for  
7 transmitting a new address to which the incoming call is to be redirected.
- 1 10. The computer program product as recited in claim 9, wherein said data  
2 processing system is a personal digital assistant.
- 1 11. The computer program product as recited in claim 9, wherein said data  
2 processing system is a laptop computer.
- 1 12. The computer program product as recited in claim 9, wherein said data  
2 processing system is a portable computing device.
- 1 13. The computer program product as recited in claim 9, wherein said data  
2 processing system is a wireless device.
- 1 14. The computer program product as recited in claim 9, wherein the registration  
2 notice is a session initiation protocol registration notice.
- 1 15. The computer program product as recited in claim 9, wherein the incoming  
2 call comprises video and the new address corresponds to a video display terminal.
- 1 16. The computer program product as recited in claim 9, wherein said data  
2 processing system is a wire-line connected device.

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- 1 17. A system of redirecting a call from a data processing system to another  
2 address, comprising:  
3 means for receiving at a data processing system a registration notice of an  
4 incoming call from a server; and  
5 means, responsive to determination of a new address; for transmitting a new  
6 address to which the incoming call is to be redirected.
- 1 18. The system as recited in claim 17, wherein said data processing system is a  
2 personal digital assistant.
- 1 19. The system as recited in claim 17, wherein said data processing system is a  
2 laptop computer.
- 1 20. The system as recited in claim 17, wherein said data processing system is a  
2 portable computing device.
- 1 21. The system as recited in claim 17, wherein said data processing system is a  
2 wireless device.
- 1 22. The system as recited in claim 17, wherein the registration notice is a session  
2 initiation protocol registration notice.
- 1 23. The system as recited in claim 17, wherein the incoming call comprises video  
2 and the new address corresponds to a video display terminal.
- 1 24. The system as recited in claim 17, wherein said data processing system is a  
2 wire-line connected device.

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- 1 25. A method for redirecting calls to a data processing system to a second  
2 location; comprising the steps of:  
3 sending a registration notification to a called party's preferred location; and  
4 responsive to receipt of a new address from the called party, redirecting the  
5 incoming call to the new address.
- 1 26. The method as recited in claim 25, further comprising:  
2 prior to said sending step, receiving a request to initiate a call with a called  
3 party; and  
4 determining a preferred location of the called party.
- 1 27. The method as recited in claim 25, wherein the registration notification is a  
2 session initiation protocol registration.
- 1 28. The method as recited in claim 25, wherein the preferred location is a personal  
2 digital assistant.
- 1 29. The method as recited in claim 28, wherein the personal digital assistant is a  
2 Palm VII utilizing a Palm Query Application to provide a user interface.
- 1 30. The method as recited in claim 25, wherein the new address corresponds to a  
2 voice mailbox.
- 1 31. The method as recited in claim 25, wherein the new address corresponds to  
2 placing the incoming call on hold.
- 1 32. The method as recited in claim 25, wherein communication with the preferred  
2 device is provided utilizing a wireless application protocol.

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- 1 33. The method as recited in claim 25, wherein the new address corresponds to a  
2 wire-line device.

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- 1 34. A computer program product in computer readable media for use in a data  
2 processing system for redirecting calls to a data processing system to a second  
3 location; the computer program product comprising:  
4 first instructions for sending a registration notification to a called party's  
5 preferred location; and  
6 second instructions, responsive to receipt of a new address from the called  
7 party, for redirecting the incoming call to the new address.
- 1 35. The computer program product as recited in claim 34, further comprising:  
2 prior to said sending step, third instructions for receiving a request to initiate a  
3 call with a called party; and  
4 fourth instructions for determining a preferred location of the called party.
- 1 36. The computer program product as recited in claim 34, wherein the registration  
2 notification is a session initiation protocol registration.
- 1 37. The computer program product as recited in claim 34, wherein the preferred  
2 location is a personal digital assistant.
- 1 38. The computer program product as recited in claim 37, wherein the personal  
2 digital assistant is a Palm VII utilizing a Palm Query Application to provide a user  
3 interface.
- 1 39. The computer program product as recited in claim 34, wherein the new  
2 address corresponds to a voice mailbox.
- 1 40. The computer program product as recited in claim 34, wherein the new  
2 address corresponds to placing the incoming call on hold.

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1 41. The computer program product as recited in claim 34, wherein  
2 communication with the preferred device is provided utilizing a wireless application  
3 protocol.

1 42. The computer program product as recited in claim 34, wherein the new  
2 address corresponds to a wire-line device.

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- 1 43. A system for redirecting calls to a data processing system to a second  
2 location; comprising:  
3 means for sending a registration notification to a called party's preferred  
4 location; and  
5 means; responsive to receipt of a new address from the called party, for  
6 redirecting the incoming call to the new address.
- 1 44. The system as recited in claim 43, further comprising:  
2 prior to said sending step, means for receiving a request to initiate a call with a  
3 called party; and  
4 means for determining a preferred location of the called party.
- 1 45. The system as recited in claim 43, wherein the registration notification is a  
2 session initiation protocol registration.
- 1 46. The system as recited in claim 43, wherein the preferred location is a personal  
2 digital assistant.
- 1 47. The system as recited in claim 46, wherein the personal digital assistant is a  
2 Palm VII utilizing a Palm Query Application to provide a user interface.
- 1 48. The system as recited in claim 43, wherein the new address corresponds to a  
2 voice mailbox.
- 1 49. The system as recited in claim 43, wherein the new address corresponds to  
2 placing the incoming call on hold.
- 1 50. The system as recited in claim 43, wherein communication with the preferred  
2 device is provided utilizing a wireless application protocol.



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- 1 51. The system as recited in claim 43, wherein the new address corresponds to a
- 2 ~~wire-line device.~~

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- 1 52. A method in a communications system for processing a call, the method
- 2 comprising:
- 3 receiving at a mobile data processing system a call for a user;
- 4 sending a first request to setup the call to the mobile data processing system
- 5 associated with a user, wherein the mobile data processing system has a wireless
- 6 communications capability;
- 7 receiving a response to the request, wherein the response includes an address
- 8 for the call; and
- 9 sending a second request to setup the call to the user using the address.
  
- 1 53. The method as recited in claim 52, wherein the data processing system is a
- 2 personal digital assistant.
  
- 1 54. The method as recited in claim 52, wherein the personal digital assistant is a
- 2 Palm VII.
  
- 1 55. The method as recited in claim 52, wherein the request and the response are
- 2 session initiation protocol messages.

Docket No. 11032RR

- 1 56. A method for processing a call at a data processing system the method  
2 comprising:  
3 receiving a request to establish a call;  
4 presenting caller information at the data processing system; and  
5 responsive to an identification of an address for the call, returning a response  
6 including the address.
- 1 57. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises displaying the caller information.
- 1 58. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises presenting the caller information audibly.
- 1 59. The method as recited in claim 56, wherein the request and the response are  
2 session initiation protocol messages.
- 1 60. The method as recited in claim 56, wherein the data processing system is a  
2 wireless device.
- 1 61. The method as recited in claim 56, wherein the step of presenting caller  
2 information comprises a vibrating alert.
- 1 62. The method as recited in claim 56, wherein the data processing system is a  
2 two-way pager.

Docket No. 11032RR

63. A communications network for redirecting communications; comprising:  
a proxy server for performing address lookup and directing calls;  
a user agent functionally connected to the aid proxy server to provide protocol  
translation between a protocol recognized by the proxy server and a protocol  
5 recognized by a terminal unit and to provide a communication link between the proxy  
server and the terminal unit; wherein  
the proxy server, responsive to an indication from the terminal unit to redirect  
a call, redirects calls to a new location.
64. The network as recited in claim 63, wherein the proxy server is a session  
10 initiation protocol proxy server and the user agent is a session initiation protocol user  
agent for translating between session initiation protocol and a second protocol.
65. The network as recited in claim 64, wherein the second protocol is HTML.

Docket No. 11032RR

66. A method for initiating calls, comprising the steps of:  
receiving registration notice of an incoming call, wherein said registration  
notice is formatted in a first protocol;  
translating said registration notice from the first protocol into a second  
5 protocol; and  
transmitting a modified registration notice to a terminating device; wherein  
the modified registration notice is formatted in the second protocol.
67. The method as recited in claim 66, further comprising:  
receiving a location data with which to redirect the incoming call from the  
10 terminating device; wherein the location data is formatted in the second protocol; and  
translating the location data to a second location data; and  
transmitting the second location data, wherein the second location data is  
formatted in the second protocol.
68. The method as recited in claim 66, wherein the first protocol is a session  
15 initiation protocol.
69. The method as recited in claim 66, wherein the second protocol is a hypertext  
markup language.

38

Docket No. 11032RR

**ABSTRACT OF THE DISCLOSURE**

**PORTABLE CALL MANAGEMENT SYSTEM**

5           A method of redirecting a call from a data processing system to another  
address. In a preferred embodiment, a notice of an incoming call received from a  
server at a data processing system. This notice may include caller identification  
information as well. The user of the data processing system is prompted for an  
address to which the user wishes the call to be redirected. The user then identifies  
10   and sends to the server a new address to which the incoming call is to be redirected.  
The server then redirects the call to the new address.

**DECLARATION AND POWER OF ATTORNEY FOR  
PATENT APPLICATION**

As below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name;

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled as set forth below, which is described in the specification of which: (check one)

was filed on October 15, 1999, under Attorney's Docket Number 11032RR as Application No. 09/419,175

**PORTABLE CALL MANAGEMENT SYSTEM**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with 37 CFR 1.56.

I hereby claim the benefit under Title 35 United States Code section 120 of the provisional application filed under 111b of this title as listed below:

\_\_\_\_\_

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John D. Crane, Reg. No. 25,231;  
Christopher O. Edwards, Reg. No. 36,127; Robert C. Klinger, Reg. No. 34,365;  
James A. Harrison, Reg. No. 40,401; W. Glen Johnson, Reg. No. 39,525; Duke W. Yee, Reg. No. 34,285;  
Rudolph J. Buchel, Reg. No. 43,448, Joseph R. Burwell, Reg. No. 44,468, Stephen R. Loe, Reg. No. 43,757.

Send correspondence to John D. Crane, Nortel Networks Corporation, Patent Department; P.O. Box 833858, Mail Stop 468/05/B10; Richardson, Texas 75083-3858 and direct all telephone calls to John D. Crane, telephone: (972) 695-8442.

=====

(1) FULL NAME OF INVENTOR: **Gregory T. Osterhout**

INVENTOR'S SIGNATURE: \_\_\_\_\_

DATE:

RESIDENCE: 313 Falcon Court, Coppell, TX 75019

COUNTY: Dallas

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

(2) FULL NAME OF INVENTOR: **Kim B. Holmes**

INVENTOR'S SIGNATURE: 

DATE: 11/17/99.

RESIDENCE: 5409 Scenic Drive, Rowlett, TX 75088

COUNTY: Rockwall

CITIZENSHIP: Canada

POST OFFICE ADDRESS: Same As Above



(3) FULL NAME OF INVENTOR: Mark Sosebee

INVENTOR'S SIGNATURE: Mark Sosebee

DATE: 11/17/99

RESIDENCE: 920 Goodwin Drive, Plano, TX 75023

COUNTY: Collin

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

1032RR-071992

Docket Number: 11032RR  
Page 1 of 3

**DECLARATION AND POWER OF ATTORNEY FOR  
PATENT APPLICATION**

As below named inventor, I hereby declare that:

My residence, post office address and citizenship is as stated below next to my name;

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled as set forth below, which is described in the specification of which: (check one)

filed herewith under Attorney's Docket Number 11032RR

**PORTABLE CALL MANAGEMENT SYSTEM**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine of imprisonment, or both, under 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10119797-071902

Docket Number: **11032RR**  
Page 2 of 3

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John D. Crane, Reg. No. 25,231;  
Christopher O. Edwards, Reg. No. 36,127; Robert C. Klinger, Reg. No. 34,365;  
James A. Harrison, Reg. No. 40,401; W. Glen Johnson, Reg. No. 39,525; Duke W. Yee, Reg. No. 34,286;  
Rudolph J. Buchel, Reg. No. 43,448. Joseph R. Burwell, Reg. No. 44,468, Stephen R. Loe, Reg. No. 43,757.

Send correspondence to John D. Crane, Nortel Networks Corporation, Patent Department; P.O. Box 833858, Mail Stop 488/05/B10; Richardson, Texas 75083-3858 and direct all telephone calls to John D. Crane, telephone: (972) 695-8442.

=====

(1) FULL NAME OF INVENTOR: Gregory T. Osterhout

INVENTOR'S SIGNATURE: Gregory T. Osterhout

DATE: 10/15/99

RESIDENCE: 313 Falcon Court, Coppell, TX 75019

COUNTY: Dallas

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above

(2) FULL NAME OF INVENTOR: Kim B. Holmes

INVENTOR'S SIGNATURE: \_\_\_\_\_

DATE:

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COUNTY: Dallas

CITIZENSHIP: Canada

POST OFFICE ADDRESS: Same As Above

(3) FULL NAME OF INVENTOR: Mark Sosebee

INVENTOR'S SIGNATURE: \_\_\_\_\_

DATE:

RESIDENCE: 920 Goodwin Drive, Plano, TX 75023

COUNTY: Collin

CITIZENSHIP: United States

POST OFFICE ADDRESS: Same As Above



Commissioner for Patents  
Washington, DC 20231  
www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 1786

|  |   |                               |   |  |
|--|---|-------------------------------|---|--|
| <b>SERIAL NUMBER</b><br>10/199,797   | <b>FILING DATE</b><br>07/19/2002<br><b>RULE</b>   | <b>CLASS</b><br>455           | <b>GROUP ART UNIT</b><br><del>2684</del><br>2685  | <b>ATTORNEY DOCKET NO.</b><br>11032RRUS04D |
| <b>APPLICANTS</b><br>Gregory T. Osterhout, Coppell, TX;<br>Kim B. Holmes, Rowlett, TX;<br>Mark Sosebee, Plano, TX; |   |                               |   |  |
| <b>** CONTINUING DATA *****</b><br>This application is a DIV of 09/419,175 10/15/1999                              |   |                               |   |  |
| <b>** FOREIGN APPLICATIONS *****</b><br><i>No / 8/02</i>   |   |                               |   |  |
| <b>IF REQUIRED, FOREIGN FILING LICENSE GRANTED</b><br><b>** 09/03/2002</b>   |   |                               |   |  |
| Foreign Priority claimed<br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no                    | 35 USC 119 (a-d) conditions met<br><input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance | <b>STATE OR COUNTRY</b><br>TX | <b>SHEETS DRAWING</b><br>10   | <b>TOTAL CLAIMS</b><br>24                  |
| Verified and Acknowledged<br>Examiner's Signature: <i>[Signature]</i> Initials: <i>[Initials]</i>                  |   |                               |   | <b>INDEPENDENT CLAIMS</b><br>4             |
| <b>ADDRESS</b><br>021498   |   |                               |   |  |
| <b>TITLE</b><br>Portable call management system  |   |                               |   |  |
| <b>FILING FEE RECEIVED</b><br>896  | FEES: Authority has been given in Paper<br>No. _____ to charge/credit DEPOSIT ACCOUNT<br>No. _____ for following:                                   |                               | <input type="checkbox"/> All Fees<br><input type="checkbox"/> 1.16 Fees ( Filing )<br><input type="checkbox"/> 1.17 Fees ( Processing Ext. of time )<br><input type="checkbox"/> 1.18 Fees ( Issue )<br><input type="checkbox"/> Other _____<br><input type="checkbox"/> Credit |  |

PATENT APPLICATION SERIAL NO. \_\_\_\_\_

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE  
FEE RECORD SHEET

07/25/2002 EHAILE1 00000664 500392 10199797

|           |          |           |
|-----------|----------|-----------|
| 01 FC:101 |          | 740.00 OP |
| 02 FC:102 | 84.00 CH |           |
| 03 FC:103 | 72.00 CH |           |

PTO-1556  
(5/87)

**PATENT APPLICATION FEE DETERMINATION RECORD**  
Effective October 1, 2001

Application or Docket Number  
*11032 R R V S O 4 D*

**CLAIMS AS FILED - PART I**

|   | (Column 1)           | (Column 2)   |
|---|----------------------|--------------|
| TOTAL CLAIMS  | <i>24</i>            |              |
| FOR   | NUMBER FILED         | NUMBER EXTRA |
| TOTAL CHARGEABLE CLAIMS                                   | <i>24</i> minus 20 = | * <i>4</i>   |
| INDEPENDENT CLAIMS  | <i>4</i> minus 3 =   | * <i>1</i>   |
| MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/> |                      |              |

\* If the difference in column 1 is less than zero, enter "0" in column 2

**SMALL ENTITY TYPE**  OR

**OTHER THAN SMALL ENTITY**

| RATE      | FEE    | OR | RATE      | FEE        |
|-----------|--------|----|-----------|------------|
| BASIC FEE | 370.00 | OR | BASIC FEE | 740.00     |
| X\$ 9=    |        | OR | X\$18=    | <i>72</i>  |
| X42=      |        | OR | X84=      | <i>84</i>  |
| +140=     |        | OR | +280=     |            |
| TOTAL     |        | OR | TOTAL     | <i>896</i> |

**CLAIMS AS AMENDED - PART II**

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT A   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * <i>24</i> Minus ** <i>24</i>     | =             |
|   | Independent                      | * <i>4</i> Minus *** <i>4</i>      | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

**SMALL ENTITY** OR **OTHER THAN SMALL ENTITY**

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT B   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * <i>15</i> Minus ** <i>24</i>     | = <i>0</i>    |
|   | Independent                      | * <i>3</i> Minus *** <i>4</i>      | = <i>0</i>    |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           | <i>0</i>       |
| X42=             |                | OR | X84=             | <i>0</i>       |
| +140=            |                | OR | +280=            | <i>0</i>       |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE | <i>0</i>       |

|   | (Column 1)                       | (Column 2)                         | (Column 3)    |
|---|----------------------------------|------------------------------------|---------------|
| AMENDMENT C   | CLAIMS REMAINING AFTER AMENDMENT | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|   | Total                            | * <i>15</i> Minus ** <i>24</i>     | =             |
|   | Independent                      | * <i>3</i> Minus *** <i>4</i>      | =             |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/> |                                  |                                    |               |

| RATE             | ADDITIONAL FEE | OR | RATE             | ADDITIONAL FEE |
|------------------|----------------|----|------------------|----------------|
| X\$ 9=           |                | OR | X\$18=           |                |
| X42=             |                | OR | X84=             |                |
| +140=            |                | OR | +280=            |                |
| TOTAL ADDIT. FEE |                | OR | TOTAL ADDIT. FEE |                |

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Best Available Copy

# CLAIMS ONLY

SERIAL NO. 10199797

FILING DATE

APPLICANT(S)

## CLAIMS

|              | AS FILED |      | AFTER 1st AMENDMENT |      | AFTER 2nd AMENDMENT |      | *    |      | *    |      | *    |      |
|--------------|----------|------|---------------------|------|---------------------|------|------|------|------|------|------|------|
|              | IND.     | DEP. | IND.                | DEP. | IND.                | DEP. | IND. | DEP. | IND. | DEP. | IND. | DEP. |
| 1            |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 4            |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 5            |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 26           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 27           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 31           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 32           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 33           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 34           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 48           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 49           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 50           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL IND.   | 4        |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL DEP.   | 20       |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL CLAIMS | 24       |      |                     |      |                     |      |      |      |      |      |      |      |
| 51           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 52           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 53           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 56           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 62           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 63           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 64           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 65           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 66           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 70           |          |      |                     |      |                     |      |      |      |      |      |      |      |
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| 82           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 83           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 84           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 85           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 86           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 87           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 88           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 89           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 90           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 91           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 92           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 93           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 94           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 95           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 96           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 97           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 98           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 99           |          |      |                     |      |                     |      |      |      |      |      |      |      |
| 100          |          |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL IND.   |          |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL DEP.   |          |      |                     |      |                     |      |      |      |      |      |      |      |
| TOTAL CLAIMS |          |      |                     |      |                     |      |      |      |      |      |      |      |

\* MAY BE USED FOR ADDITIONAL CLAIMS OR AMENDMENTS

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

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10/8/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Osterhout et al.**  
Serial No.: **Not Assigned**  
Filed: **July 19, 2002**  
For: **Portable Call Management System**

§  
§ Group Art Unit: **2684**  
§  
§ Examiner: **Nguyen, Thuan T.**  
§  
§ Attorney Docket No.: **11032RRUS04D**  
§

1c715 U.S. PTO  
10/199797  
07/19/02

Certificate of Mailing Under 37 C.F.R. § 1.8(a)  
I hereby certify this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on July 19, 2002.  
By: Krista Douthitt  
Krista Douthitt

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97

Hon. Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Applicants request that the information listed on the attached Form PTO-1449 be considered by the Office during the pendency of the above entitled application, pursuant to 37 C.F.R. 1.97.

Please charge any fees necessary for prosecution of the present application to Deposit Account No. 50-0392. If any extension of time is required, such extension is hereby requested. Please charge any additional required fee for extension of time to Deposit Account No. 50-0392.


In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not constitute an admission that any information cited therein is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b). In the interest of full and complete disclosure to the Office, some or all of the art cited herein may not be considered by Applicant(s) or the Undersigned to be material under the new standards of materiality defined in 37 C.F.R. 1.56(b),

enacted March 16, 1992, but may be material under the old standard of materiality defined in 37 C.F.R. 1.56(a), last amended on November 28, 1988, or may merely be technical background which may be of interest to the Examiner. In accordance with 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

This Information Disclosure Statement is being filed under 37 C.F.R. § 1.97(b) within three months of the filing date of the application, or before the mailing date of a first office action on the merits. No fee is required.

Respectfully submitted,

Date: 7/19/02

  
\_\_\_\_\_  
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Attorney for Applicants

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#5/A  
LB  
10/18/02

In re application of: **Osterhout et al.**

§  
§  
§  
§  
§  
§

Group Art Unit: **2684**

Serial No.: **Not Assigned**

Examiner: **Nguyen, Thuan T.**

Filed: **July 19, 2002**

Attorney Docket No.: **11032RRUS04D**

For: **Portable Call Management System**

Certificate of Mailing Under 37 C.F.R. § 1.8(a)

I hereby certify this correspondence is being deposited with the United States Postal Service as Express mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, D.C. 20231 on July 19, 2002.

By: *Krista Douthitt*  
Krista Douthitt

**PRELIMINARY AMENDMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

No fees are believed to be necessary. If, however, any fees are required, I authorize the Commissioner to charge these fees to Deposit Account No. 50-0392. No extension of time is believed to be necessary. If, however, an extension of time is necessary, the extension is requested and I authorize the Commissioner to charge the necessary extension fees to Deposit Account No. 50-0392.

Prior to examination of this application, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

On page one, before the **BACKGROUND OF THE INVENTION**, please insert the following paragraph:

A 1

This application is a divisional of application number 09/419,175,  
filed October 15, 1999, status pending.

**IN THE CLAIMS:**

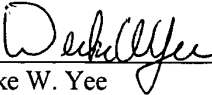
Please cancel claims 1-42 and 63-65.

**REMARKS**

Claims 1-42 and 63-65 have been canceled. Claims 52-62 and 66-69 remain in the application. These claims are believed to be in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: July 19, 2002

Respectfully submitted,

  
\_\_\_\_\_  
Duke W. Yee  
*Registration No. 34,285*  
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ATTORNEY FOR APPLICANT