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(54) **BRANCH CALLING AND CALLER ID BASED CALL ROUTING TELEPHONE FEATURES**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,100,377 A 7/1978 Flanagan

4,238,851 A 12/1980 Takahashi et al.

(Continued)

FOREIGN PATENT DOCUMENTS

DE 19813179 9/1999
EP 0 578 374 1/1994

(Continued)

OTHER PUBLICATIONS

Dowden, Douglas C., et al., "The Future of Network-Provided Communications Services," *Bell Labs Technical Journal*, Jul.-Sep. 2000, pp. 3-10.

(Continued)

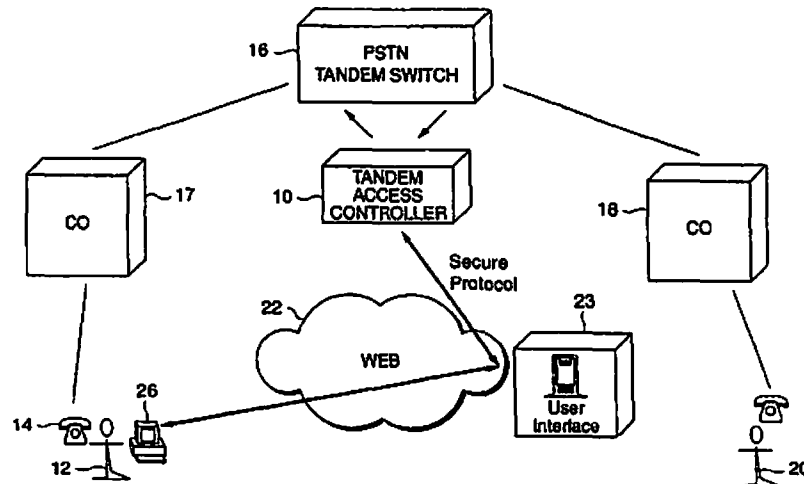
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(57) **ABSTRACT**

A caller ID based call routing feature is described for blocked and non-blocked caller ID's. A processing system in the public switched telephone network (PSTN) receives first identifying information for identify the source of a telephone call and associates additional information stored in a memory with the first identifying information. The additional information may be information about the calling party initially downloaded to the memory by a subscriber. Once retrieved from the memory by the processing system, the additional information may then be transmitted to the subscriber via the Internet for display on a monitor or to the subscriber's telephone for display on a telephone display. Another feature described is a branch calling feature where the subscriber may program a processing system within the PSTN to forward an incoming call to two or more end units (e.g., telephones) simultaneously. If the call at an end unit is answered, answer supervision signaling is transmitted back to the processing system which then terminates all other calls. The processing system then connects the calling party to the subscriber. The branch calling may be made for any combination of local, long distance, and cellular telephone numbers.

182 Claims, 11 Drawing Sheets



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| U.S. PATENT DOCUMENTS | | | | | | | |
|-----------------------|---|---------|--------------------|--------|-------------|---------|-----------------------|
| 4,310,726 | A | 1/1982 | Asmuth | 179/18 | 5,396,542 A | 3/1995 | Alger |
| 4,313,035 | A | 1/1982 | Jordan et al. | | 5,420,858 A | 5/1995 | Marshall et al. |
| 4,348,554 | A | 9/1982 | Asmuth | | 5,422,882 A | 6/1995 | Hiller et al. |
| 4,555,982 | A | 12/1985 | Goubaud | | 5,423,003 A | 6/1995 | Berteau |
| 4,569,041 | A | 2/1986 | Takeuchi et al. | | 5,426,636 A | 6/1995 | Hiller et al. |
| 4,608,685 | A | 8/1986 | Jain et al. | | 5,428,607 A | 6/1995 | Hiller et al. |
| 4,611,094 | A | 9/1986 | Asmuth et al. | | 5,428,616 A | 6/1995 | Field et al. |
| 4,611,096 | A | 9/1986 | Asmuth et al. | | 5,428,663 A | 6/1995 | Grimes et al. |
| 4,630,260 | A | 12/1986 | Toy et al. | | 5,430,719 A | 7/1995 | Weisser, Jr. |
| 4,630,262 | A | 12/1986 | Callens et al. | | 5,434,913 A | 7/1995 | Tung et al. |
| 4,661,947 | A | 4/1987 | Lea et al. | | 5,436,898 A | 7/1995 | Bowen et al. |
| 4,674,082 | A | 6/1987 | Flanagin et al. | | 5,438,614 A | 8/1995 | Rozman et al. |
| 4,679,190 | A | 7/1987 | Dias et al. | | 5,444,709 A | 8/1995 | Riddle |
| 4,679,191 | A | 7/1987 | Nelson et al. | | 5,448,623 A | 9/1995 | Wiedeman et al. |
| 4,707,831 | A | 11/1987 | Weir et al. | | 5,452,289 A | 9/1995 | Sharma et al. |
| 4,715,026 | A | 12/1987 | Eberspacher | | 5,453,986 A | 9/1995 | Davis et al. |
| 4,723,238 | A | 2/1988 | Isreal et al. | | 5,455,853 A | 10/1995 | Cebulka et al. |
| 4,757,497 | A | 7/1988 | Beierle et al. | | 5,457,684 A | 10/1995 | Bharucha et al. |
| 4,761,779 | A | 8/1988 | Nara et al. | | 5,469,500 A | 11/1995 | Salter et al. 379:201 |
| 4,771,425 | A | 9/1988 | Baran et al. | | 5,471,470 A | 11/1995 | Sharma et al. |
| 4,815,071 | A | 3/1989 | Shimizu | | 5,471,616 A | 11/1995 | Johnson et al. |
| 4,819,228 | A | 4/1989 | Baran et al. | | 5,479,411 A | 12/1995 | Klein |
| 4,862,451 | A | 8/1989 | Closs et al. | | 5,485,457 A | 1/1996 | Aramaki |
| 4,866,704 | A | 9/1989 | Bergman | | 5,495,567 A | 2/1996 | Iizawa et al. |
| 4,872,159 | A | 10/1989 | Hemmady et al. | | 5,497,339 A | 3/1996 | Bernard |
| 4,872,160 | A | 10/1989 | Hemmady et al. | | 5,521,914 A | 5/1996 | Mavraganis et al. |
| 4,885,739 | A | 12/1989 | Read et al. | | 5,526,353 A | 6/1996 | Henley et al. |
| 4,903,261 | A | 2/1990 | Baran et al. | | 5,537,403 A | 7/1996 | Cloonan et al. |
| 4,926,416 | A | 5/1990 | Weik | | 5,541,917 A | 7/1996 | Farris |
| 4,932,022 | A | 6/1990 | Keeney et al. | | 5,544,161 A | 8/1996 | Bigham et al. |
| 4,933,931 | A | 6/1990 | Kokubo | | 5,544,163 A | 8/1996 | Madonna |
| 4,953,158 | A | 8/1990 | Schreur | | 5,544,164 A | 8/1996 | Baran |
| 4,953,198 | A | 8/1990 | Daly et al. | | 5,544,168 A | 8/1996 | Jeffrey et al. |
| 4,958,341 | A | 9/1990 | Hemmady et al. | | 5,553,063 A | 9/1996 | Dickson |
| 4,962,497 | A | 10/1990 | Ferenc et al. | | 5,557,658 A | 9/1996 | Gregorek et al. |
| 4,969,184 | A | 11/1990 | Gordon et al. | | 5,563,937 A | 10/1996 | Bruno et al. |
| 4,970,721 | A | 11/1990 | Aczel et al. | | 5,566,236 A | 10/1996 | Mel ampy et al. |
| 4,973,837 | A | 11/1990 | Bradbeer | | 5,568,475 A | 10/1996 | Doshi et al. |
| 4,975,695 | A | 12/1990 | Almond et al. | | 5,570,355 A | 10/1996 | Dail et al. |
| 4,996,685 | A | 2/1991 | Farese et al. | | 5,572,583 A | 11/1996 | Wheeler, Jr. et al. |
| 5,008,929 | A | 4/1991 | Olsen et al. | | 5,572,583 A | 11/1996 | Miyahara |
| 5,014,266 | A | 5/1991 | Bales et al. | | 5,577,038 A | 11/1996 | Sharma et al. |
| 5,018,136 | A | 5/1991 | Gollub | | 5,577,041 A | 11/1996 | Sharma et al. |
| 5,020,058 | A | 5/1991 | Holden et al. | | 5,579,308 A | 11/1996 | Humpleman |
| 5,022,071 | A | 6/1991 | Mozer et al. | | 5,590,181 A | 12/1996 | Hogan et al. |
| 5,048,081 | A | 9/1991 | Gavaras et al. | | 5,592,477 A | 1/1997 | Farris et al. |
| 5,051,983 | A | 9/1991 | Kammerl | | 5,592,538 A | 1/1997 | Kosowsky et al. |
| 5,093,827 | A | 3/1992 | Franklin et al. | | 5,594,732 A | 1/1997 | Bell et al. |
| 5,115,431 | A | 5/1992 | Williams et al. | | 5,596,579 A | 1/1997 | Yasrebi |
| 5,150,357 | A | 9/1992 | Hopner et al. | | 5,600,643 A | 2/1997 | Robrock, II |
| 5,157,662 | A | 10/1992 | Tadamura et al. | | 5,600,649 A | 2/1997 | Sharma et al. |
| 5,197,067 | A | 3/1993 | Fujimoto et al. | | 5,602,991 A | 2/1997 | Berteau |
| 5,208,806 | A | 5/1993 | Hasegawa | | 5,604,737 A | 2/1997 | Iwami et al. |
| 5,218,602 | A | 6/1993 | Grant et al. | | 5,606,594 A | 2/1997 | Register et al. |
| 5,231,633 | A | 7/1993 | Hluchyj et al. | | 5,608,786 A | 3/1997 | Gordon |
| 5,241,588 | A | 8/1993 | Babson, III et al. | | 5,613,069 A | 3/1997 | Walker |
| 5,247,571 | A | 9/1993 | Kay et al. | | 111641 H | 4/1997 | Sharman |
| 5,268,900 | A | 12/1993 | Hluchyj et al. | | 5,621,727 A | 4/1997 | Vaudreuil |
| 5,274,635 | A | 12/1993 | Rahman et al. | | 5,625,677 A | 4/1997 | Feiertag et al. |
| 5,291,489 | A | 3/1994 | Morgan et al. | | 5,628,004 A | 5/1997 | Gormley et al. |
| 5,297,191 | A | 3/1994 | Gerszberg | | 5,631,897 A | 5/1997 | Pacheco et al. |
| 5,301,189 | A | 4/1994 | Schmidt et al. | | 5,640,446 A | 6/1997 | Everett et al. |
| 5,305,308 | A | 4/1994 | English et al. | | 5,646,945 A | 7/1997 | Bergler |
| 5,311,582 | A | 5/1994 | Davenport et al. | | 5,650,999 A | 7/1997 | Dickson |
| 5,327,428 | A | 7/1994 | Van As et al. | | 5,654,957 A | 8/1997 | Koyama |
| 5,341,374 | A | 8/1994 | Lewen et al. | | 5,659,541 A | 8/1997 | Chan |
| 5,351,276 | A | 9/1994 | Doll, Jr. et al. | | 5,659,542 A | 8/1997 | Bell et al. |
| 5,351,286 | A | 9/1994 | Nici | | 5,673,262 A | 9/1997 | Shimizu 370:395 |
| 5,353,283 | A | 10/1994 | Tsuchiya | | 5,680,437 A | 10/1997 | Segal |
| 5,359,598 | A | 10/1994 | Steagall et al. | | 5,684,799 A | 11/1997 | Bigham et al. |
| 5,365,521 | A | 11/1994 | Ohnishi et al. | | 5,689,553 A | 11/1997 | Ahuja et al. |
| 5,379,293 | A | 1/1995 | Kanno et al. | | 5,692,126 A | 11/1997 | Templeton et al. |
| 5,381,405 | A | 1/1995 | Daugherty et al. | | 5,701,301 A | 12/1997 | Weisser, Jr. |
| 5,381,466 | A | 1/1995 | Shibayama et al. | | 5,706,286 A | 1/1998 | Reiman et al. |
| 5,383,183 | A | 1/1995 | Yoshida | | 5,710,769 A | 1/1998 | Anderson et al. |
| 5,384,840 | A | 1/1995 | Blatchford et al. | | 5,712,903 A | 1/1998 | Bartholomew et al. |
| 5,390,184 | A | 2/1995 | Morris | | 5,712,908 A | 1/1998 | Brinkman et al. |
| 5,396,491 | A | 3/1995 | Newman | | 5,724,412 A | 3/1998 | Srinivasan |
| | | | | | 5,727,057 A | 3/1998 | Emery et al. |
| | | | | | 5,729,544 A | 3/1998 | Lev et al. |

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Page 3

| | | | | | |
|-------------|---------|------------------------------|--------------|---------|-------------------------------|
| 5,732,074 A | 3/1998 | Spaur et al. | 6,028,917 A | 2/2000 | Creamer et al. |
| 5,732,078 A | 3/1998 | Arango | 6,031,836 A | 2/2000 | Haserodt |
| 5,732,216 A | 3/1998 | Logan et al. | 6,031,904 A | 2/2000 | An et al. |
| 5,737,320 A | 4/1998 | Madonna | 6,041,325 A | 3/2000 | Shah et al. |
| 5,737,331 A | 4/1998 | Hoppal et al. | 6,044,403 A | 3/2000 | Gerszberg et al. |
| 5,737,333 A | 4/1998 | Civanlar et al. | 6,069,890 A | 5/2000 | White et al. |
| 5,737,533 A | 4/1998 | De Hond | 6,075,992 A | 6/2000 | Moon et al. |
| 5,740,164 A | 4/1998 | Liron | 6,078,581 A | 6/2000 | Shtivelman et al. |
| 5,740,231 A | 4/1998 | Cohn et al. | 6,084,584 A | 7/2000 | Nahi et al. |
| 5,742,596 A | 4/1998 | Baratz et al. | 6,094,478 A | 7/2000 | Shepherd et al. |
| 5,742,905 A | 4/1998 | Pepe et al. | 6,104,800 A | 8/2000 | Benson |
| 5,751,706 A | 5/1998 | Land et al. | 6,118,780 A | 9/2000 | Dunn et al. |
| 5,751,968 A | 5/1998 | Cohen | 6,134,235 A | 10/2000 | Goldman et al. |
| 5,754,641 A | 5/1998 | Voit et al. | 6,141,341 A | 10/2000 | Jones et al. |
| 5,764,628 A | 6/1998 | Davis et al. | 6,161,128 A | 12/2000 | Smyk |
| 5,764,736 A | 6/1998 | Shachar et al. | 6,161,134 A | 12/2000 | Wang et al. |
| 5,764,750 A | 6/1998 | Chau et al. | 6,163,598 A | 12/2000 | Moore |
| 5,764,756 A | 6/1998 | Onweller | 6,167,040 A | 12/2000 | Haeggstrom |
| 5,777,991 A | 7/1998 | Adachi et al. | 6,175,860 B1 | 1/2001 | Gaucher |
| 5,790,538 A | 8/1998 | Sugar | 6,185,285 B1 | 2/2001 | Relyea et al. |
| 5,793,762 A | 8/1998 | Penners et al. | 6,188,688 B1 | 2/2001 | Buskirk, Jr. |
| 5,793,771 A | 8/1998 | Darland et al. | 6,212,261 B1 | 4/2001 | Meubus et al. |
| 5,799,072 A | 8/1998 | Vulcan et al. | 6,216,158 B1 | 4/2001 | Luo et al. |
| 5,799,154 A | 8/1998 | Kuriyan | 6,240,097 B1 | 5/2001 | Wesolek et al. |
| 5,802,160 A | 9/1998 | Kugell et al. | 6,243,373 B1 | 6/2001 | Turock |
| 5,805,587 A | 9/1998 | Norris et al. | 6,259,692 B1 | 7/2001 | Shtivelman et al. |
| 5,805,588 A | 9/1998 | Petersen | 6,262,978 B1 | 7/2001 | Bruno et al. |
| 5,806,057 A | 9/1998 | Gornley et al. | 6,266,539 B1 | 7/2001 | Pardo |
| 5,809,022 A | 9/1998 | Byers et al. | 6,278,707 B1 | 8/2001 | MacMillan et al. |
| 5,809,128 A | 9/1998 | McMullin | 6,301,609 B1 | 10/2001 | Aravamudan et al. |
| 5,812,534 A | 9/1998 | Davis et al. | 6,308,201 B1 | 10/2001 | Pivowar et al. |
| 5,815,505 A | 9/1998 | Mills | 6,324,183 B1 | 11/2001 | Miller et al. |
| 5,818,912 A | 10/1998 | Hammond | 6,327,258 B1 | 12/2001 | Deschaine et al. 370/356 |
| 5,825,771 A | 10/1998 | Cohen et al. | 6,334,126 B1 | 12/2001 | Nagatomo et al. |
| 5,828,666 A | 10/1998 | Focsaneanu et al. | 6,337,858 B1 | 1/2002 | Petty et al. |
| 5,838,665 A | 11/1998 | Kahn et al. | 6,339,594 B1 | 1/2002 | Civanlar et al. |
| 5,848,140 A | 12/1998 | Foladare et al. 379/201 | 6,359,892 B1 | 3/2002 | Szlam |
| 5,850,433 A | 12/1998 | Rondeau | 6,381,323 B1 | 4/2002 | Schwab et al. |
| 5,859,972 A | 1/1999 | Subramaniam et al. | 6,385,308 B1 | 5/2002 | Cohen et al. |
| 5,867,494 A | 2/1999 | Krishnaswamy et al. | 6,404,764 B1 | 6/2002 | Jones et al. |
| 5,867,495 A | 2/1999 | Elliott et al. | 6,411,615 B1 | 6/2002 | DeGolia et al. |
| 5,875,405 A | 2/1999 | Honda | 6,411,965 B2 | 6/2002 | Klug |
| 5,878,113 A | 3/1999 | Bhusari | 6,414,962 B1 | 7/2002 | Hall et al. |
| 5,878,418 A | 3/1999 | Polcyn et al. | 6,418,198 B2 | 7/2002 | Brablec et al. |
| 5,881,060 A | 3/1999 | Morrow et al. | 6,421,235 B2 | 7/2002 | Ditzik |
| 5,881,131 A | 3/1999 | Farris et al. | 6,438,124 B1 | 8/2002 | Wilkes |
| 5,889,774 A | 3/1999 | Mirashrafi et al. | 6,445,694 B1 | 9/2002 | Swartz |
| 5,894,473 A | 4/1999 | Dent | 6,445,697 B1 | 9/2002 | Fenton |
| 5,894,595 A | 4/1999 | Foladare et al. | 6,446,127 B1 | 9/2002 | Shuster et al. |
| 5,907,811 A | 5/1999 | Foladare | 6,448,978 B1 | 9/2002 | Salvador et al. |
| 5,913,029 A | 6/1999 | Shostak | 6,456,594 B1 | 9/2002 | Kaplan et al. |
| 5,915,008 A | 6/1999 | Dulman | 6,456,601 B1 | 9/2002 | Kozdon et al. |
| 5,918,172 A | 6/1999 | Saunders et al. | 6,459,780 B1 | 10/2002 | Wurster et al. |
| 5,922,047 A | 7/1999 | Newlin et al. | 6,477,565 B1 | 11/2002 | Daswani et al. |
| 5,930,700 A | 7/1999 | Pepper et al. | 6,477,576 B2 | 11/2002 | Angwin et al. |
| 5,933,490 A | 8/1999 | White et al. | 6,483,902 B1 | 11/2002 | Stewart et al. |
| 5,933,778 A | 8/1999 | Buhrmann et al. | 6,493,338 B1 | 12/2002 | Preston et al. |
| 5,938,757 A | 8/1999 | Bertsch | 6,496,477 B1 | 12/2002 | Perkins et al. |
| 5,946,386 A | 8/1999 | Rogers et al. | 6,498,797 B1 | 12/2002 | Anerousis |
| 5,946,684 A | 8/1999 | Lund | 6,526,462 B1 | 2/2003 | Flabl |
| 5,953,392 A | 9/1999 | Rhic et al. | 6,539,359 B1 | 3/2003 | Ladd et al. |
| 5,954,799 A | 9/1999 | Goheen et al. | 6,577,622 B1 | 6/2003 | Shuster et al. |
| 5,958,016 A | 9/1999 | Chang et al. | 6,584,490 B1 | 6/2003 | Shuster et al. |
| 5,960,340 A | 9/1999 | Fuentes | 6,614,781 B1 | 9/2003 | Elliott et al. |
| 5,963,551 A | 10/1999 | Minko | 6,643,282 B1 | 11/2003 | Christie 370/352 |
| 5,970,059 A | 10/1999 | Ahopello et al. | 6,650,901 B1 | 11/2003 | Shuster et al. |
| 5,974,449 A | 10/1999 | Chang et al. | 6,681,252 B1 | 1/2004 | Shuster et al. |
| 5,982,866 A | 11/1999 | Kowalski | 6,697,461 B1 | 2/2004 | Middleswarth et al. |
| 5,991,291 A | 11/1999 | Asai et al. | 6,731,630 B1 | 5/2004 | Shuster et al. |
| 5,991,310 A | 11/1999 | Katko 370/522 | 6,741,586 B1 | 5/2004 | Shuster et al. |
| 5,991,394 A | 11/1999 | Dezonne et al. | 6,744,759 B1 | 6/2004 | Sidhu |
| 5,999,525 A | 12/1999 | Krishnaswamy et al. | 6,775,264 B1 | 8/2004 | Kurganov |
| 6,005,870 A | 12/1999 | Leung et al. | 6,775,284 B1 | 8/2004 | Calvignac |
| 6,006,272 A | 12/1999 | Aravamudan et al. | 6,785,229 B1 | 8/2004 | McNiff et al. |
| 6,009,469 A | 12/1999 | Mattaway et al. | 6,785,266 B2 | 8/2004 | Swartz |
| 6,012,088 A | 1/2000 | Li et al. | 6,788,775 B1 | 9/2004 | Simpson |
| 6,014,437 A | 1/2000 | Acker et al. | 6,795,429 B1 | 9/2004 | Shuster et al. |
| 6,020,916 A | 2/2000 | Gerszberg et al. | 6,804,224 B1 | 10/2004 | Shuster et al. |
| 6,026,083 A | 2/2000 | Albrow et al. | 6,807,257 B1 | 10/2004 | Kurganov |

US 8,457,113 B2

Page 4

| | | | | | | |
|--------------|----|---------|------------------------------|----|-------------|---------|
| 6,816,582 | B2 | 11/2004 | Levine | WO | WO 97/44943 | 11/1997 |
| 6,822,957 | B1 | 11/2004 | Shuster et al. | WO | WO 97/46073 | 12/1997 |
| 6,853,714 | B2 | 2/2005 | Liljestrand et al. | WO | WO 97/47118 | 12/1997 |
| 6,856,616 | B1 | 2/2005 | Shuster et al. | WO | WO 97/50217 | 12/1997 |
| 6,857,021 | B1 | 2/2005 | Schuster et al. | WO | WO 97/50271 | 12/1997 |
| 6,857,072 | B1 | 2/2005 | Schuster et al. | WO | WO 97/50277 | 12/1997 |
| 6,870,830 | B1 | 3/2005 | Shuster et al. | WO | WO 98/00988 | 1/1998 |
| 6,914,897 | B1 | 7/2005 | Shuster et al. | WO | WO 98/04065 | 1/1998 |
| 6,937,699 | B1 | 8/2005 | Shuster et al. | WO | WO 98/04989 | 2/1998 |
| 6,937,713 | B1 | 8/2005 | Kung | WO | WO 98/10538 | 3/1998 |
| 6,956,941 | B1 | 10/2005 | Duncan et al. | WO | WO 98/11704 | 3/1998 |
| 7,069,291 | B2 | 6/2006 | Graves et al. | WO | WO 98/12860 | 3/1998 |
| 7,123,708 | B1 | 10/2006 | Gavillet 379/219 | WO | WO 98/13974 | 4/1998 |
| 7,184,527 | B1 | 2/2007 | Lin | WO | WO 98/16051 | 4/1998 |
| 7,233,658 | B2 | 6/2007 | Koser | WO | WO 98/18238 | 4/1998 |
| 7,242,759 | B1 | 7/2007 | Sanchez et al. 379/219 | WO | WO 98/18289 | 4/1998 |
| 7,272,115 | B2 | 9/2007 | Maher et al. | WO | WO 98/19425 | 5/1998 |
| 7,436,851 | B1 | 10/2008 | Chambers et al. 370/325 | WO | WO 98/19445 | 5/1998 |
| 2001/0022784 | A1 | 9/2001 | Menon et al. | WO | WO 98/20701 | 5/1998 |
| 2001/0030950 | A1 | 10/2001 | Chen et al. | WO | WO 98/21911 | 5/1998 |
| 2003/0026403 | A1 | 2/2003 | Clapper | WO | WO 98/23067 | 5/1998 |
| 2003/0040325 | A1 | 2/2003 | Clark | WO | WO 98/23080 | 5/1998 |
| 2003/0095650 | A1 | 5/2003 | Mize | WO | WO 98/26543 | 6/1998 |
| 2003/0133553 | A1 | 7/2003 | Khakoo et al. | WO | WO 98/28885 | 7/1998 |
| 2003/0156693 | A1 | 8/2003 | Goldman | WO | WO 98/30007 | 7/1998 |
| 2003/0194078 | A1 | 10/2003 | Wood et al. | WO | WO 98/30008 | 7/1998 |
| 2004/0029568 | A1 | 2/2004 | DeLuca et al. | WO | WO 98/34391 | 8/1998 |
| 2004/0151294 | A1 | 8/2004 | Baniak et al. | WO | WO 98/34399 | 8/1998 |
| 2004/0240657 | A1 | 12/2004 | Camarillo 379/221.02 | WO | WO 98/36543 | 8/1998 |
| 2004/0264673 | A1 | 12/2004 | Novack 379/221.11 | WO | WO 98/37665 | 8/1998 |
| 2005/0041526 | A1 | 2/2005 | Esmersoy et al. | WO | WO 98/37688 | 8/1998 |
| 2005/0141500 | A1 | 6/2005 | Bhandari et al. | WO | WO 98/39897 | 9/1998 |
| 2005/0169445 | A1 | 8/2005 | Harris | WO | WO 98/42104 | 9/1998 |
| 2005/0207557 | A1 | 9/2005 | Dolan et al. | WO | WO 98/42107 | 9/1998 |
| 2007/0041526 | A1 | 2/2007 | Hill et al. 379/88.21 | WO | WO 98/42146 | 9/1998 |
| | | | | WO | WO 98/47256 | 10/1998 |
| | | | | WO | WO 98/51063 | 11/1998 |

FOREIGN PATENT DOCUMENTS

| | | | | | |
|----|--------------|---------|----|-------------|---------|
| EP | 0 704 788 | 4/1996 | WO | WO 99/12365 | 3/1999 |
| EP | 0 738 093 | 10/1996 | WO | WO 99/19988 | 4/1999 |
| EP | 0 789 470 | 8/1997 | WO | WO 99/20059 | 4/1999 |
| EP | 0 794 650 | 9/1997 | WO | WO 99/35802 | 7/1999 |
| EP | 0 797 373 | 9/1997 | WO | WO 99/45687 | 9/1999 |
| EP | 0 824 298 | 2/1998 | WO | WO 01/05078 | 1/2001 |
| EP | 0 829 995 | 3/1998 | WO | WO 01/24496 | 4/2001 |
| EP | 0 841 831 | 5/1998 | WO | WO 01/24498 | 4/2001 |
| EP | 0 847 176 | 6/1998 | WO | WO 01/24500 | 4/2001 |
| EP | 0 851 653 | 7/1998 | WO | WO 01/24501 | 4/2001 |
| EP | 0 853 411 A2 | 7/1998 | WO | WO 01/24502 | 4/2001 |
| EP | 0 853 411 A3 | 7/1998 | WO | WO 01/24503 | 4/2001 |
| EP | 0 858 202 | 8/1998 | WO | WO 01/84859 | 11/2001 |
| EP | 0 866 596 | 9/1998 | | | |
| EP | 0 869 688 | 10/1998 | | | |
| EP | 0 872 998 | 10/1998 | | | |
| EP | 0 918 423 | 10/1998 | | | |
| EP | 0 881 848 A2 | 12/1998 | | | |
| EP | 0 898 431 | 2/1999 | | | |
| GB | 2 315 190 A | 1/1998 | | | |
| JP | 10-023067 | 1/1998 | | | |
| JP | 10-051453 | 2/1998 | | | |
| JP | 10-164135 | 6/1998 | | | |
| JP | 10-164257 | 6/1998 | | | |
| WO | WO 94/05111 | 3/1994 | | | |
| WO | WO 95/34985 | 12/1995 | | | |
| WO | WO 96/08935 | 3/1996 | | | |
| WO | WO 96/15598 | 5/1996 | | | |
| WO | WO 97/14234 | 4/1997 | | | |
| WO | WO 97/14238 | 4/1997 | | | |
| WO | WO 97/16007 | 5/1997 | | | |
| WO | WO 97/22216 | 6/1997 | | | |
| WO | WO 97/23078 | 6/1997 | | | |
| WO | WO 97/27692 | 7/1997 | | | |
| WO | WO 97/28628 | 8/1997 | | | |
| WO | WO 97/29581 | 8/1997 | | | |
| WO | WO 97/31492 | 8/1997 | | | |
| WO | WO 97/33412 | 9/1997 | | | |
| WO | WO 97/33421 | 9/1997 | | | |
| WO | WO 97/38511 | 10/1997 | | | |
| WO | WO 97/38551 | 10/1997 | | | |
| WO | WO 97/39560 | 10/1997 | | | |

OTHER PUBLICATIONS

Foard, C.F., "Teaming Switches and Computers for Customer Applications," *AT&T Technology*, 1991; 6. 4; Research Library, pp. 32-38.

Foster, Robin Harris, "Computer-Telephone Integration Goes Global," *AT&T Technology*, Autumn 1995; 10. 3; Research Library, pp. 18-22.

Kozik, Jack, et al., "On Opening PSTN to Enhanced Voice Data Services— The PINT Protocol Solution," *Bell Labs Technical Journal*, Jul.-Sep. 2000, pp. 153-165.

Lui, Anthony Y., et al., "The Enhanced Service Manager: A Service Management System for Next-Generation Networks," *Bell Labs Technical Journal*, Jul.-Sep. 2000, pp. 130-144.

Reisfield, E.S., "Customers Take Control of the AT&T Network," *AT&T Technology*, 1991; 6. 1; Research Library, pp. 44-48.

Sijben, Paul G., et al., "Bridging the Gap to IP Telephony," *Bell Labs Technical Journal*, Oct.-Dec. 1998, pp. 192-207.

RFC 3298 Service in the PSTN, Aug. 2002.

Implementing Automatic Location Update for Follow-Me database using VoIP and Bluetooth Technologies, *IEEE Transaction on computers*, vol. 51, No. 10, Oct. 2002.

New services demand integration, *Electronic Engineering Times*, Aug. 28, 2000, Iss. 1128; p. 110.

Natural Microsystems, M2 Presswire, Coventry, Aug. 18, 2000.

US 8,457,113 B2

Page 5

This pipe dream will come true: Voice Over Internet Protocol (VoIP) technology will make the phone Box something that really talks, Businessline, Chennai: Apr. 17, 2002.

Using Optimization to Achieve Efficient Quality of Service in Voice over IP Networks, IEEE 2003.

Broadsoft literature Broadworks overview, Copyright date 2002.

BroadSoft introduces industry's first complete service delivery and creation product suite for enhanced telephony services Broadworks, ATM Newsletter: Boston: Mar. 2000, vol. 9, Iss. 3, p. 13

BroadSoft unveils advanced architecture for the rapid and cost effective delivery of enhanced communications services, Website, Aug. 25, 1999, Press releases, 3 pages.

ADC Telecommunications: SS7 New Net SS7 Tutorial, Copyright 1999.

Mary Carmichael, "Calls That Follow you Anywhere" Newsweek, Apr. 28, 2003, p. 43.

U.S. Appl. No. 09/406,322, Schuster et al., filed Sep. 27, 1999.

U.S. Appl. No. 09/515,798, Schuster et al., filed Feb. 29, 2000

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