and a server process over a computer network (User's Guide, pg. 8, 11, Network Information, pg. 10, whereby users connect via a network through data received from a server), a method for establishing point-to-point communications with other processes comprising: B. establishing a communication connection with the server process once the assigned network protocol of the first process is known and C. forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process (Network Information, pg. 10, Troubleshooting Help File, pg. 28, Help File, pg. 2, Readme File, pg. 2, whereby clients transmit name and address to be stored on a server Post Office); and D. establishing a point-to-point communication with another process over the computer network (Help File, pg. 17, User Guide, pg. 2, whereby communication between users is established).

In addition, VocalChat teaches the use of TCP/IP (Troubleshooting Help File, pg. 28). However, VocalChat does not explicitly teach A. determining the currently assigned network protocol address of the first process upon connection to the computer network.

RFC 1531 teaches dynamically assigning IP addresses on a TCP/IP network by an Internet access server (RFC 1531, Section 2.2).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine all five VocalChat References utilized above since they all describe a VocalChat system which shares numerous common features including a central server to store addresses and VocalChat client software and which all interoperate in the same basic manner. In addition it would have been obvious to utilize dynamically assigned IP addresses from Internet access servers in the invention taught by VocalChat above since this allows for automatic reuse

of an address that is no longer needed by the host to which it was assigned (RFC 1531, Pg. 2), and since examiner notes the use of dynamic IP address assignment in a TCP/IP network are old and well known in the art, and are useful to eliminate the burdensome task of manually assigning IP addresses for all networked computers.

Referring to **(Claim 6)**, VocalChat teaches the method of claim 5 wherein the program step D comprises transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network (Help File, pg. 8, 22, whereby an IP address is provided in response to a query if a callee is connected); and receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network (Help File, pg. 22, whereby network addresses are received in response to queries).

14) Claims 8-9, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable by VocalChat, further in view of Pinard.

Referring to **(Claim 8)**, VocalChat teaches in a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network (Help File, pg. 17, User Guide, pg. 2), the method comprising the steps of: querying the server process to determine if the first callee process is accessible (Help File, pg. 2, 26, Network Information, pg. 10, whereby a server can receiver

queries to determine status and information of users); and establishing a point-to-point communication link from the caller process to the first callee process (Help File, pg. 14, 20-22, whereby calls are made between users via network address).

In addition, VocalChat teaches the use of multiple user interface elements (User Guide, pg. 12, 14, Help File, pg. 11, 20-21). However, VocalChat does not explicitly teach generating a user-interface element representing a first communication line and a first callee process and establishing the link in response to a user associating the element representing the first callee process with the element representing the first communication line

Pinard teaches a human machine interface for telephone feature invocation which is utilized on a personal computer and allows a user to make telephone calls by moving graphics around a screen. Pinard teaches a user interface element representing a first communication line and callee process (Pinard, Figure 6 and col. 5 lines 23-30), and also teaches clicking and dragging an icon representing a callee from a directory into a call setup icon to establish a call link (Pinard, Figure 3, col. 4 lines 38-51, Figure 6, col. 5 lines 36-37).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize the user-interface elements and interactions taught by Pinard in the invention taught by VocalChat since Pinard teaches that the invention can be used with any system in which a personal computer in conjunction with a server operates (Pinard, col. 2 lines 43-46), and since examiner notes that both VocalChat and Pinard relate to communications between at least two users implemented in a computerized environment.

Referring to **(Claim 9)**, VocalChat teaches the method of claim 8 wherein step C further comprises the steps of: querying the server process as to the on-line status of the first callee process (Help File, pg. 8, 22, whereby an IP address is provided in response to a query if a callee is connected); and receiving a network protocol address of the first callee process over the computer network from the server process (Help File, pg. 22, whereby network addresses are received in response to queries).

Referring to **(Claims 14-15)**, VocalChat teaches the above. However, VocalChat does not explicitly teach generating a user interface element representing a communication line having a temporarily disabled status; and temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status, wherein the element generated represents a communication line on hold status.

Pinard teaches a "hard hold" icon to which saller/callees may be dragged to be put on hold status (Pinard, Figure 12, col. 6 lines 36-53).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize the user-interface elements and interactions taught by Pinard in the invention taught by VocalChat since Pinard teaches that the invention can be used with any system in which a personal computer in conjunction with a server operates (Pinard, col. 2 lines 43-46), and since examiner notes that both NetBIOS and Pinard relate to communications between at least two users implemented in a computerized environment.

Referring to **(Claim 16)**, VocalChat teaches wherein the element generated represents a communication line on mute status (VocalChat User's Guide, pg. 57, whereby a MUTE option can be used so a user can talk without being heard by the other user's system).

Referring to **(Claims 17-18)**, VocalChat teaches wherein the display further comprises a visual display (User's Guide, pg. 11, whereby computer displays are considered visual displays), and wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements (User's Guide, pg. 11-26, whereby a GUI is used showing graphic elements of call display).

Conclusion

All correspondence relating to this ex parte reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop Ex Parte Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to:

(571) 273-9900
Central Reexamination Unit

By hand to:

Customer Service Window
Randolph Building
401 Dulany St.
Alexandria, VA 22314

By EFS-Web:

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at

https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Alexander J Kosowski/

Primary Examiner, Art Unit 3992

CMC
ESK

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 1 of 1		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES			
Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	1-1	Civ Action No. 06-2469 Plaintiff Net2Phone, Inc.'s Opening Claim Construction Brief (part 1 of 3) (N2PIDS_02100-2166)	
	1-2	Civ Action No. 06-2469 Plaintiff Net2Phone, Inc.'s Opening Claim Construction Brief (part 2 of 3) (N2PIDS_02166-2232)	
	1-3	Civ Action No. 06-2469 Plaintiff Net2Phone, Inc.'s Opening Claim Construction Brief (part 3 of 3) (N2PIDS_02233-2292)	
	1-4		
	1-5		
	1-6		
	1-7		

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

Electronic Acknowledgement Receipt

EFS ID:	5873861
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	6,009,469
Customer Number:	42624
Filer:	Michael Raymond Casey
Filer Authorized By:	
Attorney Docket Number:	2655-0185
Receipt Date:	12-AUG-2009
Filing Date:	26-FEB-2009
Time Stamp:	13:52:55
Application Type:	Reexam (Third Party)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	N2PIDS_02063.pdf	257079 9077c94fc8f614df35da9f7f213079fb742610d7	no	2

Warnings:	
Information:	

2	Information Disclosure Statement (IDS) Filed (SB/08)	N2PIDS_02065.pdf	135592 6e5d8d42ad1bf741500657bc2dcf4594147efbac	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	NPL Documents	N2PIDS_02100.pdf	7508718 5746764fc5941ad1219fab6873a3f311ed436bf0	no	66
Warnings:					
Information:					
4	NPL Documents	N2PIDS_02166.pdf	6806160 e5f84cd3022bf393d6052237c341fc4a78616503	no	67
Warnings:					
Information:					
5	NPL Documents	N2PIDS_02233.pdf	6987289 25ba8ceecec040367e21e1fdfb5f5a6fcd50c600	no	60
Warnings:					
Information:					
6	Reexam Certificate of Service	N2PIDS_02078_COS.pdf	21706 1a8b052cea43fd90e6f3de54729dca4e47d2bd7a	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	21716544		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF:	Attorney Docket: 2655-0185
Net2Phone, Inc.	Group Art Unit: 3992
Control No.: 90/010,422	Examiner: KOSOWSKI, Alexander J.
Issue Date: December 28, 1999	Date: August 12, 2009
Title: **GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION**	Confirmation No.: 6565

INFORMATION DISCLOSURE STATEMENT

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

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each non-U.S. Patent reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The submission of any document herewith, which is not a statutory bar, is not intended that any such document constitutes prior art against any of the claims of the present application or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference against the claims of the present application.

☐ The Examiner's attention is directed to co-pending U.S. Patent Control Nos. 90/010,424, 90/010,421, 90/010,416 and 90/010,423 which are involved in

the same litigation as the patent corresponding to the present re-examination. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.

CHARGE STATEMENT: Deposit Account No. 501860, order no. **2655-0185.**

The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached

This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.

CUSTOMER NUMBER

42624

Respectfully submitted,

By: /Michael R. Casey /

Michael R. Casey, Ph.D. (Reg. No.: 40,294)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 1 of 5	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	1-1	Civ Action No. 06-2469 Appendix A (List of Prior Art References) to Defendants' Fourth Amended Responses to Plaintiff's Interrogatory Nos. 17-19 (N2PIDS_01618 -1657)	
	1-2	Civ Action No. 06-2469 Appendix B (Invalidty Claim Chart) to Defendants' Fourth Amended Responses to Plaintiff's Interrogatory Nos. 17-19 (N2PIDS_01658-1693)	
	1-3	Civ Action No. 06-2469 Appendix C (Obviousness Combinations Chart) to Defendants' Fourth Amended Responses to Plaintiff's Interrogatory Nos. 17-19 (N2PIDS_01694-01716)	
	1-4	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Opening Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 1 of 5) (N2PIDS_00457-506)	
	1-5	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Opening Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 2 of 5) (N2PIDS_00507-556)	
	1-6	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Opening Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 3 of 5) (N2PIDS_00557-606)	
	1-7	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Opening Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 4 of 5) (N2PIDS_00607-656)	

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 2 of 5	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	2-1	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Opening Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 5 of 5) (N2PIDS_00657-733)	
	2-2	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Reply Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 1 of 3) (N2PIDS_00734-768)	
	2-3	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Reply Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 2 of 3) (N2PIDS_00769-802)	
	2-4	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Reply Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (part 3 of 3) (N2PIDS_00803-844)	
	2-5	Civ Action No. 06-2469 Declaration of Alan J. Heinrich in Support of Responsive Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (N2PIDS_00412-456)	
	2-6	Civ Action No. 06-2469 Declaration of David B. Johnson in Support of Skype's Responsive Claim Construction Brief (N2PIDS_00845-913)	
	2-7	Civ Action No. 06-2469 Defendants' Fourth Amended Responses to Plaintiff's Interrogatory Nos. 17-19 Directed to Defendents Ebay Skype Tech and Skype Inc (N2PIDS_00387-411)	

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 3 of 5	Confirmation No.	6565

NON-PATENT REFERENCES			
Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	3-1	Civ Action No. 06-2469 Joint Final Pretrial Order (part 1 of 8) (N2PIDS_00914-963)	
	3-2	Civ Action No. 06-2469 Joint Final Pretrial Order (part 2 of 8) (N2PIDS_00964-1013)	
	3-3	Civ Action No. 06-2469 Joint Final Pretrial Order (part 3 of 8) (N2PIDS_01014-1063)	
	3-4	Civ Action No. 06-2469 Joint Final Pretrial Order (part 4 of 8) (N2PIDS_01064-1113)	
	3-5	Civ Action No. 06-2469 Joint Final Pretrial Order (part 5 of 8) (N2PIDS_01114-1163)	
	3-6	Civ Action No. 06-2469 Joint Final Pretrial Order (part 6 of 8) (N2PIDS_01164-1213)	
	3-7	Civ Action No. 06-2469 Joint Final Pretrial Order (part 7 of 8) (N2PIDS_01214-1263)	

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 4 of 5	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	4-1	Civ Action No. 06-2469 Joint Final Pretrial Order (part 8 of 8) (N2PIDS_01264-1310)	
	4-2	Civ Action No. 06-2469 Opening Claim Construction Brief of Skype Tech Skype Inc. and Ebay (N2PIDS_01741-1790)	
	4-3	Civ Action No. 06-2469 Plaintiff Net2Phone's Reply Brief on Claim Construction (part 1 of 3) (N2PIDS_01311-1393)	
	4-4	Civ Action No. 06-2469 Plaintiff Net2Phone's Reply Brief on Claim Construction (part 2 of 3) (N2PIDS_01394-1451)	
	4-5	Civ Action No. 06-2469 Plaintiff Net2Phone's Reply Brief on Claim Construction (part 3 of 3) (N2PIDS_01452-1490)	
	4-6	Civ Action No. 06-2469 Plaintiff Net2Phone's Response Brief on Claim Construction (part 1 of 2) (N2PIDS_01491-1546)	
	4-7	Civ Action No. 06-2469 Plaintiff Net2Phone's Response Brief on Claim Construction (part 2 of 2) (N2PIDS_01547-1617)	

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 5 of 5	Confirmation No.	6565

NON-PATENT REFERENCES			
Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	5-1	Civ Action No. 06-2469 Reply Claim Construction Brief of Skype Tech, Skype Inc. and Ebay (N2PIDS_01717-1740)	
	5-2	Civ Action No. 06-2469 Responsive Claim Construction Brief of Skype Tech Skype Inc. and Ebay (N2PIDS_01791-1825)	
	5-3	U.S. Control No. 90/010,423 - 2009-08-05 PTO Office Action	
	5-4		
	5-5		
	5-6		
	5-7		

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

Electronic Acknowledgement Receipt

EFS ID:	5869609
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	6,009,469
Customer Number:	42624
Filer:	Michael Raymond Casey
Filer Authorized By:	
Attorney Docket Number:	2655-0185
Receipt Date:	11-AUG-2009
Filing Date:	26-FEB-2009
Time Stamp:	18:06:49
Application Type:	Reexam (Third Party)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	26550185Xmittal.pdf	251587 e38895e1779000ed5dbfda946618b791c4eef4ac	no	2

Warnings:	
Information:	

2	Information Disclosure Statement (IDS) Filed (SB/08)	26550185_1449.pdf	798432 ea92a9ed4bfc4793db8c20aa6a3934b16383c3a0	no	5
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Information:					
This is not an USPTO supplied IDS fillable form					
3	NPL Documents	N2PIDS_00387.pdf	1248303 103f829551fe55b548a541d669beda6cad272089	no	25
Warnings:					
Information:					
4	NPL Documents	N2PIDS_00412.pdf	3962848 1af848ed034593c08abb73fe5d189f1e6f7f5298	no	45
Warnings:					
Information:					
5	NPL Documents	N2PIDS_00457.pdf	2698601 ce8f9d9f9808e5c59d3b34fab8c77ca89aeb825f	no	50
Warnings:					
Information:					
6	NPL Documents	N2PIDS_00507.pdf	1838285 37c19558ce807b15bbead7b7636c9d0f18f07a6f	no	50
Warnings:					
Information:					
7	NPL Documents	N2PIDS_00557.pdf	1953095 3a1ccc92e0a0e581163917ecdc9acc66de6c098f	no	50
Warnings:					
Information:					
8	NPL Documents	N2PIDS_00607.pdf	3476450 b193aab143feb3aa818b3e4180603961343387793	no	50
Warnings:					
Information:					
9	NPL Documents	N2PIDS_00657.pdf	3241310 70cbfb7c1eb6c50d82b67074772470e507b91cde	no	77
Warnings:					
Information:					
10	NPL Documents	N2PIDS_00734.pdf	3726939 d4c9f933c002ebde9c954298814937c980f65660	no	35

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11	NPL Documents	N2PIDS_00769.pdf	4202699 b4c92116877442bcd04bd6debf7d14595fb9a731	no	34
Warnings:					
Information:					
12	NPL Documents	N2PIDS_00803.pdf	4152068 7b3a2e2ddcdeffd164f8a1cfc96d610e8b846617	no	42
Warnings:					
Information:					
13	NPL Documents	N2PIDS_00845.pdf	4330148 c432255361158b4e81c3b1bb0d51e0574242a578	no	69
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Information:					
14	NPL Documents	N2PIDS_00914.pdf	2944261 080bb981dd8437b6157018b86fc3befc6ea75db8	no	50
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15	NPL Documents	N2PIDS_00964.pdf	4490177 7d1ee36dc21fea4ded879265154bb7945a02315d	no	50
Warnings:					
Information:					
16	NPL Documents	N2PIDS_01014.pdf	4260549 3cdd0ff0c98cae3e3cae281b22424495215e177f	no	50
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18	NPL Documents	N2PIDS_01114.pdf	2797371 1aa57c3ffc28f68e2b72007b078334fd902a037f	no	50
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19	NPL Documents	N2PIDS_01164.pdf	2757821 [illegible]	no	50

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20	NPL Documents	N2PIDS_01214.pdf	2751710 ef893e52560ecd5e62dcd743fb915147bde65a5b	no	50
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21	NPL Documents	N2PIDS_01264.pdf	2069106 df95a3266f4b04540ff5230cbf06f520e2a80bd1	no	47
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22	NPL Documents	N2PIDS_01311.pdf	4119057 b220edcf06eed135dc679c8358b50fad44b347d2	no	83
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23	NPL Documents	N2PIDS_01394.pdf	3968881 4af783e9b0d04ff379bba2fc7dfcfa52b9b1d311	no	58
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24	NPL Documents	N2PIDS_01452.pdf	1920359 3b013b03ee0d9b44a7aad1c6e1d3b56344860c7d	no	39
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25	NPL Documents	N2PIDS_01491.pdf	3401591 364aed57efd1a9a5a36c818e1e65dc90a11abd54	no	56
Warnings:					
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26	NPL Documents	N2PIDS_01547.pdf	4441250 15d16abc2d22fc670e1b3af1890142dbe41d6c87	no	71
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28	NPL Documents	N2PIDS_01658.pdf	2270928 [illegible]	no	36

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29	NPL Documents	N2PIDS_01694.pdf	1540394 6ec7be7e68a603a25c0fafd57a479064eac8d23f	no	23
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30	NPL Documents	N2PIDS_01717.pdf	1150239 05ae46089b0835e058ab04f346c73aa6ea6ca128	no	24
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31	NPL Documents	N2PIDS_01741.pdf	2620699 8878a7f238582ef777bb48052fa32342df91bc16	no	50
Warnings:					
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32	NPL Documents	N2PIDS_01791.pdf	1800489 59e0d76f3e3f44657ef083de4d41a22e7ff852f2	no	35
Warnings:					
Information:					
33	Reexam Certificate of Service	20090811COS.pdf	58475 3e0d0b295f06538e5b37ee165c7654d83165ba4a	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	90841291		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF:	Attorney Docket: 2655-0185
Net2Phone, Inc.	Group Art Unit: 3992
Control No.: 90/010,422	Examiner: KOSOWSKI, Alexander J.
Issue Date: December 28, 1999	Date: August 11, 2009
Title: **GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION**	Confirmation No.: 6565

INFORMATION DISCLOSURE STATEMENT

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

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each non-U.S. Patent reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The submission of any document herewith, which is not a statutory bar, is not intended that any such document constitutes prior art against any of the claims of the present application or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference against the claims of the present application.

☒ The Examiner's attention is directed to co-pending U.S. Patent Control Nos. 90/010,424, 90/010,421, 90/010,416 and 90/010,423 which are involved in

the same litigation as the patent corresponding to the present re-examination. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.

CHARGE STATEMENT: Deposit Account No. 501860, order no. **2655-0185.**

The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached

This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.

CUSTOMER NUMBER

42624

Respectfully submitted,

By: /Michael R. Casey /

Michael R. Casey, Ph.D. (Reg. No.: 40,294)

Davidson Berquist Jackson & Gowdey LLP
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Re-Exam

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF:

Net2Phone, Inc.

Control No.: 90/010,422

Issue Date: December 28, 1999

Title: **GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION**

Attorney Docket: 2655-0185

Group Art Unit: 3992

Examiner: KOSOWSKI, Alexander J.

Date: June 11, 2009

Confirmation No.: 6565

INFORMATION DISCLOSURE STATEMENT

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

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each non-U.S. Patent reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

The submission of any document herewith, which is not a statutory bar, is not intended that any such document constitutes prior art against any of the claims of the present application or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference against the claims of the present application.

☒ This Information Disclosure Statement is being filed within three (3) months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

☐ This Information Disclosure Statement is being filed more than three (3) months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance.

☐ I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three (3) months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ Attached is our check no. _____ in the amount required under 37 C.F.R. § 1.17(p). Please credit or debit Deposit Account No. 501860 as needed to ensure consideration of the disclosed information. A duplicate copy of this paper is attached.

☐ This Information Disclosure Statement is being filed more than three (3) months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Applicant(s) hereby requests that the Information Disclosure Statement be considered. Attached is our check in the amount required under 37 C.F.R. § 1.17(p). Please credit or debit

Deposit Account No. 501860 as needed to ensure consideration of the disclosed information. A duplicate copy of this paper is attached.

☐ I hereby certify that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three (3) months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ Relevance of the non-English language reference(s) is/are discussed in the present specification.

☐ The reference(s) was/were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.

☐ A concise explanation of the relevance of the non-English language reference(s) appear(s) in the Appendix hereto.

☐ The Examiner's attention is directed to co-pending U.S. Patent Application No. _____, filed _____, which is directed to related technical subject matter. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.

☐ Copies of the references were cited by or submitted to the Office in parent Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. 120. Thus, Form PTO 1449 is attached without copies of these references. 37 C.F.R. § 1.98(d).

CHARGE STATEMENT: Deposit Account No. 501860, order no. **2655-0185**.

The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any missing or insufficient fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (missing or insufficiencies only) now or hereafter relative to this application and the resulting Official Document under Rule 20, or credit any overpayment, to our Accounting/Order Nos. shown above, for which purpose a duplicate copy of this sheet is attached

This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal sheet is filed.

CUSTOMER NUMBER

42624

Davidson Berquist Jackson & Gowdey LLP
4300 Wilson Blvd., 7th Floor,
Arlington Virginia 22203
Main: (703) 894-6400 o FAX: (703) 894-6430

Respectfully submitted,

By: _____

Michael R. Casey, Ph.D.
Registration No.: 40,294

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 1 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.	Document No.	Publication/ Issue Date	Name of Patentee or Applicant of Cited Document
	1-1	US-4313035	1982/01/26	Jordan et al.
	1-2	US-4423414	1983/12/27	Bryant et al.
	1-3	US-4491693	1985/01/01	Sano et al.
	1-4	US-4602132	1986/07/22	Nagatomi et al.
	1-5	US-4653090	1987/03/24	Hayden, C.
	1-6	US-4658093	1987/14/04	Hellman
	1-7	US-4706274	1987/11/10	Baker et al.
	1-8	US-4754479	1988/06/28	Bicknell et al.
	1-9	US-4755985	1988/07/05	Jayapalan et al.
	1-10	US-4756020	1988/07/05	Fodale
	1-11	US-4759056	1988/07/19	Akiyama
	1-12	US-4800488	1989/24/01	Agrawal et al.
	1-13	US-4823374	1989/04/18	Verlohr
	1-14	US-4827411	1989/05/02	Arrowood
	1-15	US-4899333	1990/06/02	Roediger
	1-16	US-4899373	1990/02/06	Lee et al.
	1-17	US-4914571	1990/04/03	Baratz et al.
	1-18	US-4928306	1990/05/22	Biswas et al.
	1-19	US-4953159	1990/08/28	Hayden, C.
	1-20	US-4962449	1990/10	Schlesinger
	1-21	US-5109403	1992/04/28	Sutphin
	1-22	US-5113499	1992/05	Ankney et al.
	1-23	US-5127001	1992/30/06	Steagall, et al.
	1-24	US-5134648	1992/07/28	Hochfield et al.

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 2 of 67	Confirmation No.	6565

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.	Document No.	Publication/ Issue Date	Name of Patentee or Applicant of Cited Document
	2-1	US-5136716	1992/08/04	Harvey et al.
	2-2	US-5153908	1992/10/06	Kakizawa et al.
	2-3	US-5159592	1992/10	Perkins
	2-4	US-5164988	1992/11/17	Matyas et al.
	2-5	US-5185860	1993/02/09	Wu
	2-6	US-5195086	1993/03/16	Baumgartner et al.
	2-7	US-5301324	1994/04	Dewey et al.
	2-8	US-5315705	1994/24/05	Iwami Naoko et al
	2-9	US-5319705	1994/07/06	Halter et al.
	2-10	US-5325524	1994/06/28	Black et al.
	2-11	US-5329619	1994/07/12	Page et al.
	2-12	US-5388213	1995/02/07	Oppenheimer et al.
	2-13	US-5402477	1995/03/28	McMahan et al.
	2-14	US-5402528	1995/03/28	Christopher et al.
	2-15	US-5408526	1995/04/18	McFarland et al.
	2-16	US-5408619	1995/04/18	Oran
	2-17	US-5425028	1995/13/06	Britton et al.
	2-18	US-5434913	1995/07	Tung et al.
	2-19	US-5440632	1995/08/08	Bacon et al.
	2-20	US-5452289	1995/09/19	Sharma et al.
	2-21	US-5461668	1995/10/24	Zdenek et al.
	2-22	US-5469500	1995/21/11	Satter et al.
	2-23	US-5475819	1995/12	Miller et al.
	2-24	US-5481720	1996/02/01	Loucks et al.

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 3 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.	Document No.	Publication/ Issue Date	Name of Patentee or Applicant of Cited Document
	3-1	US-5499295	1996/12/03	Cooper
	3-2	US-5502727	1996/03/26	Catanzaro et al.
	3-3	US-5515508	1996/05/07	Pettus et al.
	3-4	US-5533110	1996/02/07	Pinard et al.
	3-5	US-5555290	1996/09/10	McLeod et al.
	3-6	US-5608786	1997/04/03	Gordon
	3-7	US-5615257	1997/03/25	Pezzullo et al.
	3-8	US-5621789	1997/04/15	McCalmont et al.
	3-9	US-5627978	1997/05/06	Altom et al.
	3-10	US-5649194	1997/07	Miller et al.
	3-11	US-5671412	1997/09/23	Christiano
	3-12	US-5684951	1997/04/11	Goldman et al.
	3-13	US-5689641	1997/11/18	Ludwig et al.
	3-14	US-5692180	1997/11	Lee
	3-15	US-5724648	1998/03/03	Shaughnessy et al.
	3-16	US-5734828	1998/31/03	Pendse et al.
	3-17	US-5774656	1998/06/30	Hattori et al.
	3-18	US-5790803	1998/04/08	Kinoshita et al.
	3-19	US-5815665	1998/29/09	Teper et al.
	3-20	US-5819084	1998/10/08	Shapiro, E.
	3-21	US-5825865	1998/20/10	Oberlander et al.
	3-22	US-5844978	1998/12/01	Reuss et al.
	3-23	US-5883956	1999/03/16	Le et al.
	3-24	US-5953350	1999/09	Higgins

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 4 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

U.S. PATENT DOCUMENTS				
Examiner Initials*	Cite No.	Document No.	Publication/ Issue Date	Name of Patentee or Applicant of Cited Document
	4-1	US-5956485	1999/09/21	Perlman
	4-2	US-6009469	1999/12	Mattaway et al.
	4-3	US-6031836	2000/02	Haserodt
	4-4	US-6047054	2000/04	Bayless et al.
	4-5	US-6067350	2000/05/23	Gordon, A.
	4-6	US-6108704	2000/08	Hutton et al.
	4-7	US-6131121	2000/10	Mattaway et al.
	4-8	US-6360266	2002/03/19	Pettus
	4-9	US-6513066	2003/01	Hutton et al.
	4-10	US-6701365	2004/02/03	Glenn W. Hutton
	4-11			
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Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified)		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 5 of 67	Confirmation No.	6565

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document No.	Publication Date	Name of Patentee or Applicant of Cited Document	Notes
	5-1	EP-0455402-A2	11-06-1991	Hewlett-Packard Company	
	5-2	EP-0556012-A2	08-18-1993	Wada et al.	
	5-3	EP-0581722	02/02/1994	Yeda R&D Co., Ltd.	
	5-4	EPO 0497022A1	19920508	Jennings et al.	
	5-5	WO-9219054	10-29-1992	Ferdinand et al.	
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	5-24				

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 6 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	6-1	"A Low Cost Solution for: Using your WAN as a Voice Communication Tool" VocalTec White Paper (dated 06/03/94)	
	6-2	"CyberPhone Annoucement" Internet Posting in Newsgroups comp.speech, June 8, 1995.	
	6-3	"CyberPhone!" Internet Posting in Newsgroups comp.speech, April 14, 1995.	
	6-4	"Electric Magic Company Provides Internet Alternative to Long-Distance Calls", Electric Magic Company Press Release (March 13, 1995)	
	6-5	"Electric Magic Company Releases NetPhone 1.2 and Netpub Server", Electric Magic Company Press Release (June 1995)	
	6-6	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.34, March 4, 1996.	
	6-7	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.43, May 1, 1996.	

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 7 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	7-1	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.45, May 31, 1996.	
	7-2	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.47, June 12, 1996.	
	7-3	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.48, June 25, 1996.	
	7-4	"Frequently-Asked Questions about Tribal Voices PowWow" Version 0.59, October 30, 1996.	
	7-5	"NetPhone Gets Internet Users Talking at Local Rates" MacUser UK, March 3, 1995, pg. 27.	
	7-6	"NetPhone Gives Your Mac Voice Over the Internet" Inside the Internet Rocket Science for the Rest of Us. Vol. 2 Num. 3, June 1995.	
	7-7	"NetPhone" MacWorld, July 1995.	

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 8 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 9 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 10 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 11 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 12 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 14 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 15 of 67	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 16 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 17 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 18 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 19 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 20 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 21 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 22 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 23 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 24 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 25 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 26 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 27 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 29 of 67	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 30 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 31 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 32 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 33 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 34 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 35 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 36 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 37 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 38 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 39 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 40 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 41 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 42 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 43 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 44 of 67	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 45 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 46 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 47 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 48 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 49 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 50 of 67	Confirmation No.	6565

NON-PATENT REFERENCES			
Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 51 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 52 of 67	Confirmation No.	6565

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	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 53 of 67	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 54 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
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	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 55 of 67	Confirmation No.	6565

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	55-6	S. Waldbusser, et al., RFC 1742: AppleTalk Management Information Base II (Jan. 1995).	
	55-7	S.R. Ahuja, et al., The Rapport Multimedia Conferencing System, ACM (1988).	

Examiner Signature		Date Considered	

*Examiner: Initial if reference was considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant. Notes: If identified, the following is provided: EA = English Abtract, T = Translation, PF = Patent Family.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 56 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
	56-1	Sakae Okubo, et al., Draft ITU-T Recommendation H.245—Line Transmission of Non-Telephone Signals: Control Protocol for Multimedia Communication (Nov. 14, 1995).	
	56-2	Sakae Okubo, et al., ITU-T Recommendation H.245—Line Transmission of Non-Telephone Signals: Control Protocol for Multimedia Communication (May 20, 1996).	
	56-3	Sakae Okubo, et al., Line Transmission of Non-Telephone Signals: Control Protocol for Multimedia Communication, Recommendation H245 (May 20, 1996).	
	56-4	Sakae Okubo, et, al., ITU-T Standardization of Audiovisual Communication Systems in ATM and LAN Environments (April 17, 1996).	
	56-5	Sape J. Mullender, et al., Distributed Match-Making for Processes in Computer Networks (Association for Computing Machinery, 1985).	
	56-6	Sape Mullender, ed., Distributed Systems, ACM Press (1992).	
	56-7	Sapwater, E. "Webbed", 2 pages (undated)	

Examiner Signature		Date Considered	

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	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 57 of 67	Confirmation No.	6565

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	57-1	Saruchi Mohan, Internet Phone Accepting Calls, COMPUTERWORLD (Feb. 27, 1995).	
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	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
Sheet 58 of 67	Confirmation No.	6565

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Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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	58-4	Stephen A. Uhler, PhoneStation, Moving the Telephone onto the Virtual Desktop, 1993 Winter Usenix, San Diego, California (Jan. 25-29, 1993).	
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	58-6	Stuart Harris, THE IRC SURVIVAL GUIDE: TALK TO THE WORLD WITH INTERNET RELAY CHAT (Addison-Wesley, Feb. 1995).	
	58-7	Sun Microsystems, Inc., RFC 1050: RPC: Remote Procedure Call Protocol Specification Version 2 (June 1988).	

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 59 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 60 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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	60-2	The Electric Magic Company, Business Plan, Version 0.1 draft, April 17, 1995.	
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Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 61 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449 (modified) Sheet 62 of 67		
	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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	Issue Date	1999/12/28
	Group Art Unit	3992
	Examiner Name	KOSOWSKI, ALEXANDER J
	Attorney Docket No.	2655-0185
	Confirmation No.	6565

NON-PATENT REFERENCES

Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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	63-2	VocalTec Cross-Reference Sheet, Pursuant to Item 501 of Reg. S-K (dated January, 1996)	
	63-3	VocalTec Internet Phone Information Sheet, 2 pages. (dated June 1995)	
	63-4	VocalTec Internet Phone Version 3.0 Build 17, README.TXT, August 11, 1995.	
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	63-6	VocalTec SEC 20-F Filing, 1996	
	63-7	VocalTec SEC F-1 Filing, December 22, 1995	

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	Attorney Docket No.	2655-0185
	Confirmation No.	6565

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	64-3	W. David Albrecht, CPA Firms on the World Wide Web, OHIO CPA JOURNAL (June 1996).	
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	64-5	W. Yeong, et al., RFC 1777. Lightweight Directory Access Protocol (Mar. 1995).	
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	Reexam number	90/010,422
	First Named Inventor	Mattaway et al.
	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
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	65-7	Walter Tuvell, RFC 98.0: Challenges Concerning Public-Key in DCE (Dec. 1996).	

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	Patent Under Re-Exam	6009469
	Issue Date	1999/12/28
	Group Art Unit	3992
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Examiner Initials*	Cite No.	Non-patent Reference bibliographic information, where available	Notes
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	66-7	Welch, Nathalie "Vendors Ring in New Telephony Options" MacWeek, April 10, 1995, pg 18.	

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	67-6		
	67-7		

Examiner Signature		Date Considered	

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Electronic Acknowledgement Receipt

EFS ID:	5477387
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	6,009,469
Customer Number:	42624
Filer:	Thomas Webster/Janece Shannon
Filer Authorized By:	Thomas Webster
Attorney Docket Number:	2655-0185
Receipt Date:	08-JUN-2009
Filing Date:	26-FEB-2009
Time Stamp:	21:29:27
Application Type:	Reexam (Third Party)

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1	Reexam Miscellaneous Incoming Letter	R003E_APPRAISAL.pdf	27717 111b43a18b132da34ae336e466f56754b4b413ce	no	1

Warnings:	
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2	Reexam Miscellaneous Incoming Letter	4_28_09_Order.pdf	39063 2270419aa607d07d68281d6c3c171459f691ce7a	no	2
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,422	02/26/2009	6,009,469	03801.G184	6565

42624 7590 03/13/2009

DAVIDSON BERQUIST JACKSON & GOWDEY LLP
4300 WILSON BLVD., 7TH FLOOR
ARLINGTON, VA 22203

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 03/13/2009

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MAR 13 2009

CENTRAL REEXAMINATION UNIT

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/010,422*.

PATENT NO. *6,009,469*.

ART UNIT *3992*.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting / Denying Request For Ex Parte Reexamination	Control No.	Patent Under Reexamination	
	90/010,422	6,009,469	
	Examiner	Art Unit	
	ALEXANDER J. KOSOWSKI	3992	

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

The request for *ex parte* reexamination filed *26 February 2009* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO/SB/08, c)☐ Other: _____

1. ☒ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☐ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

cc:Requester (if third party requester)

DECISION

1) A substantial new question of patentability affecting claims 1-3, 5-6, 8-9 and 14-18 of United States Patent Number 6,009,469 (Mattaway et al) is raised by the request for *ex parte* reexamination filed 02/23/09.

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

References Cited in the Request

NetBIOS (Protocols for X/Open PC Interworking SMB...)

Etherphone (Collected Papers 1987-1988...)

Vin (Multimedia Conferencing in the Etherphone Environment...)

RFC 1531 (Dynamic Host Configuration Protocol...)

Pinard (U.S. Pat 5,533,110)

Vocalchat (5 submitted Vocalchat references, exhibits G-K in the Request)

Identification of Every Claim for Which Reexamination is Requested

2) The six sets of references cited above are discussed regarding claims 1-3, 5-6, 8-9 and 14-18 of the Mattaway patent. Requestor has proposed at least 11 possible combinations of rejections for the requested claims. Pages 13-26 of the Request detail out proposed substantial

new questions of patentability in light of the combination of the six sets of references cited above.

Prosecution History

3) The Mattaway patent was assigned serial number 08/721,316. During prosecution, the application was allowed with no reasons for allowance after a series of amendments to the claims. None of the references in the currently filed request except Pinard were previously discussed by the examiner or applied to claims 1-3, 5-6, 8-9 and 14-18 in the prosecution history of the Mattaway patent. The Pinard reference was initialed as considered by the original examiner in an IDS submitted along with an office action mailed 04/20/98. However, the Pinard reference was not discussed or actively used in any office action during the prosecution of the Mattaway application.

Substantial New Question of Patentability

4) For purposes of determination, independent claim 1 is a representative claim. The italicized sections of claim 1 below are utilized by the examiner to show how specific teachings of the proposed references create a substantial new question of patentability.

Claim 1. A computer program product for use with a computer system having a display, the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium comprising:

a. program code for generating a user-interface enabling control a first process executing on the computer system;

b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network;

c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process; and

d. program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network.

NetBIOS and RFC 1531

5) The NetBIOS reference discloses an address server with an address database for storing network protocol addresses usable by network nodes to establish point-to-point communications. RFC 1531 discloses how TCP/IP addresses are assigned dynamically by a DHCP server.

The Request shows that NetBIOS and RFC 1531 in combination teach

a. program code for generating a user-interface enabling control a first process executing on the computer system (NetBIOS, pgs. 356, 359, 507);

b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network (NetBIOS, pgs. 367, 385, 431, RFC 1531, Section 2.2);

c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process (NetBIOS, pgs. 367, 385, 388, 431)*; and*

d. program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network (NetBIOS, pgs. 397-401).

The NetBIOS and RFC 1531 references were not previously discussed by the examiner nor applied to claims 1-3, 5-6, 8-9 and 14-18 in the prior examination of the patent as discussed above.

It is agreed that the consideration of NetBIOS and RFC 1531 raises an SNQ as to claims 1-3, 5-6, 8-9 and 14-18 of the Mattaway patent as pointed out above. There is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable.

Accordingly, NetBIOS and RFC 1531 raise a substantial new question of claims 1-3, 5-6, 8-9 and 14-18, which question has not been decided in a previous examination of the Mattaway patent nor was there a final holding of invalidity by the Federal Courts regarding the Mattaway patent.

Etherphone, Vin and RFC 1531

6) The Etherphone reference discloses an address server with an address database for storing network protocol addresses usable by network nodes to establish point-to-point communications.

RFC 1531 discloses how TCP/IP addresses are assigned dynamically by a DHCP server. Vin discloses TCP/IP as the network protocol in an Etherphone system.

The Request shows that Etherphone in combination with Vin and RFC 1531 teach

a. program code for generating a user-interface enabling control a first process executing on the computer system (EtherPhone, Swinehart 1, Figures 1-10, Zellweger 1, Figures 3-4);

b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network (Etherphone, Swinehart 1, pg. 4, Terry, pg. 3, Vin pg. 77, RFC 1531, Section 2.2);

c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process (EtherPhone, Swinehart 1, pgs. 2, 4, Zellweger 1, pg. 5); *and*

d. program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network (EtherPhone, Swinehart 1, pg. 4).

The Etherphone, Vin and RFC 1531 references were not previously discussed by the examiner nor applied to claims 1-3, 5-6, 8-9 and 14-18 in the prior examination of the patent as discussed above.

It is agreed that the consideration of Etherphone, Vin and RFC 1531 raises an SNQ as to claims 1-3, 5-6, 8-9 and 14-18 of the Mattaway patent as pointed out above. There is a

substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable.

Accordingly, Etherphone, Vin and RFC 1531 raise a substantial new question of claims 1-3, 5-6, 8-9 and 14-18, which question has not been decided in a previous examination of the Mattaway patent nor was there a final holding of invalidity by the Federal Courts regarding the Mattaway patent.

VocalChat and RFC 1531

7) The VocalChat reference disclose an address server with an address database for storing network protocol addresses usable by network nodes to establish point-to-point communications. RFC 1531 discloses how TCP/IP addresses are assigned dynamically by a DHCP server.

The Request shows that the VocalChat references and RFC 1531 in combination teach

a. program code for generating a user-interface enabling control a first process executing on the computer system (VocalChat, User's Guide, pg. 11);

b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network (VocalChat, Readme, pg. 5, User's Guide, pg. 8, RFC 1531, Section 2.2);

c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process (VocalChat, Network Information, pg. 10, Troubleshooting Help File, pg. 28, Readme, pg. 2); *and*

d. program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network (VocalChat, Help File, pg. 17, User Guide, pg. 2).

The VocalChat and RFC 1531 references were not previously discussed by the examiner nor applied to claims 1-3, 5-6, 8-9 and 14-18 in the prior examination of the patent as discussed above.

It is agreed that the consideration of VocalChat and RFC 1531 raises an SNQ as to claims 1-3, 5-6, 8-9 and 14-18 of the Mattaway patent as pointed out above. There is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable.

Accordingly, VocalChat and RFC 1531 raise a substantial new question of claims 1-3, 5-6, 8-9 and 14-18, which question has not been decided in a previous examination of the Mattaway patent nor was there a final holding of invalidity by the Federal Courts regarding the Mattaway patent.

Pinard

8) Pinard is cited by Requester as supporting the primary references in alternative obviousness rejections, as well as proposed teachings for some dependent claims in Mattaway. Examiner agrees that many of the claims in Mattaway, as mapped out in the Request, appear to be read on by the combination of References listed above with Pinard.

The Pinard reference was not previously discussed by the examiner nor applied to claims 1-3, 5-6, 8-9 and 14-18 in the prior examination of the patent as discussed above.

It is agreed that the consideration of Pinard in combination with the references above raises an SNQ as to claims 1-3, 5-6, 8-9 and 14-18 of the Mattaway patent as pointed out above. There is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not these claims are patentable.

Accordingly, Pinard raises a substantial new question of claims 1-3, 5-6, 8-9 and 14-18, which question has not been decided in a previous examination of the Mattaway patent nor was there a final holding of invalidity by the Federal Courts regarding the Mattaway patent.

Scope of Reexamination

9) Claims 1-3, 5-6, 8-9 and 14-18 will be reexamined as requested in the Request.

Conclusion

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. ~~5,337,753~~ 6,009,469 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

All correspondence relating to this ex parte reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop Ex Parte Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to:

(571) 273-9900
Central Reexamination Unit

By hand to:

Customer Service Window
Randolph Building
401 Dulany St.
Alexandria, VA 22314

By EFS-Web:

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at

https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Alexander J Kosowski/

Primary Examiner, Art Unit 3992

ESK

Substitute for Form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*				Application Number	90/010,422
				Filing Date	02-23-2009
				First Named Inventor:	
				Art Unit	
				Examiner Name	
Sheet	1	**of**	1	Attorney Docket Number	003801.G184

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number / Number-Kind Code[2] (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US			

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
ASK	Exhibit B	The Open Group, Technical Standard, Protocols for X/Open PC Interworking: SMB, Version 2, 1992, pages ii-xvi and pages 1-516.	
ASK	Exhibit C	ZELLWEGER, POLLE T., et al., Etherphone: Collected Papers 1987-1988, Xerox Corporation, May 1989.	
ASK	Exhibit D	VIN, HERRICK M., et al, Multimedia Conferencing in the Etherphone Environment, October 1991, pages 69-79.	
ASK	Exhibit E	DROMS, R., Dynamic Host Configuration Protocol, RFC 1531, Bucknell University, October 1993, pages 1-39.	
ASK	Exhibit F	U.S. Patent No. 5,533,110 issued to Pinard, et al. ("the Pinard patent")	
ASK	Exhibit G	VocalChat User's Guide Version 2.0, Vocaltec, 1994, pages 1-77.	
ASK	Exhibit H	README, VocalChat Version 2.02 & VocalChat WAN Version 2.02, Vocaltec, June 1994, pages 1-3.	
ASK	Exhibit I	VocalChat 1.01 Network Information, Vocaltec, 1994, pages 1-10.	
ASK	Exhibit J	VocalChat Information, Vocaltec, 1994, pages 1-31.	
ASK	Exhibit K	VocalChat Troubleshooting, Vocaltec, 1994, pages 1-101.	

Examiner Signature		Date Considered	3/13/09

*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.

[1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 2 hours 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

Based on Form PTO/SB/08A (08-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 09/10/03.

Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/010,422	6,009,469
	Certificate Date	Certificate Number

Requester Correspondence Address:	☐ Patent Owner	☒ Third Party

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

LITIGATION REVIEW ☒	AJK (examiner initials)	3/13/09 (date)
Case Name		Director Initials
OPEN: 2:06cv2469 Net2phone, Inc. v. Ebay, Inc et al		Eric Keasel for GM

COPENDING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING	NUMBER
1. no copending office proceedings	
2.	
3.	
4.	

Search Notes

Application/Control No.	Applicant(s)/Patent under Reexamination	
90/010,422	6,009,469	
Examiner	**Art Unit**	
ALEXANDER J. KOSOWSKI	3992	

SEARCHED			
Class	Subclass	Date	Examiner

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
reviewed proposed prior art	3/13/2009	AJK

Litigation Search Report CRU 3999

Reexam Control No. 90/010,422

TO: Alexander Kosowski **Location: CRU** **Art Unit: 3992** **Date: 3/13/09**	**From: Patricia Volpe** **Location: CRU 3999** **MDW 7C76** **Phone: (571) 272-6825** **Patricia.volpe@uspto.gov**

Search Notes

Litigation search for US Patent Number: **6,009,469**

Sources:

1) I performed a KeyCite Search in Westlaw, which retrieves all history on the patent including any litigation.

2) I performed a search on the patent in Lexis CourtLink for any open dockets or closed cases.

3) I performed a search in Lexis in the Federal Courts and Administrative Materials databases for any cases found.

4) I performed a search in Lexis in the IP Journal and Periodicals database for any articles on the patent.

5) I performed a search in Lexis in the news databases for any articles about the patent or any articles about litigation on this patent.

Date of Printing: MAR 14,2009

KEYCITE

C US PAT 6009469 GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION, Assignee: NetSpeak Corporation (Dec 28, 1999)

History

Direct History

=> 1 **GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION,** US PAT 6009469, 1999 WL 1774380 (U.S. PTO Utility Dec 28, 1999) (NO. 08/721316)

Patent Family

2 COMPUTER PROGRAM PRODUCT FOR PROVIDING VIRTUAL COMMUNICATIONS UTILITY DISPLAY ON COMPUTER SYSTEM INTERFACE, Derwent World Patents Legal 2000-115711

Assignments

3 ACTION: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). NUMBER OF PAGES: 034, (DATE RECORDED: Dec 09, 2005)

4 ACTION: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). NUMBER OF PAGES: 032, (DATE RECORDED: Oct 28, 2005)

5 ACTION: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). NUMBER OF PAGES: 033, (DATE RECORDED: Oct 28, 2005)

6 Action: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). Number of Pages: 032, (DATE RECORDED: Sep 12, 2005)

7 ASSIGNEE(S): NETSPEAK CORPORATION, (DATE RECORDED: Apr 14, 1997)

8 ASSIGNEE(S): NETSPEAK CORPORATION, (DATE RECORDED: Jan 21, 1997)

Patent Status Files

.. Certificate of Correction, (OG DATE: May 08, 2001)

Prior Art (Coverage Begins 1976)

C 10 APPARATUS FOR SUPERVISING AN AUTOMATIC CALL DISTRIBUTION TELEPHONE SYSTEM, US PAT 5465286Assignee: Executone Information Systems, Inc., (U.S. PTO Utility 1995)

C 11 ASYNCHRONOUS TRANSFER MODE COMMUNICATION SYSTEM, US PAT

5452296Assignee: NEC Corporation, (U.S. PTO Utility 1995)

C 12 AUTOMATIC STATION IDENTIFICATION WHERE FUNCTION MODULES AUTOMATICALLY INITIALIZE, US PAT 5204669Assignee: DataCard Corporation, (U.S. PTO Utility 1993)

C 13 AUTOMATIC TELEPHONE CALL DISTRIBUTION APPARATUS AND METHOD FOR ELECTRONIC SWITCHING SYSTEM, US PAT 5432846Assignee: Kabushiki Kaisha Toshiba, (U.S. PTO Utility 1995)

C 14 BRIDGE-LIKE INTERNET PROTOCOL ROUTER, US PAT 5309437Assignee: Digital Equipment Corporation, (U.S. PTO Utility 1994)

C 15 COMMUNICATIONS NETWORK DYNAMIC ADDRESSING ARRANGEMENT, US PAT 5166931Assignee: AT&T Bell Laboratories, (U.S. PTO Utility 1992)

C 16 COMMUNICATIONS SYSTEM FOR AN ISDN AND A LAN, AND AN ISDN-LAN CONNECTION TERMINAL, US PAT 5400335Assignee: Ricoh Company, Ltd., (U.S. PTO Utility 1995)

C 17 CONFERENCING OVER MULTIPLE TRANSPORTS, US PAT 5524110Assignee: Intel Corporation, (U.S. PTO Utility 1996)

C 18 EXTENSION OF TWO PHASE COMMIT PROTOCOL TO DISTRIBUTED PARTICIPANTS, US PAT 5546582Assignee: International Business Machines, (U.S. PTO Utility 1996)

C 19 GLOBAL MANAGEMENT OF TELEPHONE DIRECTORY, US PAT 5509058Assignee: Mitel Corporation, (U.S. PTO Utility 1996)

C 20 HIGH PERFORMANCE MACHINE FOR SWITCHED COMMUNICATIONS IN A HETEROGENEOUS DATA PROCESSING NETWORK GATEWAY, US PAT 5463625Assignee: International Business Machines, (U.S. PTO Utility 1995)

C 21 HUMAN MACHINE INTERFACE FOR TELEPHONE FEATURE INVOCATION, US PAT 5533110Assignee: Mitel Corporation, (U.S. PTO Utility 1996)

C 22 LINK AND DISCOVERY PROTOCOLS FOR A RING INTERCONNECT ARCHITECTURE, US PAT 5457683Assignee: Apple Computer, Inc., (U.S. PTO Utility 1995)

C 23 MESSAGE ROUTING SYSTEM FOR SHARED COMMUNICATION MEDIA NETWORKS, US PAT 5095480 (U.S. PTO Utility 1992)

C 24 METHOD AND APPARATUS FOR DELIVERING CALLING SERVICES, US PAT 5469500Assignee: Voiceplex Corporation, (U.S. PTO Utility 1995)

C 25 METHOD AND SYSTEM FOR SEARCHING AN ON- LINE DIRECTORY AT A TELEPHONE STATION, US PAT 5457738Assignee: U S West Advanced Technologies, Inc., (U.S. PTO Utility 1995)

C 26 METHOD AND SYSTEM OF MULTICAST ROUTING FOR GROUPS WITH A SINGLE TRANSMITTER, US PAT 5517494Assignee: Apple Computer, Inc., (U.S. PTO Utility 1996)

C 27 METHOD FOR CONFIGURING AND OPERATING A TELECOMMUNICATION APPARATUS, US PAT 5544303Assignee: International Business Machines, (U.S. PTO Utility 1996)

C 28 METHOD FOR POINT-TO-POINT COMMUNICATIONS WITHIN SECURE COMMUNICATION SYSTEMS, US PAT 5357571Assignee: Motorola, Inc., (U.S. PTO Utility 1994)

C 29 METHODS AND APPARATUS FOR ROUTING PACKETS IN PACKET TRANSMISSION NETWORKS, US PAT 5309433Assignee: International Business Machines Corp., (U.S. PTO

Utility 1994)

C 30 MULTI-MEDIA INTEGRATED MESSAGE ARRANGEMENT, US PAT 5479411Assignee: AT&T Corp., (U.S. PTO Utility 1995)

▷ 31 MULTIPLE PROTOCOL ROUTING, US PAT 5430727Assignee: Digital Equipment Corporation, (U.S. PTO Utility 1995)

C 32 NETWORK CONTROL SYSTEM AND METHOD, US PAT 5224095Assignee: Johnson Service Company, (U.S. PTO Utility 1993)

C 33 NETWORK MONITORING METHOD AND APPARATUS, US PAT 5430709Assignee: Hewlett-Packard Company, (U.S. PTO Utility 1995)

C 34 OBJECT-ORIENTED TELEPHONY SYSTEM, US PAT 5455854Assignee: Taligent, Inc., (U.S. PTO Utility 1995)

C 35 PROTOCOL SELECTION AND ADDRESS RESOLUTION FOR PROGRAMS RUNNING IN HETEROGENEOUS NETWORKS, US PAT 5425028Assignee: International Business Machines, (U.S. PTO Utility 1995)

C 36 RECONFIGURABLE, FAULT TOLERANT, MULTISTAGE INTERCONNECT NETWORK AND PROTOCOL, US PAT 5321813Assignee: Teradata Corporation, (U.S. PTO Utility 1994)

C 37 SHARED-PRICE CUSTOM VIDEO RENTALS VIA INTERACTIVE TV, US PAT 5291554Assignee: TV Answer, Inc., (U.S. PTO Utility 1994)

C 38 SHORTCUT NETWORK LAYER ROUTING FOR MOBILE HOSTS, US PAT 5442633Assignee: International Business Machines, (U.S. PTO Utility 1995)

C 39 SYSTEM AND METHOD FOR PROVIDING DIRECTORY INFORMATION OVER A TELEPHONY NETWORK USING ADSI, US PAT 5524141Assignee: Bell Communications Research, Inc., (U.S. PTO Utility 1996)

C 40 SYSTEM FOR REVERSE ADDRESS RESOLUTION FOR REMOTE NETWORK DEVICE INDEPENDENT OF ITS PHYSICAL ADDRESS, US PAT 5526489Assignee: 3Com Corporation, (U.S. PTO Utility 1996)

▶ 41 TELEPHONE-ENTRY SYSTEM WITH ELECTRONIC DIRECTORY, US PAT 5475741Assignee: Sentex Systems, Inc., (U.S. PTO Utility 1995)

C 42 UTILIZATION OF REDUNDANT LINKS IN BRIDGED NETWORKS, US PAT 5150360Assignee: Digital Equipment Corporation, (U.S. PTO Utility 1992)

Patent Search 6009469 3/14/2009

No cases found.

Return to Search

(Charges for search still apply)

721316 (08) 6009469 December 28, 1999

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6009469

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December 28, 1999

Graphic user interface for internet telephony application

INVENTOR: Mattaway, Shane D. - Boca Raton, Florida, United States (US)Hutton, Glenn W. - Miami, Florida, United States (US); Strickland, Craig B. - Tamarac, Florida, United States (US)

APPL-NO: 721316 (08)

FILED-DATE: September 25, 1996

GRANTED-DATE: December 28, 1999

ASSIGNEE-PRE-ISSUE: January 21, 1997 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., NETSPEAK CORPORATION SUITE 104 902 CLINT MOORE ROADBOCA RATON, FLORIDA, 33487, Reel and Frame Number: 008311/0785
April 14, 1997 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., NETSPEAK CORPORATION 902 CLINT MOORE ROAD, SUITE 104BOCAA RATON, FLORIDA, 33487, Reel and Frame Number: 008448/0779

ASSIGNEE-AT-ISSUE: NetSpeak Corporation, Boca Raton, Florida, United States (US), United States company or corporation (02)

ASSIGNEE-AFTER-ISSUE: September 12, 2005 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., VOIP TECHNOLOGY HOLDINGS, LLC 520 BROAD STREET, 8TH FLOOR NEWARK NEW JERSEY 07102, Reel and Frame Number: 016522/0205
October 28, 2005 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., NET2PHONE, INC. 520 BROAD STREET, 8TH FLOOR NEWARK NEW JERSEY 07102, Reel and Frame Number: 016945/0858
October 28, 2005 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., NET2PHONE, INC. 520 BROAD STREET, 8TH FLOOR NEWARK NEW JERSEY 07102, Reel and Frame Number: 016945/0890
December 9, 2005 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., NET2PHONE, INC. 520 BROAD STREET, 8TH FLOOR NEWARK NEW JERSEY 07102, Reel and Frame Number: 017105/0240

CL: 709

CORE TERMS: webphone, server, user, processing, internet, packet, button, protocol, audio, message ...

*2008 U.S. Dist. LEXIS 50451, **

Net2Phone, Inc. v. eBay, Inc.

Civil Action 06-2469 (KSH)

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

2008 U.S. Dist. LEXIS 50451

June 25, 2008, Decided
June 26, 2008, Filed

NOTICE: NOT FOR PUBLICATION

SUBSEQUENT HISTORY: Later proceeding at Net2Phone, Inc. v. eBay, Inc., 2008 U.S. Dist. LEXIS 87521 (D.N.J., Oct. 27, 2008)

CORE TERMS: patent, privileged, log, disclosure, common interest, handwriting, declaration, legal interests, legal advice, email ...

COUNSEL: [*1] For **HOWARD S. JONAS, Movant: JOSEPH P. LA SALA,** *LEAD ATTORNEY,* MCELROY, DEUTSCH, MULVANEY & CARPENTER, LLP, MORRISTOWN, NJ.

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For **EBAY, INC., SKYPE TECHNOLOGIES SA, SKYPE, INC., Counter Claimants: THOMAS R. CURTIN,** *LEAD ATTORNEY,* **KATHLEEN M. FENNELLY,** GRAHAM, CURTIN, PA, MORRISTOWN, NJ.

For **NET2PHONE, INC., Counter Defendant: JOSEPH P. LA SALA,** *LEAD ATTORNEY,* MCELROY, DEUTSCH, MULVANEY & CARPENTER, LLP, MORRISTOWN, NJ.

JUDGES: Patty Shwartz, United States Magistrate Judge.

OPINION BY: Patty Shwartz

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Click "Edit Search" to return to the search form and modify your search.

Suggestions:

- Check for spelling errors .
- Remove some search terms.
- Use more common search terms, such as those listed in "Suggested Words and Concepts"
- Use a less restrictive date range.

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Command Searching > **News, All (English, Full Text)**

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Enter Search Terms

(•) Terms and Connectors ( ) Natural Language ( ) Easy Search™

6009469 or 6,009,469

Suggest terms for my search

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Select a document segment, enter search terms for the segment, then click Add.

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Search Connectors

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or	or	w/seg	in same segment
w/N	within N words	w/s	in same sentence
pre/N	precedes by N words	and not	and not

More Connectors & Commands...

How Do I...?

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- Use wildcards as placeholders for one or more characters in a searc

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No documents were found for your search terms

"6009469 or 6,009,469"

Click "Save this search as an Alert" to schedule your search to run in the future.

- OR -

Click "Edit Search" to return to the search form and modify your search.

Suggestions:

- Check for spelling errors .
- Remove some search terms.
- Use more common search terms, such as those listed in "Suggested Words and Concepts"
- Use a less restrictive date range.

Save this Search as an Alert Edit Search

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

POWER OF ATTORNEY, CORRESPONDENCE ADDRESS AND REVOCATION OF PRIOR POWERS

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

Sir:

Revocation: I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

Power of Attorney: I hereby appoint the practitioners associated with customer number **42624**, individually and collectively, as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

I authorize Davidson Berquist Jackson & Gowdey, LLP to delete names/numbers of persons no longer with the Firm and to act and rely on instructions from and communicate directly with the entity who first sent this case to them and by whom I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Davidson Berquist Jackson & Gowdey, LLP in writing to the contrary.

Correspondence Address: Please recognize or change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to the address associated with Customer Number **42624**.

Assignee Name and Address:

Net2Phone, Inc.
520 Broad Street, 8th Floor
Newark, New Jersey 07102

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record The individual whose signature and title is supplied below is authorized to act on behalf of the assignee			
Signature		Date	3/12/09
Name	JAMES RAPIEN	Telephone	9734383253
Title	EVP & DIRECTOR		

Re-Exam

STATEMENT UNDER 37 CFR 3.73(B)

Applicant / Patent Owner: Net2Phone, Inc. Docket No. 2655-0185

Control No. 90/010,422 Filed / Issued Date: 12/28/1999

Entitled: GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION

Assignee: Net2Phone, Inc. A corporation

(Name of assignee) (Type of Assignee: corporation, partnership, university, government agency, etc.)

States that it is:

1. ☒ the assignee of the entire right, title, and interest; or

2. ☐ an assignee of less than the entire right, title and interest.
(The extent (by percentage) of its ownership interest is %)

in the patent application / patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application / patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel , Frame , or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application / patent identified above, to the current assignee shown below:

1.	From: MATTAWAY, Shane D. et al. To: Netspeak Corporation The document was recorded in the United States Patent and Trademark Office at Reel 008311 Frame 0785, or for which a copy thereof is attached.
2.	From: HUTTON, Gleen W. To: Netspeak Corporation The document was recorded in the United States Patent and Trademark Office at Reel 008448 Frame 0779, or for which a copy thereof is attached.
3.	From: Netspeak Corporation To: VOIP Technology Holdings, LLC The document was recorded in the United States Patent and Trademark Office at Reel 016522 Frame 0205, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[Note: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature — 3/13/09 Date

Michael R. Casey, Ph.D — 703-894-6400

Printed or Typed Name — Telephone Number

Title: Attorney, Registration No. 40,294

STATEMENT UNDER 37 CFR 3.73(B)
Continued

4.	From: VOIP Technology Holdings, LLC To: Net2Phone, Inc. The document was recorded in the United States Patent and Trademark Office at Reel 016945 Frame 0858, or for which a copy thereof is attached.
5.	From: Netspeak Corporation To: Net2Phone, Inc. The document was recorded in the United States Patent and Trademark Office at Reel 016945 Frame 0890, or for which a copy thereof is attached.
6.	From: VOIP Technology Holdings, LLC To: Net2Phone, Inc. The document was recorded in the United States Patent and Trademark Office at Reel 017105 Frame 0240, or for which a copy thereof is attached.

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

REEXAM CONTROL NUMBER	FILING OR 371 (c) DATE	PATENT NUMBER
90/010,422	02/26/2009	6009469

CONFIRMATION NO. 6565

REEXAMINATION REQUEST NOTICE

EWIN H. TAYLOR
BLAKELY,SOKOLOFF, TAYLOR & ZAFMAN, LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

OC000000034843631

Date Mailed: 03/04/2009

NOTICE OF REEXAMINATION REQUEST FILING DATE

(Third Party Requester)

Requester is hereby notified that the filing date of the request for reexamination is 02/26/2009, the date that the filing requirements of 37 CFR § 1.510 were received.

A decision on the request for reexamination will be mailed within three months from the filing date of the request for reexamination. (See 37 CFR 1.515(a)).

A copy of the Notice is being sent to the person identified by the requester as the patent owner. Further patent owner correspondence will be the latest attorney or agent of record in the patent file. (See 37 CFR 1.33). Any paper filed should include a reference to the present request for reexamination (by Reexamination Control Number).

cc: Patent Owner
42624
DAVIDSON BERQUIST JACKSON & GOWDEY LLP
4300 WILSON BLVD., 7TH FLOOR
ARLINGTON, VA 22203

/kpdozier/

Legal Instruments Examiner
Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900

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

REEXAM CONTROL NUMBER	FILING OR 371 (c) DATE	PATENT NUMBER
90/010,422	02/26/2009	6009469

CONFIRMATION NO. 6565

REEXAM ASSIGNMENT NOTICE

42624
DAVIDSON BERQUIST JACKSON & GOWDEY LLP
4300 WILSON BLVD., 7TH FLOOR
ARLINGTON, VA 22203

OC000000034843632

Date Mailed: 03/04/2009

NOTICE OF ASSIGNMENT OF REEXAMINATION REQUEST

The above-identified request for reexamination has been assigned to Art Unit 3992. All future correspondence to the proceeding should be identified by the control number listed above and directed to the assigned Art Unit.

A copy of this Notice is being sent to the latest attorney or agent of record in the patent file or to all owners of record. (See 37 CFR 1.33(c)). If the addressee is not, or does not represent, the current owner, he or she is required to forward all communications regarding this proceeding to the current owner(s). An attorney or agent receiving this communication who does not represent the current owner(s) may wish to seek to withdraw pursuant to 37 CFR 1.36 in order to avoid receiving future communications. If the address of the current owner(s) is unknown, this communication should be returned within the request to withdraw pursuant to Section 1.36.

cc: Third Party Requester(if any)
EWIN H. TAYLOR
BLAKELY,SOKOLOFF, TAYLOR & ZAFMAN, LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

/kpdozier/

Legal Instruments Examiner
Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900

Patent Assignment Abstract of Title

Total Assignments: 6

Application #: 08721316 **Filing Dt:** 09/25/1996 **Patent #:** 6009469 **Issue Dt:** 12/28/1999
PCT #: NONE **Publication #:** NONE **Pub Dt:**
Inventors: SHANE D. MATTAWAY, GLENN W. HUTTON, CRAIG B. STRICKLAND
Title: GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION

Assignment: 1

Reel/Frame: 008311 / 0785 **Received:** 01/27/1997 **Recorded:** 01/21/1997 **Mailed:** 03/27/1997 **Pages:** 4
Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).
Assignors: MATTAWAY, SHANE D. **Exec Dt:** 01/02/1997
STRICKLAND, CRAIG B. **Exec Dt:** 01/03/1997
Assignee: NETSPEAK CORPORATION
SUITE 104
902 CLINT MOORE ROAD
BOCA RATON, FLORIDA 33487
Correspondent: BOOKSTEIN & KUDIRKA, P.C.
BRUCE D. JOBSE, ESQ.
ONE BEACON STREET
BOSTON, MA 02108

Assignment: 2

Reel/Frame: 008448 / 0779 **Received:** 04/18/1997 **Recorded:** 04/14/1997 **Mailed:** 06/02/1997 **Pages:** 4
Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).
Assignor: HUTTON, GLEEN W. **Exec Dt:** 04/02/1997
Assignee: NETSPEAK CORPORATION
902 CLINT MOORE ROAD, SUITE 104
BOCAA RATON, FLORIDA 33487
Correspondent: BOOKSTEIN & KUDIRKA, P.C.
BRUCE D. JOBSE, ESQ.
ONE BEACON STREET
BOSTON, MA 02108

Assignment: 3

Reel/Frame: 016522 / 0205 **Received:** 09/12/2005 **Recorded:** 09/12/2005 **Mailed:** 09/13/2005 **Pages:** 32
Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).
Assignor: NETSPEAK CORPORATION **Exec Dt:** 03/25/2004
Assignee: VOIP TECHNOLOGY HOLDINGS, LLC
520 BROAD STREET, 8TH FLOOR
ATTN: NET2PHONE LEGAL DEPARTMENT
NEWARK, NEW JERSEY 07102
Correspondent: DENNEMEYER & CO., INC.
6990 COLUMBIA GATEWAY DRIVE, STE 360
ATTN: MICHELLE CHERVENAK
COLUMBIA, MD 21046

Assignment: 4

Reel/Frame: 016945 / 0858 **Received:** 10/28/2005 **Recorded:** 10/28/2005 **Mailed:** 12/30/2005 **Pages:** 32
Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).
Assignor: VOIP TECHNOLOGY HOLDINGS, LLC **Exec Dt:** 10/06/2005
Assignee: NET2PHONE, INC.
520 BROAD STREET, 8TH FLOOR
NEWARK, NEW JERSEY 07102
Correspondent: DAVIDSON BERQUIST JACKSON & GOWDEY LLP
4300 WILSON BLVD., 7TH FLOOR
ARLINGTON, VA 22203

Assignment: 5

Reel/Frame: 016945 / 0890 **Received:** 10/28/2005 **Recorded:** 10/28/2005 **Mailed:** 12/30/2005 **Pages:** 33

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: NETSPEAK CORPORATION **Exec Dt:** 10/06/2005

Assignee: NET2PHONE, INC.
520 BROAD STREET, 8TH FLOOR
NEWARK, NEW JERSEY 07102

Correspondent: DAVIDSON BERQUIST JACKSON & GOWDEY LLP
4300 WILSON BLVD., 7TH FLOOR
ARLINGTON, VA 22203

Assignment: 6

Reel/Frame: 017105 / 0240 **Received:** 12/09/2005 **Recorded:** 12/09/2005 **Mailed:** 02/02/2006 **Pages:** 34

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: VOIP TECHNOLOGY HOLDINGS, LLC **Exec Dt:** 10/06/2005

Assignee: NET2PHONE, INC.
520 BROAD STREET, 8TH FLOOR
NEWARK, NEW JERSEY 07102

Correspondent: MICHAEL R. CASEY, PH.D.
DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
4300 WILSON BOULEVARD, 7TH FLOOR
ARLINGTON, VIRGINIA 22203

Search Results as of: 03/04/2009 10:05 AM

Substitute for Form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*				Application Number	90/010,422
				Filing Date	02-23-2009
				First Named Inventor:	
				Art Unit	
				Examiner Name	
Sheet	1	**of**	1	Attorney Docket Number	003801.G184

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-			

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	Exhibit B	The Open Group, Technical Standard, Protocols for X/Open PC Interworking: SMB, Version 2, 1992, pages ii-xvi and pages 1-516.	
	Exhibit C	ZELLWEGER, POLLE T., et al., Etherphone: Collected Papers 1987-1988, Xerox Corporation, May 1989.	
	Exhibit D	VIN, HERRICK M., et al, Multimedia Conferencing in the Etherphone Environment, October 1991, pages 69-79.	
	Exhibit E	DROMS, R., Dynamic Host Configuration Protocol, RFC 1531, Bucknell University, October 1993, pages 1-39.	
	Exhibit F	U.S. Patent No. 5,533,110 issued to Pinard, et al. ("the Pinard patent")	
	Exhibit G	VocalChat User's Guide Version 2.0, Vocaltec, 1994, pages 1-77.	
	Exhibit H	README, VocalChat Version 2.02 & VocalChat WAN Version 2.02, Vocaltec, June 1994, pages 1-3.	
	Exhibit I	VocalChat 1.01 Network Information, Vocaltec, 1994, pages 1-10.	
	Exhibit J	VocalChat Information, Vocaltec, 1994, pages 1-31.	
	Exhibit K	VocalChat Troubleshooting, Vocaltec, 1994, pages 1-101.	

Examiner Signature		Date Considered	

*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.

[1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 2 hours 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, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the following:

(1) Information Disclosure Statement for Control No. 90/010,422

was served on

BRUCE D. JOBSE, ESQ.
KUDIRKA & JOBSE, LLP
TWO CENTER PLAZA
BOSTON, MA 02108

DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
4300 WILSON BOULEVARD, 7TH FLOOR
ARLINGTON, VIRGINIA 22203

/et/
Edwin H. Taylor
Reg. No. 25,129

Dated: /02-26-2009/

the attorney of record for the assignee of USP 6,701,469 in accordance with 37 CFR § 1.915(b)(6), on the 26 day of February, 2009.

Electronic Acknowledgement Receipt

EFS ID:	4868134
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	Shane D. Mattaway
Correspondence Address:	-
Filer:	Edwin Taylor/carla vignola
Filer Authorized By:	Edwin Taylor
Attorney Docket Number:	03801.G184
Receipt Date:	26-FEB-2009
Filing Date:	
Time Stamp:	17:42:08
Application Type:	Reexam (Third Party)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reexam - Info Disclosure Statement Filed by 3rd Party	3801G184_469_IDS_1449_PTO_SB_08.pdf	40354 8538efe20e26a31e657ce126973a0f5e3cd5bd9d	no	2
Warnings:					
Information:					
2	Reexam Certificate of Service	3801G184_CertOfService.pdf	15431 616435058d165db8da40e59ed49f935fedaa1044	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	55785		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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
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Bib Data Sheet

CONFIRMATION NO. 6565

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
90/010,422	02/26/2009 RULE	709	3992	03801.G184

APPLICANTS

6,009,469, Residence Not Provided;
NET2PHONE, INC. (OWNER), NEWARK, NJ;
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP (3RD.PTY.REQ.), SUNNYVALE, CA;
EWIN H. TAYLOR, SUNNYVALE, CA

**** CONTINUING DATA ***************************

This application is a REX of 08/721,316 09/25/1996 PAT 6,009,469
which is a CIP of 08/533,115 09/25/1995 PAT 6,108,704
and claims benefit of 60/025,415 09/04/1996
and claims benefit of 60/024,251 08/21/1996

**** FOREIGN APPLICATIONS *********************

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ yes ☐ no			18	3
35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance				
Verified and Acknowledged Examiner's Signature Initials				

ADDRESS
42624

TITLE

Graphic User Interface For Internet Telephony Application

FILING FEE RECEIVED	FEES: Authority has been given in Paper	
2520	No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	90/010,422	6,009,469	
	Examiner	Art Unit	
		3992	

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
90/010,422	6,009,469
Examiner	**Art Unit** 3992

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date								
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Issue Classification	Application/Control No. 90/010,422	Applicant(s)/Patent under Reexamination 6,009,469
	Examiner	Art Unit 3992

ISSUE CLASSIFICATION

ORIGINAL		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
709	227	/	/
CROSS REFERENCES		/	/
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)	/	/
		/	/
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		/	/
		/	/

(Assistant Examiner) (Date)		Total Claims Allowed:
(Legal Instruments Examiner) (Date)	(Primary Examiner) (Date)	O.G. Print Claim(s) / O.G. Print Fig.

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		31		61		91		121		151		181
	2		32		62		92		122		152		182
	3		33		63		93		123		153		183
	4		34		64		94		124		154		184
	5		35		65		95		125		155		185
	6		36		66		96		126		156		186
	7		37		67		97		127		157		187
	8		38		68		98		128		158		188
	9		39		69		99		129		159		189
	10		40		70		100		130		160		190
	11		41		71		101		131		161		191
	12		42		72		102		132		162		192
	13		43		73		103		133		163		193
	14		44		74		104		134		164		194
	15		45		75		105		135		165		195
	16		46		76		106		136		166		196
	17		47		77		107		137		167		197
	18		48		78		108		138		168		198
	19		49		79		109		139		169		199
	20		50		80		110		140		170		200
	21		51		81		111		141		171		201
	22		52		82		112		142		172		202
	23		53		83		113		143		173		203
	24		54		84		114		144		174		204
	25		55		85		115		145		175		205
	26		56		86		116		146		176		206
	27		57		87		117		147		177		207
	28		58		88		118		148		178		208
	29		59		89		119		149		179		209
	30		60		90		120		150		180		210

Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/010,422	6,009,469
	Certificate Date	Certificate Number

Requester Correspondence Address: ☐ Patent Owner ☒ Third Party
EWIN H. TAYLOR BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040

LITIGATION REVIEW ☐	(examiner initials)	(date)
Case Name		Director Initials

COPENDING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING	NUMBER
1.	
2.	
3.	
4.	

Search Notes

Application/Control No.	Applicant(s)/Patent under Reexamination	
90/010,422	6,009,469	
Examiner	Art Unit	
	3992	

SEARCHED			
Class	Subclass	Date	Examiner

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

REQUEST FOR EX PARTE REEXAMINATION TRANSMITTAL FORM

REVISED
FOR CONTROL NO. 90/010,422

Address to:
Mail Stop Ex Parte Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

1. **[X]** This is a request for ex parte reexamination pursuant to 37 CFR 1.510 of patent number 6,009,469 issued December 28, 1999. The request is made by:

   [ ] patent owner

   [X] third party requester.

2. **[X]** The name and address of the person requesting reexamination is:
   EDWIN H. TAYLOR
   BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP
   1279 OAKMEAD PARKWAY,
   SUNNYVALE, CALIFORNIA 94085

3. **[ ]** a. A check in the amount of $2,520 is enclosed to cover the reexamination fee, 37 CFR 1.20(c)(i);

   [X] b. The Commissioner is hereby authorized to charge the fee as set forth in 37 CFR 1.20(c)(i) to Deposit Account No. 02-2666; or

   [ ] c. Payment by credit card. Form PTO-2038 is attached.

4. Any refund should be made by
   [ ] check or
   [X] credit to Deposit Account No. 02-2666.
   37 CFR 1.26. If payment is made by credit card, refund must be to credit card account.

5. **[X]** A copy of the patent to be reexamined having a double column format on one side of a separate paper is enclosed. 37 CFR 1.510(b)(4).
   EXHIBIT A

6. **[ ]** CD-ROM or CD-R in duplicate, Computer Program (Appendix) or large table

7. [ ] Nucleotide and/or Amino Acid Sequence Submission
   If applicable, all of the following are necessary

   a. [ ] Computer Readable Form (CRF)

   b. [ ] Specification Sequence Listing on:

      i [ ] CD-ROM (2 copies) or CD-R (2 copies); **or**

      ii [ ] paper

   c. [ ] Statements verifying identify of above copies

8. **[ ]** A copy of any disclaimer, certificate of correction or reexamination certificate issued in the patent is included.

9. **[X]** Reexamination of claims(s) 1-3, 5-6, 8-9 and 14-18 is requested.

10. **[X]** A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO-1449 or PTO/SB/08.

Based on Form PTO/SB/57 (02-01) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03

11. [ ] An English language translation of all necessary and pertinent non-English language patents and/or printed publications is included.

12. [X] The attached detailed request includes at least the following items:.

a. [X] A statement identifying each substantial new question of patentability based on prior patents and printed publications 37 CFR 1.510(b)(1)

b. [X] An identification of every claim for which examination is requested, and a detailed explanation of the pertinency and manner of applying the cited art to every claim for which reexamination is requested. 37 CFR 1.51(b)(2)

13. [ ] A proposed amendment is included (only where the patent owner is the requester). 37 CFR 1.510(e)

14. [X] a. It is certified that a copy of this request (if filed by other than the patent owner) has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c).
The name and address of the party served and the date of service are:

BRUCE D. JOBSE, ESQ.
KUDIRKA & JOBSE, LLP
TWO CENTER PLAZA
BOSTON, MA 02108

AND

DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
4300 WILSON BOULEVARD, 7TH FLOOR
ARLINGTON, VIRGINIA 22203

Date of Service: February 23, 2009 ; or

[ ] b. A duplicate copy is enclosed since service on patent owner was not possible.

15. [x] Correspondence Address: Direct all communication about the reexamination to:

[x] Customer Number: 8791 _____
Type Customer Number here — Place Customer Number Bar Code Label here

OR

[ ] Firm or Individual Name: Edwin H. Taylor

Address (line 1) 1279 Oakmead Parkway

Address (line 2) _____

City Sunnyvale State California Zip 94085-4040 Country USA

Telephone (408) 720-8300 Fax (408) 720-8383

16. [X] The patent is currently the subject of the following concurrent proceeding(s):

[ ] a. Copending reissue Application No. _____
[ ] b. Copending reexamination Control No. _____
[ ] c. Copending Interference No. _____
[X] d. Copending litigation styled:

Net2Phone, Inc. v. eBay, Inc., Skype Technologies SA, and Skype, Inc., Case No. 06-2469, United States District Court for the District of New Jersey.

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.

/et/
Authorized Signature

Edwin H. Taylor, Reg. No. 25,129

/02-23-2009/
Date

[ ] For Patent Owner Requester

[X] For Third Party Requester

Based on Form PTO/SB/57 (02-01) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03

CERTIFICATE OF SERVICE

The undersigned certifies that copies of the following:

(1) Revised Request for Ex Parte Reexamination Transmittal Form For Control No.: 90/010,422; and

(2) Revised Certificate of Service For Control No.: 90/010,422

were served on

BRUCE D. JOBSE, ESQ.
KUDIRKA & JOBSE, LLP
TWO CENTER PLAZA
BOSTON, MA 02108

DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
4300 WILSON BOULEVARD, 7TH FLOOR
ARLINGTON, VIRGINIA 22203

/et/
Edwin H. Taylor
Reg. No. 25,129

Dated: /02-24-2009/

the attorney of record for the assignee of USP 6,701,469 in accordance with 37 CFR § 1.915(b)(6), on the 24 day of February, 2009.

REVISED CERTIFICATE OF SERVICE FOR CONTROL NO: 90/010,422

The undersigned certifies that copies of the following:

(1) Request for *Ex Parte* Reexamination Transmittal Form; and

(2) Request for *Ex Parte* Reexamination including Exhibits A through X.

were served on

BRUCE D. JOBSE, ESQ.
KUDIRKA & JOBSE, LLP
TWO CENTER PLAZA
BOSTON, MA 02108

DAVIDSON BERQUIST JACKSON & GOWDEY, LLP
4300 WILSON BOULEVARD, 7TH FLOOR
ARLINGTON, VIRGINIA 22203

/et/
Edwin H. Taylor
Reg. No. 25,129

Dated: /02-23-2009/

the attorney of record for the assignee of USP 6,131,121 in accordance with 37 CFR § 1.915(b)(6), on the 23 day of February, 2009.

Electronic Acknowledgement Receipt

EFS ID:	4851848
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	Shane D. Mattaway
Correspondence Address:	-
Filer:	Edwin Taylor/Carrie Boccaccini
Filer Authorized By:	Edwin Taylor
Attorney Docket Number:	03801.G184
Receipt Date:	24-FEB-2009
Filing Date:	
Time Stamp:	20:44:30
Application Type:	Reexam (Third Party)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Trans Letter filing of a response in a reexam	469_3801G184_REVISED_REQUEST_REEXAMINATIONTransmittal_filed_2-24-09.pdf	27523 2ef461881c071cd7c8a532be26f99815bbde4248	no	2
Warnings:					
Information:					
2	Reexam Certificate of Service	3801G184_CertOfService.pdf	15637 945806447dbdca8344ae204cd89b7b3a712793d7	no	1
Warnings:					
Information:					
3	Reexam Certificate of Service	3801G184_REVISEDCertofService.pdf	16808 45d5c340dfd466d2f2530e52c35a535937ba32a4	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	59968		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Request for Ex Parte Reexamination	§	REQUEST FOR EX PARTE
	§	REEXAMINATION
U.S. Patent No. 6,009,469	§	
	§	
Issued: December 28, 1999	§	
	§	Attorney Docket No.: 03801.G184
For: Graphic User Interface For	§	
Internet Telephony Application	§	
	§	
Requester: Skype, Inc.	§	Customer No.: 08791

REQUEST FOR EX PARTE REEXAMINATION UNDER 35 U.S.C. § 302

Mail Stop *Ex parte* Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the provisions of 35 U.S.C. §§ 302-307, the undersigned hereby requests an *ex parte* reexamination of Claims 1-3, 5-6, 8-9, and 14-18 of United States Patent No. 6,009,469 ("the '469 patent," Exhibit A) which issued on December 28, 1999 to Shane D. Mattaway et al., resulting from a patent application filed on September 25, 1996. The patent application was a continuation-in-part of a patent application filed September 25, 1995, which resulted in U.S. Patent No. 6,108,704 ("the '704 patent"). The Requester asserts that claims 1-3, 5-6, 8-9, and 14-18 are unpatentable because of prior art references which were not before the U.S. Patent and Trademark Office (PTO) during prosecution of the '469 patent.

Table of Contents

I. PENDING LITIGATION

The '469 patent is the subject of pending litigation, Net2Phone, Inc. v. eBay, Inc., Skype Technologies SA, and Skype, Inc., Case No. 06-2469, instituted by the current assignee, Net2Phone, Inc., in the United States District Court for the District of New Jersey. Net2Phone alleges that Skype Technologies SA, Skype, Inc. and eBay Inc. infringe claims 8-9, and 14-18 of the '469 patent. The parties have submitted their claim construction briefs and a Markman hearing is currently scheduled for March 2, 2009. The Court has not yet set a schedule for summary judgment proceedings. No trial date has been set. Skype, Inc., plans to file a motion to stay the above-entitled litigation pending reexamination on the grounds that a stay of litigation at this time will permit the Court and parties to benefit from the PTO's guidance on issues of patentability and to avoid further costly legal proceedings that would otherwise burden the Court and parties. Claim Construction Briefs submitted by the parties to the pending litigation are set forth in Exhibits S-X.

II. LISTING OF PRIOR ART PATENTS AND PRINTED PUBLICATIONS

In accordance with 37 C.F.R. §§ 1.510(b)(1) and (b)(2), reexamination of claims 1-3, 5-6, 8-9, and 14-18 of the '469 patent is requested in view of the following references:

Exhibit B — The Open Group, Technical Standard, Protocols for X/Open PC Interworking SMB, Version 2, (1992) ("**NetBIOS**"), which **published as a single publication** containing:[1] (a) Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Concept and Methods, RFC 1001 (March 1987) ("RFC 1001"); and (b) Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Detailed Specifications, RFC 1002 (March 1987) ("RFC 1002").

[1] NetBIOS published as a single reference with RFC 1001 and RFC 2002.

Exhibit C — Etherphone: Collected Papers 1987-1988 (May 1989) (collectively referred to herein as "**Etherphone**"). These papers, which **published together as a single publication**, include the following:[2]

a. Polle T. Zellweger, et al., *An Overview of the Etherphone System and its Applications*, IEEE CONFERENCE ON COMPUTER WORKSTATIONS (March 1988), 160-168 (hereinafter "Zellweger 1").

b. Daniel C. Swinehart, *Telephone Management in the Etherphone System*, PROCEEDINGS OF THE IEEE/IEICE GLOBAL TELECOMMUNICATIONS CONFERENCE (November 1987), 1176-1180 (hereinafter "Swinehart 1").

c. Douglas B. Terry and Daniel C. Swinehart, *Managing Stored Voice in the Etherphone System*, ACM TRANSACTIONS ON COMPUTER SYSTEMS 6(1) (February 1988), 3-27 (hereinafter "Terry").

d. Daniel C. Swinehart, *System Support Requirements for Multi-media Workstations*, PROCEEDINGS OF THE SPEECHTECH '88 CONFERENCE (April 1988), 82-83 (hereinafter "Swinehart 2").

e. Polle T. Zellweger, *Active Paths through Multimedia Documents*, DOCUMENT MANIPULATION AND TYPOGRAPHY, J.C. AN VILET (ED.), CAMBRIDGE UNIVERSITY PRESS (1988) (hereinafter "Zellweger 2").

Exhibit D — Vin, Harrick M., et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (October 1991) ("**Vin**"); and

Exhibit E — Droms, R., Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("**RFC 1531**")

Exhibit F — Pinard, et al., U.S. Patent No. 5,533,110 ("Pinard")

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[2] The five papers comprising this reference were published together as set forth on the first page of this reference. Thus, all five papers are a single reference.

Exhibit G	VocalChat User's Guide, Version 2.0 (1994) ("User's Guide")
Exhibit H	VocalChat Readme File, Version 2.02 (June, 1994) ("Readme")
Exhibit I	VocalChat 1.01 Networking Information (March 6, 1994) ("VocalChat Networking")
Exhibit J	VocalChat Information, Version 2.02 (July 18, 1994) ("Help File")
Exhibit K	VocalChat Troubleshooting Help File, Version 2.02 (July 18, 1994) ("Troubleshooting Help File")

III. OVERVIEW OF '469 PATENT

Before providing detailed explanations of the pertinency and manner of applying the cited prior art to the claims, presented here is an overview of the '469 patent and its prosecution history. The '469 patent issued on March 2, 2004, and includes 3 independent claims, all of which are part of this Request for Reexamination.

A. Subject Matter of the '469 Patent

The '469 patent describes two techniques for locating computer processes on a network. Referring to Figure 1 of the '469 patent (reproduced below), one technique relies on a "connection server" (26) to locate processes and a second technique relies on a "mail server" (28) to locate processes.[3] According to the first technique, each computer (referred to as a "processing unit" in the '469 patent) registers its IP addresses with the connection server (26). The IP address of each "online" computer is stored within a database (34) on the connection server. As described in the '469 patent (referring to Figure 1):

[3] The first technique is referred to as the "primary point-to-point Internet protocol" and the second technique is referred to as the "secondary point-to-point internet protocol." *See, e.g.,* '469 patent, col. 7 lines 47 to col. 8 lines 39.

> Upon the first user initiating the point-to-point Internet protocol when the first user is logged on to Internet 24, the first processing unit 12 automatically transmits its associated E-mail address and its dynamically allocated IP address to the connection server 26. The connection server 26 then stores these addresses in the database 34 and timestamps the stored addresses using timer 32. The first user operating the first processing unit 12 is thus established in the database 34 as an active on-line party available for communication using the disclosed point-to-point Internet protocol. Similarly, a second user operating the second processing unit 22, upon connection to the Internet 24 through a connection service provider, is processed by the connection server 26 to be established in the database 34 as an active on-line party.[4]

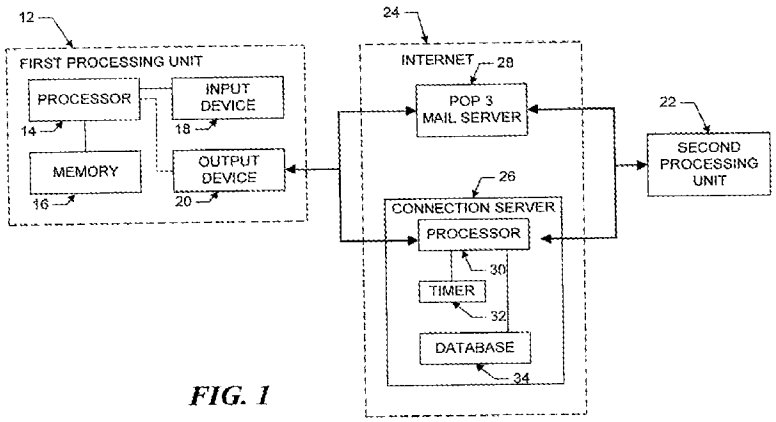

FIG. 1

In order to initiate a connection with the second computer (22) on the network, the first computer (12) retrieves the current IP address of the second computer from the connection server (26). Once the first computer knows the IP address of the second computer, it can establish a point-to-point connection with the second computer. As described in the '469 patent:

> The first processing unit 12 then sends a query, including the E-mail address of the callee, to the connection server 26. The connection server 26 then searches the database 34 to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. If the callee is active and on-line, the connection server 26 then performs the primary point-to-point Internet protocol; i.e. the IP address of

[4] '469 patent, col. 6, line 66 to col. 7, line 13.

> the callee is retrieved from the database 34 and sent to the first processing unit 12. The first processing unit 12 may then directly establish the point-to-point Internet communications with the callee using the IP address of the callee.[5]

The second technique for locating computers on a network (the "secondary point-to-point Internet protocol") utilizes the email server (28) illustrated in Figure 1. The second technique is used "if the connection server 26 is non-responsive, inoperative, and/or unable to perform the primary point-to-point Internet protocol, as a non-responsive condition."[6] Using the second technique, the first computer (12) transmits an email message which includes the IP address of the first user and a session number (referred to as a "<ConnectRequest>" message).[7] After receiving the email message from the mail server, the second computer (22) uses the IP address and session number to establish a point-to-point connection with the first computer (12). As described in the '469 patent:

> Upon receiving the incoming E-mail signal from the first processing unit 12, the second processing unit 22 may assign or may be assigned a temporary IP address. Therefore, the delivery of the E-mail through the Internet 24 provides the second processing unit 22 with a session number as well as IP addresses of both the first processing unit 12 and the second processing unit 22.
>
> Point-to-point communication may then be established by the processing unit 22 processing the E-mail signal to extract the <ConnectRequest> message, including the IP address of the first processing unit 12 and the session number. The second processing unit 22 may then open a socket and generate a <ConnectOK> response signal, which includes the temporary IP address of the second processing unit 22 as well as the session number of the first processing unit.[8]

While the independent claims of the '469 patent are not limited to a particular protocol standard, the embodiments described in the '469 patent utilize the TCP/IP protocol.[9] Thus, the

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[5] '469 patent, col. 7, line 30-43.
[6] '469 patent, col. 7, lines 63-66.
[7] '469 patent, col. 8, lines 1-4.
[8] '469 patent, col. 9, lines 4-18.
[9] *See, e.g.*, '469 patent, col. 6, lines 50-51.

focus of the '469 patent is a central repository of IP addresses which is queried to locate computers on a network.

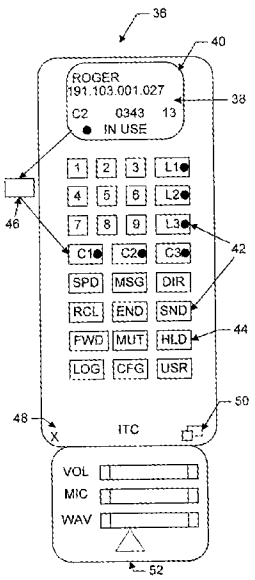


FIG. 5

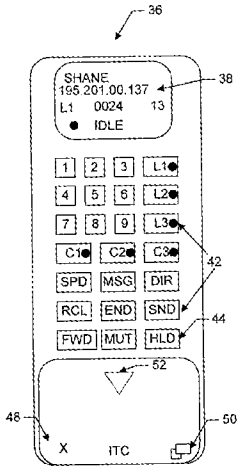


FIG. 6

The '469 patent also describes a graphical user interface ("GUI") for managing calls on a computer. The GUI, illustrated in Figures 5 and 6 of the '469 patent (reproduced above), includes a status area (38) which is used to indicate . . .

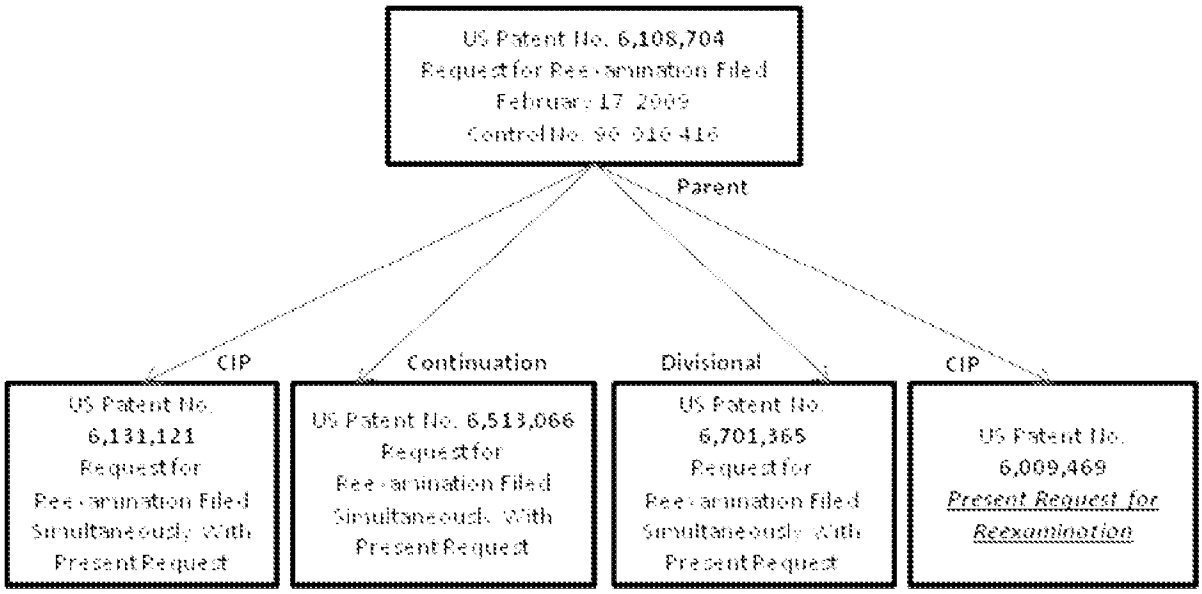
> . . . a called user by name and/or by IP address or telephone number; a current function such as C2; a current time; a current operating status such as "IN USE", and other control icons such as a down arrow icon 40 for scrolling down a list of parties on a current conference line. The operating status may include such annunciators as "IN USE", "IDLE", "BUSY", "NO ANSWER", "OFFLINE", "CALL", "DIALING", "MESSAGES", and "SPEEDDIAL."[10]

Figures 5 and 6 also illustrate a set of graphical icons (42) which are "configured to substantially simulate a telephone handset or a cellular telephone interface."[11] The icons provide functions typically found on a telephone such as speed dial (SPD), hold (HLD), send (i.e., initiate call) (SND), end call (END), mute (MUT). Icons are also provided to indicate individual

[10] '469 patent, col. 10, lines 35-43.
[11] '469 patent, col. 10, lines 51-53.

telephone "lines" (L1-L3) and "conference lines" (C1-C3). An active call may be transferred to a different line by "by clicking and dragging the status area 38, which is represented by a reduced icon 46. Dragging the reduced icon 46 to any one of line icons L1-L4 transfers the called party in use to the selected line, and dragging the reduced icon 46 to any one of conference line icons C1-C3 adds the called party to the selected conference call."[12]

B. Related Reexaminations Filed by Requestor



C. Prosecution History of the '469 Patent

The '469 patent is a continuation-in-part of the '704 patent, which issued on August 22, 2000. The application which resulted in the '704 patent was filed on September 25, 1995.

The application resulting in the '469 patent was filed on September 25, 1996 and included 6 claims.

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[12] '469 patent, col. 11, lines 29-35.

The PTO mailed a first Office Action on April 20, 1998, rejecting all 6 claims under 35 U.S.C. § 102 as being anticipated by VocalTec Internet Phone Version 2.5 (hereinafter "IPHONE").[13]

The Applicants filed an Amendment and Response on October 20, 1998 in which they amended Claims 1-4, cancelled Claims 5-6, and added claims 7-20. In view of the rejection under § 102, Claim 1 was amended to include the following limitation (among others): "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."[14] New independent Claims 7 (which issued as Claim 5) included a similar limitation.[15] New Claim 10 (which issued as Claim 8) was directed to a method for generating a user interface which included the steps of "A. generating a user-interface element representing a first communication line; B. generating a user interface element representing a first callee process; and C. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."[16]

In addition, with respect to Claims 1 and 7 (issued Claim 5), the Applicants allegedly distinguished the "invention" from IPHONE as follows:

> According to the IRC protocol [used in IPHONE], there is no field or identifier which "uniquely" identifies an IRC server user. Each user connects to an IRC server using a "nickname" which can be any character string up to nine characters in length. Note that duplicate nicknames are possible. Accordingly, such nicknames are not unique. The IPhone Version 2.5 provides no functionality beyond that if a conventional IRC client. A user is presented with a list of

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[13] *See* Office Action (April 20, 1998), page 3.
[14] Office Action response (October 20, 1998), page 2.
[15] *See* Office Action response (October 20, 1998), page 4 ("forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process.")
[16] *Id.*, page 5.

> "joined" IRC users from which a selection can be made. Once a nickname is selected from the IRC server, information about the user, including an Internet Protocol address are provided to the selecting party.
>
> In contrast, the present invention provides a global server that can be queried to locate any user anywhere using a known unique identifier or handle, e.g. the user's email address. A perspective caller does not have to go through the time-consuming and annoying task of hunting for the correct IRC server and sifting through all joined users and topics in search of the person to whom he or she wishes to communicate. As disclosed in the specification, a Webphone user merely selects information identifying the user from either a personal directory or the results of a query from the global server to establish a point-to-point communication connection with the desired callee.[17]

The PTO mailed an Office Action on February 3, 1999, stating that the Applicants failed to "clearly point out the patentable novelty which they think each of the claims presents, particularly newly added claims 10-20, in view of the state of the art disclosed by the references cited." The Applicants responded on March 3, 1999, amending the claims and making substantially the same arguments as in their prior response.[18]

A Notice of Allowability followed on June 22, 1999, allowing Claims 1-18 of the '469 patent.

Prior to issuance, the Applicants filed an Amendment After Allowance under 37 CFR § 1.312(a), in which they removed the "audio transducer" limitation from the preamble of Claims 1 and 7 (which issued as claims 1 and 5 of the '469 patent).[19] The amendments were entered on November 16, 1999 and the '469 patent issued on December 28, 1999.

Because the amendments in the Amendment After Allowance do not appear in the '469 patent as published, the Applicants submitted a Request for Certificate of Correction on December 29, 2000. The PTO subsequently entered a Certificate of Correction with the requested amendments.

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[17] Office Action response (October 20, 1998), page 9.
[18] See Office Action response (March 3, 1999), pages 7-9.
[19] *See* Amendment After Allowance (July 20, 1999).

IV. SUBSTANTIAL NEW QUESTION (SNQ) OF PATENTABILITY AS REQUIRED BY 37 C.F.R 1.510 (b)(1)

The following section provides a list of the SNQs and detailed explanation of the prior art references relied upon in the present request for the SNQ, including references not previously considered by the PTO.

A. SNQs Raised by NetBIOS

A SNQ as to Claims 1-3 and 5-6 is raised by NetBIOS. NetBIOS anticipates all of the limitations of these claims, including limitations argued by the patentee to overcome prior art rejections during prosecution of the '469 patent. Specifically, to overcome the 102(b) rejection based on IPHONE, the Applicants amended Claim 1 to include the limitation of "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."[20] In addition, the Applicants argued that, in contrast to the prior art, the claimed invention included a "a global server that can be queried to locate any user anywhere using a known unique identifier."[21]

NetBIOS discloses all of these limitations and, as such, presents a SNQ of patentability. Specifically, NetBIOS describes a NetBIOS Name Server ("NBNS") which is a dedicated, central server that receives unique identifiers (NetBIOS names) and corresponding network protocol addresses from client processes and responds to queries from client processes for the stored network protocol address corresponding to a given NetBIOS name. *See, e.g.*, NetBIOS at 367 (describing how the NBNS acts as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively,

[20] Office Action response (October 20, 1998), page 5.
[21] Office Action response (October 20, 1998), page 9.

the NBNS may elect to completely manage and validate names."); *id.* at 376 (describing how "[e]very node has a permanent unique name."). *See also id.* at 388 ("Name query transactions are initiated by endnodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); *id.* at 377 ("Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered."); *id.* at 389 ("An NBNS answers queries from a P [point-to-point] node with a list of IP address and other information" for the queried name.). *See also id. at* 397 ("The NetBIOS session service begins after one or more IP addresses have been found for the target name. . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications.") (emphasis added).

For these reasons, NetBIOS would be considered important in deciding the question of patentability for Claims 1-3 and 5-6 of the '469 patent and, accordingly, presents a SNQ of patentability with respect to these claims.

B. SNQ's Raised by NetBIOS in view of RFC 1531

A SNQ as to Claims 1-3 and 5-6 is raised by NetBIOS in view of RFC 1531. Independent Claims 1 and 5 claim "determining the currently assigned network protocol address of the first process upon connection to the computer network." As described below, any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

Alternatively, to the extent this claim limitation requires dynamically assigned network protocol addresses (a position with which the requestor respectfully disagrees), a SNQ as to Claims 1-3 and 5-6 is raised by is raised by NetBIOS in view of RFC 1531. For example, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned *dynamically* "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, RFC 1531 shows that, in at least some instances, the computer systems on which NetBIOS was used received IP

addresses dynamically, following connection to the computer network. A motivation to combine NetBIOS with RFC 1531 exists because the NetBIOS reference describes NetBIOS operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network.

Consequently, NetBIOS and RFC 1531 would be considered important in deciding the question of patentability for Claims 1-3 and 5-6 of the '469 patent and, accordingly, present a SNQ of patentability with respect to these claims.

C. SNQs Raised by NetBIOS in view of Pinard

A SNQ as to Claims 8-9, 14-15, and 17-18 is raised by NetBIOS in view of Pinard. As mentioned above, NetBIOS discloses various features from Claim 8 which the Applicant argued to distinguish the invention over the prior art including "a method for establishing a point-to-point communication from a caller process to a callee process over a computer network" and "querying the server process to determine if the first callee process is accessible." *See, e.g.*, NetBIOS at 367 (describing how the NBNS acts as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."). *See also id.* at 388 ("Name query transactions are initiated by endnodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). *See also id. at* 397 ("The NetBIOS session service begins after one or more IP addresses have been found for the target name. . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications.") (emphasis added).

In addition, during prosecution of Claims 8-18, the Applicants argued that none of the references disclosed or suggested various user interface features recited in these claims, including "a user interface in which establishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are achieved using elements representing

communication lines and parties."[22] Pinard discloses all of these user interface features and, thus, presents a SNQ of patentability. In particular, Pinard discloses a user interface element representing a first communication line, a user interface element representing a first callee process, and establishing a point-to-point communication link from a caller process to the first callee process in response to a user associating the element representing the first callee process with the element representing the first communication line, as recited in independent Claim 8. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee process from a directory 17 into an icon 15 representing a communication line. Once the callee answers the call, the icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51.

Consequently, NetBIOS and Pinard would be considered important in deciding the question of patentability for Claims 8-9, 14-15, and 17-18 of the '469 patent and, accordingly, present a SNQ of patentability with respect to these claims.

D. SNQs Raised by NetBIOS in view of Pinard and Further in View of VocalChat User's Guide

A SNQ as to Claim 16 is raised by NetBIOS in view of Pinard and Further in View of VocalChat User's Guide. As described above, NetBIOS and Pinard describe all of the elements of Claim 16 except for a "communication line on mute status." VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57. A motivation to combine VocalChat with NetBIOS and Pinard exists considering the problem sought to be solved. All three references relate to the field of communications over a computer network, and VocalChat and Pinard relate to the use of a computer system to implement telephony features. *See, e.g.,* Pinard, Col. 1, lines

[22] Office Action response (October 20, 1998), page 10.

5-7. One of ordinary skill in the art would have recognized the need for a "mute" function to enable users to mute the audio of a call as needed.

Consequently, the combination of NetBIOS, Pinard and VocalChat User's Guide would be considered important in deciding the question of patentability for Claim 16 of the '469 patent and, accordingly, present a SNQ of patentability with respect to this claim.

E. SNQs Raised by Etherphone

A SNQ as to Claims 1-3, 5-6, 8-9, and 17-18 is raised by Etherphone. Etherphone anticipates all of the limitations of these claims, including limitations argued by the patentee to overcome prior art rejections during prosecution of the '469 patent. Specifically, to overcome the 102(b) rejection of Claims 1-3 and 5-6 based on IPHONE, the Applicants amended Claim 1 to include the limitation of "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process" and added new independent claim 7 with similar limitations.[23] In addition, the Applicants argued that, in contrast to the prior art, the claimed invention included a "a global server that can be queried to locate any user anywhere using a known unique identifier"[24]

Etherphone discloses all of these limitations and, as such, presents a SNQ of patentability. Specifically, a "Voice Control Server" (also called a "Telephone Control Server") stores the current network protocol addresses of each of the Etherphones/workstations on the network. *See, e.g.,* Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants."). A

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[23] Office Action response (October 20, 1998), page 4 (for example, Claim 7 includes the limitation "forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process.")
[24] Office Action response (October 20, 1998), page 9.

unique identifier is assigned to each user and is associated with the current network protocol address of the Etherphone/workstation at which each user is currently located. As described in Swinehart 1:

> The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues.

Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting.").

In addition, with respect to Claim 8-18, the Applicants argued that none of the references disclosed or suggested various user interface features recited in these claims, including "a user interface in which establishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are achieved using elements representing communication lines and parties."[25] Etherphone discloses all of these user interface features and, thus, presents a SNQ of patentability. In particular, Etherphone discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, the top row of Figure 4 of Zellweger 1 shows a series of graphical icons used for placing a call including a personal telephone directory, a telephone, and a picture of a user on the phone (to indicate a call is in process). In this example, the personal telephone directory, displayed as a graphical rolodex, includes a plurality of graphical elements representing callees (i.e., with a separate card in the rolodex for each callee). The icon of the telephone and the icon with the picture of a user talking

[25] Office Action response (October 20, 1998), page 10.

on the phone represents a telephone communication line. As described in Zellweger 1, "[a]n active conversation is represented as a conversation between two people with a superimposed indication of the other party's name (also shown in Figure 4)." Zellweger 1, pages 4-5. Thus, when the user makes a call, the name from the graphical rolodex (PolleZ in the example) is "associated with" the graphical element representing the communication line (the image with the user talking on the phone).

Consequently, Etherphone would be considered important in deciding the question of patentability for Claims 1-3, 5-6, 8-9, and 17-18 of the '469 patent and, accordingly, presents a SNQ of patentability with respect to this claim.

F. SNQs Raised by Etherphone in view of Vin and Further in View of RFC 1531

A SNQ as to Claims 1-3 and 5-6 is raised by Etherphone in view of Vin and further in view of RFC 1531. Claims 1-3 and 5-6 include the limitation of "determining the currently assigned network protocol address of the first process upon connection to the computer network." Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

Alternatively, to the extent this claim limitation requires dynamically assigned network protocol addresses (a position with which the requestor respectfully disagrees), a SNQ as to Claims 1-3 and 5-6 is raised by is raised by Etherphone in view of Vin and further in view of RFC 1531. As mentioned above, Etherphone discloses a Voice Control Server for storing user identifiers and network protocol addresses. Vin discloses an Etherphone system on a TCP/IP network. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). RFC 1531 discloses how IP addresses are dynamically assigned on TCP/IP networks. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, RFC

1531 shows that, in at least some instances, the computer systems on which Etherphone was used received IP addresses dynamically, following connection to the computer network.

A motivation to combine Etherphone and Vin exists because they both describe the same Etherphone system. A motivation to combine these references with RFC 1531 exists due to the problem to be solved. In particular, Vin describes the use of IP addresses within an Etherphone system and RFC 1531 describes techniques for dynamically assigning IP addresses.

Consequently, Etherphone, Vin and RFC 1531 would be considered important in deciding the question of patentability for Claims 1-3 and 5-6 of the '469 patent and, accordingly, present a SNQ of patentability with respect to these claims.

G. SNQs Raised by Etherphone in view of Pinard

A SNQ as to Claims 8-9, 14-15, and 17-18 is raised by Etherphone in view of Pinard. As described above, Etherphone discloses a "Voice Control Server" for storing network protocol addresses of processes and responding to queries for the network protocol addresses. *See, e.g.,* Swinehart 1, page 4 (the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server.").

In addition, during prosecution of Claims 8-18, the Applicants argued that none of the references disclosed or suggested various user interface features recited in Claim 8, including "a user interface in which establishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are achieved using elements representing communication lines and parties."[26] Pinard discloses all of these user interface features and, thus, presents a SNQ of patentability in combination with Etherphone. In particular, Pinard discloses a user interface element representing a first communication line, a user interface element representing a first callee process, and establishing a point-to-point communication link from a caller process to the

[26] Office Action response (October 20, 1998), page 10.

first callee process in response to a user associating the element representing the first callee process with the element representing the first communication line, as recited in independent Claim 8. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee process from a directory 17 into an icon 15 representing a communication line. Once the callee answers the call, the icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51.

Consequently, Etherphone and Pinard would be considered important in deciding the question of patentability for Claims 8-9, 14-15, and 17-18 of the '469 patent and, accordingly, present a SNQ of patentability with respect to these claims.

H. SNQs Raised by Etherphone in view of Pinard and Further in View of VocalChat

A SNQ as to Claim 16 is raised by Etherphone in view of Pinard and further in view of VocalChat. As described above, Etherphone and Pinard describe all of the elements of Claim 16 except for a "communication line on mute status." VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57. A motivation to combine VocalChat with Etherphone and Pinard exists considering the problem sought to be solved. All three references relate to the field of computer-implemented telephony over a computer network. *See, e.g.,* Pinard, Col. 1, lines 5-7. One of ordinary skill in the art would have recognized the need for a "mute" function to enable users to mute the audio of a call as needed.

Consequently, the combination of Etherphone, Pinard and VocalChat User's Guide would be considered important in deciding the question of patentability for Claim 16 of the '469 patent and, accordingly, present a SNQ of patentability with respect to this claim.

I. SNQs Raised by VocalChat User's Guide in view of Readme, and further in view of VocalChat Networking, and further in view of Help File, and further in view of Troubleshooting Help File (hereinafter collectively "VocalChat" or "the VocalChat References")

A SNQ as to Claims 1-3, 5-6, 8-9, and 17-18 is raised by the VocalChat references. A strong motivation to combine the VocalChat references under 35 U.S.C. § 103 exists because they all describe the same VocalChat system. The VocalChat references disclose all of the limitations of these claims, including limitations argued by the patentee to overcome prior art rejections during prosecution of the '469 patent. Specifically, to overcome the 102(b) rejection based on IPHONE, the Applicants amended Claim 1 to include the limitation of "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."[27] In addition, the Applicants argued that, in contrast to the prior art, the claimed invention included a "a global server that can be queried to locate any user anywhere using a known unique identifier"[28]

The VocalChat references disclose all of these limitations and, as such, present a SNQ of patentability. Specifically, In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.
>
> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in

[27] Office Action response (October 20, 1998), page 5.
[28] Office Action response (October 20, 1998), page 9.

> order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

VocalChat Network Information, page 10 (underline emphasis added). *See also* Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), refer to the USERS file as a "Connection List" file. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.") (emphasis added). Regardless of the file name, the Connection List/USERS file is stored on a server for access by VocalChat clients. *See, e.g.*, VocalChat Network Information, page 2 ("**Server Installation** is used to install the VocalChat program files on the network, for use by the different network users."). *See also* Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory."); Help File, page 8 ("the Setup program crates a Connection List File which is used to identify and access users").

In addition, during the prosecution of Claim 8-18 before the PTO, the Applicants argued that none of the references disclosed or suggested various user interface features recited in these claims, including "a user interface in which establishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are achieved using elements representing communication lines and parties."[29] The VocalChat references disclose all of these user interface features and, thus, present a SNQ of patentability. In particular, a VocalChat user makes a point-to-point call to another user with the Call button or a Quick Dial Button representing a frequently called callee. *See* Help File, page 14 (describing use of the Call button) and 20 (describing use of the Quick Dial buttons). Selecting the Call button opens a dialog box

[29] Office Action response (October 20, 1998), page 10.

displaying a list of connected VocalChat users. A caller then clicks on a user's name in the list and then clicks the OK button to establish a point-to-point communication link. *See*, *e.g.,* Help File, page 14. In this example, the graphical representation of the user in the list is an "element representing the first callee process" and the OK button is an "element representing a first communication line." Alternatively, a user can associate any VocalChat user with a Quick Dial button by right-clicking on a Quick Dial button, which presents the user with the VocalChat users list. *See* Help File, page 20. After the user selects a user name from the list, that user is associated with the quick dial button. *See* Help File, page 21 ("From the user list, choose the user name that you want the button to hold."). The caller then places a call to the callee by selecting the Quick Dial button. VocalChat also assigns Quick Dial buttons automatically ("When you call a user with the Call command, a vacant button changes to hold the user's name if one does not hold it already."). In these examples, the graphical representation of the user in the list is an "element representing the first callee process" and the quick dial button is an "element representing a first communication line." In both cases, the element representing the callee process is "associated with" an element representing a communication line.

Consequently, the VocalChat references would be considered important in deciding the question of patentability for 1-3, 5-6, 8-9, and 14-18 of the '469 patent and, accordingly, present a SNQ of patentability with respect to these claims.

J. SNQs Raised by the VocalChat references in view of RFC 1531

A SNQ as to Claims 1-3 and 5-6 is raised by the VocalChat references in view of RFC 1531. Claims 1-3 and 5-6 require "determining the currently assigned network protocol address of the first process upon connection to the computer network." As described above, VocalChat inherently describes this feature. Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

Alternatively, to the extent this claim limitation requires dynamically assigned network protocol addresses (a position with which the requestor respectfully disagrees), a SNQ as to

Claims 1-3 and 5-6 is raised by is raised by VocalChat in view of RFC 1531, which describes how TCP/IP addresses are dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks).

Consequently, the combination of the VocalChat references and RFC 1531 would be considered important in deciding the question of patentability for Claims 1-3 and 5-6 of the '469 patent and, accordingly, presents a SNQ of patentability with respect to these claims.

K. SNQs Raised by VocalChat References in view of Pinard

A SNQ as to Claims 8-9 and 14-18 is raised by the VocalChat references in view of Pinard. During the prosecution of Claim 8-18 before the PTO, the Applicants argued that none of the references disclosed or suggested various user interface features recited in these claims, including "a user interface in which establishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are achieved using elements representing communication lines and parties."[30] Pinard discloses all of these user interface features and, thus, presents a SNQ of patentability. In particular, Pinard discloses a user interface element representing a first communication line, a user interface element representing a first callee process, and establishing a point-to-point communication link from a caller process to the first callee process in response to a user associating the element representing the first callee process with the element representing the first communication line, as recited in independent Claim 8. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee process from a directory 17 into an icon 15 representing a communication line. Once the callee answers the call, the icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51.

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[30] Office Action response (October 20, 1998), page 10.

Consequently, the combination of the VocalChat references and Pinard would be considered important in deciding the question of patentability for Claims 8-9 and 14-18 of the '469 patent and, accordingly, presents a SNQ of patentability with respect to these claims.

V. OVERVIEW OF THE PRIOR ART REFERENCES PRESENTING A SNQ OF PATENTABILITY

A. NetBIOS

The Network Basic Input/Output System, known as NetBIOS, was originally developed for IBM's PC-Network in the early 1980s. In March 1987, the NetBIOS Working Group of the Internet Engineering Task Force released Request for Comments 1001 ("RFC 1001"), titled "Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Concept and Methods," and Request for Comments 1002 ("RFC 1002"), titled "Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Detailed Specifications." Both of these documents were republished in NetBIOS in 1992 (Exhibit B).[31]

NetBIOS is a software interface which allows applications on different computers to communicate within a computer network, such as a local area network or the Internet. "NetBIOS applications employ NetBIOS mechanisms to locate resources, establish connections, send and receive data with an application peer, and terminate connections." NetBIOS at 359. NetBIOS "defines a proposed standard protocol to support NetBIOS services in a TCP/IP environment. Both local network and Internet operation are supported." *Id.* at 350.

[31] The pages of NetBIOS are numbered consecutively including RFC 1001 and RFC 1002. When referencing a page in NetBIOS the consecutively numbered pages of RFC 1001 and RFC 1002 are used.

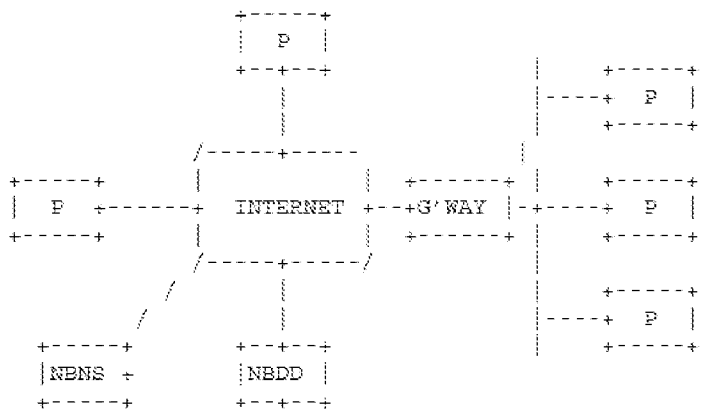

Figure From NetBIOS, page 371 (RFC 1001, page 22)

As illustrated in the figure above, NetBIOS enables point-to-point communications between two or more "point-to-point" nodes (also referred to as "P nodes"). The point-to-point connections are established over the Internet or a local area network (LAN). A NetBIOS Name Server ("NBNS") coupled to the point-to-point nodes over the Internet (or other network) provide a dedicated directory service for associating node names with IP addresses. In operation, NetBIOS point-to-point nodes register distinguishing names and corresponding IP addresses with the NBNS. When a node makes a point-to-point connection it first "queries" the NBNS to obtain the current IP address of other nodes. Having obtained the target node's IP address from the NBNS, the originating node can establish "directed (point-to-point) communications." *Id.* at 397 ("The NetBIOS session service begins after one or more IP addresses have been found for the target name. . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications.") (emphasis added). In the December 2, 1997 Office Action Response on page 8, the Patent Owner indicated, among other things, that "the second process establishes communications with the first process directly, without any intervention [sic] from the address/information server." Accordingly, the examiner would have considered NetBIOS important in determining patentability.

"Name query transactions are initiated by endnodes to obtain the IP address(es) and other attributes associated with a NetBIOS name." *Id.* at 388. *See also id.* at 376 (describing how "[e]very node has a permanent unique name."); *id.* at 377 (describing how NetBIOS point-to-point nodes perform "name resolution" by "ask[ing]" the NBNS for the IP address corresponding

to a NetBIOS end-node identified by name); *id.* ("Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered."); *id.* at 388 ("Name query transactions are initiated by end nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); *id.* at 389 ("An NBNS answers queries from a P [point-to-point] node with a list of IP address and other information" for the queried name.).

This is a comprehensive reference for Internet and LAN point-to-point connections as will be seen by the citation to NetBIOS in the text below and in the claim charts of Exhibit M. To overcome the 102(b) rejection based on IPHONE, the Applicants amended Claim 1 to include the limitation of "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."[32] In addition, the Applicants argued that, in contrast to the prior art, the claimed invention included a "a global server that can be queried to locate any user anywhere using a known unique identifier"

NetBIOS discloses all of these limitations and, as such, presents a SNQ of patentability. Specifically, NetBIOS describes a NetBIOS Name Server ("NBNS") which is a dedicated, central server that receives unique identifiers (NetBIOS names) and corresponding network protocol addresses from client processes and responds to queries from client processes for the stored network protocol address corresponding to a given NetBIOS name. *See, e.g.*, NetBIOS at 367 (describing how the NBNS acts as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."); *id.* at 376 (describing how "[e]very node has a permanent unique name."). *See also id.* at 388 ("Name query transactions are initiated by endnodes to obtain the IP address(es) and other attributes associated with a

[32] Office Action response (October 20, 1998), page 5.

NetBIOS name."); *id.* at 377 ("Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered."); *id.* at 389 ("An NBNS answers queries from a P [point-to-point] node with a list of IP address and other information" for the queried name.). *See also id. at* 397 ("The NetBIOS session service begins after one or more IP addresses have been found for the target name. . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications.") (emphasis added).

Additionally, NetBIOS was not cited during the prosecution of the '469 patent and, as shown above, would have been considered important to an examiner in deciding patentability of the '469 patent. Accordingly, it presents a substantially new question of patentability.

B. Etherphone

The Etherphone system (Exhibit C) "consists of microprocessor-based electronic telephones, a centralized switching server, a voice file server, and workstation programs to support voice communications and voice recording services. From a workstation, a user can place and receive telephone calls, maintain private telephone directories, and manage a database of voice messages."[33]

Figure 1 of Terry (reproduced below) provides an architectural overview of the Etherphone system. A Voice Control Server (sometimes called a "Telephone Control Server") registers the network addresses of workstations/Etherphones of users and provides the network addresses to requesting workstations/Etherphones upon request to establish calls between users. As described in Etherphone:

> The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter,

[33] Zellweger 2, page 11.

> voice datagrams are transmitted directly among the participants, bypassing the control server.[34]

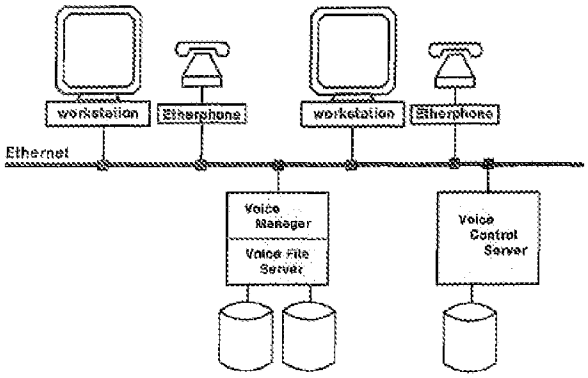

Figure 1. A simple Etherphone system environment.

Thus, after determining the current network addresses for a call, the workstation/Etherphone of the calling user and the workstation/Etherphone of a called user establish a point-to-point ("direct") connection over the network, bypassing the Voice Control Server.

In addition, the Voice Control Server associates user identifiers with each network protocol address. For example, a user may log in to any workstation. Calls to that user will then be directed to that workstation and its associated Etherphone. As described:[35]

> The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information

[34] Swinehart 1, page 4.
[35] Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting. Registering with the destination location allows users to travel more freely than forwarding calls from the home location does.").

> linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues.[36]

Etherphone also describes a graphical user interface (GUI) to provide various telephony functions. One example of the GUI is provided in Figure 3 of Zellweger 1 (reproduced below). As described in Zellweger 1:

> A variety of convenient workstation dialing methods are provided: a user can . . . select names or numbers from anywhere on the [Etherphone telephone management windows], use either of two directory tools that present browsable lists of names and associated telephone numbers as speed-dialing buttons, or redial any previously-made call by clicking on its conversation log entry. Calls can also be placed by name or number from the telephone keypad.[37]

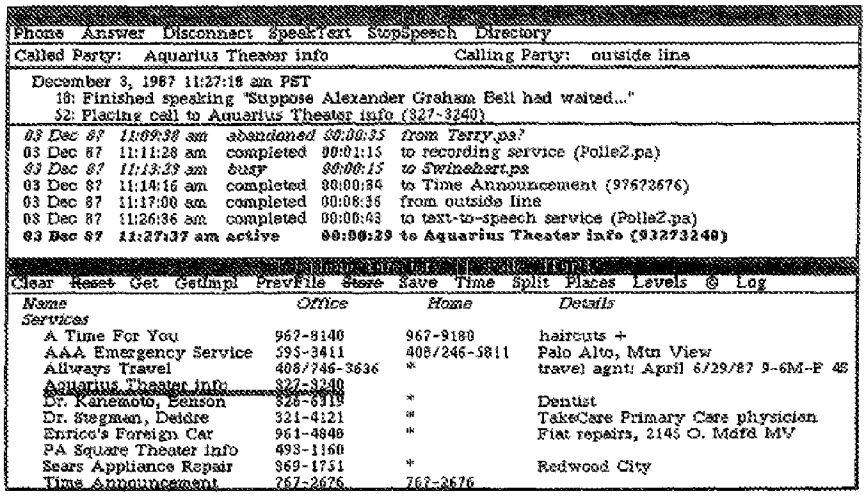

Figure 3 From Zellweger 1

In addition, the Etherphone GUI uses icons to represent callers and telephone lines. For example, Figure 4 of Zellweger 1 (reproduced below) includes a rolodex graphic to represent callees (upper left) and a telephone graphic (upper middle) and a graphic of a person talking on

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[36] Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting. Registering with the destination location allows users to travel more freely than forwarding calls from the home location does.").

[37] Zellweger 1, page 4.

the phone (upper right) to represent telephone lines. When a call is placed to a callee in the rolodex, the name of the callee is associated with the active telephone line graphic (upper right). For example, the active telephone line graphic includes name of the callee and an image of a user speaking on the telephone.

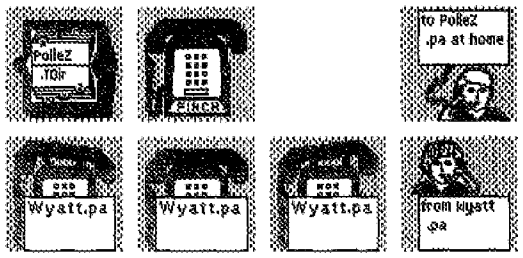

Figure 4. Etherphone system icons. The two icons at the upper left show a closed personal telephone directory and a Finch icon at rest. The icon at the upper right shows an outgoing call to Polle Zellweger's home (username PolleZ.pa). The four bottom icons show several stages of an incoming call from Doug Wyatt: the three left icons of the group are animated during ringing, while the right conversation icon is used after the call has been answered.

The Etherphone system also supports conference calling and call waiting. For example, Swinehart 1 describes how conference calls may be scheduled with other participants ("negotiated conference calls"). *See, e.g.*, Swinehart 1, page 3. In addition, using the Etherphone system, a user may receive and answer a call while already on an existing call. *See, e.g.*, Swinehart 1, page 2 (describing how users can place and receive other calls during a "background call").

The Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3. At least one implementation of the Etherphone system used the Internet Protocol (IP) to support network communications. *See, e.g.*, Vin, page 77, Figure 5 (illustrating a "protocol stack and format" which includes internet protocol (IP) packets).

Consequently, Etherphone, which was not cited or discussed in the prosecution of the '469 patent, presents a SNQ of patentability because it discloses limitations argued in prosecution before the PTO to overcome the 102(b) rejection based on IPHONE, including "program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server

process."[38] Etherphone also discloses "a global server that can be queried to locate any user anywhere using a known unique identifier."[39] Accordingly, Etherphone presents a SNQ of patentability.

C. VocalChat User's Guide, VocalChat Readme File, VocalChat Networking Information, VocalChat Help File, VocalChat Troubleshooting Help File (collectively referred to as "VocalChat" or "the VocalChat references")

As mentioned above, the VocalChat system is described in VocalChat User's Guide, VocalChat Readme File, VocalChat Networking Information, VocalChat Help File, and VocalChat Troubleshooting Help File. As stated in the declaration of Alon Cohen, one of the co-founders of VocalTec, Ltd., included as **Exhibit L** with this reexamination:

1. VocalChat 1.01 Networking Information ("Networking Information"), attached as **Exhibit I** (referred to as "Exhibit A" in the declaration), was publicly distributed in 1994 as part of the VocalChat version 1.01 software, which was commercially released and on sale to the general public in 1994. The VocalChat version 1.01 software was sold as a boxed product, which included an electronic copy of the VocalChat 1.01 Networking Information document.

2. VocalChat 2.0 User's Guide ("User's Guide"), attached as **Exhibit G** (referred to as "Exhibit B" in the declaration), was publicly distributed in 1994 as part of the VocalChat version 2.0 software, which was commercially released and on sale to the general public in 1994. The VocalChat version 2.0 software was sold as a boxed product, which included a printed copy of the VocalChat 2.0 User's Guide.

3. The VocalChat Readme File ("Readme"), attached as **Exhibit H** (referred to as "Exhibit C" in the declaration), the VocalChat Troubleshooting Help File ("Troubleshooting Help File"), attached as **Exhibit K** (referred to as "Exhibit D" in the

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[38] Office Action response (October 20, 1998), page 5.
[39] Office Action response (October 20, 1998), page 9.

declaration), and VocalChat Information ("Help File"), attached as **Exhibit J** (referred to as "Exhibit E" in the declaration), are true and correct print outs of VocalChat version 2.02's README.TXT, TROUBLE.HLP, and INFO.HLP files, respectively. Electronic copies of these documents were publicly distributed in 1994 as part of the VocalChat version 2.02 software, which was commercially released and on sale to the general public as a boxed product in 1994.

VocalChat is a software-based telephone executed on a personal computer which connects to a central server to locate other personal computers on a variety of computer networks, including TCP/IP, NetBIOS, and IPX networks.[40] In particular, as illustrated in the figures on pages 4 and 5 of the VocalChat User's Guide (reproduced below), computers with VocalChat installed connect directly to a Post Office directory on a server to register their current network protocol addresses, query the Post Office directory for the network protocol addresses of other on-line computers, and establish point-to-point communications with each other using the retrieved network protocol addresses.[41]

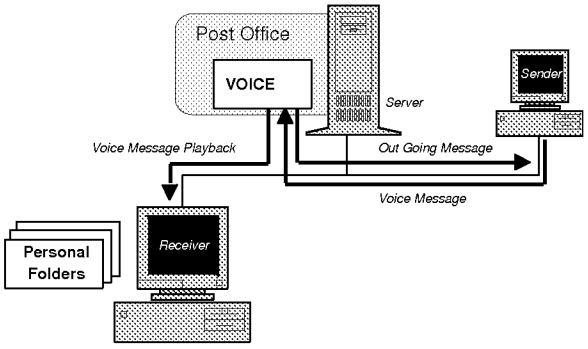

Figure from Page 5 of User's Guide

[40] *See, e.g.*, VocalChat User's Guide, page 5 (illustrating a central server with a "post office" to enable communication between computers)

[41] *See, e.g.*, Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory.").

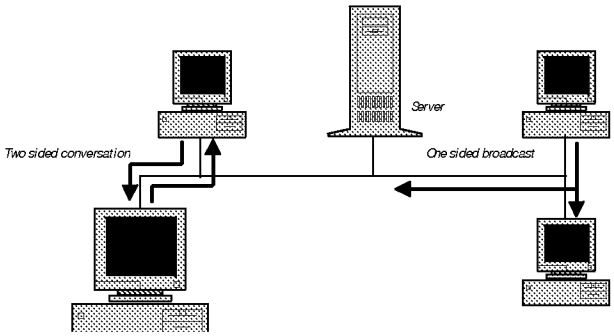

Figure from Page 4 of User's Guide

VocalChat may be implemented over a variety of network protocols including TCP/IP and NetBIOS. In a TCP/IP implementation, the Post Office directory includes a "Connection List" file (CONNLIST.VC) which contains the unique usernames and IP addresses of connected VocalChat users.[42] In the initial versions of VocalChat (versions 1.x), the Connection List file is called a "USERS file."[43] When the VocalChat client starts it transmits a user's unique username and IP address to the Connection List file.[44] User information maintained in the Connection List file is then made available to other VocalChat users, thereby enabling those users to locate and communicate with other VocalChat users.

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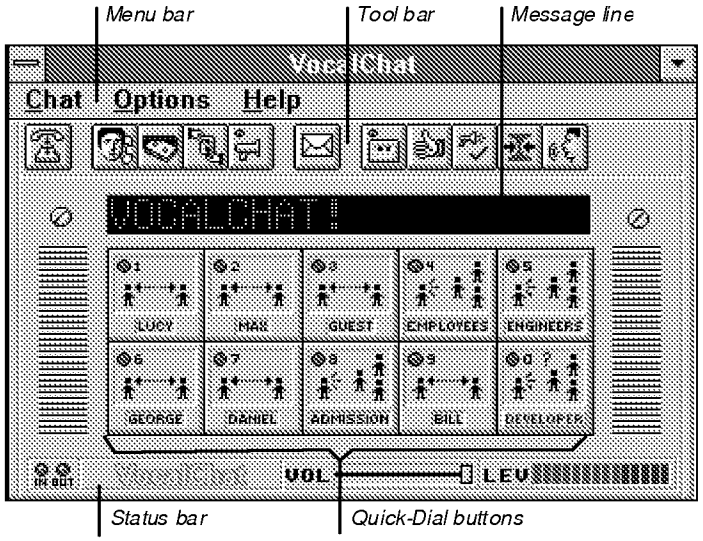
[42] *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory."). For the purpose of this reexamination we have converted the VocalChat Help File (Exhibit J) and Troubleshooting Help File (Exhibit K) into PDF files and added page numbers to simplify navigation. Aside from the addition of page numbering, the content of the help file and troubleshooting help file has not been modified in any manner.

[43] See, e.g., VocalChat Network Information, page 10 ("When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address.")

[44] See, e.g., Help File, page 22 ("VocalChat will use the CONNLIST.VC files to get network addresses and a user name should be entered in the Setup for each user."). *See also* VocalChat Network Information, page 10.



As illustrated above, VocalChat also provides a graphical user interface (GUI) to establish point-to-point calls over the network. The user interface displays various buttons and interface elements, including a Call button, Quick Dial buttons, and an "Idle" icon, representing a temporarily disabled communication line, and a volume slider. Additionally, VocalChat includes a user interface window known as the "User List" to display a list of on-line users.[45] A VocalChat user may browse the list to find someone to call. Clicking on a username followed by the Call button establishes a point-to-point call with the selected user.[46] The VocalChat software queries the central directory database to determine whether the callee is on-line and, if so, the callee's network protocol address is returned to the VocalChat software (an IP address in the TCP/IP implementation).[47] The VocalChat software establishes a point-to-point call using the IP address.

Consequently, VocalChat, which was not cited or discussed in the prosecution of the '469 patent, presents a SNQ of patentability because it discloses limitations argued in prosecution before the PTO to overcome the 102(b) rejection based on IPHONE, including

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[45] *See, e.g.*, User's Guide, page 14 (illustrating an Address Book User List).
[46] *Id.*
[47] *See, e.g.*, Help File, page 22 (describing how VocalChat retrieves network addresses from the connection list file in a TCP/IP implementation).

"program code means, responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."[48] VocalChat also discloses "a global server that can be queried to locate any user anywhere using a known unique identifier."[49] In view of the above, a reasonable examiner would consider the VocalChat references to be important in deciding patentability. Accordingly, the VocalChat references present a SNQ of patentability.

D. RFC 1531

RFC 1531 discloses how TCP/IP addresses are assigned dynamically by a Dynamic Host Configuration Protocol (DHCP) server. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). There are various benefits to using dynamic IP address assignment. For example, dynamically assigning IP addresses allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). To the extent that Claims 1-3 and 5-6 require dynamically assigned network protocol addresses (a position with which the requestor respectfully disagrees), a SNQ as to Claims 1-3 and 5-6 is raised by is raised by RFC 1531 in combination with either NetBIOS, Etherphone or the VocalChat references. RFC 1531 would be considered important in deciding the question of patentability and accordingly presents a SNQ of patentability.

E. Vin

[48] Office Action response (October 20, 1998), page 5.
[49] Office Action response (October 20, 1998), page 9.

Vin is another prior art reference describing the Etherphone system which was published separately from Etherphone: Collected Papers 1987-1988 (May 1989) (collectively referred to herein as "Etherphone"). Vin describes many of the same features of the Etherphone system described in Etherphone and, in addition, describes how the Etherphone system may be used on a TCP/IP network. *See, e.g.*, Vin, page 77, Figure 5 (illustrating a "protocol stack and format" used in an Etherphone system which includes internet protocol (IP) packets). Consequently, Etherphone in view of Vin and further in view of RFC 1531 shows that, in at least some instances, the computer systems on which Etherphone was used received IP addresses dynamically, following connection to the computer network. As such, Vin would be considered important in deciding the question of patentability and accordingly presents a SNQ of patentability, particularly with respect to Claims 1-3 and 5-6.

F. Pinard

Pinard (Exhibit F) entitled "Human Machine Interface for Telephone Feature Invocation," issued on July 2, 1996 from an application filed on November 29, 1994. Pinard discloses that "[t]he ability to display icons on a computer display and to invoke commands by dragging an icon to another has long been known" in the prior art. (Col. 3, lines 15-17.) Pinard applies such a graphical user interface to the field of telephony. (Col. 1, lines 5-7.)

In Pinard "a method of providing information to a user unambiguously as to which persons are parties to a call" is described. (Col. 1, lines 55-57.) Specifically, Pinard shows how such information is represented graphically: "icons representing a subscriber's line associated with a local subscriber, the status of the line and [sic] associated with particular other subscribers to which calls are made or received are displayed in a manner that provides full information as to their status and the status of any call in progress, whether on line or being held, and whether it is a conference call or not." (Col. 2, lines 47-54.)

Also described is how call functions or processes can be displayed and then invoked using the graphical user interface: "The state of the call can be changed merely by dragging icons to particular locations on the display." (Col. 2, lines 54-55.) Specifically, Pinard describes:

> A method for calls to be made between parties, to be placed on hold, to be dropped from hold, to be conferenced or to be dropped from a conference with

clear indication to the user which of the parties to any call are being dealt with. (Col. 1, lines 57-61.)

In Pinard with the graphical user interface on a personal computer, one has the ability to dial out and make and receive calls via a local area network (LAN). *See, e.g.*, Col. 1, line 64 - Col. 2, line 8; Col. 2, lines 38-41; Col. 3, lines 55-60; Col. 4; lines 1-3; and Figure 1. Pinard teaches that the described graphical user interface "can be used with any system in which a telephony application on a personal computer or [a] personal computer in conjunction with a server operates." (Col. 2, lines 41-45.) *See also* Col. 1, lines 60-62.

As show in Figure 2 below, Pinard discloses a personal computer with a display 11 running a telephone application software program. *See* Col. 4, lines 10-11. The program creates an icon 13 representing the caller ("Debbie" in the example) as well as an icon 15 representing a call setup process. (Col. 4, lines 11-18.)

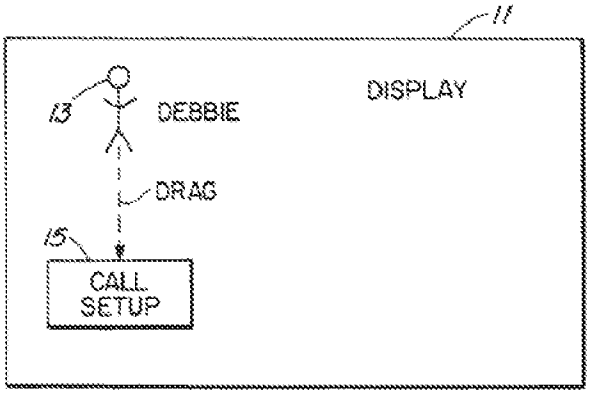

FIG. 2

Pinard discloses that the program uses the graphical user interface to permit the caller to place a call. (Col. 2, line 59 – Col. 3, line 9; Col. 3, lines10-14.) Figure 2 above and Figure 3 below are illustrative. By dragging the caller icon 13 ("Debbie") onto the call set up icon 15, the caller instructs the program that an outgoing call is to be made. (Col. 4, lines 19-21.) The program creates icons ("images of the faces of the persons listed in the directory") in directory 17 representing potential callees. *See, e.g.,* Col. 4, lines 22-31. When the user drags an icon from the directory 17 onto the call setup icon 15, the program retrieves and dials the corresponding callee's telephone number. *See, e.g.,* Col. 4, lines 38-48.

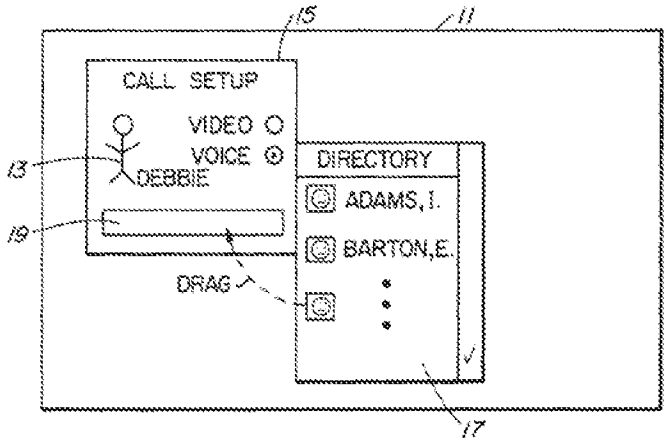

FIG. 3

As show in Figure 4 below, when caller "Debbie" and callee "John" are telephonically connected, the call setup icon 15 is transformed into a call icon 23, within whose borders the caller icon (stick figure labeled "Debbie") and the callee icon 21 ("John") are located. (Col. 4, lines 43-55.) This defined boundary signifies that a call is in progress. The program also creates a new call setup icon 24. (Col. 4, lines 50-41.) The program allows the caller to terminate a call by dragging the callee icon 21 ("John") into a trash basket icon 26. *See, e.g.,* Col. 5, lines 1-4.

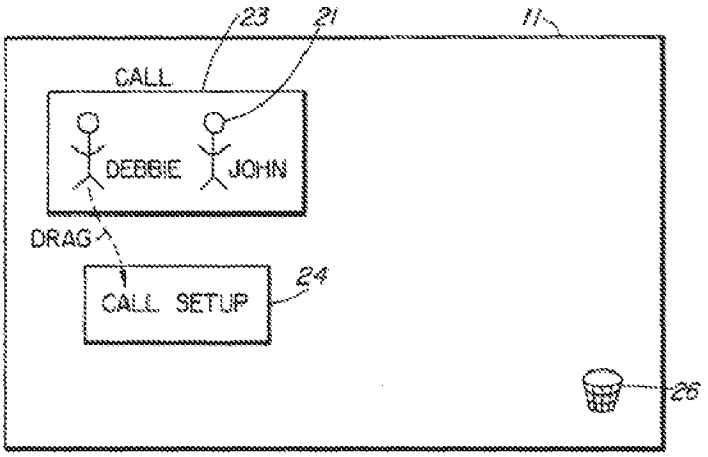

FIG. 4

The program of Pinard uses the graphical user interface to permit a caller to call a first callee on a first phone line and a second callee on a second phone line. *See, e.g.,* Col. 2, line 59 – Col. 3, line 9; Col. 3, lines 10-14. The program also uses a graphical interface to permit a

caller to place on hold a first callee on one phone line and speak to a second callee on a second phone line (or vice versa). *See, e.g.*, Col. 2, line 59 – Col. 3, line 9; Col. 3, lines 10-14.

As shown in Figure 6 below, caller icon 13A ("Debbie") is ghosted in the first call icon 23 to indicate that the first phone line over which the first caller ("John," represented by icon 21) is connected is on hold. *See* Col. 5, lines 5-35; Col. 5, line 45 – Col. 6, line 5. Caller icon 13 ("Debbie") is solid in the second call icon 29 to indicate that the second phone line over which the second caller ("Mary," represented by icon 28) is connected is active. *See* Col. 5, lines 5-35; Col. 5, line 45 – Col. 6, line 5. Moreover, in the example of Figure 6, Debbie moves John from the first line (represented by call icon 23) to the second line (represented by call icon 29) by clicking and dragging John's icon 21, thereby creating a conference call between Debbie, Mary, and John. *See, e.g.*, Col. 5, lines 36-40.

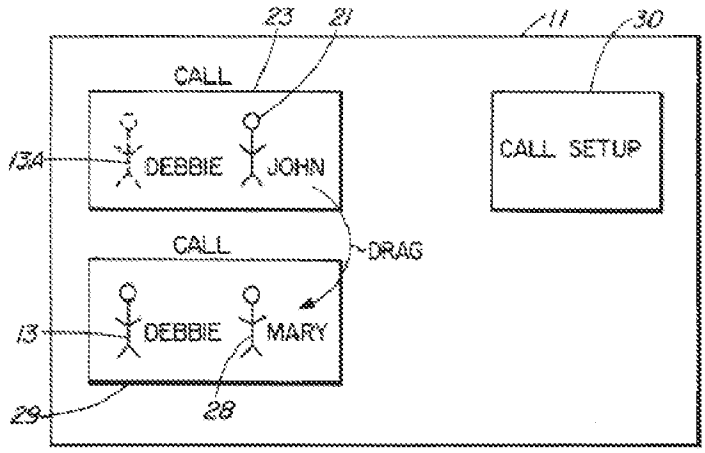

FIG. 6

A hard hold icon 39 of Pinard, shown below in Figure 12 allows the caller ("Debbie") to drag a callee icon 28 ("Mary") to the hard hold icon 39. This places the callee ("Mary") on hold. Other callers (represented by icons 41) may also be placed on hold. (Col. 6, lines 36-53.)

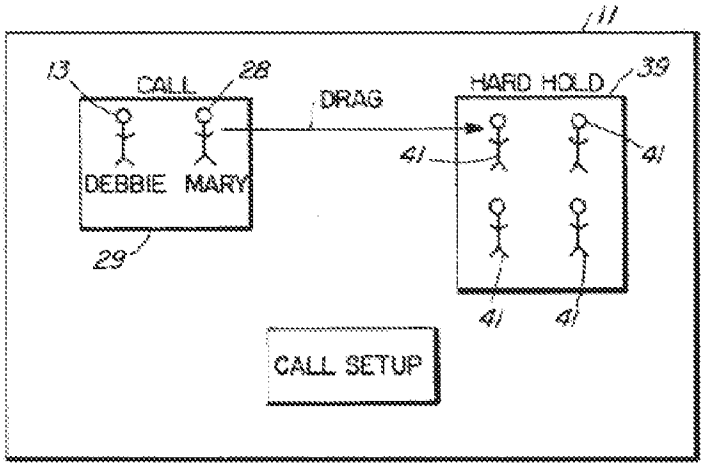

FIG. 12

Pinard discloses that the program uses the graphical user interface to permit a caller to conference a first callee and a second callee onto a single conference call. (Col. 2, line 59 – Col. 3, line 9; Col. 3, lines 10-14.) As shown in Figure 6 above, callee icon 21 ("John") is dragged onto call icon 29. As shown in Figure 7 below, this results in a conference call represented by conference icon 32 in whose borders caller icon 13 ("Debbie"), first callee icon 21 ("John"), and second callee icon 28 ("Mary") are located. (Col. 5, lines 36-44.)

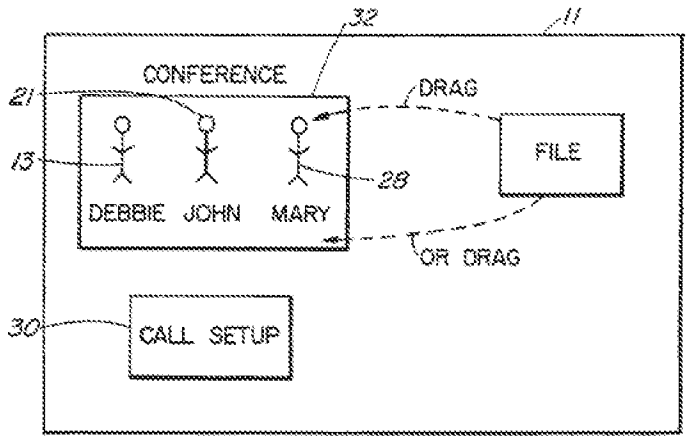

FIG. 7

Finally, Pinard teaches that "[u]sing similar principles, a person skilled in the art will now be able to provide unambiguous other features, such as call pickup, redial, speed call, callback,

etc." (Col. 7, lines 48-52.) These and other features were well known to those of ordinary skill in the art insofar as they were prevalent on prior art telephones.

In summary, Pinard discloses graphical elements representing communication lines and callees that may be clicked and dragged to establish and terminate calls, set up conference calls, and place calls on hold, as recited in Claims 8-18 of the '469 patent. In view of the above, a reasonable examiner would consider Pinard to be an important reference in deciding patentability of these claims. Additionally, Pinard was not cited as a reference or discussed in the prosecution of the '469 Patent. Accordingly, Pinard presents a SNQ of patentability.

VI. DETAILED EXPLANATION OF THE PERTINENCY AND MANNER OF APPLYING THE PRIOR ART REFERENCES TO EVERY CLAIM FOR WHICH REEXAMINATION IS REQUESTED

As required under 37 C.F.R. § 1.510(b)(2), a detailed explanation of the pertinency and manner of applying the prior art references to the claims is provided. The following analysis is directed to prior art which was not cited during the prosecution of the claims of the '469 patent. Additional explanation of the pertinency and manner of applying the prior art references to the claims is provided in the claim charts at Exhibits M-O of this Request.

A. NetBIOS

¶ 1. The quotation of 35 U.S.C. §102 (b) forms the basis for the anticipation rejections which follow:

> A person shall be entitled to a patent unless…
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

¶ 2. Claims 1-3 and 5-6 are anticipated by Protocols for X/Open PC Interworking SMB, Version 2, THE OPEN GROUP (1992) ("NetBIOS"), which includes Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Concept and Methods, RFC 1001 (March 1987) ("RFC 1001") and Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Detailed Specifications, RFC 1002 (March 1987) ("RFC 1002").

¶ 3. During the Net2Phone Litigation, Net2Phone attempted to distinguish the claims of the '469 patent over NetBIOS. The court has yet to render an opinion on these arguments. As set forth in **Exhibit P** submitted with this reexamination, these arguments fail to distinguish the claims of the '469 patent over NetBIOS for a variety of reasons.

INDEPENDENT CLAIM 1

Claim 1 recites "A computer program product for use with a computer system having a display . . ."

¶ 4. NetBIOS nodes are personal computers which inherently include displays. *See* NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems.") (emphasis added). *See also id.* (NetBIOS has generally been confined to personal computers to date).

Claim 1 also recites "the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium."

¶ 5. NetBIOS discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. That NetBIOS discloses a computer program product for use with a computer system can be seen from NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems."). In addition, NetBIOS describes that the computer systems (or "nodes") execute software, which is a computer-implemented "process." *See id.* ("NetBIOS defines a software interface . . . . NetBIOS has generally been confined to personal computers to date. However, . . . this specification has been designed to allow an implementation to be built on virtually any type of system where the TCP/IP protocol suite is available."); *id.* at 357 ("NetBIOS is the foundation of a large body of existing applications."). Finally, NetBIOS discloses a "server" to which all processes are operatively coupled over a network. For example, the figure on page 371 of NetBIOS illustrates a NetBIOS Name Server ("NBNS") coupled to point-to-point nodes ("P nodes") over the

Internet. After retrieving addressing information from the NBNS, NetBIOS processes communicate directly with one another. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added).

¶ 6. In the pending litigation, Net2Phone argued that the term "server" should be defined broadly. Plaintiff Net2Phone, Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), page 3. More specifically, Net2Phone argued:

> Consistent with the use of the term 'server' in the specification, the claims do not refer to any specific server configuration. They simply require a 'server' (also referred to as a 'connection server,' 'address server,' or 'server process'). There is nothing in any of the claims that require that the server be in the form of a single computer with a centralized database, as defendants contend.

Id., page 4. Similarly, Net2Phone argued that "[a] server in a 'client/server system' can be implemented in any number of ways, from one to multiple computers, in one location or many, and from a single large computer acting as the server to a network of personal computers." Plaintiff Net2Phone Inc.'s Reply Brief on Claim Construction (Oct. 19, 2007) (Exhibit W), page 7. Thus, under Net2Phone's interpretation, a "server" is not limited to any particular hardware or software configuration. This interpretation is not supported by the intrinsic record and is inconsistent with the arguments made by Net2Phone during the prosecution of the '469 patent. *See* Office Action response (October 20, 1998), page 9 ("the present invention provides a global server that can be queried to locate any user anywhere using a known unique identifier or handle") (emphasis added). Under any interpretation, the NBNS described in NetBIOS is a "server."

¶ 7. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Oct. 19, 2007) (Exhibit X), pages 2-9. For the sake of brevity, the above interpretations are not repeated below with respect to the other claims of the '469 patent which require a "server."

Claim 1 requires "program code for generating a user-interface enabling control a first process executing on the computer system."

¶ 8. NetBIOS inherently describes a user-interface which allows users to "control" processes on the computer system. For example, NetBIOS describes that the computers on the network may execute MS-DOS and PC-DOS operating systems, which included text-based user interfaces that allowed users to control computer processes. *See, e.g.*, NetBIOS at 359 ("One of the first implementations was for personal computers running the PC-DOS and MS-DOS operating systems. It is possible to implement NetBIOS within other operating systems, or as processes which are, themselves, simply application programs as far as the host operating system is concerned."). *See also id.* at 356 ("it is expected that on computers operating under the PC-DOS and MS-DOS operating systems that the existing NetBIOS interface will be preserved by implementers."); *id.* at 507 (describing NetBIOS as "The de facto standard programmatic interface to networks for DOS systems.").

Claim 1 also requires "program code for determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 9. As mentioned above, the functionality of NetBIOS is implemented in software, which is "program code." An IP address and name is assigned to uniquely identify each networked computer. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 10. Furthermore, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, the computer systems on which NetBIOS was used received IP addresses dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the NetBIOS reference.

¶ 11. Alternatively, as set forth below, Claim 1 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over the NetBIOS reference in view of RFC 1531, which describes how TCP/IP addresses were dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks).

Claim 1 further requires "program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."

¶ 12. NetBIOS describes the network nodes forwarding assigned IP addresses and unique names to the NetBIOS Name Server (NBNS). As stated in NetBIOS, "[e]very node has a permanent unique name." *Id.* at 376. To engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a unique identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names.") (emphasis added); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); *id.* at 461-464 (disclosing program code for the P-

node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.

Claim 1 also requires "program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network."

¶ 13. Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401:

> This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session.

See also id. at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages."). In sum, NetBIOS discloses all of the elements of, and hence anticipates, claim 1 of the '469 Patent.

INDEPENDENT CLAIM 5

Claim 5 recites "In a computer system having a display . . ."

¶ 14. NetBIOS nodes are personal computers which inherently include displays. *See* NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems.") (emphasis added). *See also id.* (NetBIOS has generally been confined to personal computers to date).

Claim 5 also recites "the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes."

¶ 15. NetBIOS discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. That NetBIOS discloses a computer program product for use with a computer system can be seen from NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems."). In addition, NetBIOS describes that the computer systems (or "nodes") execute software, which is a computer-implemented "process." *See id.* ("NetBIOS defines a software interface . . . . NetBIOS has generally been confined to personal computers to date. However, . . . this specification has been designed to allow an implementation to be built on virtually any type of system where the TCP/IP protocol suite is available."); *id.* at 357 ("NetBIOS is the foundation of a large body of existing applications."). Finally, NetBIOS discloses a "server" to which all processes are operatively coupled over a network. For example, the figure on page 371 of NetBIOS illustrates a NetBIOS Name Server ("NBNS") coupled to point-to-point nodes ("P nodes") over the Internet. After retrieving addressing information from the NBNS, NetBIOS processes communicate directly with one another. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added).

Claim 5 requires "determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 16. NetBIOS discloses that an IP address and name is assigned to uniquely identify each networked computer. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the

field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 17. Furthermore, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, the computer systems on which NetBIOS was used received IP addresses dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the NetBIOS reference.

¶ 18. Alternatively, as set forth below, Claim 1 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over the NetBIOS reference in view of RFC 1531, which describes how TCP/IP addresses were dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks).

Claim 5 also requires "establishing a communication connection with the server process once the assigned network protocol of the first process is known."

¶ 19. NetBIOS describes the network nodes establishing a communication connection with the NBNS once the network protocol address of the first process is known. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by

an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); NetBIOS at 461-464 (disclosing program code for the P-node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.

Claim 5 also requires "forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process."

¶ 20. As described above, NetBIOS describes the network nodes forwarding assigned IP addresses and unique names to the NBNS. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); NetBIOS at 461-464 (disclosing program code for the P-node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.

Claim 5 further requires "establishing a point-to-point communication with another process over the computer network."

¶ 21. Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401:

> This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session.

See also id. at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages."). In sum, NetBIOS discloses all of the elements of, and hence anticipates, claim 5 of the '469 Patent.

DEPENDENT CLAIMS 2-3 AND 6

Claim 2 recites: "The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises: d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network."

¶ 22. Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401:

> This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session.

See also id. at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages.").

Claim 3 recites: "The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise: d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network."

¶ 23. As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "whether the second process is connected to the computer network." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a

notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NetBIOS Name Server, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g., id.* at 389.

Claim 3 further requires "program code for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 24. The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").

¶ 25. In Claim Construction Briefs filed in the pending litigation, the patentee argued that the term

> 'connected' means 'logged on,' and *vice versa* . . . To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve

> perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status— *e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say.

Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), pages 24-25. Thus, under Net2Phone's interpretation, the information retained in the "server" as to which processes are "connected to the computer network" or "online" may be imperfect. As described above, while the server "endeavors to identify accurately who is on line, it is not possible to achieve perfection." *Id.* This interpretation is not supported by the intrinsic record and is inconsistent with the specification of the '469 patent. *See* '469 patent, col. 7, lines 34-36 (stating that the server "determine[s] whether the callee is logged-in by finding any stored information . . . indicating that the callee is active and on-line."). Nonetheless, as described herein, NetBIOS employs similar techniques as NBNS entries for off-line nodes are removed through the use of log-out messages and timers. Thus, under any interpretation, a first NetBIOS process receives the network protocol address of a second NetBIOS process from the NBNS when the second NetBIOS process is "connected to the computer network" or "online."

¶ 26. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Exhibit X), pages 12-14. For the sake of brevity, these interpretations are not repeated below with respect to the other claims of the '469 patent which require a process to be "connected to" the computer network or "on-line."

> **Claim 6 recites: "The method of claim 5 wherein the program step D comprises: D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network."**

¶ 27. As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id.* *See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "whether the second process is connected to the computer network." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NBNS, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name

status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g., id.* at 389.

Claim 6 also requires "receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 28. The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").

B. NetBIOS in view of RFC 1531

¶ 29. The following is a quotation of 35 U.S.C. §103 (a) which forms the basis for the following obviousness rejections:

> 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 negatived by the manner in which the invention was made.

CLAIMS 1-3 AND 5-6

Independent Claims 1 and 5 claim "determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 30. As described above, any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 31. Furthermore, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, the computer systems on which NetBIOS was used received IP addresses dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the NetBIOS reference.

¶ 32. Alternatively, as set forth below, Claims 1-3 and 5-6 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over the NetBIOS reference in view of RFC 1531, which describes how TCP/IP addresses are dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks)..

Motivation to Combine NetBIOS with RFC 1531

¶ 33. A motivation to combine NetBIOS with RFC 1531 exists because the NetBIOS reference describes NetBIOS operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine the NetBIOS reference with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood at the time of the alleged invention of the '469 patent that personal computers connected to the Internet as described in RFC 1001/1002 of NetBIOS would frequently have their IP addresses dynamically assigned.

C. NetBIOS in view of Pinard

¶ 34. Claims 8-9, 14-15, and 17-18 are invalid under 35 U.S.C. § 103(a) as being unpatentable over NetBIOS in view of Pinard.

In particular, independent Claim 8 recites "In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network."

¶ 35. Any computer system includes a display and is capable of executing software, which is a computer-implemented process. Moreover, as described above, in NetBIOS, once the node seeking to initiate the communication (the "caller process") has obtained from the NBNS the IP address for the node to receive the communication (the "callee process"), a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401:

> This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session.

See also id. at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages.").

Claim 8 requires "generating a user-interface element representing a first communication line."

¶ 36. Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.

Claim 8 also requires "generating a user interface element representing a first callee process."

¶ 37. Pinard describes "a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.

Claim 8 also requires "querying the server process to determine if the first callee process is accessible."

¶ 38. As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "if the first callee process is accessible." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NetBIOS Name Server, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name

deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NetBIOS Name Server. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g., id.* at 389.

Claim 8 also requires "establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."

¶ 39. As described above, NetBIOS describes establishing a point-to-point communication link between nodes. *See, e.g.*, NetBIOS at 397 ("NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications.") (emphasis added). Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be

established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user Debbie merely drags the John icon to the call icon 29.").

Claim 9 recites: "The method of claim 8 wherein step C further comprises the steps of: C.1 querying the server process as to the on-line status of the first callee process."

¶ 40. As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NBNS for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "the on-line status of the first callee process." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NBNS, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which

do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g., id.* at 389.

Claim 9 further requires "receiving a network protocol address of the first callee process over the computer network from the server process."

¶ 41. The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").

Claim 14 recites: "The method of claim 8 further comprising the steps of: E. generating a user interface element representing a communication line having a temporarily disabled status."

¶ 42. Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 14 also requires "temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status."

¶ 43. As described above, Figure 12 of Pinard illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 15 recites: "The method of claim 14 wherein the element generated in step E represents a communication line on hold status."

¶ 44. See above. Figure 12 of Pinard illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 17 recites: "The method of claim 8 wherein the display further comprises a visual display."

¶ 45. This claim element is redundant as any display comprises a "visual display." Nonetheless, Pinard describes a graphical user interface which is displayed on a "visual display." *See, e.g.,* Pinard, col. 4, lines 10-11 ("Turning now to FIG. 2, a display 11 of the personal computer 1 is illustrated.").

Claim 18 recites: "The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements."

¶ 46. Pinard describes a graphical user interface in which the elements in steps A and B are graphic elements. *See, e.g.,* Pinard, Figures 2-16 (illustrating multiple embodiments of a GUI on a computer system for managing telephone calls).

Motivation to Combine NetBIOS and Pinard

¶ 47. A motivation to combine NetBIOS and Pinard exists considering the problem sought to be solved. Pinard relates to the field of computer-implemented telephony, and in particular to a computer-implemented method of indicating the status of various calls, to a user. *See* Pinard, Col. 1, lines 5-7. Pinard explicitly states that the invention "can be used with any system in which a . . . personal computer in conjunction with a server operates." Pinard, col. 2, lines 43-46. Given that NetBIOS describes networking software executed on personal computers

(such as IBM PCs), one of ordinary skill in the art would have recognized that the particular design choices reflected in the graphical user interface of Pinard could readily be implemented within the context of the systems described in NetBIOS. Moreover, NetBIOS describes that it may be implemented using different operating systems. *See, e.g.*, NetBIOS at 359 ("It is possible to implement NetBIOS within other operating systems, or as processes which are, themselves, simply application programs as far as the host operating system is concerned.").

D. NetBIOS in view of Pinard and Further in View of VocalChat User's Guide

Claim 16 recites: "The method of claim 15 wherein the element generated in step E represents a communication line on mute status."

¶ 48. As described above, NetBIOS and Pinard describe all of the elements of Claim 16 except for a "communication line on mute status." VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57.

Motivation to Combine NetBIOS with VocalChat User's Guide and Pinard

¶ 49. A motivation to combine VocalChat with NetBIOS and Pinard exists considering the problem sought to be solved. All three references relate to the field of communications over a computer network, and VocalChat and Pinard relate to the use of a computer system to implement telephony features. *See, e.g.,* Pinard, Col. 1, lines 5-7. One of ordinary skill in the art would have recognized the need for a "mute" function to enable users to mute the audio of a call as needed.

E. Etherphone

¶ 50. The quotation of 35 U.S.C. §102 (b) forms the basis for the anticipation rejections which follow:

> A person shall be entitled to a patent unless…
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

¶ 51. Claims 1-3, 5-6, 8-9, and 17-18 are anticipated by *Etherphone: Collected Papers 1987-1988* (May 1989) (hereinafter "Etherphone") which published, as a single publication, with the following papers:

a. Polle T. Zellweger, et al., *An Overview of the Etherphone System and its Applications*, IEEE CONFERENCE ON COMPUTER WORKSTATIONS (March 1988), 160-168 (hereinafter "Zellweger 1").

b. Daniel C. Swinehart, *Telephone Management in the Etherphone System*, PROCEEDINGS OF THE IEEE/IEICE GLOBAL TELECOMMUNICATIONS CONFERENCE (November 1987), 1176-1180 (hereinafter "Swinehart 1").

c. Douglas B. Terry and Daniel C. Swinehart, *Managing Stored Voice in the Etherphone System*, ACM TRANSACTIONS ON COMPUTER SYSTEMS 6(1) (February 1988), 3-27 (hereinafter "Terry").

d. Daniel C. Swinehart, *System Support Requirements for Multi-media Workstations*, PROCEEDINGS OF THE SPEECHTECH '88 CONFERENCE (April 1988), 82-83 (hereinafter "Swinehart 2").

e. Polle T. Zellweger, *Active Paths through Multimedia Documents*, DOCUMENT MANIPULATION AND TYPOGRAPHY, J.C. AN VILET (ED.), CAMBRIDGE UNIVERSITY PRESS (1988) (hereinafter "Zellweger 2").

These papers were published together and form a single reference.

¶ 52. During the Net2Phone Litigation mentioned above, Net2Phone attempted to distinguish the claims of the '469 patent over Etherphone. The court has yet to render an opinion on these arguments. As set forth in **Exhibit Q**, these arguments fail to distinguish the claims of the '469 patent over Etherphone for a variety of reasons.

¶ 53. Etherphone was not cited during the prosecution of the '469 patent. As delineated below there is a SNQ of patentability raised by Etherphone. The independent claims are set forth first along with a discussion concerning the relevancy of Etherphone to the SNQ of patentability. Then the dependent claims are set forth.

INDEPENDENT CLAIM 1

Claim 1 recites "A computer program product for use with a computer system having a display . . ."

¶ 54. The computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 1 requires "the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium."

¶ 55. Etherphone discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. The functionality of the Etherphone system is implemented in software, which is inherently stored on a "computer usable medium." As described in Swinehart 2, the capabilities provided by the Etherphone system "are presented to application programmers as program packages and network services." Swinehart 2, page 1. *See also* Zellweger 1, page 2 ("Etherphone software is written in C"); *id.* ("Centralized server software limited the necessary size and speed of the Etherphone processor, and thus its cost . . ."); *id.*, page 1 (describing how the Etherphone system uses "microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server . . ."); Terry, page 4 ("The server software and the initial workstation software was developed in the Cedar programming environment.").

¶ 56. In the pending litigation, Net2Phone argued that the term "server" should be defined broadly. Plaintiff Net2Phone, Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), page 3. More specifically, Net2Phone argued:

> Consistent with the use of the term 'server' in the specification, the claims do not refer to any specific server configuration. They simply require a 'server' (also referred to as a 'connection server,' 'address server,' or 'server process'). There is nothing in any of the claims that require that the server be in the form of a single computer with a centralized database, as defendants contend.

Id., page 4. Similarly, Net2Phone argued that "[a] server in a 'client/server system' can be implemented in any number of ways, from one to multiple computers, in one location or many, and from a single large computer acting as the server to a network of personal computers." Plaintiff Net2Phone Inc.'s Reply Brief on Claim Construction (Oct. 19, 2007) (Exhibit W), page 7. Thus, under Net2Phone's interpretation, a "server" is not limited to any particular hardware or software configuration. This interpretation is not supported by the intrinsic record and is inconsistent with the arguments made by Net2Phone during the prosecution of the '469 patent. *See* Office Action response (October 20, 1998), page 9 ("the present invention provides a global server that can be queried to locate any user anywhere using a known unique identifier or handle") (emphasis added). Under any interpretation, the Voice Control Server described in Etherphone is a "server."

¶ 57. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Oct. 19, 2007) (Exhibit X), pages 2-9. For the sake of brevity, the above interpretations are not repeated below with respect to the other claims of the '469 patent which require a "server."

Claim 1 requires "program code for generating a user-interface enabling control a first process executing on the computer system."

¶ 58. The workstations described in Etherphone include a graphical user interface (GUI). *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)). The

workstations may be Apple Macintoshes or Xerox 6085s. *See* Swinehart 1, page 1. The workstations are operatively connectable to the callee process and a server over the computer network. As previously described, "[t]he telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 2.

Claim 1 also requires "program code for determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 59. As mentioned above, the functionality of the Etherphone system is implemented in software, which is a "process." A network address is assigned to uniquely identify each workstation/Etherphone. *See, e.g.,* Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 60. In addition, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3. *See also* Terry, Abstract ("the voice manager stores voice on a special voice file server that is accessible via the local internet."). Moreover, another Etherphone reference, Vin, explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). Vin may be combined with Etherphone under 35 U.S.C. § 102. *See* MPEP 2131.01 (stating that a §102 rejection over multiple references is proper when the extra references are cited to explain the meaning of a term used in the primary reference). In this case, Vin is used to define the complete meaning of the term "Voice Transmission Protocol" used in Etherphone.

¶ 61. In any case, as described below, it would have been obvious to combine Vin with Etherphone because they both describe the same Etherphone system. In addition, to the extent this limitation is held to require the dynamic assignment of network addresses (a position with which the Requestor respectfully disagrees), this feature is inherent in Etherphone or at least obvious in light of the numerous references describing dynamic IP address assignment. *See, e.g.*, RFC 1531, Dynamic Host Configuration Protocol (1993), Section 2.2 (describing the "dynamic allocation of network addresses").

Claim 1 further requires "program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."

¶ 62. Each time a user logs in to a particular workstation/Etherphone, the identity of the user and the network address of the workstation/ Etherphone are transmitted to the Voice Control Server so that callers can locate the user. As described in Swinehart 1: "The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, the Telephone Control Server (also referred to as the Voice Control Server) stores a list of network addresses which are made available to workstations and Etherphones. In addition, the Voice Control Server associates different user identifiers with each network protocol address. For example, a user may log in to any workstation and, thereafter, calls to that user will be directed to that workstation and its associated Etherphone. As described in Swinehart 1:

> The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues.

Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting.").

Claim 1 also requires "program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network."

¶ 63. As stated above, after acquiring the network address of a callee, "voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4.

INDEPENDENT CLAIM 5

Claim 5 recites "In a computer system having a display . . ."

¶ 64. The computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 5 further recites "the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes."

¶ 65. Etherphone discloses a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. Additionally, the computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See*

also Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 5 requires "determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 66. As mentioned above, the functionality of the Etherphone system is implemented in software, which is a "process." A network address is assigned to uniquely identify each workstation/Etherphone. *See, e.g.,* Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 67. In addition, the Etherphone system is intended for use in "multiple networks and communication protocols." Terry, page 3. *See also* Terry, Abstract ("the voice manager stores voice on a special voice file server that is accessible via the local internet."). Moreover, another Etherphone reference, Vin, explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). Vin may be combined with Etherphone under 35 U.S.C. § 102. *See* MPEP 2131.01 (stating that a §102 rejection over multiple references is proper when the extra references are cited to explain the meaning of a term used in the primary reference). In this case, Vin is used to define the complete meaning of the term "Voice Transmission Protocol" used in Etherphone.

¶ 68. In any case, as described below, it would have been obvious to combine Vin with Etherphone because they both describe the same Etherphone system. In addition, to the extent this limitation is held to require the dynamic assignment of network addresses, this feature is inherent in Etherphone or at least obvious in light of the numerous references describing dynamic IP address assignment. *See, e.g.*, RFC 1531, Dynamic Host Configuration Protocol (1993), Section 2.2 (describing the "dynamic allocation of network addresses").

Claim 5 also requires "establishing a communication connection with the server process once the assigned network protocol of the first process is known."

¶ 69. Each workstation/Etherphone is capable of establishing a communication connection with the Voice Control Server. For example, each time a user logs in to a particular workstation/Etherphone, the identity of the user and the network address of the workstation/ Etherphone are transmitted to the Voice Control Server so that callers can locate the user. As described in Swinehart 1: "The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, the Telephone Control Server (also referred to as the Voice Control Server) stores a list of network addresses which are made available to workstations and Etherphones. In addition, the Voice Control Server associates different user identifiers with each network protocol address. For example, a user may log in to any workstation and, thereafter, calls to that user will be directed to that workstation and its associated Etherphone. As described in Swinehart 1:

> The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues.

Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting.").

Claim 5 also requires "forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process."

¶ 70. As described above, whenever a user logs in to a workstation/Etherphone, the identity of the user and the network address of the workstation/Etherphone are "forwarded" to

the Voice Control Server so that the location of the user can be identified. As described above, the Voice Control Server "uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues." Swinehart 1, page 4.

Claim 5 further requires "establishing a point-to-point communication with another process over the computer network."

¶ 71. As stated above, after acquiring the network address of a callee, "voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4.

INDEPENDENT CLAIM 8

Claim 8 recites "In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network."

¶ 72. Etherphone discloses a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. Additionally, the computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 8 requires "generating a user-interface element representing a first communication line."

¶ 73. Etherphone discloses this limitation. For example, Figure 3 of Zellweger 1 depicts the Etherphone telephone management windows, including Phone and Answer buttons, a conversation log, and a portion of a personal telephone directory, which is a set of speed-dialing buttons. As described in Zellweger 1, "[a] variety of convenient workstation dialing methods are provided: a user can . . . select names or numbers from anywhere on the [Etherphone telephone management windows], use either of two directory tools that present browsable lists of names and associated telephone numbers as speed-dialing buttons, or redial any previously-made call by clicking on its conversation log entry. Calls can also be placed by name or number from the telephone keypad." Zellweger 1, page 4. In addition, Figure 4 of Zellweger 1 illustrates telephone icons representing telephone lines and icons with graphical images of a caller/callee which represent active telephone lines. As such, the Etherphone telephone management windows provide a "user interface element representing a first communication line."

Claim 8 also requires "generating a user interface element representing a first callee process."

¶ 74. Etherphone discloses user interface elements in the form of speed-dial buttons which represent frequently called callees. As described in Zellweger 1, the GUI provides "browsable lists of names and associated telephone numbers as speed-dialing buttons." Zellweger 1, page 4. *See also* Zellweger 1, Figure. 3 (depicting portion of a personal telephone directory, which is a set of speed-dial buttons). As another example, in Zellweger 1, Figure 4, the top left user interface icon represents a personal telephone directory in the form of a graphical rolodex.

Claim 8 also requires "querying the server process to determine if the first callee process is accessible."

¶ 75. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first

Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 8 further requires "establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."

¶ 76. First, Etherphone describes establishing a point-to-point communication link between a caller process and a callee process. *See, e.g.*, Swinehart 1, page 2 ("voice datagrams are transmitted directly among the participants, bypassing the control server"). Second, Etherphone discloses that the point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, the top row of Figure 4 of Zellweger 1 shows a series of graphical icons used for placing a call including a personal telephone directory, a telephone, and a picture of a user on the phone (to indicate a call is in process). In this example, the personal telephone directory, displayed as a graphical rolodex, includes a plurality of graphical elements representing callees (i.e., with a separate card in the rolodex for each callee). The icon of the telephone and the icon with the picture of a user talking on the phone represents a telephone communication line. As described in Zellweger 1, "[a]n active conversation is represented as a conversation between two people with a superimposed indication of the other party's name (also shown in Figure 4)." Zellweger 1, pages 4-5. Thus, when the user makes a call, the name from

the graphical rolodex (PolleZ in the example) is "associated with" the graphical element representing the communication line (the image with the user talking on the phone).

¶ 77. Alternatively, as set forth below, Claim 8 is invalid under 35 U.S.C. § 103(a) as being unpatentable over Etherphone in view of Pinard.

DEPENDENT CLAIMS 2-3, 6, 9, AND 17-18

Claim 2 recites: "The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises: d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network."

¶ 78. In Etherphone, once a caller process receives the network address of the callee process from the Voice Control Server, the caller process establishes a point-to-point communication link with the callee process over the network. *See, e.g.*, Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server.") (emphasis added).

Claim 3 recites: "The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise: d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network."

¶ 79. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . .

Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 3 further requires "program code for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 80. Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").

¶ 81. In Claim Construction Briefs filed in the pending litigation, the patentee argued that the term

> 'connected' means 'logged on,' and *vice versa* . . . To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status— *e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term

> "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say.

Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), pages 24-25. Thus, under Net2Phone's interpretation, the information retained in the "server" as to which processes are "connected to the computer network" or "online" may be imperfect. As described above, while the server "endeavors to identify accurately who is on line, it is not possible to achieve perfection." *Id.* This interpretation is not supported by the intrinsic record and is inconsistent with the specification of the '469 patent. *See* '469 patent, col. 7, lines 34-36 (stating that the server "determine[s] whether the callee is logged-in by finding any stored information . . . indicating that the callee is active and on-line."). Nonetheless, under any interpretation, a first Etherphone process receives the network protocol address of a second Etherphone process from the Voice Control Server when the second Etherphone process is "connected to the computer network." Given that the Voice Control Server must track the location of individual on-line users, it is capable of determining the on-line status of users with at least the same level of precision described in the '469 patent. *See, e.g.,* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting.").

¶ 82. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Exhibit X), pages 12-14. For the sake of brevity, these interpretations are not repeated below with respect to the other claims of the '469 patent which require a process to be "connected to" the computer network or "on-line."

Claim 6 recites: "The method of claim 5 wherein the program step D comprises: D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network."

¶ 83. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other

participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 6 also requires "receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 84. Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").

Claim 9 recites: "The method of claim 8 wherein step C further comprises the steps of: C.1 querying the server process as to the on-line status of the first callee process."

¶ 85. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants,

bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 9 further requires "receiving a network protocol address of the first callee process over the computer network from the server process."

¶ 86. Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").

Claim 17 recites: "The method of claim 8 wherein the display further comprises a visual display."

¶ 87. This claim element is redundant. Every computer display is a "visual display." As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 18 recites: "The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements."

¶ 88. As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

F. Etherphone in view of Vin and Further in View of RFC 1531

¶ 89. The following is a quotation of 35 U.S.C. §103 (a) which forms the basis for the following obviousness rejections:

> 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 negatived by the manner in which the invention was made.

¶ 90. Claims 1-3 and 5-6 include the limitation of "determining the currently assigned network protocol address of the first process upon connection to the computer network." As mentioned above, this limitation is inherent in Etherphone. Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Thus, Claims 1-3 and 5-6 are anticipated by Etherphone under 35 U.S.C. § 102, as described above.

¶ 91. Alternatively, to the extent this limitation is held to require the dynamic assignment of network addresses (a position with which the Requestor respectfully disagrees), this feature is inherent in Etherphone or Claims 1-3 and 5-6 should be rejected under 35 U.S.C. §

103(a) as being unpatentable over Etherphone in view of Vin and further in view of Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531").

¶ 92. Vin explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). RFC 1531 describes how TCP/IP addresses are dynamically assigned. *See* RFC 1531, Dynamic Host Configuration Protocol (1993), Section 2.2 (describing the "dynamic allocation of network addresses").

Motivation to Combine Etherphone, Vin, and RFC 1531

¶ 93. As mentioned above, a motivation to combine Etherphone and Vin exists because they both describe the same Etherphone system. In addition, a motivation to combine these references with RFC 1531 exists due to the problem to be solved. In particular, Vin describes the use of IP addresses within an Etherphone system and RFC 1531 describes techniques for dynamically assigning IP addresses. One of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers (e.g., workstations and Etherphones) and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). Moreover, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3.

G. Etherphone in view of Pinard

¶ 94. Claims 8-9, 14-15, and 17-18 are invalid under 35 U.S.C. § 103(a) as being unpatentable over Etherphone in view of Pinard.

¶ 95. As mentioned above, Claim 8 is anticipated by Etherphone under 35 U.S.C. § 102. Additionally, Claim 8 is invalid under 35 U.S.C. § 103(a) as being unpatentable over Etherphone in view of Pinard.

INDEPENDENT CLAIM 8

Claim 8 recites "In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network."

¶ 96. Etherphone discloses a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. Additionally, the computer systems described in Etherphone include a graphical user interface (GUI) rendered on a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 8 requires "generating a user-interface element representing a first communication line."

¶ 97. Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30. Note that Etherphone also describes a user-interface element representing a first communication line. *See* anticipation rejections above.

Claim 8 also requires "generating a user interface element representing a first callee process."

¶ 98. Pinard describes "generating a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30. Note that Etherphone also describes a user interface element representing a first callee process. *See* anticipation rejections above.

Claim 8 also requires "querying the server process to determine if the first callee process is accessible."

¶ 99. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 8 also requires "establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."

¶ 100. As described above, Etherphone describes establishing a point-to-point communication link between a caller process and a callee process. *See, e.g.*, Swinehart 1, page 2 ("voice datagrams are transmitted directly among the participants, bypassing the control server"). Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user Debbie merely drags the John icon to the call icon 29."). Note that Etherphone also describes this limitation. *See* anticipation rejections above.

DEPENDENT CLAIMS 9 AND 14-18

Claim 9 recites: "The method of claim 8 wherein step C further comprises the steps of: C.1 querying the server process as to the on-line status of the first callee process."

¶ 101. As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional

feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").

Claim 9 further requires "receiving a network protocol address of the first callee process over the computer network from the server process."

¶ 102. Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").

Claim 14 recites: "The method of claim 8 further comprising the steps of: E. generating a user interface element representing a communication line having a temporarily disabled status."

¶ 103. Examples of a "temporarily disabled status" provided in the '469 patent include "line on hold" and "line on mute." *See, e.g.*, '469 patent, Claims 15-16. Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 14 also requires "temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status."

¶ 104. In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 15 recites: "The method of claim 14 wherein the element generated in step E represents a communication line on hold status."

¶ 105. In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 17 recites: "The method of claim 8 wherein the display further comprises a visual display."

¶ 106. This claim element is redundant. Every computer display is a "visual display." As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Claim 18 recites: "The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements."

¶ 107. As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Motivation to Combine Etherphone and Pinard

¶ 108. A motivation to combine Etherphone and Pinard exists due to the problem to be solved. Pinard relates to the field of telephony, and in particular to a method of indicating the status of various calls, to a user. *See* Pinard, 1:5-7. Indeed, the graphical user interface described in Pinard could be used in any system that operates a telephony application on a

personal computer or on a personal computer in conjunction with a server. *See* Pinard, 1:60-62; 2:41-45. One of ordinary skill in the art would have recognized that the particular design choices reflected in the graphical user interface of Pinard could readily be implemented within the context of the Etherphone system. In fact, Etherphone discloses a graphical user interface with similar features to those described in Pinard.

H. Etherphone in view of Pinard and Further in View of VocalChat

¶ 109. Claim 16 is invalid under 35 U.S.C. § 103(a) as being unpatentable over Etherphone in view of Pinard and further in view of VocalChat.

Claim 16 recites: "The method of claim 15 wherein the element generated in step E represents a communication line on mute status."

¶ 110. As described above, Etherphone and Pinard describe all of the elements of Claim 16 except for a "communication line on mute status." However, VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57.

Motivation to Combine VocalChat with Etherphone and Pinard

¶ 111. A motivation to combine VocalChat with Etherphone and Pinard exists due to the problem to be solved. All three references relate to the field of telephony, and in particular to the use of computer system to implement telephony features. *See, e.g.,* Pinard, Col. 1, lines 5-7. One of ordinary skill in the art would have recognized the need for a "mute" function to enable users to mute the audio of a call as needed. In fact, the Etherphone system includes a mute function, although it was not explicitly described in the Etherphone papers. *See, e.g.*, Vin, page 73 ("Additional accelerators and features, such as manually toggling the Recv-only condition to mute the conversation, are available via mouse clicks on conversation log entries.").

I. VocalChat

¶ 112. The following is a quotation of 35 U.S.C. §103 (a) which forms the basis for the following obviousness rejections:

> 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 negatived by the manner in which the invention was made.

¶ 113. Claims 1-3, 5-6, 8-9, and 17-18 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over VocalChat User's Guide, Version 2.0 (1994) ("User's Guide"), in view of VocalChat Readme File, Version 2.02 (June, 1994) ("Readme"), in view of VocalChat 1.01 Networking Information ("VocalChat Networking"), in view of VocalChat Information, Version 2.02 (July 18, 1994) ("Help File"), and further in view of VocalChat Troubleshooting Help File, Version 2.02 (July 18, 1994) ("Troubleshooting Help File"). These prior art publications are collectively referred to herein as "the VocalChat references" or "VocalChat."

¶ 114. As stated in the declaration of Alon Cohen, one of the co-founders of VocalTec, Ltd., included as **Exhibit L**: (1) VocalChat 1.01 Networking Information ("Networking Information"), attached as **Exhibit I** (referred to as Exhibit A in the declaration), was publicly distributed in 1994 as part of the VocalChat version 1.01 software, which was commercially released and on sale to the general public in 1994; (2) VocalChat 2.0 User's Guide ("User's Guide"), attached as **Exhibit G** (referred to as Exhibit B in the declaration), was publicly distributed in 1994 as part of the VocalChat version 2.0 software, which was commercially released and on sale to the general public in 1994; and (3) The VocalChat Readme File ("Readme"), attached as **Exhibit H** (referred to as Exhibit C in the declaration), the VocalChat Troubleshooting Help File ("Troubleshooting Help File"), attached as **Exhibit K** (referred to as Exhibit D in the declaration), and VocalChat Information ("Help File"), attached as **Exhibit J** (referred to as Exhibit E in the declaration), are true and correct print-outs of VocalChat version 2.02's README.TXT, TROUBLE.HLP, and INFO.HLP files, respectively. In sum, electronic copies of all of these documents were publicly distributed in 1994 as part of the various VocalChat software releases.

Motivation to Combine the VocalChat References Under 35 U.S.C. § 103

¶ 115. It would have been obvious to combine the VocalChat references under 35 U.S.C. § 103 because they all describe the same VocalChat system. The fact that some of the references

describe different versions of the VocalChat system does not alter the fact that it would have been obvious to combine these references because all of the references share numerous common features (e.g., a central server to store addresses and VocalChat client software) which interoperate in the same basic manner.

¶ 116. During the Net2Phone Litigation, Net2Phone attempted to distinguish the claims of the '469 patent over the VocalChat References. The court has yet to render an opinion on these arguments. As set forth in **Exhibit R**, these arguments fail to distinguish the claims of the '469 patent over the combined VocalChat References for a variety of reasons.

¶ 117. VocalChat was not cited during the prosecution of the '469 patent. As delineated below, there is a SNQ of patentability raised by VocalChat. Below first the independent claims are set forth along with a discussion concerning the relevancy of VocalChat to the SNQ of patentability. Then the dependent claims are set forth.

INDEPENDENT CLAIM 1

Claim 1 recites "A computer program product for use with a computer system having a display . . ."

¶ 118. VocalChat clients are personal computers which inherently included displays. *See, e.g.*, User's Guide, page 11 (illustrating the VocalChat GUI displayed in a window).

Claim 1 further recites "the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium."

¶ 119. As software, VocalChat is inherently stored as program code on a computer-usable medium. *See, e.g.*, Readme, page 1 (listing the VocalChat files copied during installation). *See also* VocalChat User's Guide, page 8 (describing how VocalChat is installed by inserting "the VocalChat Disk in drive A"). As illustrated in the figure on page 5 of the VocalChat User's Guide (reproduced above), computers with VocalChat installed connect directly to a server to register their current network protocol addresses. In the initial VocalChat

implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on the server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.
>
> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), referred to the USERS file as a "Connection List" stored within a 'Post-Office' directory. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.").

Claim 1 requires "program code for generating a user-interface enabling control a first process executing on the computer system."

¶ 120. VocalChat comprises a graphical user interface (GUI) for registering with the post office server, and communicating with other VocalChat clients. *See, e.g.*, User's Guide, page 11 (illustrating the primary VocalChat GUI including a Call button, a volume slider and a plurality of Quick Dial buttons).

Claim 1 also requires "program code for determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 121. As mentioned above, the functionality of the VocalChat system is implemented using "program code." *See, e.g.*, Readme, page 1 (listing the VocalChat files copied during installation). *See also* VocalChat User's Guide, page 8 (describing how VocalChat is installed by inserting "the VocalChat Disk in drive A"). Moreover, any networked computer must "determine" its network protocol address in order to communicate with other computers on the

network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 122. Moreover, on many networks, including the TCP/IP networks described in VocalChat, network addresses are assigned dynamically, "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, a computer system executing VocalChat receives its IP address dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the VocalChat system. Alternatively, as set forth below, it would have been obvious to one of ordinary skill in the art to use dynamic address assignment on a TCP/IP network.

Claim 1 further requires "program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process."

¶ 123. In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.
>
> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

VocalChat Network Information, page 10 (underline emphasis added). *See also* Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), refer to the USERS file as a "Connection List" file. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC

file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.") (emphasis added). Regardless of the file name, the Connection List/USERS file is stored on a server for access by VocalChat clients. *See, e.g.*, VocalChat Network Information, page 2 ("**Server Installation** is used to install the VocalChat program files on the network, for use by the different network users."). *See also* Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory."); Help File, page 8 ("the Setup program crates a Connection List File which is used to identify and access users").

¶ 124. In the pending litigation, Net2Phone argued that the term "server" should be defined broadly. Plaintiff Net2Phone, Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), page 3. More specifically, Net2Phone argued:

> Consistent with the use of the term 'server' in the specification, the claims do not refer to any specific server configuration. They simply require a 'server' (also referred to as a 'connection server,' 'address server,' or 'server process'). There is nothing in any of the claims that require that the server be in the form of a single computer with a centralized database, as defendants contend.

Id., page 4. Similarly, Net2Phone argued that "[a] server in a 'client/server system' can be implemented in any number of ways, from one to multiple computers, in one location or many, and from a single large computer acting as the server to a network of personal computers." Plaintiff Net2Phone Inc.'s Reply Brief on Claim Construction (Oct. 19, 2007) (Exhibit W), page 7. Thus, under Net2Phone's interpretation, a "server" is not limited to any particular hardware or software configuration. This interpretation is not supported by the intrinsic record and is inconsistent with the arguments made by Net2Phone during the prosecution of the '469 patent. *See* Office Action response (October 20, 1998), page 9 ("the present invention provides a global server that can be queried to locate any user anywhere using a known unique identifier or handle") (emphasis added). Under any interpretation, the "post office" server in VocalChat is a "server."

¶ 125. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Oct. 19, 2007) (Exhibit X), pages 2-9. For the sake of brevity, the above interpretations are not repeated below with respect to the other claims of the '469 patent which require a "server."

Claim 1 also requires "program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network."

¶ 126. VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." Id. In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. Id. at 8. See also User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").

INDEPENDENT CLAIM 5

Claim 5 recites "In a computer system having a display . . ."

¶ 127. VocalChat clients are personal computers which inherently included displays. See, e.g., User's Guide, page 11 (illustrating the VocalChat GUI displayed in a window).

Claim 5 further recites "the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes."

¶ 128. As illustrated in the figure on page 5 of the VocalChat User's Guide (reproduced above), computers with VocalChat installed connect directly to a server to register their current network protocol addresses. In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on the server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.

> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), referred to the USERS file as a "Connection List" stored within a 'Post-Office' directory. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.").

Claim 5 requires "determining the currently assigned network protocol address of the first process upon connection to the computer network."

¶ 129. Any networked computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Moreover, on many networks, including the TCP/IP networks described in VocalChat, network addresses are determined "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, a computer system executing VocalChat receives its IP address following connection to the computer network. Consequently, dynamic address assignment is inherent in the VocalChat system. Alternatively, as set forth below, it would have been obvious to one of ordinary skill in the art to use dynamic address assignment on a TCP/IP network.

Claim 5 also requires "establishing a communication connection with the server process once the assigned network protocol of the first process is known."

¶ 130. In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.
>
> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

¶ 131. VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), refer to the USERS file as a "Connection List" file. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.") (emphasis added). Regardless of the file name, the Connection List/USERS file is stored on a server for access by VocalChat clients. *See, e.g.*, VocalChat Network Information, page 2 ("**Server Installation** is used to install the VocalChat program files on the network, for use by the different network users."). *See also* Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory."); Help File, page 8 ("the Setup program crates a Connection List File which is used to identify and access users").

Claim 5 also requires "forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process."

¶ 132. See response to previous claim element. Each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information:

> When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.
>
> Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the

> user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file.*

VocalChat Network Information, page 10 (underline emphasis added)

Claim 5 further requires "establishing a point-to-point communication with another process over the computer network."

¶ 133. VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").

INDEPENDENT CLAIM 8

Claim 8 recites "In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network."

¶ 134. As discussed above, VocalChat clients connect to a server to locate and establish point-to-point connections with other VocalChat clients over a network. For example, VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file" which is stored on a server. Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").

Claim 8 requires "generating a user-interface element representing a first communication line."

¶ 135. A VocalChat user makes a point-to-point call to another user by using the VocalChat "Call" button, which is a user interface element representing a first communication line. *See, e.g.*, User Guide, page 14 ("Select Call from the Chat menu, or click on the tool bar Call button"). In addition, the VocalChat graphical user interface (GUI) includes a plurality of Quick Dial buttons. *See* User Guide, page 12. Depending on the implementation, either the Call button or the Quick Dial button comprises an "element representing a first communication line."

Claim 8 also requires "generating a user interface element representing a first callee process."

¶ 136. The VocalChat GUI displayed the names of potential callees in a dialog box. *See, e.g.*, Help File, page 14 ("just select a user from the user list, and choose "OK"). Callees are also represented as Quick Dial buttons. *See* Help File, pages 11, 20-21 ("Setting a Quick Dial Button"). Depending on the implementation, either the callee names listed within the dialog box or the Quick Dial buttons comprise "a user interface element representing a first callee process."

Claim 8 also requires "querying the server process to determine if the first callee process is accessible."

¶ 137. In a TCP/IP implementation, the server on which the Connection List/USERS file was located received queries from VocalChat clients (first processes) to determine the on-line status of other VocalChat clients (second processes). As described in the Help File:

> Method of determining users address:
> Netware — Get Users information from Netware 2.x/3.x bindery
> WinWorkgroups — Get users information from Windows for Workgroups.
> Generic User — VocalChats files for users information. (See Generic network, below).

Help File, page 26. With any protocol other than Netware or Windows for Workgroups (such as TCP/IP or NetBIOS), a "generic" method is used where the VocalChat client queries VocalChat files (the Connection List/USERS files) locating users on the network. As described in greater detail in the Help File:

> When **NetBIOS** or **IPX** are used, but not with NetWare or Window for Workgroups, or when TCP/IP is used, a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory. In this case, the user name for each user, is entered when performing the **User Installation** in the Setup program. You should make sure that this name is not used by any other user on the network.

Help File, page 2. With NetWare, the VocalChat client queries existing NetWare Bindery services locating "currently logged-in users;" with Windows for Workgroups, the VocalChat client queries the Windows for Workgroups services locating online users; and with other protocols, such as TCP/IP and NetBIOS, the VocalChat client queries the shared Connection List file (CONNLIST.VC). Regardless of protocol, the query determines whether the second process (the VocalChat client of another user) is connected to the computer network. For example, "[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file." VocalChat Network Information, page 10. Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users."

Claim 8 further requires "establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."

¶ 138. As mentioned above, a VocalChat user makes a point-to-point call to another user with the Call button or a Quick Dial Button representing a frequently called callee. *See* Help File, page 14 (describing use of the Call button) and 20 (describing use of the Quick Dial buttons). Selecting the Call button opens a dialog box displaying a list of connected VocalChat users. A caller then clicks on a user's name in the list and then clicks the OK button to establish a point-to-point communication link. See, e.g., Help File, page 14. In this example, the graphical representation of the user in the list is an "element representing the first callee process" and the OK button is an "element representing a first communication line." Alternatively, a user can associate any VocalChat user with a Quick Dial button by right-clicking on a Quick Dial button, which presents the user with the VocalChat users list. See Help File, page 20. After the user selects a user name from the list, that user is associated with the quick dial button. See Help File, page 21 ("From the user list, choose the user name that you want the button to hold."). The caller then places a call to the callee by selecting the Quick Dial button. VocalChat also assigns

Quick Dial buttons automatically ("When you call a user with the Call command, a vacant button changes to hold the user's name if one does not hold it already."). In these examples, the graphical representation of the user in the list is an "element representing the first callee process" and the quick dial button is an "element representing a first communication line." In both cases, the element representing the callee process is "associated with" an element representing a communication line.

DEPENDENT CLAIMS 2-3, 6, 9 AND 17-18

Claim 2 recites: "The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises: d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network."

¶ 139. VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." Id. In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. Id. at 8. See also User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons."). In general, when an IP address of a second process is known by a first process, the first process may establish a point-to-point communication link with the second process over any TCP/IP network (including the Internet).

Claim 3 recites: "The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise: d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network."

¶ 140. As discussed above, a VocalChat caller sends a query to the post office server with the Connection List/USERS file to locate a particular callee. See, e.g., Help File, page 22 (VocalChat "will use the CONNLIST.VC files to get network addresses"); page 8 ("the Setup program creates a Connection List file which is used to identify and access users"). Consequently, the server identifies an entry in the directory corresponding to the identified callee

(the Connection List file in a TCP/IP implementation), and, if the callee is connected, provides the corresponding IP address associated with that callee in the directory to the caller.

Claim 3 further requires "program code for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 141. As discussed in the previous claim element, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added). Obviously, the first process will receive the network protocol address "when the second process is connected to the computer network."

¶ 142. In Claim Construction Briefs filed in the pending litigation, the patentee argued that the term

> 'connected' means 'logged on,' and *vice versa* . . . To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status— *e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say.

Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), pages 24-25. Thus, under Net2Phone's interpretation, the information retained in the "server" as to which processes are "connected to the computer network" or "online" may be imperfect. As described above, while the server "endeavors to identify accurately who is on line, it is not possible to achieve perfection." *Id.* This interpretation is not supported by the intrinsic record and is inconsistent with the specification of the '469 patent. *See* '469 patent, col. 7, lines 34-36 (stating that the server "determine[s] whether the callee is logged-in by finding any stored

information . . . indicating that the callee is active and on-line."). Nonetheless, under any interpretation, a first VocalChat process receives the network protocol address of a second VocalChat process from the "post office" server when the second VocalChat process is "connected to the computer network."

¶ 143. The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Exhibit X), pages 12-14. For the sake of brevity, these interpretations are not repeated below with respect to the other claims of the '469 patent which require a process to be "connected to" the computer network or "on-line."

Claim 6 recites: "The method of claim 5 wherein the program step D comprises: D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network."

¶ 144. As discussed above, a VocalChat caller sends a query to the post office server with the Connection List/USERS file to locate a particular callee. *See, e.g.*, Help File, page 22 (VocalChat "will use the CONNLIST.VC files to get network addresses"); page 8 ("the Setup program creates a Connection List file which is used to identify and access users"). Consequently, the server identifies an entry in the directory corresponding to the identified callee (the Connection List file in a TCP/IP implementation), and, if the callee is connected, provides the corresponding IP address associated with that callee in the directory to the caller.

Claim 6 also requires "receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network."

¶ 145. As discussed in the previous claim element, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added). Obviously, the first process will receive the network protocol address "when the second process is connected to the computer network."

Claim 9 recites: "The method of claim 8 wherein step C further comprises the steps of: C.1 querying the server process as to the on-line status of the first callee process."

¶ 146. The second process (the second VocalChat client) may query the post office server to determine whether the first process (the first VocalChat client) is on-line. For example,

"[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file." VocalChat Network Information, page 10 (emphasis added). Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users." Help File, page 2.

Claim 9 further requires "receiving a network protocol address of the first callee process over the computer network from the server process."

¶ 147. As discussed above, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added).

Claim 17 recites: "The method of claim 8 wherein the display further comprises a visual display."

¶ 148. This claim element is redundant. Any display (as understood by one of ordinary skill in the art) is a "visual display." As previously discussed, VocalChat discloses a visual display. *See, e.g.*, User's Guide, page 11 (illustrating the primary VocalChat graphical user interface (GUI)).

Claim 18 recites: The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements."

¶ 149. The user interface in VocalChat is a graphical user interface (GUI) and all of the elements discussed above are graphical elements. *See, e.g.,* User's Guide, pages 11-26 (illustrating the VocalChat primary GUI, including Quick Dial and Call buttons within the VocalChat GUI).

J. VocalChat in view of RFC 1531

¶ 150. Claims 1-3 and 5-6 require "determining the currently assigned network protocol address of the first process upon connection to the computer network." As described above, VocalChat inherently describes this feature. Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other

computers on the network, regardless of whether the network protocol address is assigned statically or dynamically.

¶ 151. Moreover, on many networks, including the TCP/IP networks of VocalChat, network addresses are assigned dynamically, following connection to the computer network. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). For this reason, in at least some instances, the VocalChat computer system dynamically receives its IP address, following connection to the computer network. Consequently, dynamic address assignment is inherent in the VocalChat system.

¶ 152. Alternatively, a SNQ of patentability of Claims 1-3 and 5-6 is raised under 35 U.S.C. § 103 based on VocalChat in view of RFC 1531, which describes how TCP/IP addresses are dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks).

Motivation to Combine VocalChat with RFC 1531

¶ 153. A motivation to combine VocalChat with RFC 1531 exists because VocalChat describes the VocalChat software operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine VocalChat with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood at the time of the alleged invention of the '469 patent that VocalChat software would be installed and executed on personal computers that would frequently have their IP addresses dynamically assigned.

K. VocalChat in view of Pinard

¶ 154. Claims 8-9 and 14-18 are invalid under 35 U.S.C. § 103(a) as being unpatentable over VocalChat in view of Pinard.

¶ 155. As mentioned above, Claim 8 is anticipated by VocalChat under 35 U.S.C. § 102(b). In addition, as set forth below, Claim 8 is invalid under 35 U.S.C. § 103(a) as being unpatentable over VocalChat in view of Pinard.

CLAIM 8

Independent Claim 8 recites "In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network."

¶ 156. As discussed above, VocalChat clients connect to a server to locate and establish point-to-point connections with other VocalChat clients over a network. For example, VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file" which is stored on a server. Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").

Claim 8 requires "generating a user-interface element representing a first communication line."

¶ 157. Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.

Claim 8 also requires "generating a user interface element representing a first callee process."

¶ 158. Pinard describes "a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.

Claim 8 also requires "querying the server process to determine if the first callee process is accessible."

¶ 159. In a TCP/IP implementation, the server on which the Connection List/USERS file was located received queries from VocalChat clients (first processes) to determine the on-line status of other VocalChat clients (second processes). As described in the Help File:

> Method of determining users address:
> Netware — Get Users information from Netware 2.x/3.x bindery
> WinWorkgroups — Get users information from Windows for Workgroups.
> Generic User — VocalChats files for users information. (See Generic network, below).

Help File, page 26. With any protocol other than Netware or Windows for Workgroups (such as TCP/IP or NetBIOS), a "generic" method is used where the VocalChat client queries VocalChat files (the Connection List/USERS files) locating users on the network. As described in greater detail in the Help File:

> When **NetBIOS** or **IPX** are used, but not with NetWare or Window for Workgroups, or when TCP/IP is used, a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory. In this case, the user name for each user, is entered when performing the **User Installation** in the Setup program. You should make sure that this name is not used by any other user on the network.

Help File, page 2. With NetWare, the VocalChat client queries existing NetWare Bindery services locating "currently logged-in users;" with Windows for Workgroups, the VocalChat client queries the Windows for Workgroups services locating online users; and with other protocols, such as TCP/IP and NetBIOS, the VocalChat client queries the shared Connection List file (CONNLIST.VC). Regardless of protocol, the query determines whether the second process (the VocalChat client of another user) is connected to the computer network. For example, "[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a

shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file." VocalChat Network Information, page 10. Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users."

Claim 8 also requires "establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line."

¶ 160. Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user Debbie merely drags the John icon to the call icon 29.").

CLAIMS 9 AND 14-18

Claim 9 recites: "The method of claim 8 wherein step C further comprises the steps of: C.1 querying the server process as to the on-line status of the first callee process."

¶ 161. The second process (the second VocalChat client) may query the post office server to determine whether the first process (the first VocalChat client) is on-line. For example, "[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the

address is removed, but the user name is kept in the file." VocalChat Network Information, page 10 (emphasis added). Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users." Help File, page 2.

Claim 9 further requires "receiving a network protocol address of the first callee process over the computer network from the server process."

¶ 162. As discussed above, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added).

Claim 14 recites: "The method of claim 8 further comprising the steps of: E. generating a user interface element representing a communication line having a temporarily disabled status."

¶ 163. Examples of a "temporarily disabled status" provided in the '469 patent include "line on hold" and "line on mute." *See, e.g.*, '469 patent, Claims 15-16. VocalChat discloses a user interface element representing a MUTE function. As described in VocalChat, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57 (illustrating a special user interface element "when in Manual Activation mode"). Additionally, Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 14 also requires "temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status."

¶ 164. In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 15 recites: "The method of claim 14 wherein the element generated in step E represents a communication line on hold status."

¶ 165. In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

Claim 16 recites: "The method of claim 15 wherein the element generated in step E represents a communication line on mute status."

¶ 166. VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57.

Claim 17 recites: "The method of claim 8 wherein the display further comprises a visual display."

¶ 167. This claim element is redundant. Any display (as understood by one of ordinary skill in the art) is a "visual display." As previously discussed, VocalChat discloses a visual display. *See, e.g.*, User's Guide, page 11 (illustrating the primary VocalChat graphical user interface (GUI)).

Claim 18 recites: The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements."

¶ 168. The user interface in VocalChat is a graphical user interface (GUI) and all of the elements discussed above are graphical elements. *See, e.g.,* User's Guide, pages 11-26 (illustrating the VocalChat primary GUI, including Quick Dial and Call buttons within the VocalChat GUI).

Motivation to Combine VocalChat with Pinard

¶ 169. A motivation to combine VocalChat and Pinard exists due to the problem to be solved. Like VocalChat, Pinard relates to the field of computer-implemented telephony, and in particular to a method of indicating the status of various calls, to a user. *See* Pinard, Col. 1, lines 5-7. Indeed, the graphical user interface described in Pinard could be used in any system that operates a telephony application on a personal computer or on a personal computer in conjunction with a server. *See* Pinard, Col. 1, lines 60-62; Col. 2, lines 41-45. One of ordinary skill in the art would have recognized that the particular design choices reflected in the graphical

user interface of Pinard could readily be implemented within the context of the network telephony system described in VocalChat. In fact, as described above, VocalChat discloses a graphical user interface with some similar features to those described in Pinard.

VII. LIST OF EXHIBITS

Exhibit A **U.S. Patent No. 6,009,469 issued to Mattaway et al. ("the '469 patent")**

Exhibit B **Protocols for X/Open PC Interworking SMB, Version 2, THE OPEN GROUP (1992) ("NetBIOS"), which published as a single document with:**

- Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Concept and Methods, RFC 1001 (March 1987) ("RFC 1001"); and
- Protocol Standard for a NetBIOS Service on a TCP/UDP Transport: Detailed Specifications, RFC 1002 (March 1987) ("RFC 1002").

Exhibit C **Etherphone: Collected Papers 1987-1988. The papers published together as a single document include:**

- Polle T. Zellweger, et al., *An Overview of the Etherphone System and its Applications*, IEEE CONFERENCE ON COMPUTER WORKSTATIONS (March 1988), 160-168 (hereinafter "Zellweger 1").
- Daniel C. Swinehart, *Telephone Management in the Etherphone System*, PROCEEDINGS OF THE IEEE/IEICE GLOBAL TELECOMMUNICATIONS CONFERENCE (November 1987), 1176-1180 (hereinafter "Swinehart 1").
- Douglas B. Terry and Daniel C. Swinehart, *Managing Stored Voice in the Etherphone System*, ACM TRANSACTIONS ON COMPUTER SYSTEMS 6(1) (February 1988), 3-27 (hereinafter "Terry").
- Daniel C. Swinehart, *System Support Requirements for Multi-media Workstations*, PROCEEDINGS OF THE SPEECHTECH '88 CONFERENCE (April 1988), 82-83 (hereinafter "Swinehart 2").
- Polle T. Zellweger, *Active Paths through Multimedia Documents*, DOCUMENT MANIPULATION AND TYPOGRAPHY, J.C. AN VILET (ED.), CAMBRIDGE UNIVERSITY PRESS (1988) (hereinafter "Zellweger 2")

Exhibit D **Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (October 1991) ("Vin")**

Exhibit E **Droms, R., Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531")**

Exhibit F **Pinard, et al., U.S. Patent No. 5,533,110 ("Pinard")**

Exhibit G	**VocalChat User's Guide, Version 2.0 (1994) ("User's Guide")**
Exhibit H	**VocalChat Readme File, Version 2.02 (June, 1994) ("Readme")**
Exhibit I	**VocalChat 1.01 Networking Information ("VocalChat Networking")**
Exhibit J	**VocalChat Information (July 18, 1994) ("Help File")**
Exhibit K	**VocalChat Troubleshooting Help File (July 18, 1994) ("Troubleshooting Help File")**
Exhibit L	**Declaration of VocalTec, Ltd., co-founder Alon Cohen**
Exhibit M	**Claim Chart for NetBIOS**
Exhibit N	**Claim Chart for Etherphone**
Exhibit O	**Claim Chart for VocalChat**
Exhibit P	**Comments on arguments made by Net2Phone's expert to distinguish over NetBIOS**
Exhibit Q	**Comments on arguments made by Net2Phone's expert to distinguish over Etherphone**
Exhibit R	**Comments on arguments made by Net2Phone's expert to distinguish over VocalChat**
Exhibit S	**Plaintiff Net2Phone's Opening Claim Construction Brief (Oct. 18, 2007)**
Exhibit T	**Reformatted Opening Claim Construction Brief of Skype Technologies, SA, Skype, Inc., and Ebay Inc (Oct 18, 2007)**
Exhibit U	**Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007)**
Exhibit V	**Reformatted Responsive Claim Construction Brief of Skype Technologies SA, Skype, Inc., and EBay Inc (Oct. 18, 2007)**
Exhibit W	**Plaintiff Net2Phone, Inc.'s Reply Brief on Claim Construction (Oct. 19, 2007)**
Exhibit X	**Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc., and EBay Inc. (Oct. 19, 2007)**

VIII. CONCLUSION

For the reasons set forth above, it is clear that a SNQ of patentability is raised in connection with claims 1-3, 5-6, 8-9, and 14-18 of the '469 patent by this Request for *Ex Parte* Reexamination since claims 1-3, 5-6, 8-9, and 14-18 are anticipated and/or rendered obvious in view of the above-listed prior art references. Therefore, it is requested that this request for reexamination be granted and claims 1-3, 5-6, 8-9, and 14-18 all be finally rejected.

As identified in the attached Certificate of Service and in accordance with 37 CFR §§1.33(c) and 1.915(b)(6), a copy of the present request, in its entirety, is being served to the address of the attorney or agent of record.

Please direct all correspondence in this matter to the undersigned.

Respectfully submitted,

/et/_____

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Dated: /02-23-2009/

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Exhibit A

U.S. Patent No. 6,009,469 issued to Mattaway, et al. ("the '469 patent")

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US006009469A

United States Patent [19]

Mattaway et al.

[11] **Patent Number: 6,009,469**

[45] **Date of Patent: Dec. 28, 1999**

[54] **GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION**

[75] Inventors: **Shane D. Mattaway**, Boca Raton; **Glenn W. Hutton**, Miami; **Craig B. Strickland**, Tamarac, all of Fla.

[73] Assignee: **NetSpeak Corporation**, Boca Raton, Fla.

[21] Appl. No.: **08/721,316**

[22] Filed: **Sep. 25, 1996**

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/533,115, Sep. 25, 1995

[60] Provisional application No. 60/025,415, Sep. 4, 1996, and provisional application No. 60/024,251, Aug. 21, 1996.

[51] **Int. Cl.**[6] **G06F 17/00**

[52] **U.S. Cl.** **709/227**

[58] **Field of Search** 395/200.57, 200.58; 709/227, 228; 370/352, 355, 357, 389, 395

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A2 0556012	8/1993	European Pat. Off. .
WO 9219054	10/1992	WIPO .

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Weinberg, Netscape Conference and Cooltalk Meeting Room, www.q5.com, Feb. 22, 1996.

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Gull, Re: Internet Phone for Mac?, >jgull–1704950116450001@pm049–28.dialip.mich.net>, Apr. 17, 1995.

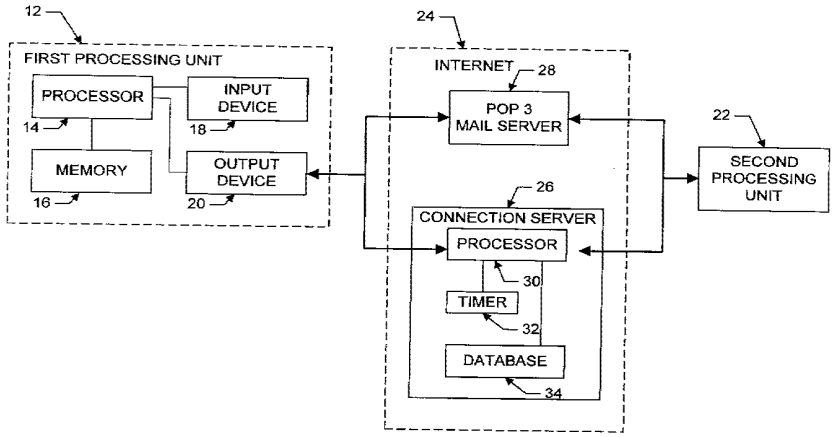
Primary Examiner—Ellis B. Ramirez

Attorney, Agent, or Firm—Kudirka & Jobse, LLP

[57] **ABSTRACT**

A communication utility for establishing real-time, point-to-point communications between processes over a computer network includes apparatus for querying a server as to the network protocol address of another client process, and apparatus for directly establishing a communication link with the client process upon receipt of the network protocol address from the server. In one embodiment, the utility includes a sophisticated user interface having features similar to typical telephony hardware but implementing greater flexibility with software.

18 Claims, 27 Drawing Sheets



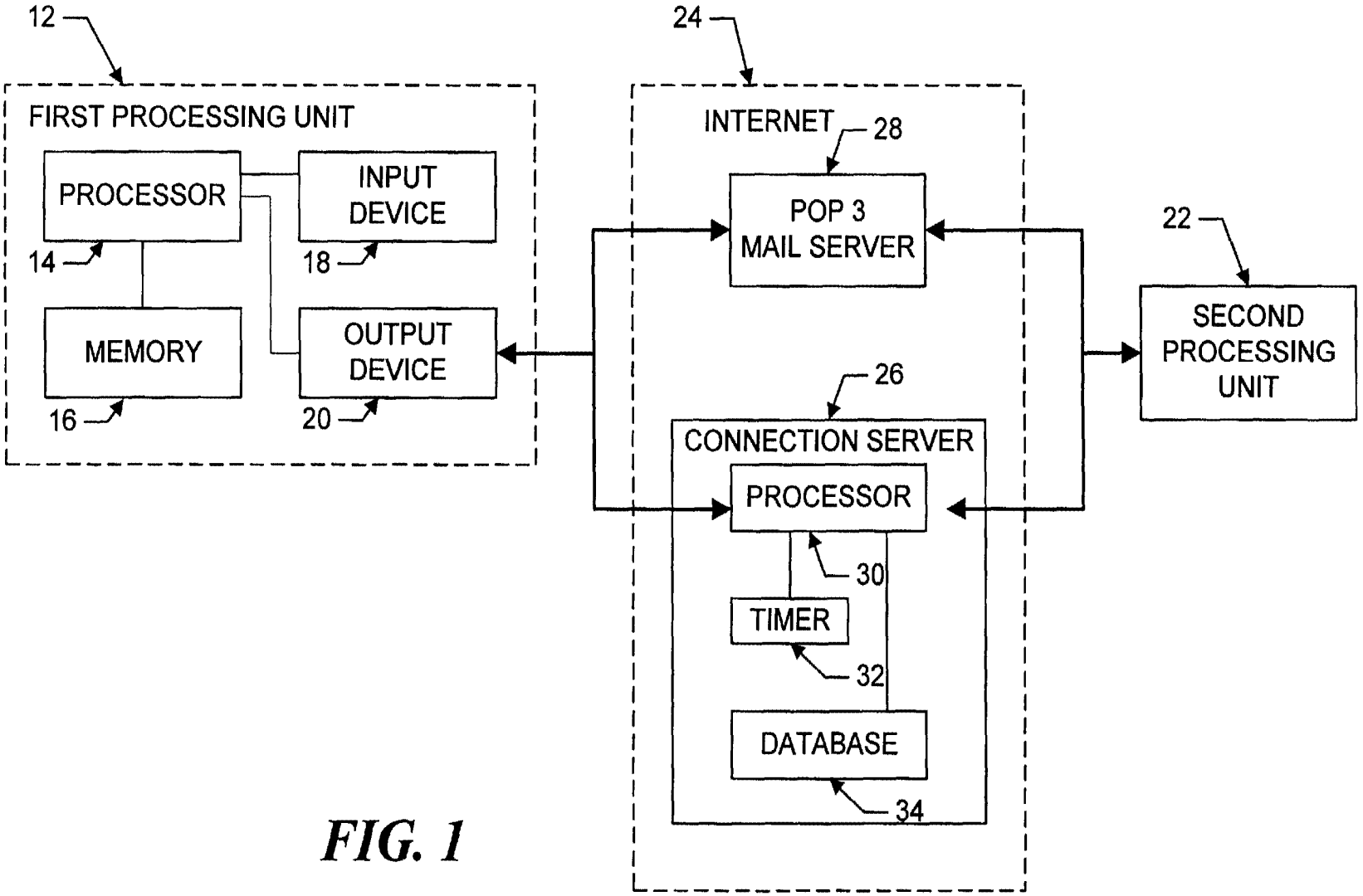

12
FIRST PROCESSING UNIT
PROCESSOR
INPUT DEVICE
14
18
MEMORY
OUTPUT DEVICE
16
20
24
INTERNET
28
POP 3 MAIL SERVER
22
SECOND PROCESSING UNIT
26
CONNECTION SERVER
PROCESSOR
30
TIMER
32
DATABASE
34

FIG. 1

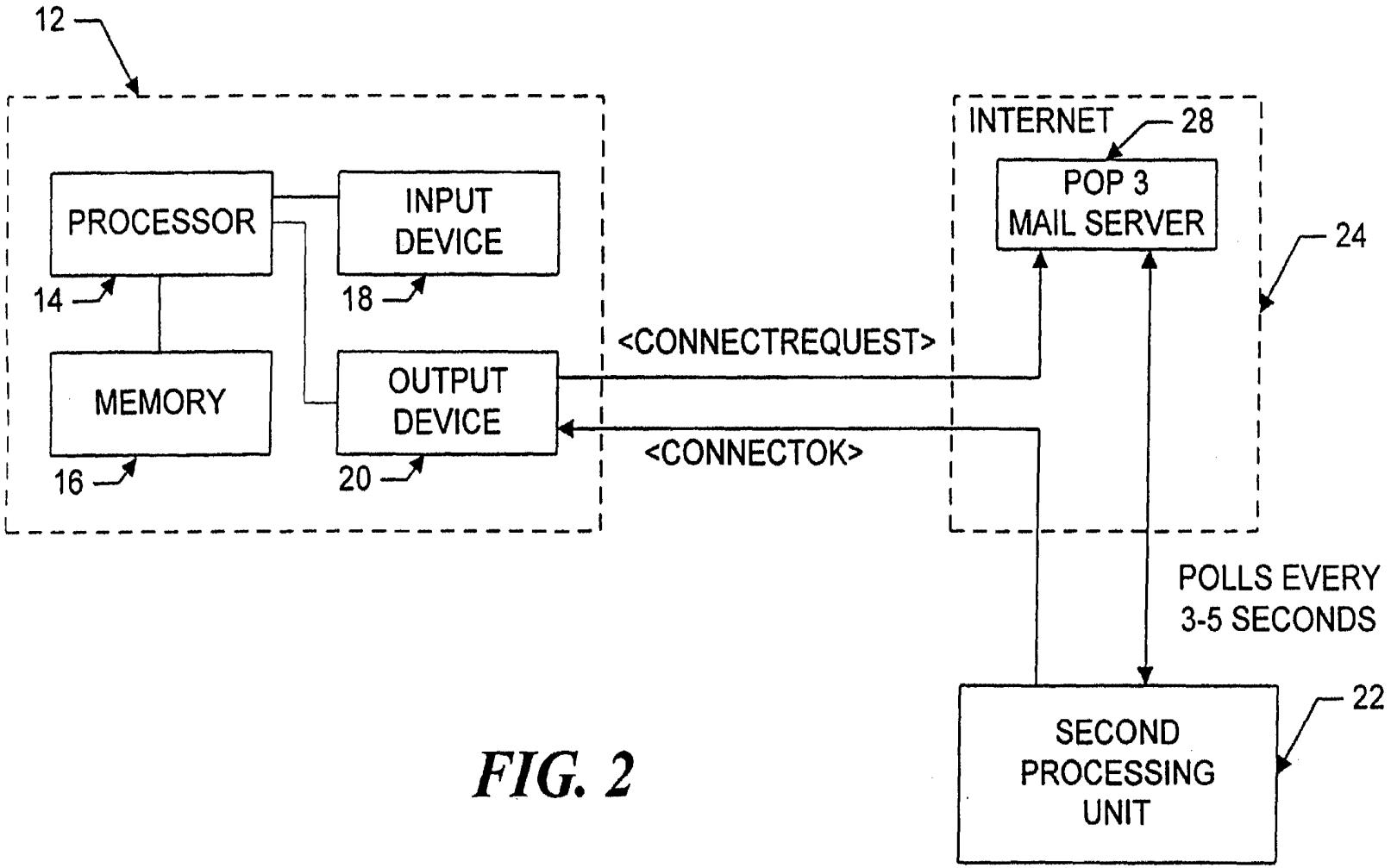

12
PROCESSOR
INPUT DEVICE
14
18
MEMORY
OUTPUT DEVICE
16
20
INTERNET
28
POP 3 MAIL SERVER
24
<CONNECTREQUEST>
<CONNECTOK>
POLLS EVERY 3-5 SECONDS
22
SECOND PROCESSING UNIT

FIG. 2

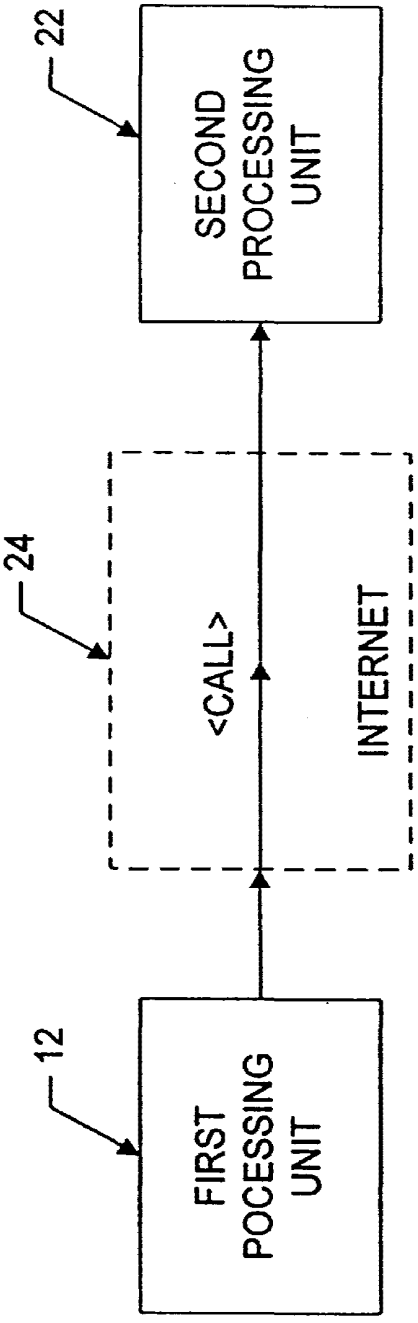

22
SECOND PROCESSING UNIT
24
<CALL>
INTERNET
12
FIRST POCESSING UNIT

FIG. 3

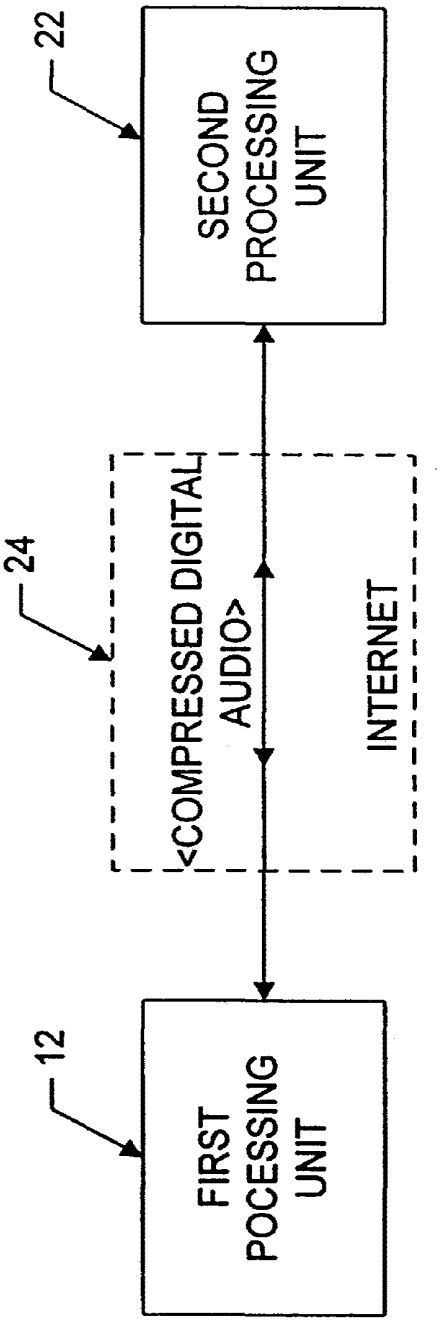

22
SECOND PROCESSING UNIT
24
<COMPRESSED DIGITAL AUDIO>
INTERNET
12
FIRST POCESSING UNIT

FIG. 4

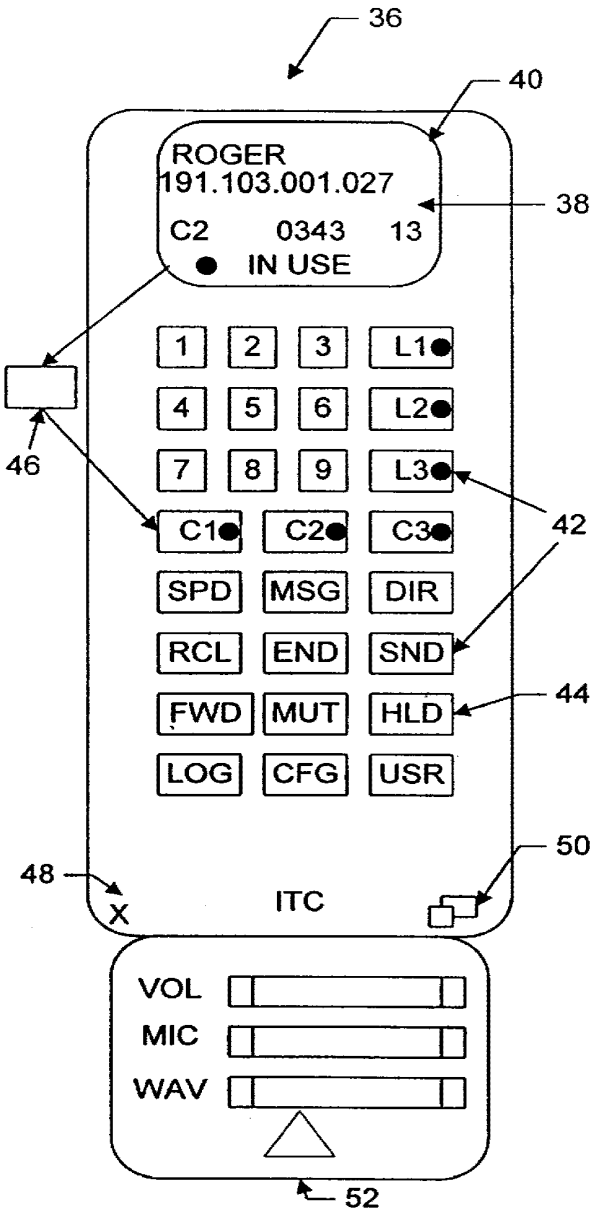

36
40
ROGER
191.103.001.027
C2 0343 13
IN USE
38
1 2 3 L1
4 5 6 L2
7 8 9 L3
C1 C2 C3
SPD MSG DIR
RCL END SND
FWD MUT HLD
LOG CFG USR
42
44
46
48
X
ITC
50
VOL
MIC
WAV
52

FIG. 5

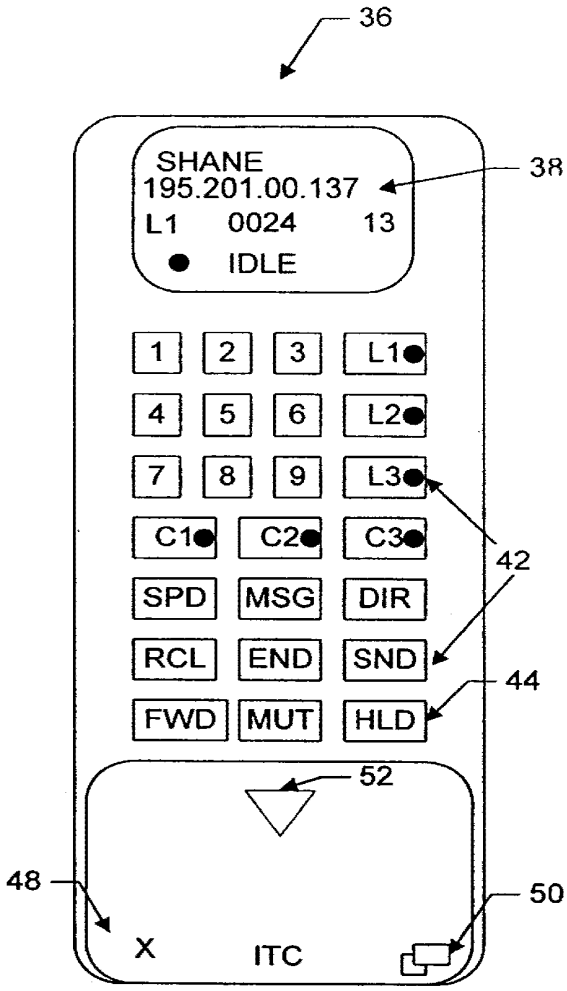

36
SHANE
195.201.00.137
L1 0024 13
IDLE
38
1 2 3 L1
4 5 6 L2
7 8 9 L3
C1 C2 C3
SPD MSG DIR
RCL END SND
FWD MUT HLD
42
44
52
48
X
ITC
50

FIG. 6

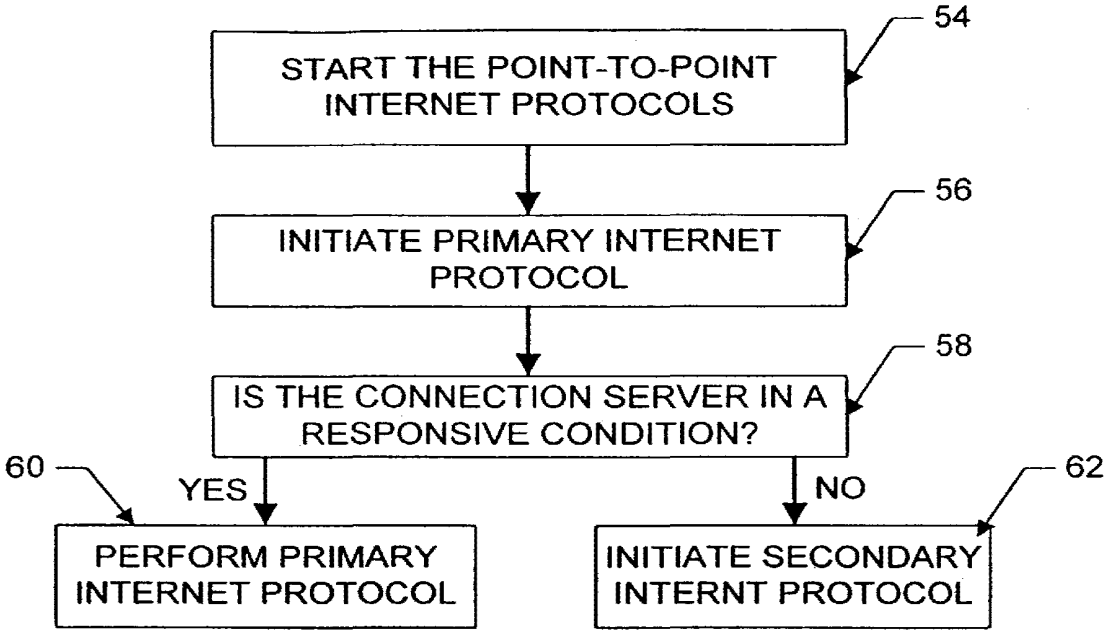

54
START THE POINT-TO-POINT INTERNET PROTOCOLS
56
INITIATE PRIMARY INTERNET PROTOCOL
58
IS THE CONNECTION SERVER IN A RESPONSIVE CONDITION?
60
YES
NO
62
PERFORM PRIMARY INTERNET PROTOCOL
INITIATE SECONDARY INTERNT PROTOCOL

FIG. 7

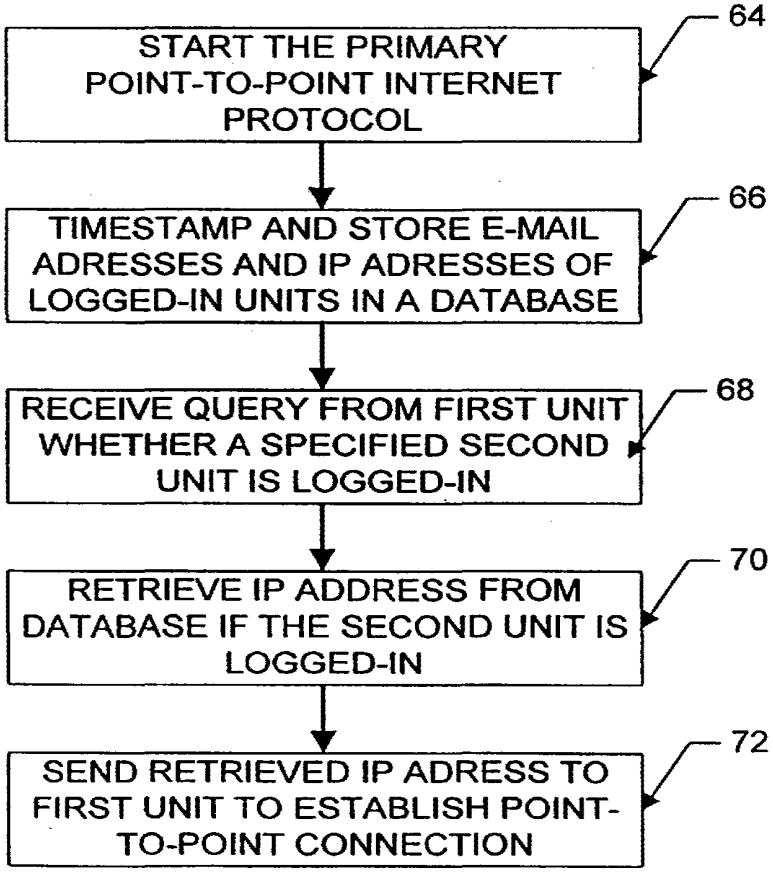

64
START THE PRIMARY POINT-TO-POINT INTERNET PROTOCOL
66
TIMESTAMP AND STORE E-MAIL ADRESSES AND IP ADRESSES OF LOGGED-IN UNITS IN A DATABASE
68
RECEIVE QUERY FROM FIRST UNIT WHETHER A SPECIFIED SECOND UNIT IS LOGGED-IN
70
RETRIEVE IP ADDRESS FROM DATABASE IF THE SECOND UNIT IS LOGGED-IN
72
SEND RETRIEVED IP ADRESS TO FIRST UNIT TO ESTABLISH POINT-TO-POINT CONNECTION

FIG. 8

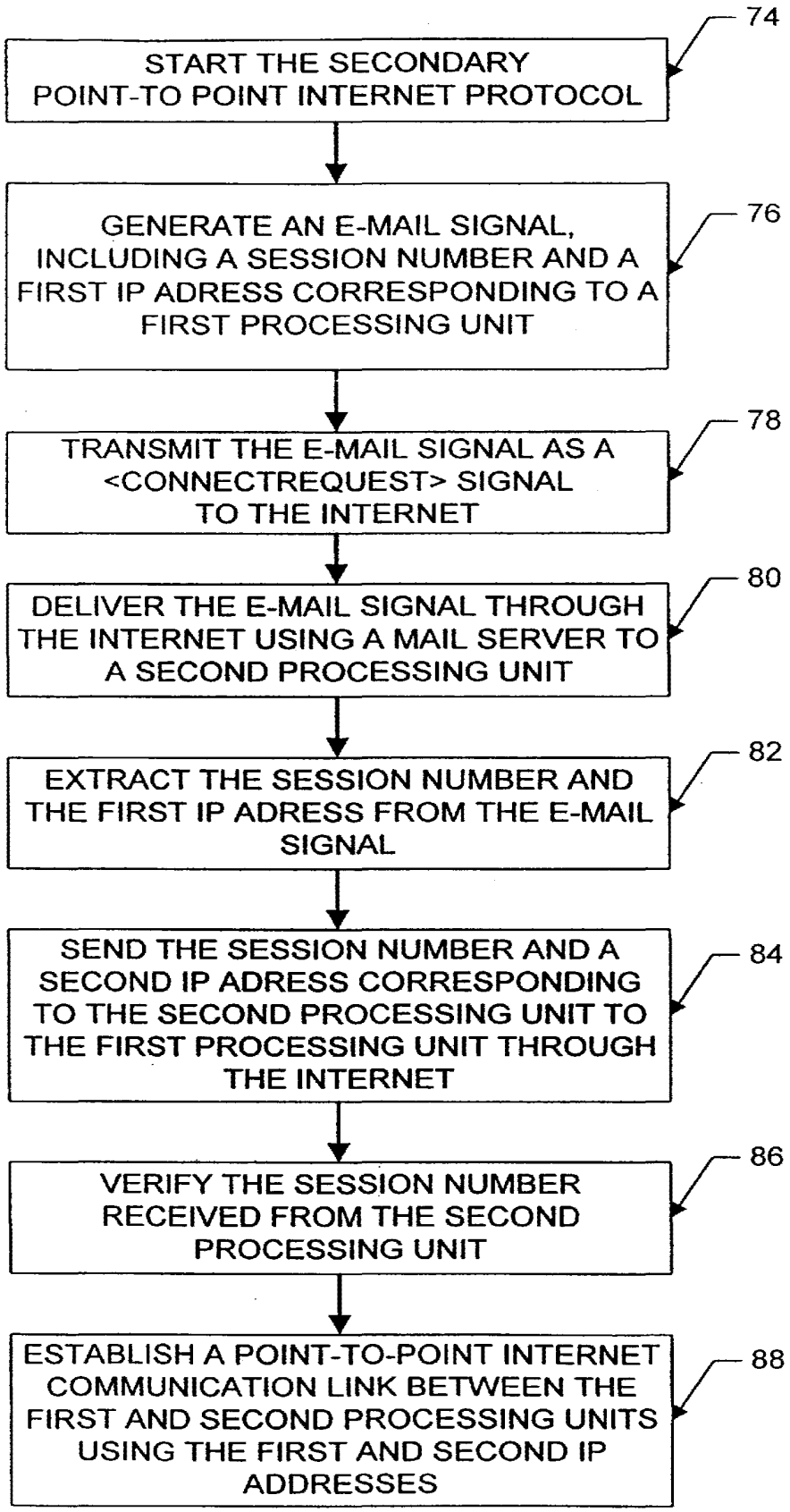

START THE SECONDARY POINT-TO POINT INTERNET PROTOCOL
74
GENERATE AN E-MAIL SIGNAL, INCLUDING A SESSION NUMBER AND A FIRST IP ADRESS CORRESPONDING TO A FIRST PROCESSING UNIT
76
TRANSMIT THE E-MAIL SIGNAL AS A <CONNECTREQUEST> SIGNAL TO THE INTERNET
78
DELIVER THE E-MAIL SIGNAL THROUGH THE INTERNET USING A MAIL SERVER TO A SECOND PROCESSING UNIT
80
EXTRACT THE SESSION NUMBER AND THE FIRST IP ADRESS FROM THE E-MAIL SIGNAL
82
SEND THE SESSION NUMBER AND A SECOND IP ADRESS CORRESPONDING TO THE SECOND PROCESSING UNIT TO THE FIRST PROCESSING UNIT THROUGH THE INTERNET
84
VERIFY THE SESSION NUMBER RECEIVED FROM THE SECOND PROCESSING UNIT
86
ESTABLISH A POINT-TO-POINT INTERNET COMMUNICATION LINK BETWEEN THE FIRST AND SECOND PROCESSING UNITS USING THE FIRST AND SECOND IP ADDRESSES
88

FIG. 9

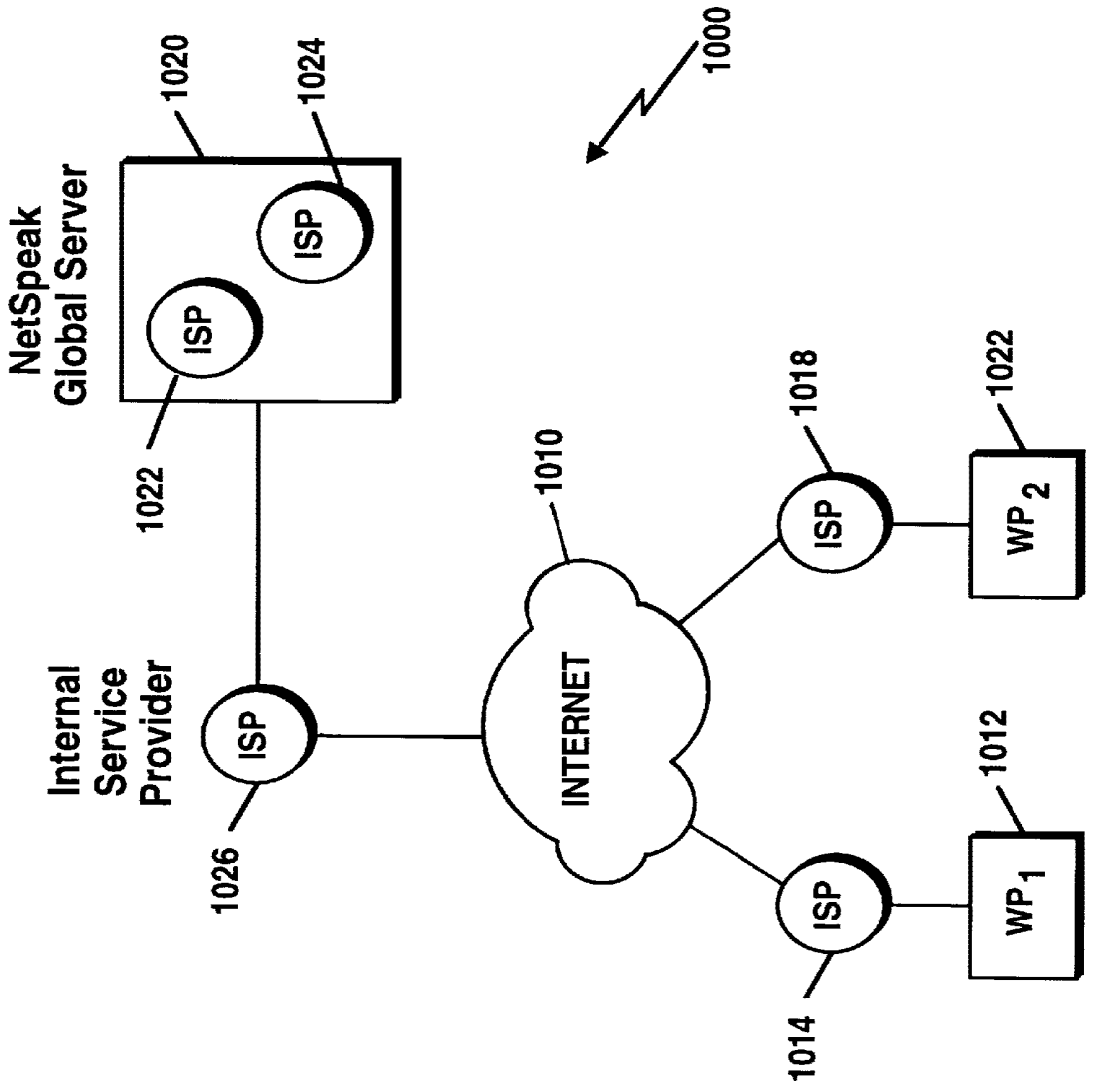

1000
1020
1024
NetSpeak Global Server
ISP
ISP
1022
1026
Internal Service Provider
ISP
1010
INTERNET
1018
ISP
1022
WP 2
1012
ISP
WP 1
1014

Figure 10

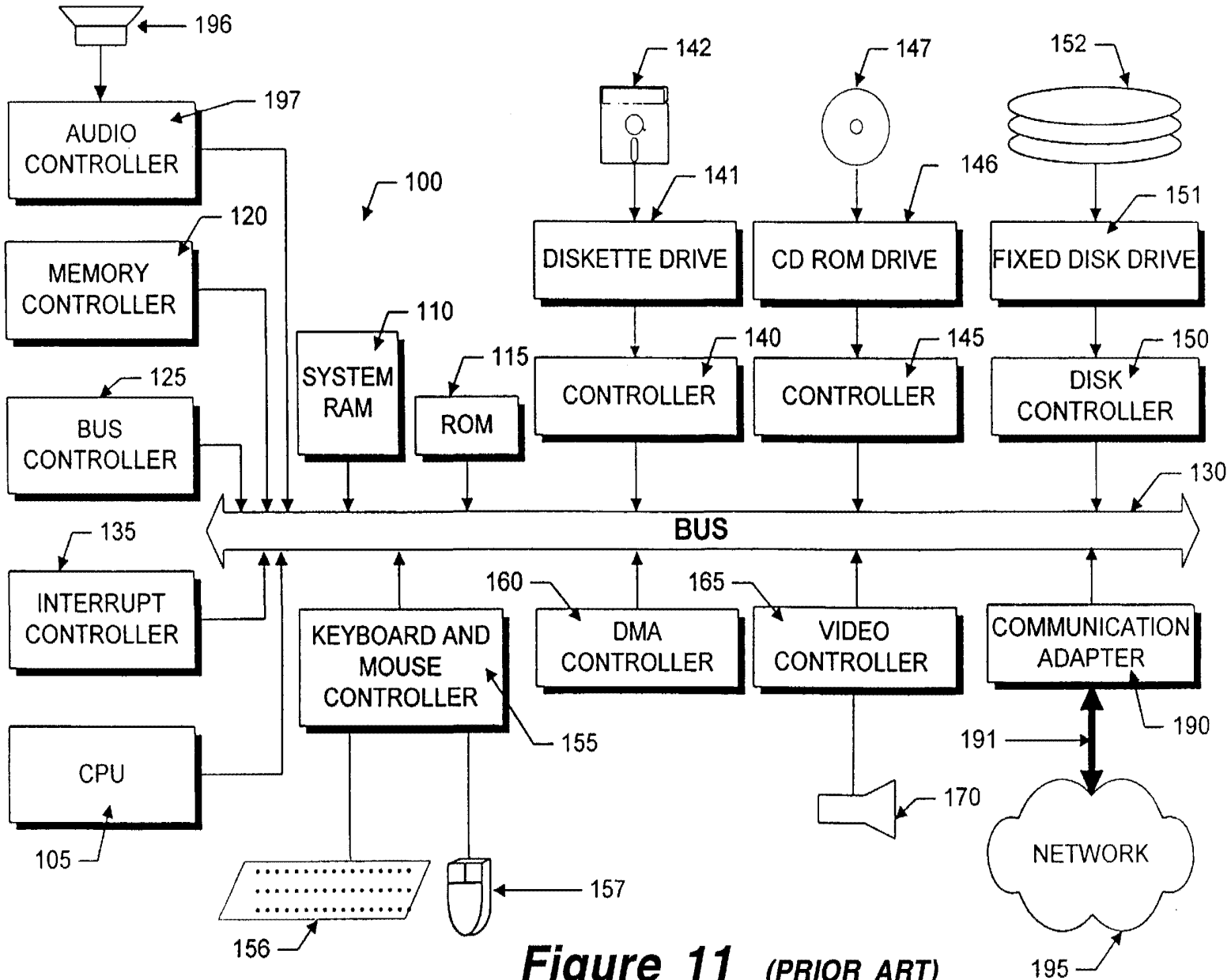


Figure 11 *(PRIOR ART)*

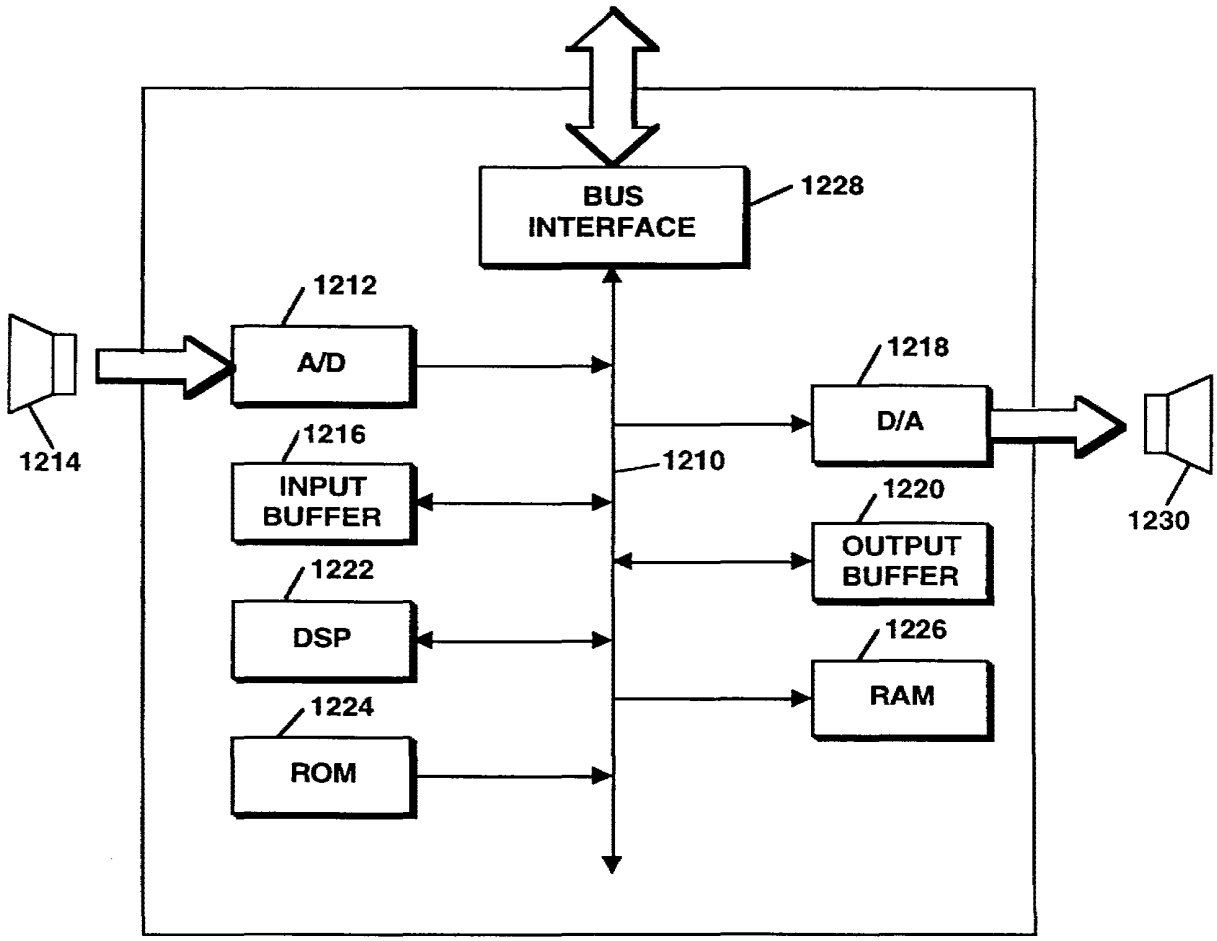


FIGURE 12 (PRIOR ART)

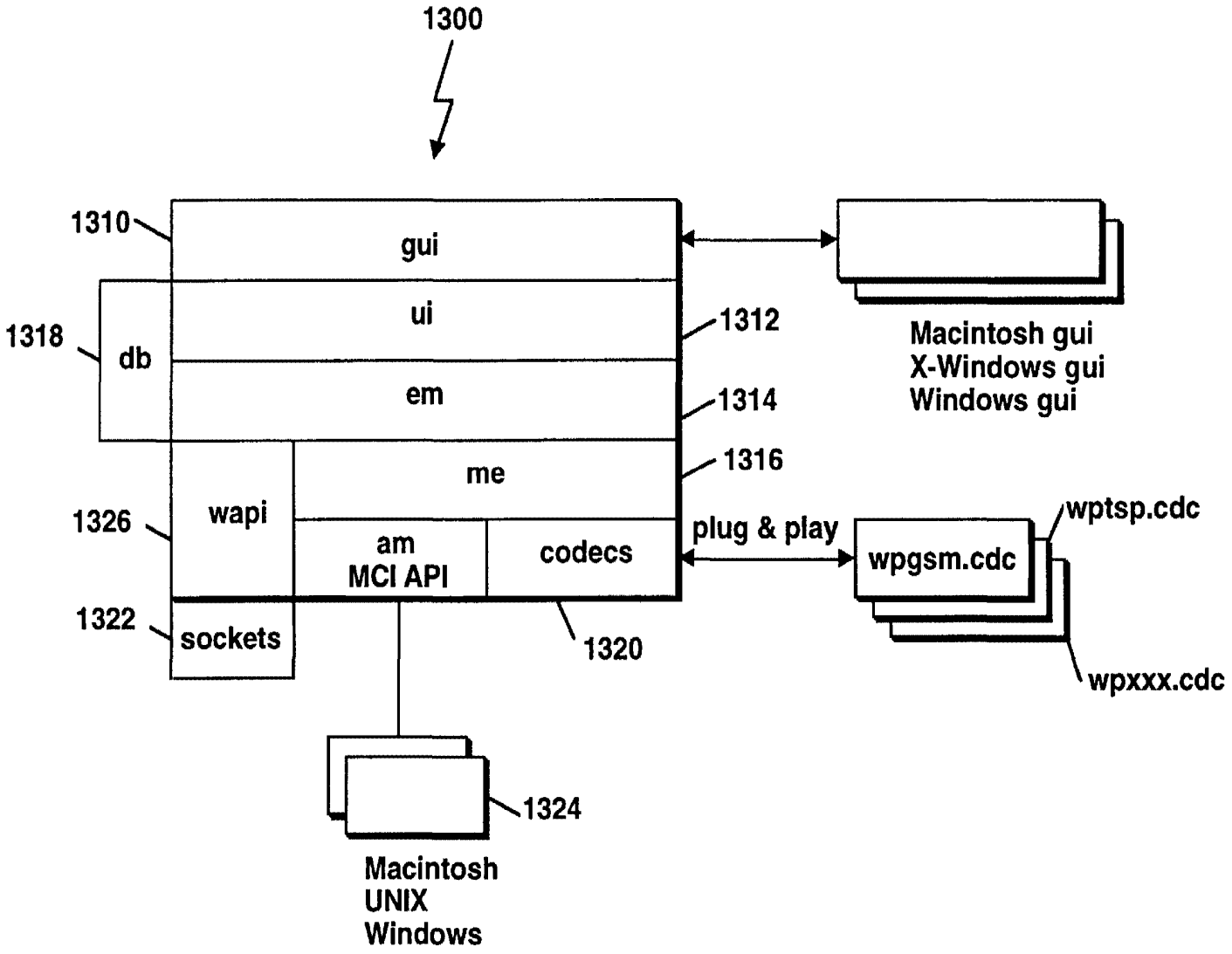

1300
1310
gui
ui
1318
db
em
1312
1314
me
1316
wapi
1326
am
MCI API
codecs
plug & play
wptsp.cdc
wpgsm.cdc
wpxxx.cdc
1322
sockets
1320
1324
Macintosh gui
X-Windows gui
Windows gui
Macintosh
UNIX
Windows

Figure 13 A

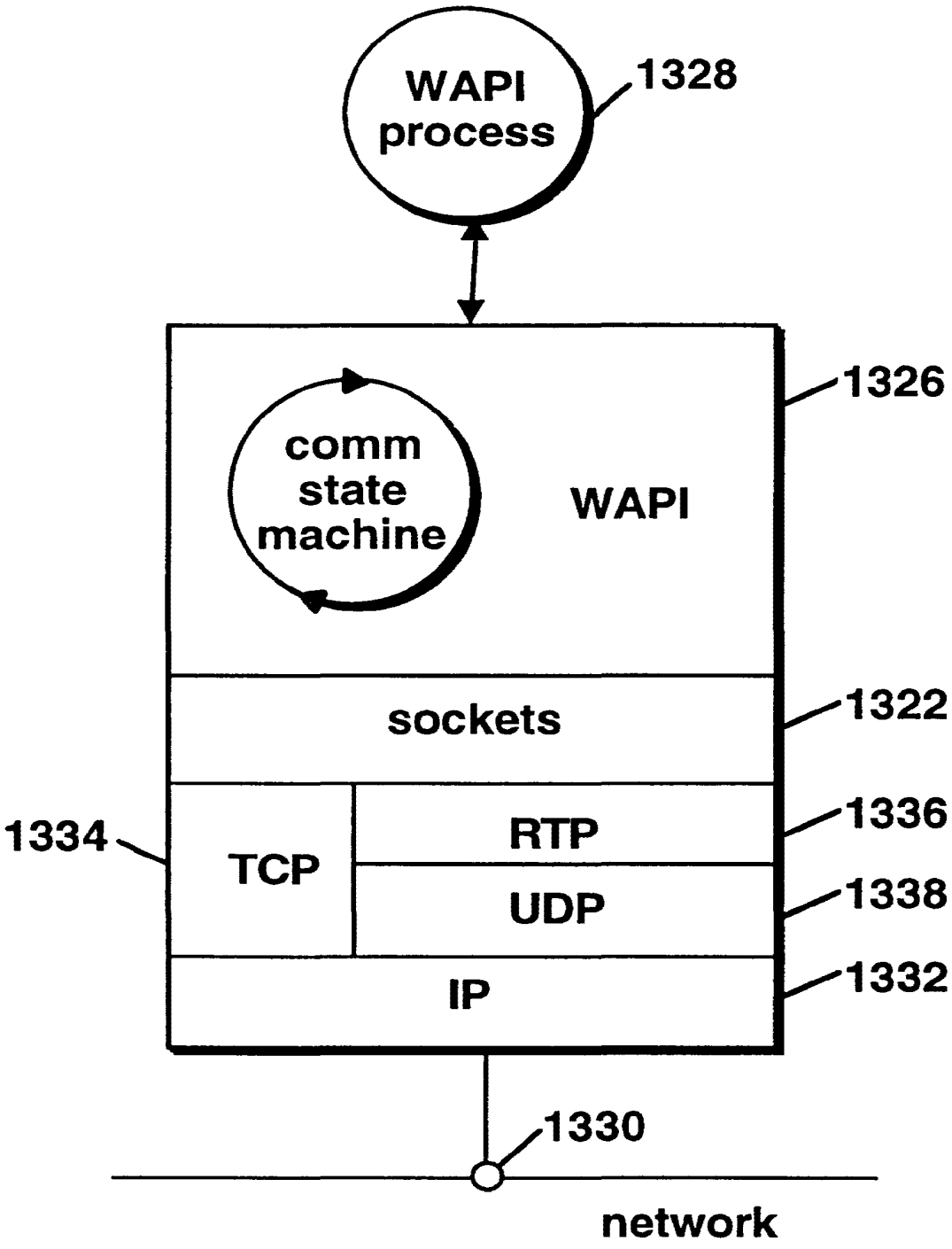

WAPI process
1328
1326
comm state machine
WAPI
sockets
1322
1334
TCP
RTP
1336
UDP
1338
IP
1332
1330
network

FIGURE 13 B

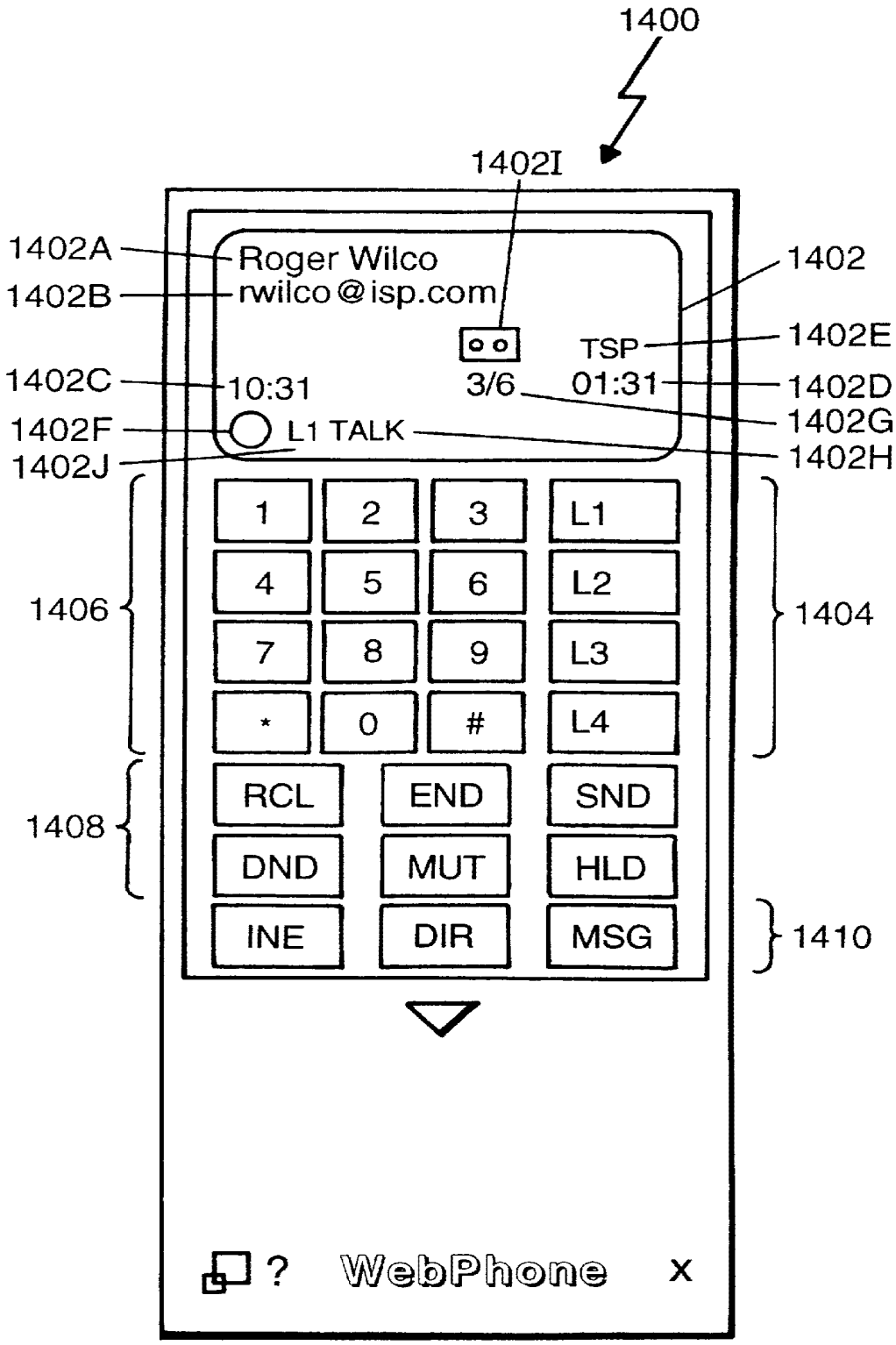

1400
1402I
1402A
Roger Wilco
1402B
rwilco@isp.com
1402
1402E
TSP
1402C
10:31
3/6
01:31
1402D
1402G
1402F
L1 TALK
1402H
1402J
1
2
3
L1
4
5
6
L2
1406
1404
7
8
9
L3
*
0
#
L4
RCL
END
SND
1408
DND
MUT
HLD
INE
DIR
MSG
1410
?
WebPhone
X

Figure 14

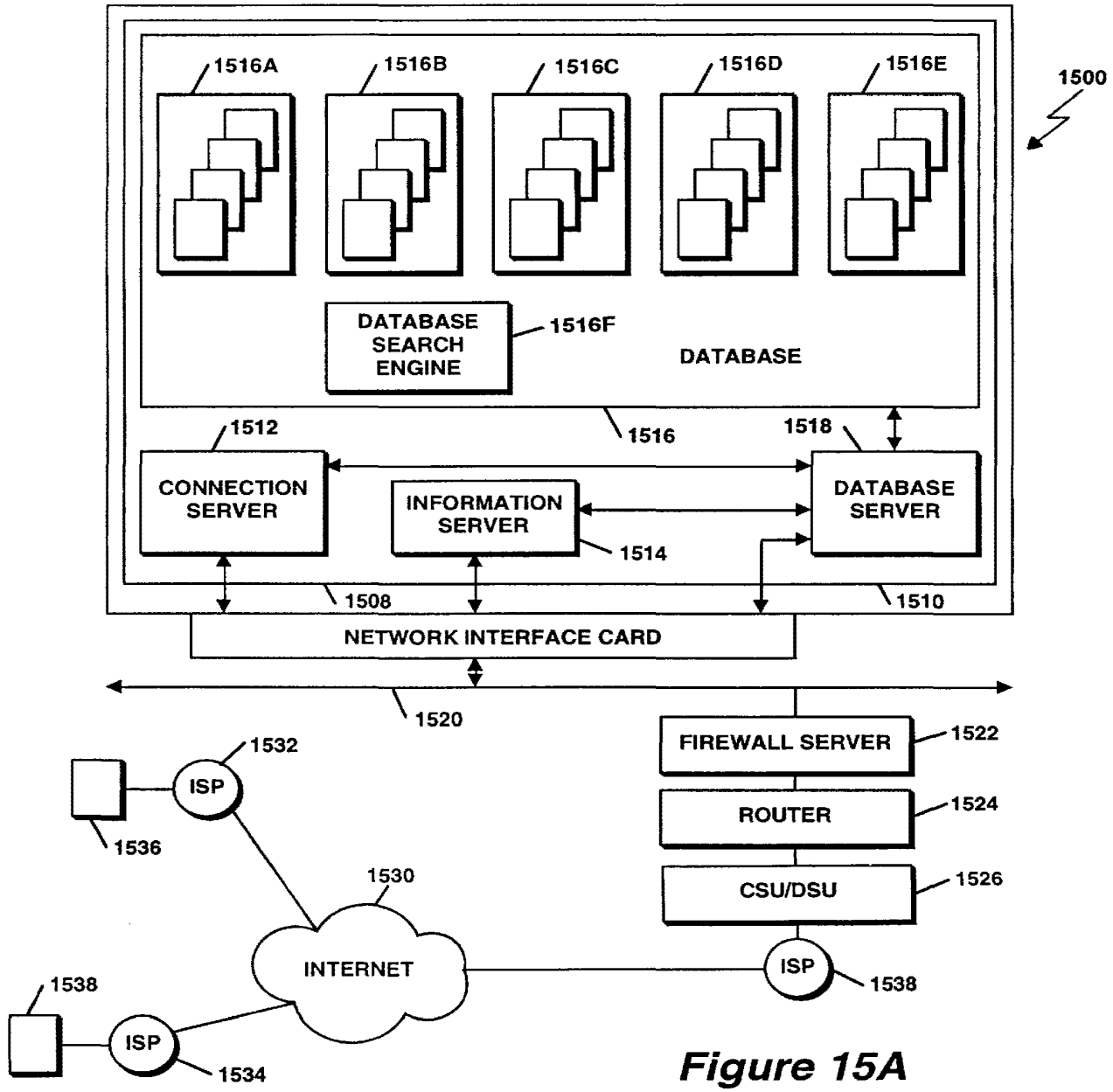

1500
1516A
1516B
1516C
1516D
1516E
DATABASE SEARCH ENGINE
1516F
DATABASE
1516
1512
1518
CONNECTION SERVER
INFORMATION SERVER
1514
DATABASE SERVER
1508
1510
NETWORK INTERFACE CARD
1520
1532
ISP
1536
1530
INTERNET
1538
ISP
1534
FIREWALL SERVER
1522
ROUTER
1524
CSU/DSU
1526
ISP
1538

Figure 15A

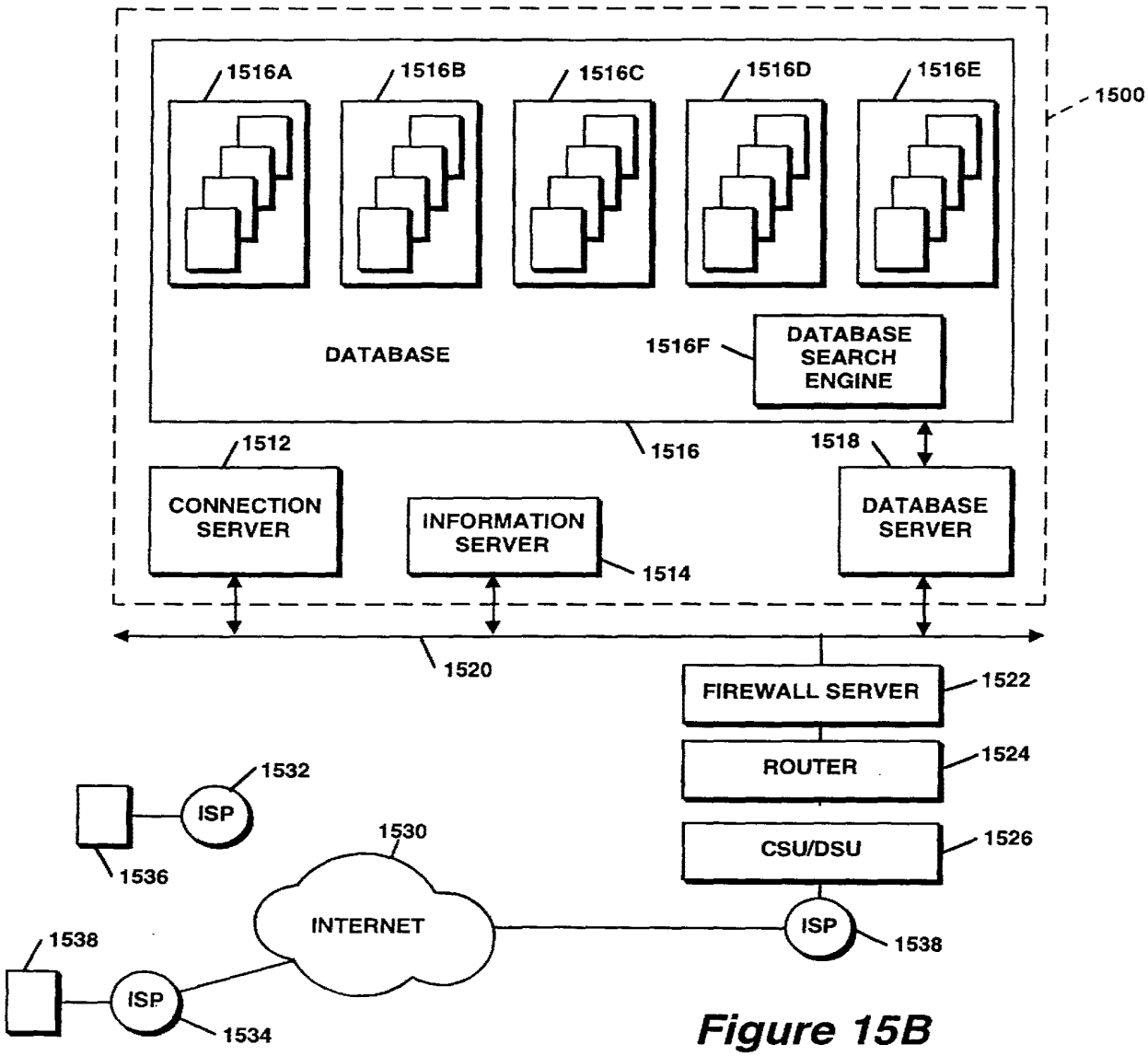

1516A
1516B
1516C
1516D
1516E
1500
DATABASE
1516F
DATABASE SEARCH ENGINE
1516
1512
CONNECTION SERVER
INFORMATION SERVER
1514
1518
DATABASE SERVER
1520
FIREWALL SERVER
1522
ROUTER
1524
CSU/DSU
1526
ISP
1538
INTERNET
1530
ISP
1532
1536
ISP
1538
1534

Figure 15B

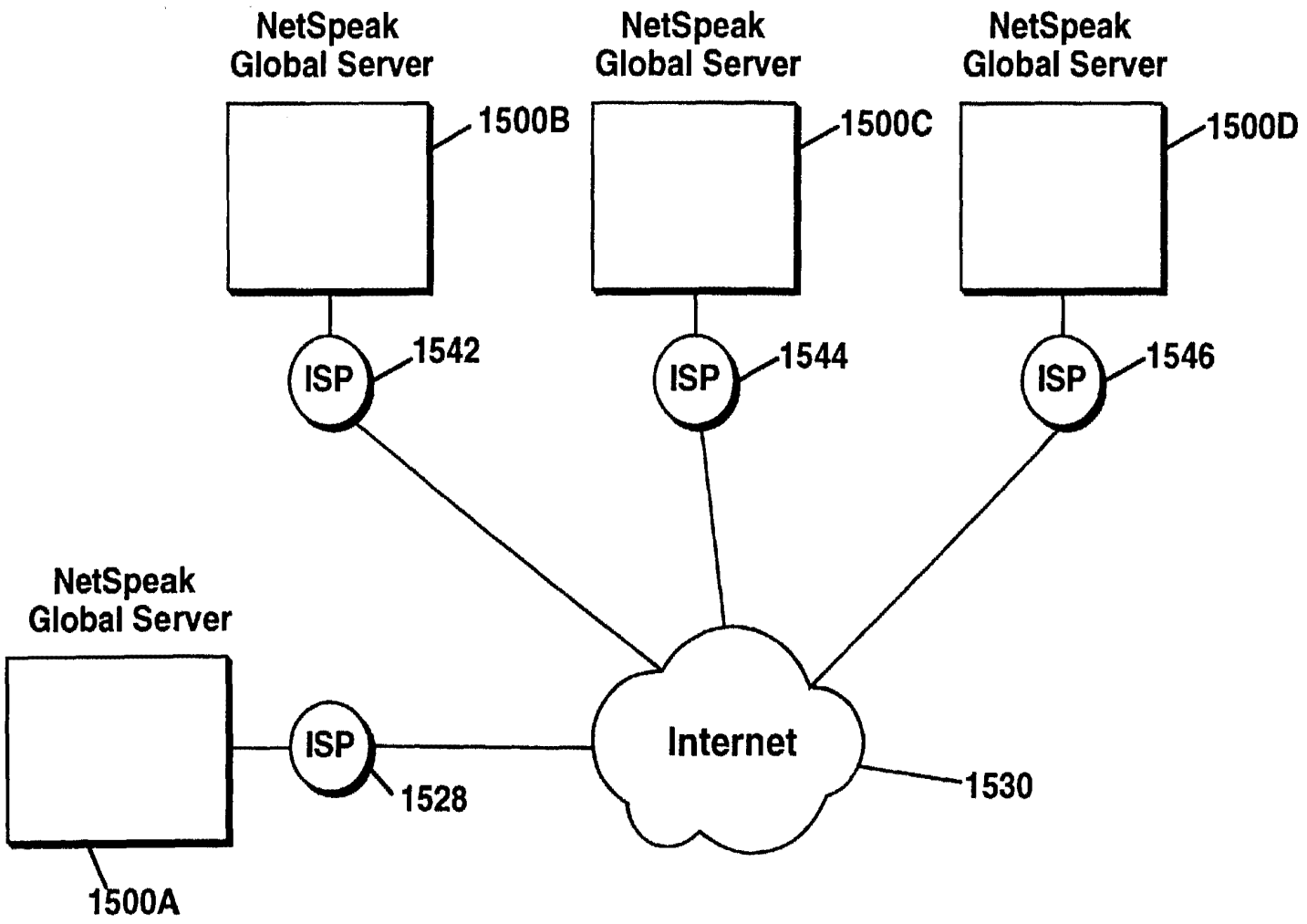

NetSpeak
Global Server
1500B
NetSpeak
Global Server
1500C
NetSpeak
Global Server
1500D
ISP
1542
ISP
1544
ISP
1546
NetSpeak
Global Server
ISP
1528
Internet
1530
1500A

Figure 15C

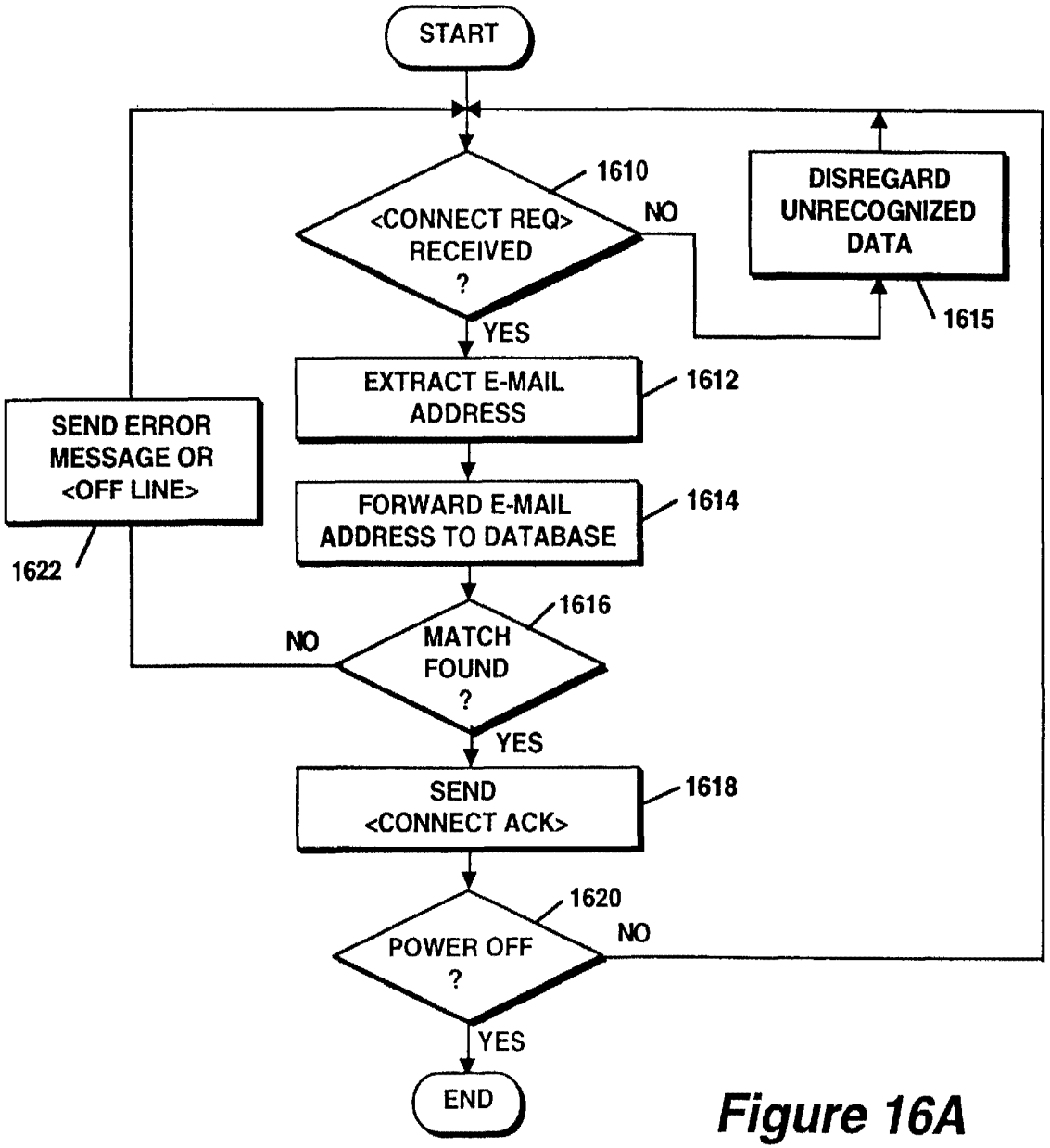

START
1610
<CONNECT REQ> RECEIVED ?
NO
DISREGARD UNRECOGNIZED DATA
1615
YES
EXTRACT E-MAIL ADDRESS
1612
SEND ERROR MESSAGE OR <OFF LINE>
1622
FORWARD E-MAIL ADDRESS TO DATABASE
1614
1616
NO
MATCH FOUND ?
YES
SEND <CONNECT ACK>
1618
1620
POWER OFF ?
NO
YES
END

Figure 16A

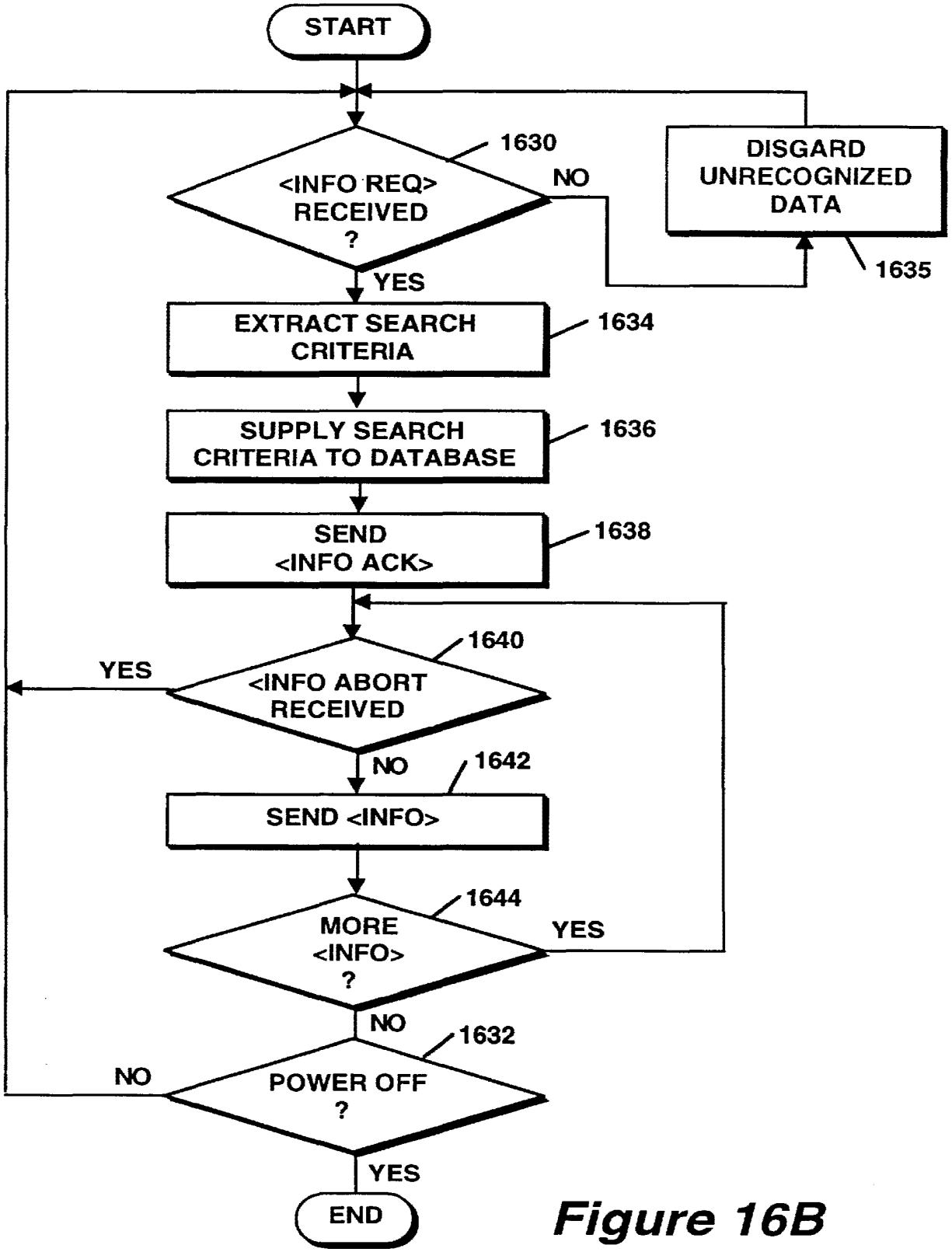

START
<INFO REQ> RECEIVED ?
1630
NO
DISGARD UNRECOGNIZED DATA
1635
YES
EXTRACT SEARCH CRITERIA
1634
SUPPLY SEARCH CRITERIA TO DATABASE
1636
SEND <INFO ACK>
1638
1640
YES
<INFO ABORT RECEIVED
NO
1642
SEND <INFO>
1644
MORE <INFO> ?
YES
NO
1632
NO
POWER OFF ?
YES
END

Figure 16B

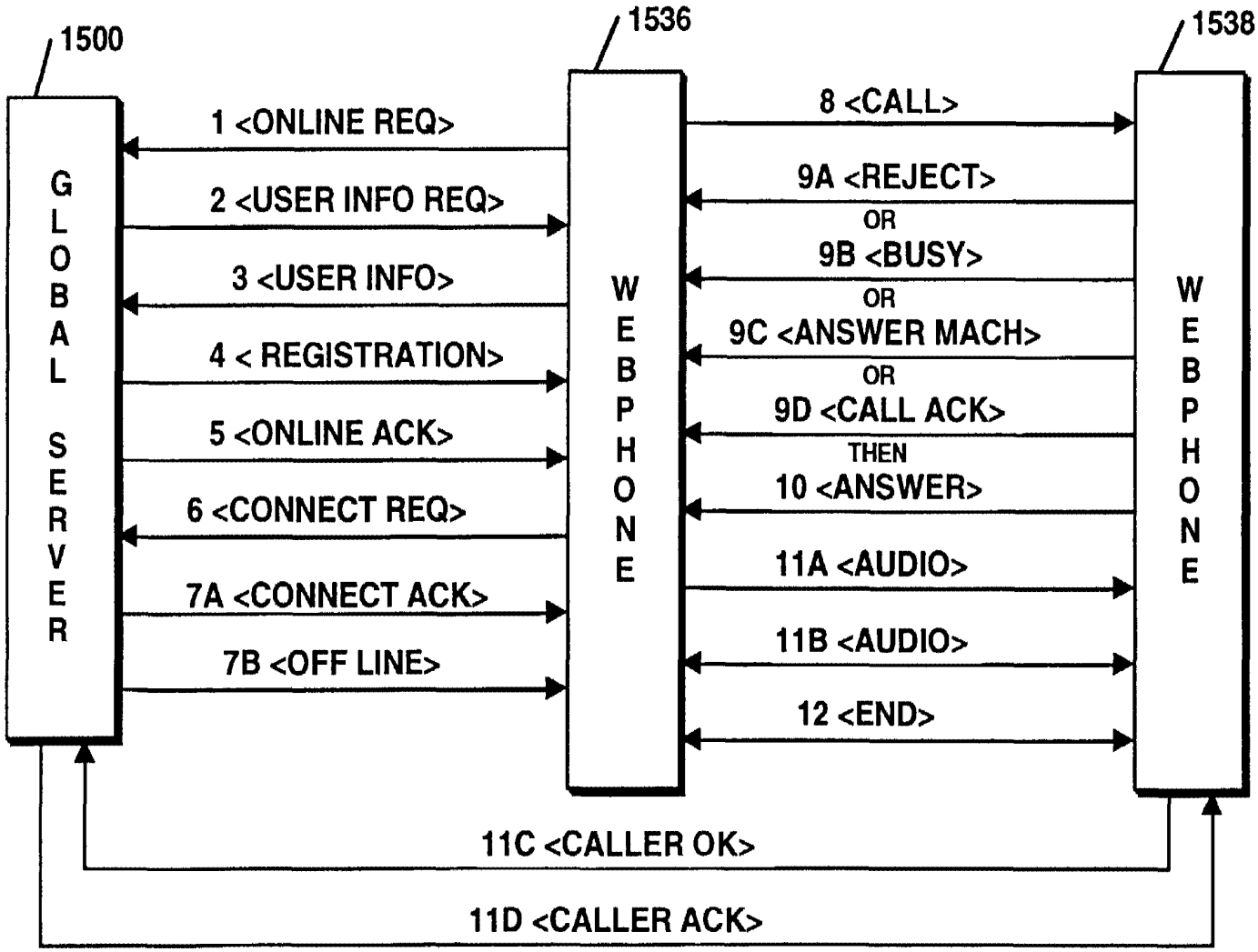

1500
1536
1538
GLOBAL SERVER
WEBPHONE
WEBPHONE
1 <ONLINE REQ>
2 <USER INFO REQ>
3 <USER INFO>
4 < REGISTRATION>
5 <ONLINE ACK>
6 <CONNECT REQ>
7A <CONNECT ACK>
7B <OFF LINE>
8 <CALL>
9A <REJECT>
OR
9B <BUSY>
OR
9C <ANSWER MACH>
OR
9D <CALL ACK>
THEN
10 <ANSWER>
11A <AUDIO>
11B <AUDIO>
12 <END>
11C <CALLER OK>
11D <CALLER ACK>

Figure 17A

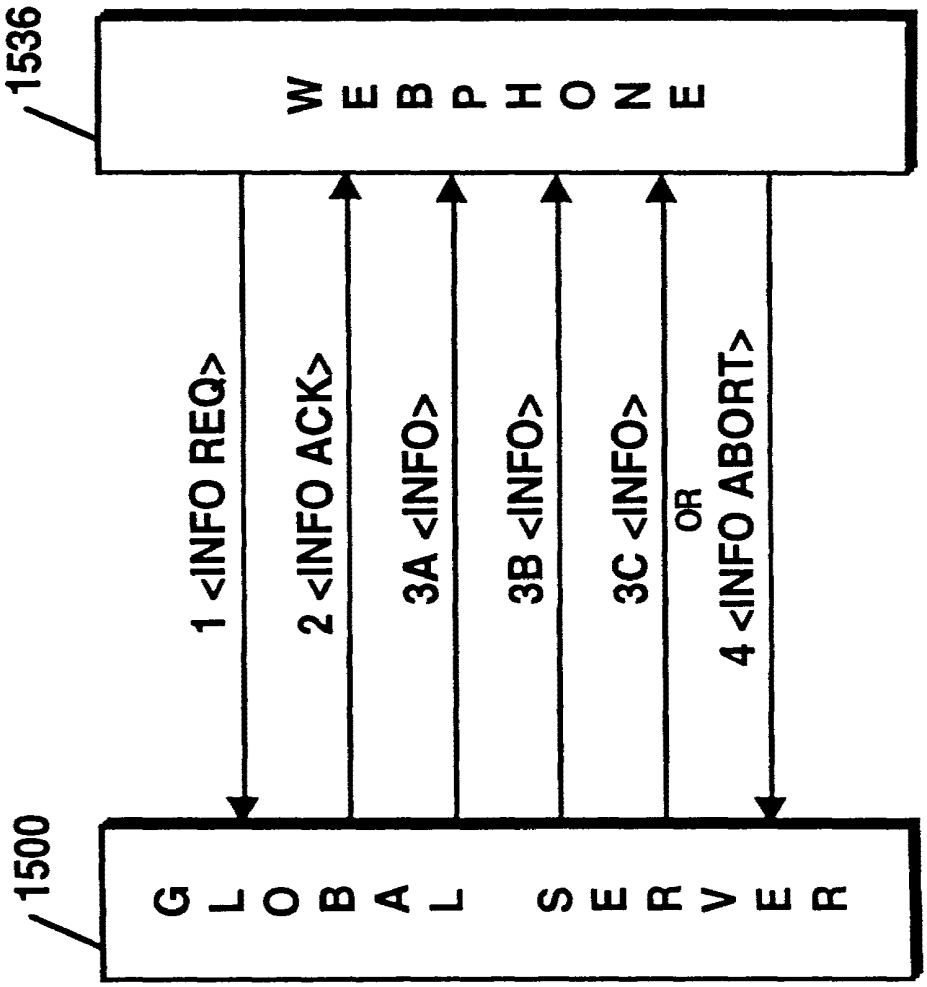

1536
WEBPHONE
1 <INFO REQ>
2 <INFO ACK>
3A <INFO>
3B <INFO>
3C <INFO>
OR
4 <INFO ABORT>
1500
GLOBAL SERVER

Figure 17B

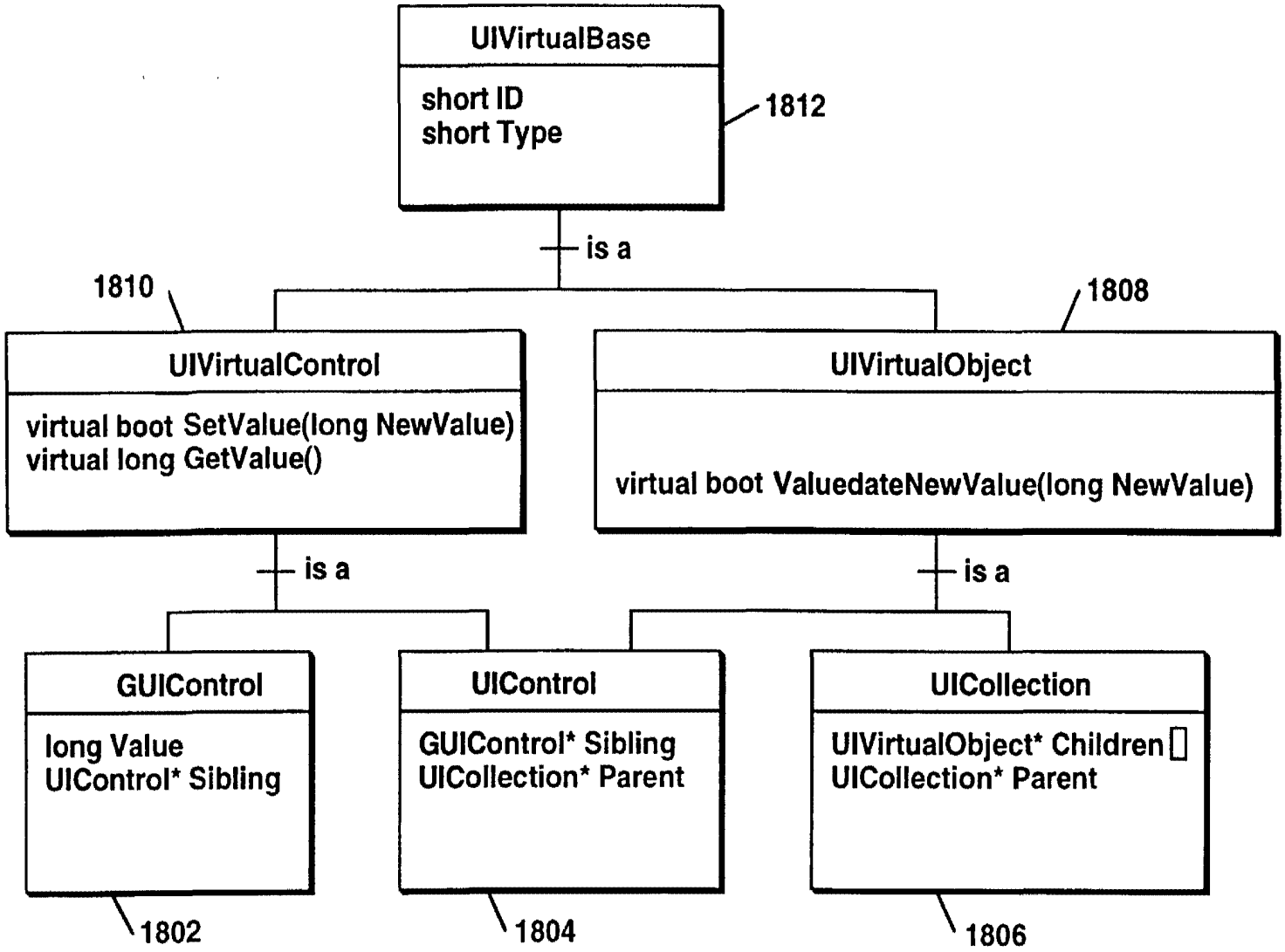

UIVirtualBase
short ID
short Type
1812
is a
1810
1808
UIVirtualControl
virtual boot SetValue(long NewValue)
virtual long GetValue()
UIVirtualObject
virtual boot ValuedateNewValue(long NewValue)
is a
is a
GUIControl
long Value
UIControl* Sibling
UIControl
GUIControl* Sibling
UICollection* Parent
UICollection
UIVirtualObject* Children[]
UICollection* Parent
1802
1804
1806

Figure 18A

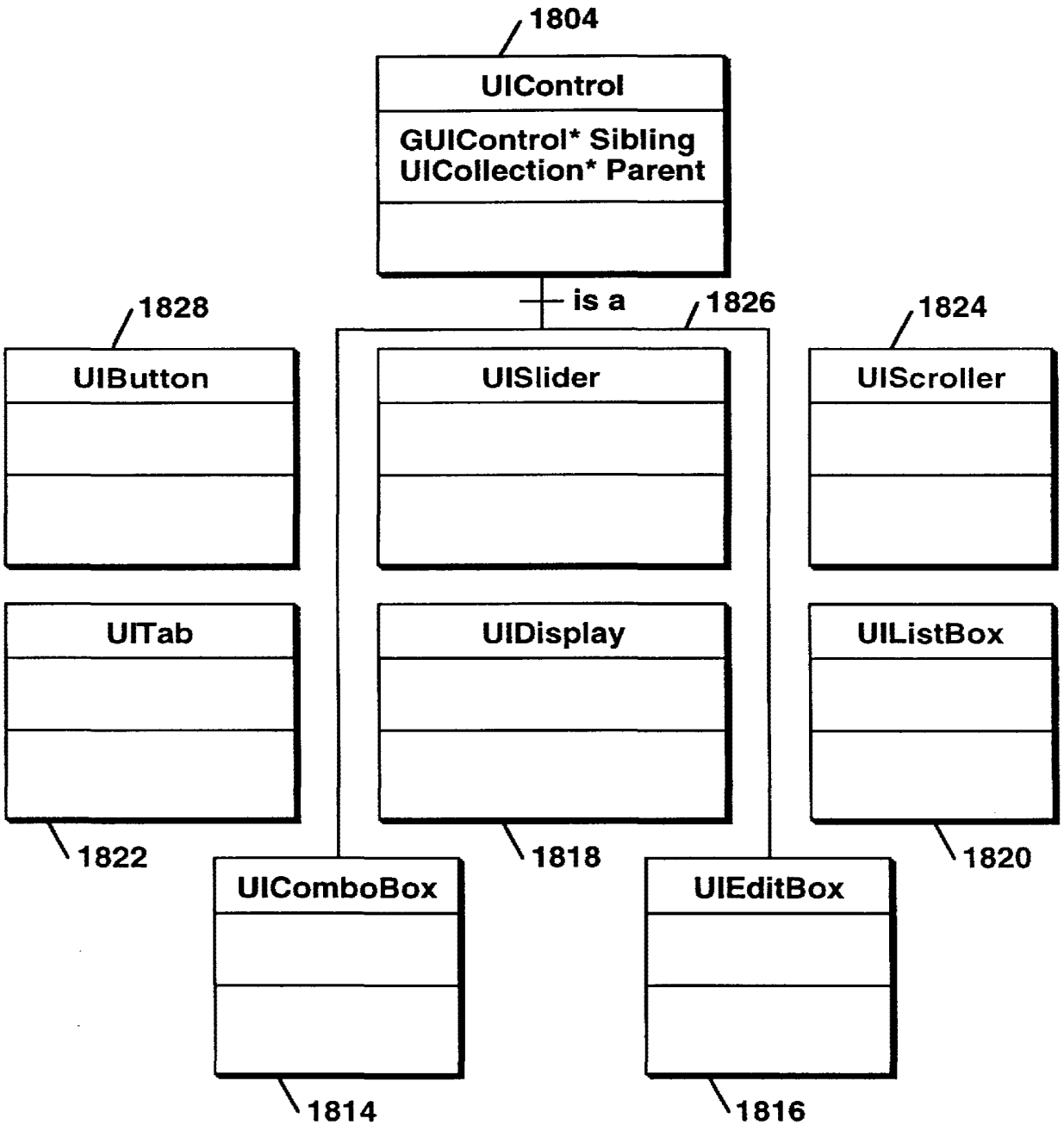

1804
UIControl
GUIControl* Sibling
UICollection* Parent
is a
1828
UIButton
1826
UISlider
1824
UIScroller
UITab
UIDisplay
UIListBox
1822
1818
1820
UIComboBox
UIEditBox
1814
1816

Figure 18B

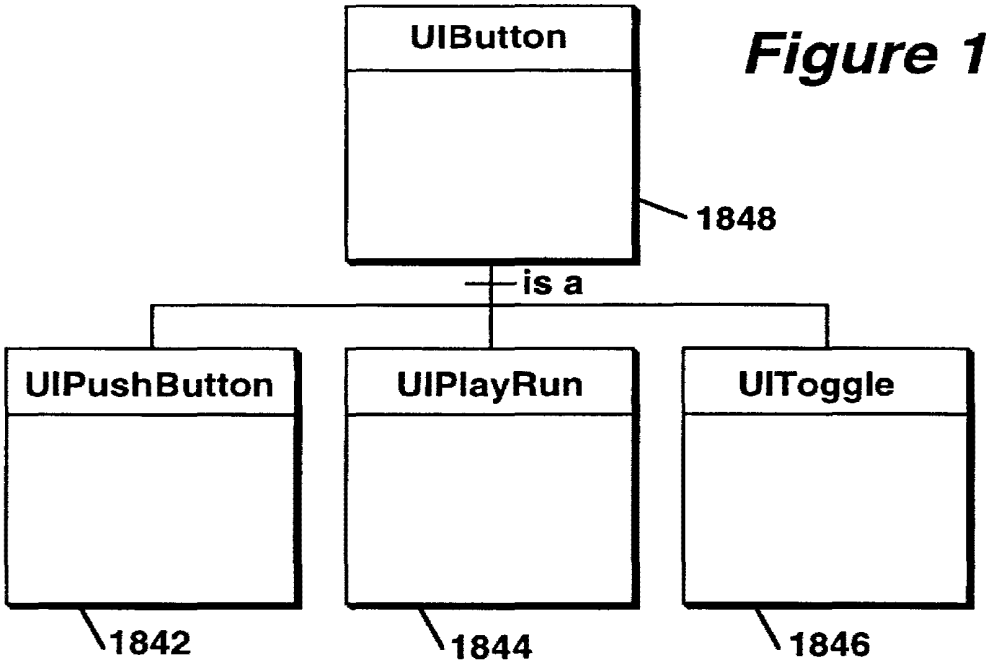


Figure 18C

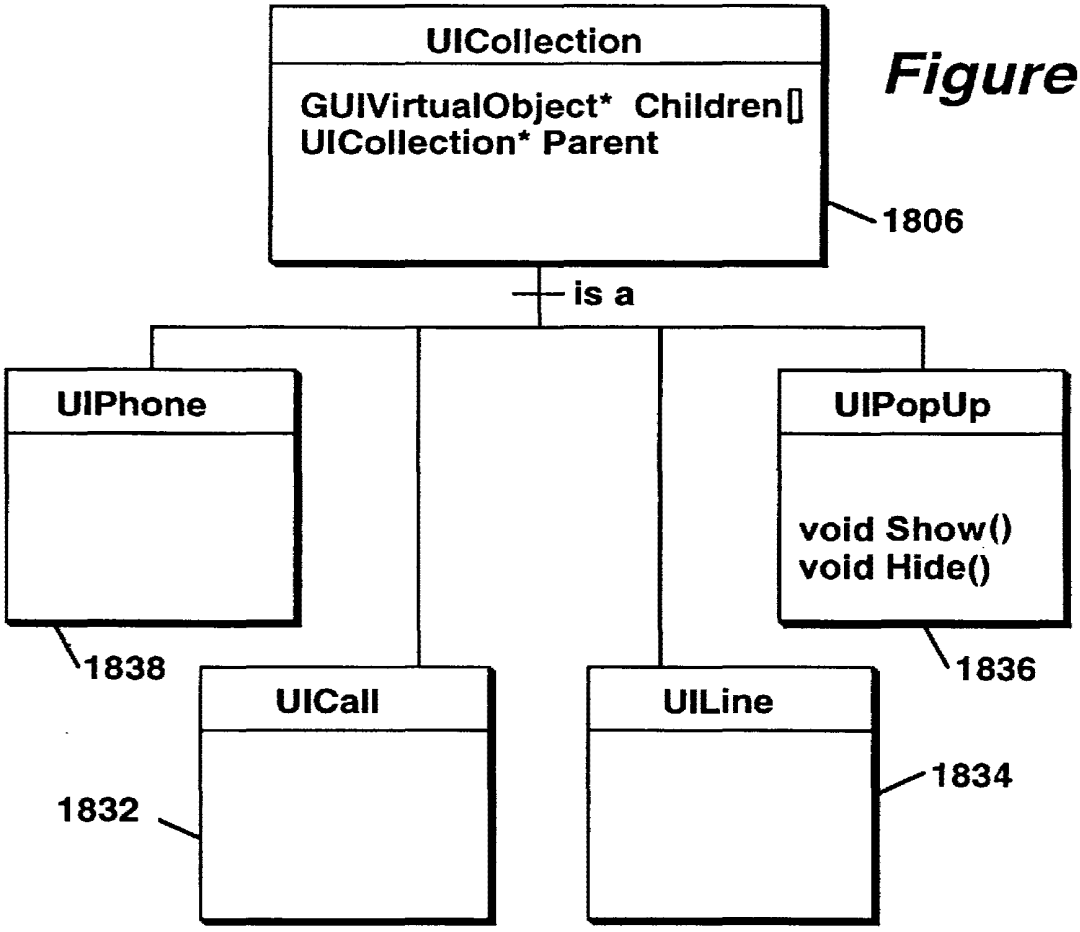


Figure 18D

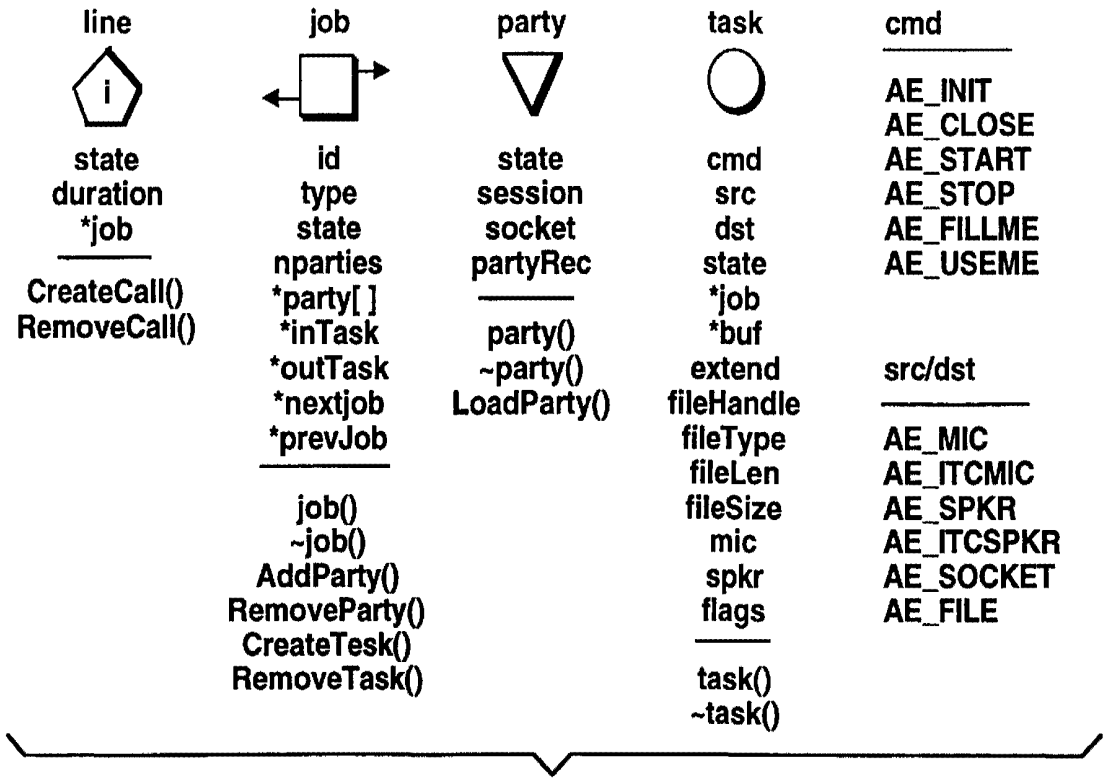


Figure 19A

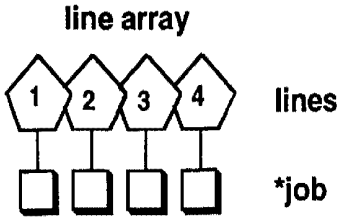


Figure 19B

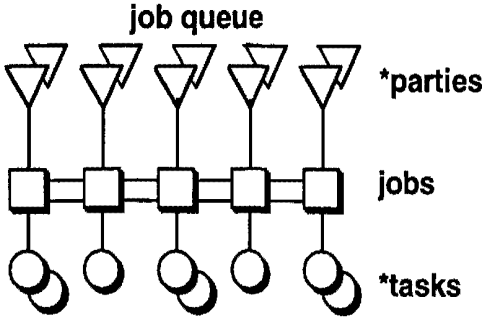


Figure 19C

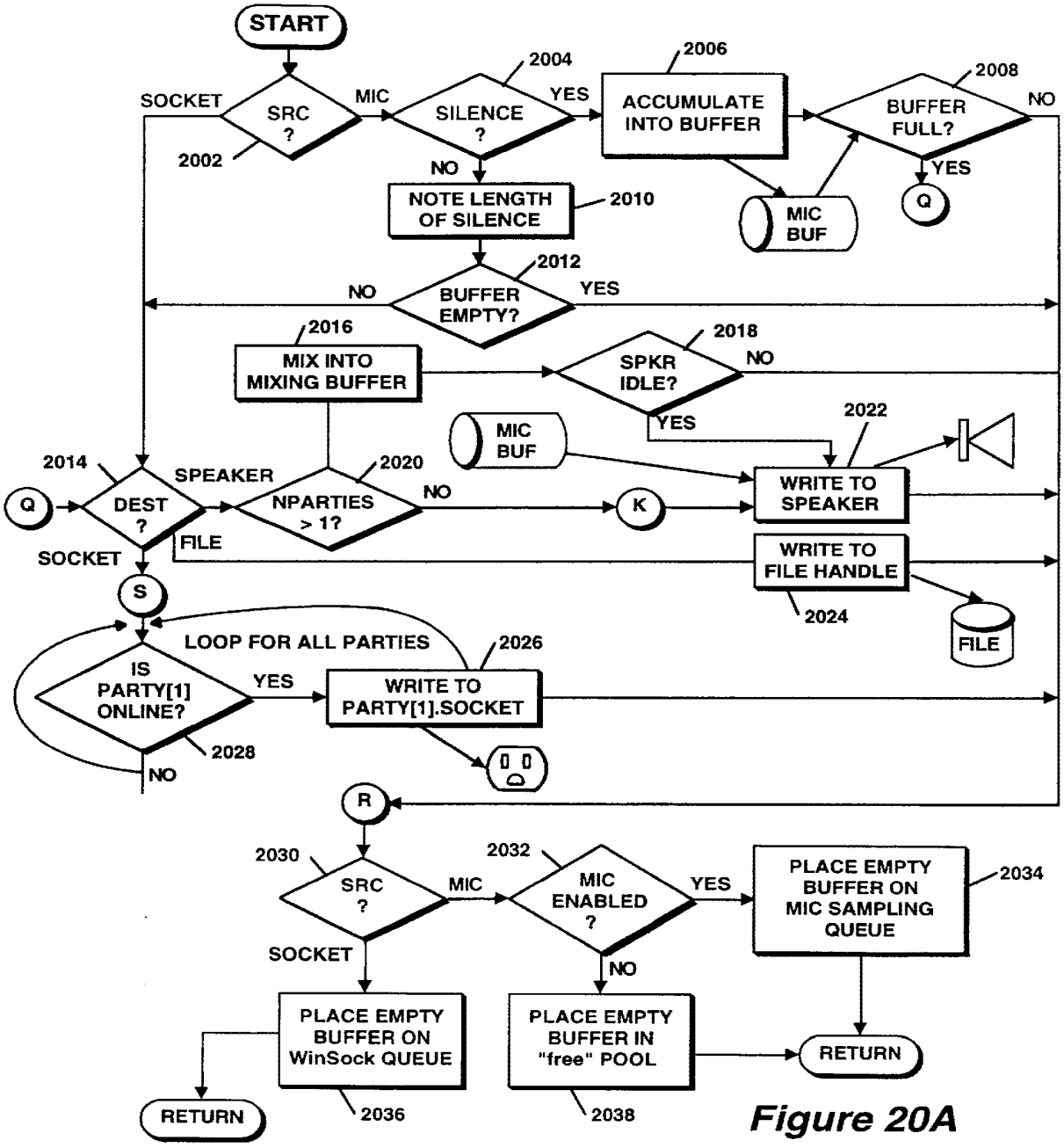

START
SRC ?
2002
SOCKET
MIC
SILENCE ?
2004
YES
NO
ACCUMULATE INTO BUFFER
2006
BUFFER FULL?
2008
NO
YES
Q
MIC BUF
NOTE LENGTH OF SILENCE
2010
BUFFER EMPTY?
2012
NO
YES
MIX INTO MIXING BUFFER
2016
SPKR IDLE?
2018
NO
YES
MIC BUF
2022
WRITE TO SPEAKER
Q
DEST ?
2014
SPEAKER
FILE
SOCKET
NPARTIES > 1?
2020
NO
K
WRITE TO FILE HANDLE
2024
FILE
S
LOOP FOR ALL PARTIES
IS PARTY[1] ONLINE?
2028
YES
NO
WRITE TO PARTY[1].SOCKET
2026
R
SRC ?
2030
MIC
MIC ENABLED ?
2032
YES
NO
PLACE EMPTY BUFFER ON MIC SAMPLING QUEUE
2034
SOCKET
PLACE EMPTY BUFFER ON WinSock QUEUE
2036
PLACE EMPTY BUFFER IN "free" POOL
2038
RETURN
RETURN

Figure 20A

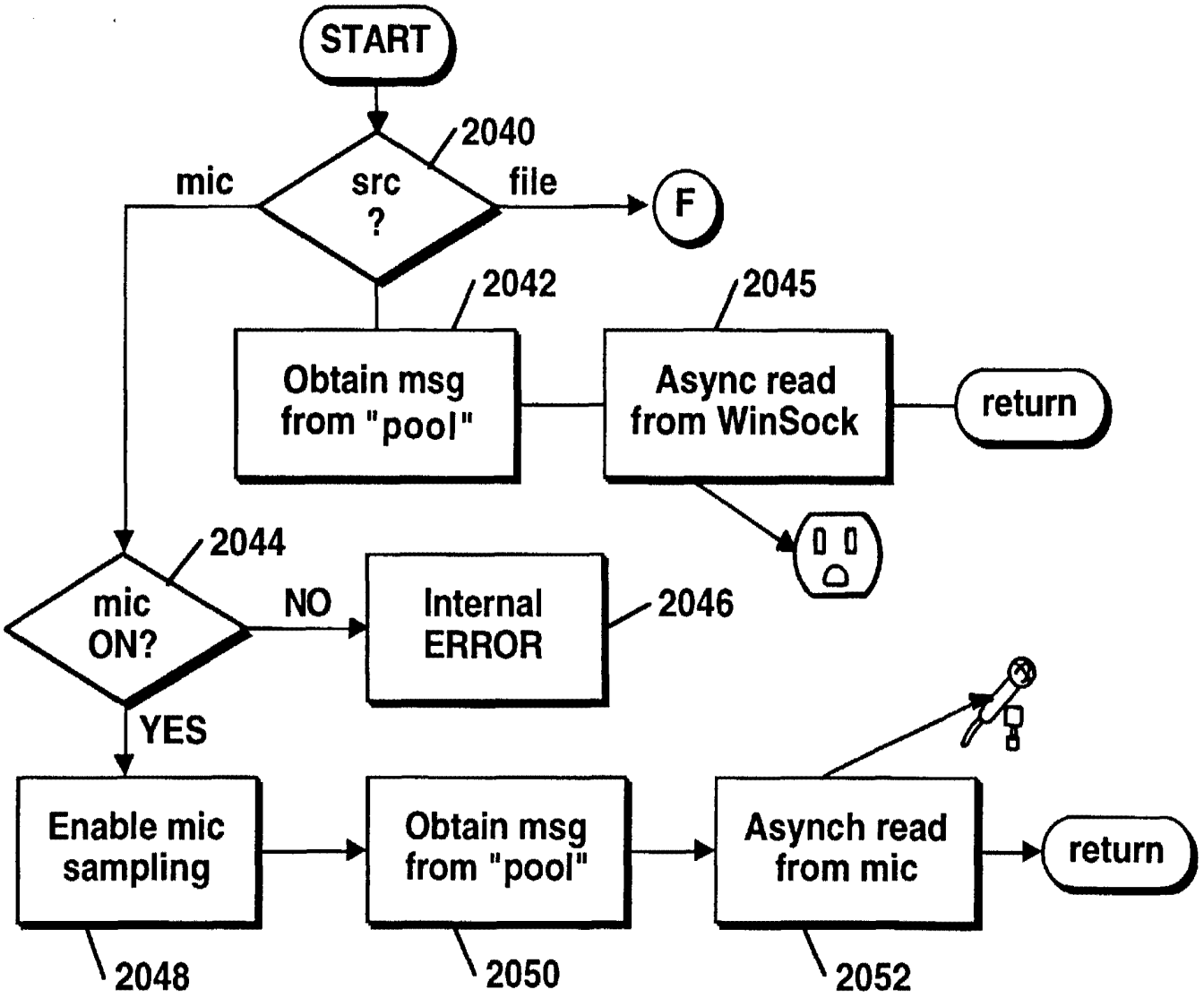

START
2040
src ?
mic
file
F
2042
Obtain msg from "pool"
2045
Async read from WinSock
return
2044
mic ON?
NO
Internal ERROR
2046
YES
Enable mic sampling
Obtain msg from "pool"
Asynch read from mic
return
2048
2050
2052

Figure 20B

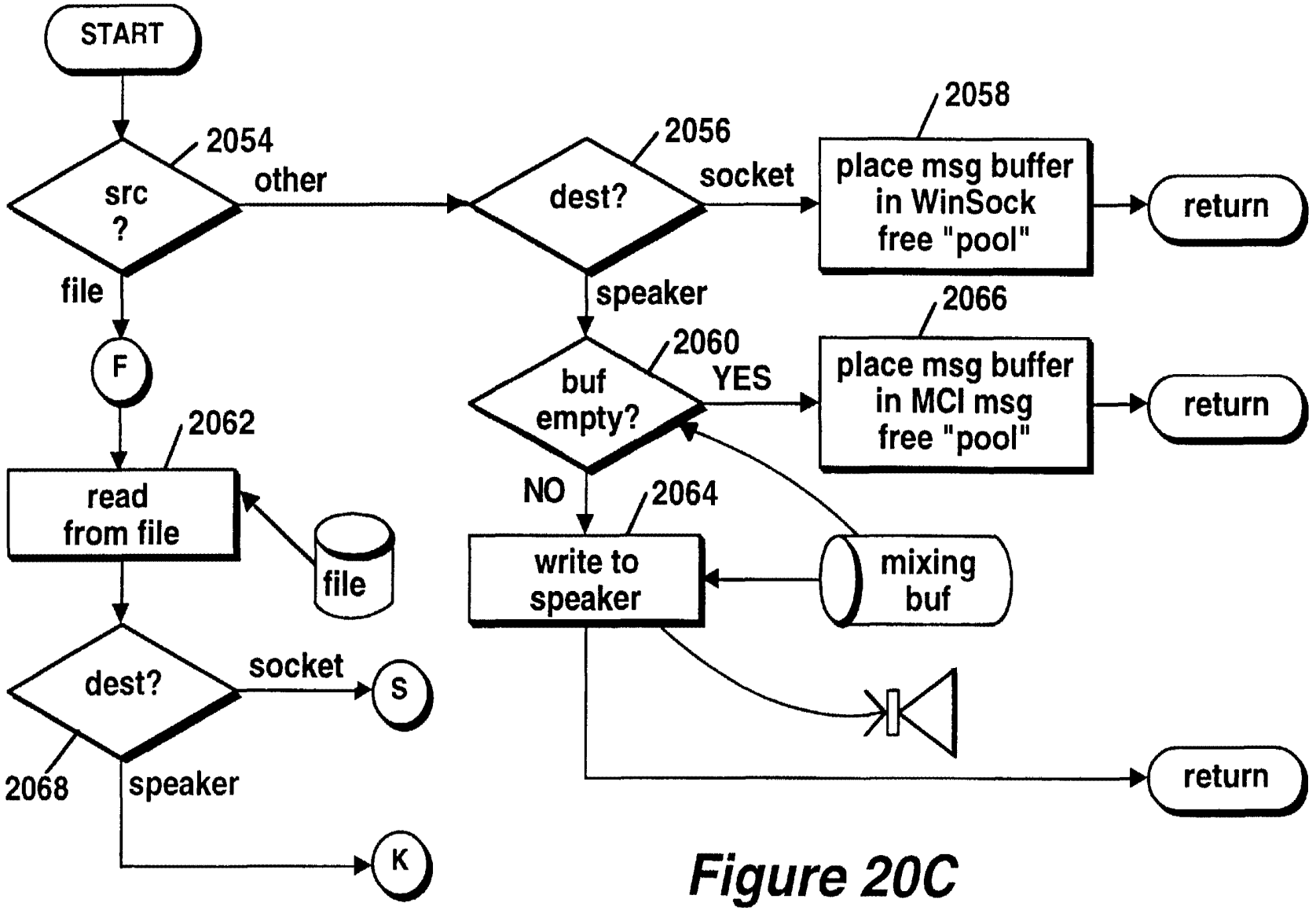

START
2054
src ?
other
file
F
2062
read from file
file
dest?
socket
S
2068
speaker
K
2056
dest?
socket
2058
place msg buffer in WinSock free "pool"
return
speaker
2060
buf empty?
YES
2066
place msg buffer in MCI msg free "pool"
return
NO
2064
write to speaker
mixing buf
return

Figure 20C

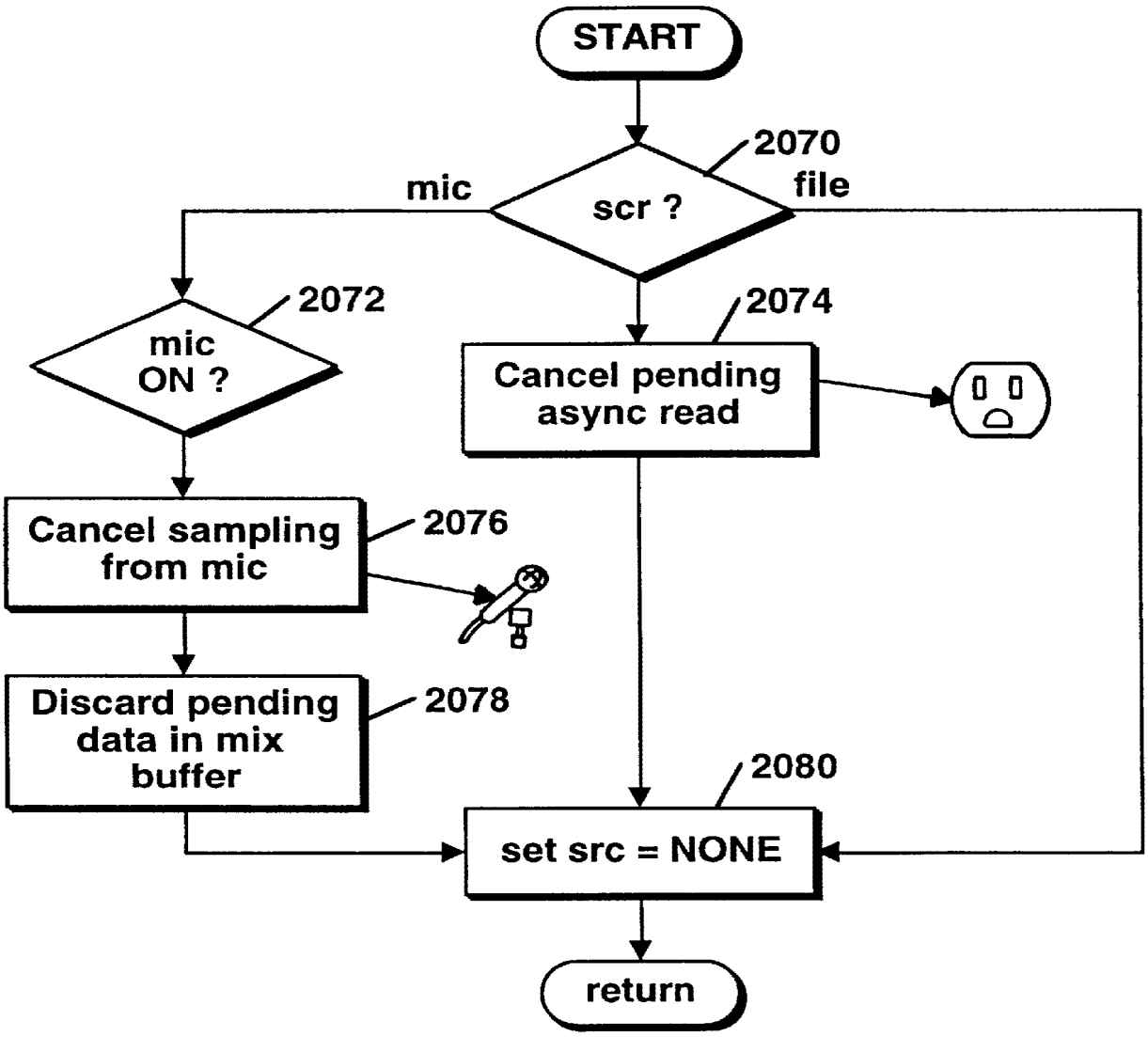

START
2070
scr ?
mic
file
2072
mic
ON ?
2074
Cancel pending
async read
Cancel sampling
from mic
2076
Discard pending
data in mix
buffer
2078
2080
set src = NONE
return

Figure 20D

GRAPHIC USER INTERFACE FOR INTERNET TELEPHONY APPLICATION

RELATED APPLICATIONS

This application is a continuation-in-part of U.S. patent application Ser. No. 08/533,115 (Pending) entitled Point-to-Point Internet Protocol, by Glenn W. Hutton, filed Sep. 25, 1995, commonly assigned, the subject matter of which is incorporated herein by reference.

To the extent that any matter contained herein is not already disclosed in the above-identified parent application a location claims priority to U.S. provisional patent application 60/025,415 entitled Internet Telephony Apparatus and Method by Mattaway et al., filed Sep. 4, 1996, and U.S. provisional patent application Ser. No. 60/024,251 entitled System and Methods for Point-To-Point Communications Over a Computer Network, by Mattaway et al., filed Aug. 21, 1996.

In addition, this application is one of a number of related applications filed on an even date herewith and commonly assigned, the subject matters of which are incorporated herein by reference, including the following:

- U.S. patent application Ser. No. 08/719,894, entitled Directory Server For Providing Dynamically Assigned Network Protocol Addresses, by Mattaway et al.;
- U.S. patent application Ser. No. 08/719,554, entitled Point-to-point Computer Network Communication Utility Utilizing Dynamically Assigned Network Protocol Addresses, by Mattaway et al.;
- U.S. patent application Ser. No. 08/719,640, entitled Method And Apparatus For Dynamically Defining Data Communication Utilities, by Mattaway et al.;
- U.S. patent application Ser. No. 08/719,891, entitled Method And Apparatus For Distribution And Presentation Of Multimedia Data Over A Computer Network, by Mattaway et al.;
- U.S. patent application Ser. No. 08/719,898, entitled Method And Apparatus For Providing Caller Identification Based Out-going Messages In A Computer Telephony Environment, by Mattaway et al.;
- U.S. patent application Ser. No. 08/718,911, entitled Method And Apparatus For Providing Caller Identification Based Call Blocking In A Computer Telephony Environment, by Mattaway et al.; and
- U.S. patent application Ser. No. 08/719,639, entitled Method And Apparatus For Providing Caller Identification Responses In A Computer Telephony Environment, by Mattaway et al.

FIELD OF THE INVENTION

The present invention relates, in general, to data processing systems, and more specifically, to a method and apparatus for facilitating audio communications over computer networks.

BACKGROUND OF THE INVENTION

The increased popularity of on-line services such as AMERICA ONLINE™, COMPUSERVE®, and other services such as Internet gateways have spurred applications to provide multimedia, including video and voice clips, to online users. An example of an online voice clip application is VOICE E-MAIL FOR WINCIM and VOICE E-MAIL FOR AMERICA ONLINE™, available from Bonzi Software, as described in "Simple Utilities Send Voice E-Mail Online", MULTIMEDIA WORLD, VOL. 2, NO. 9, Aug. 1995, p. 52. Using such Voice E-Mail software, a user may create an audio message to be sent to a predetermined E-mail address specified by the user.

Generally, devices interfacing to the Internet and other online services may communicate with each other upon establishing respective device addresses. One type of device address is the Internet Protocol (IP) address, which acts as a pointer to the device associated with the IP address. A typical device may have a Serial Line Internet Protocol or Point-to-Point Protocol (SLIP/PPP) account with a permanent IP address for receiving E-mail, voicemail, and the like over the Internet. E-mail and voicemail is generally intended to convey text, audio, etc., with any routing information such as an IP address and routing headers generally being considered an artifact of the communication, or even gibberish to the recipient.

Devices such as a host computer or server of a company may include multiple modems for connection of users to the Internet, with a temporary IP address allocated to each user. For example, the host computer may have a general IP address "XXX.XXX.XXX," and each user may be allocated a successive IP address of XXX.XXX.XXX.10, XXX.XXX.XXX.11, XXX.XXX.XXX.12, etc. Such temporary IP addresses may be reassigned or recycled to the users, for example, as each user is successively connected to an outside party. For example, a host computer of a company may support a maximum of 254 IP addresses which are pooled and shared between devices connected to the host computer.

Permanent IP addresses of users and devices accessing the Internet readily support point-to-point communications of voice and video signals over the Internet. For example, real-time video teleconferencing has been implemented using dedicated IP addresses and mechanisms known as reflectors. Due to the dynamic nature of temporary IP addresses of some devices accessing the Internet, point-to-point communications in real-time of voice and video have been generally difficult to attain.

The ability to locate users having temporary or dynamically assigned Internet Protocol address has been difficult without the user manually initiating the communication. Accordingly, spontaneous, real-time communications with such users over computer networks have been impractical. Further, it is desirable to have a communication utility which contains familiar features and functions to current communication utility such as telephones and cellular telephones. It is even further desirable to utilize the current graphic user interface technology associated with computer software in a manner to achieve a more flexible interface to a such a communication utility, without the limitations associated with hardware.

Accordingly, a need exists for a way to determine whether computer users are actively connected to a computer network.

A further need exists for a way to obtain the dynamically assigned Internet Protocol address of a user having on-line status with respect to a computer network, particularly the Internet.

An even further need exists for a method and apparatus by which to establish real-time, point-to-point communications over a computer network using a communication utility having an interface which combines the familiar aspects of current hardware communication utilities but which allows for the flexibility associated with graphic user interfaces.

SUMMARY OF THE INVENTION

The above deficiencies in the prior art and previously described needs are fulfilled by the present invention which

provides a virtual communications utility displayable on computer system interfaces which enables real-time, point-to-point communications over computer networks. According to one embodiment of the present invention, a computer program product for use with a computer system having a display and an audio transducer comprises a computer usable medium having computer readable code means embodied therein comprising program code means for generating a user interface, program code means responsive to user input commands for establishing a point-to-point communication link with another computer over a network and program code means responsive to audio data from the audio transducer for transmitting the audio data over the communication link.

According to another embodiment of the present invention, a computer program product for use with a computer system comprises a computer usable medium having computer readable program code means embodied thereon comprising code means for transmitting from a client process to a server a query as to whether a second client process is connected to the computer network, program code means for receiving the network protocol address of the second process from the server, and program code means responsive to the network protocol address of the second client process for establishing a point-to-point communication link between the first client process and the second client process.

BRIEF DESCRIPTION OF THE DRAWINGS

The features of the invention will become more readily apparent and may be better understood by referring to the following detailed description of an illustrative embodiment of the present invention, taken in conjunction with the accompanying drawings, in which:

FIG. **1** illustrates, in block diagram format, a system for the disclosed point-to-point Internet protocol;

FIG. **2** illustrates, in block diagram format, the system using a secondary point-to-point Internet protocol;

FIG. **3** illustrates, in block diagram format, the system of FIGS. **1–2** with the point-to-point Internet protocol established;

FIG. **4** is another block diagram of the system of FIGS. **1–2** with audio communications being conducted;

FIG. **5** illustrates a display screen for a processing unit;

FIG. **6** illustrates another display screen for a processing unit;

FIG. **7** illustrates a flowchart of the initiation of the point-to-point Internet protocols;

FIG. **8** illustrates a flowchart of the performance of the primary point-to-point Internet protocols;

FIG. **9** illustrates a flowchart of the performance of the secondary point-to-point Internet protocol;

FIG. **10** illustrates schematically a computer network over which the present invention may be utilized;

FIG. **11** is a block diagram of a computer system suitable for use with the present invention;

FIG. **12** is a block diagram of an audio processing card suitable for use with the computer system of FIG. **10**;

FIGS. **13** A–B are schematic block diagrams of the elements comprising the inventive computer network telephony mechanism of the present invention;

FIG. **14** is a screen capture illustrating an exemplary user interface of the present invention;

FIG. **15** is a schematic diagram illustrating the architecture of the connection server apparatus suitable for use with the present invention;

FIG. **16**A is a flowchart illustrating the process steps performed by the connection server in accordance with the present invention;

FIG. **16**B is a flowchart illustrating the process steps performed in accordance with the information server of the present invention;

FIGS. **17**A–B are schematic block diagrams illustrating of the packet transfer sequence in accordance with the communication protocol of the present invention;

FIGS. **18**A–D are conceptual block diagrams illustrating user interface and graphic user interface objects utilized by the communication utility of the present invention;

FIGS. **19**A–C are conceptual block diagrams illustrating the event manager and media engine objects utilized by the communication utility of the present invention; and

FIGS. **20**A–D illustrate process steps performed by the media engine function of the communication utility in accordance with the present invention.

DETAILED DESCRIPTION

Referring now in specific detail to the drawings, with like reference numerals identifying similar or identical elements, as shown in FIG. **1**, the present disclosure describes a point-to-point network protocol and system **10** for using such a protocol.

In an exemplary embodiment, the system **10** includes a first processing unit **12** for sending at least a voice signal from a first user to a second user. The first processing unit **12** includes a processor **14**, a memory **16**, an input device **18**, and an output device **20**. The output device **20** includes at least one modem capable of, for example, 14.4 Kilobit-per-second communications and operatively connected via wired and/or wireless communication connections to the Internet or other computer networks such as an Intranet, i.e., a private computer network. One skilled in the art would understand that the input device **18** may be implemented at least in part by the modem of the output device **20** to allow input signals from the communication connections to be received. The second processing unit **22** may have a processor, memory, and input and output devices, including at least one modem and associated communication connections, as described above for the first processing unit **12**. In an exemplary embodiment, each of the processing units **12, 22** may execute the WEBPHONE® Internet telephony application available from NetSpeak Corporation, Boca Raton, Fla., which is capable of performing the disclosed point-to-point Internet protocol and system **10**, as described herein.

The first processing unit **12** and the second processing unit **22** are operatively connected to the Internet **24** by communication devices and software known in the art, such as an Internet Service Provider (ISP) or an Internet gateway. The processing units **12, 22** may be operatively interconnected through the Internet **24** to a connection server **26**, and may also be operatively connected to a mail server **28** associated with the Internet **24**.

The connection server **26** includes a processor **30**, a timer **32** for generating time stamps, and a memory such as a database **34** for storing, for example, E-mail and Internet Protocol (IP) addresses of logged-in units. In an exemplary embodiment, the connection server **26** may be a SPARC 5 server or a SPARC 20 server, available from SUN MICROSYSTEMS, INC., Mountain View, Calif., having a central processing unit (CPU) as processor **30**, an operating system (OS) such as UNIX, for providing timing operations

such as maintaining the timer **32**, a hard drive or fixed drive, as well as dynamic random access memory (DRAM) for storing the database **34**, and a keyboard and display and/or other input and output devices (not shown in FIG. **1**). The database **34** may be an SQL database available from ORACLE or INFORMIX.

In an exemplary embodiment, the mail server **28** may be implemented with a Post Office Protocol (POP) Version **3** mail server and the Simple Mail Transfer Protocol (SMTP), including a processor, memory, and stored programs operating in a UNIX environment, or, alternatively, another OS, to process E-mail capabilities between processing units and devices over the Internet **24**.

In the illustrative embodiment, the POP protocol is utilized to retrieve E-mail messages from mail server **28** while the SMTP protocol is used to submit E-mail message to Internet **24**.

The first processing unit **12** may operate the disclosed point-to-point Internet protocol by a computer program described hereinbelow in conjunction with FIG. **6**, which may be implemented from compiled and /or interpreted source code in the C++ programming language and which may be downloaded to the first processing unit **12** from an external computer. The operating computer program may be stored in the memory **16**, which may include about 8 MB RAM and/or a hard or fixed drive having about 8 MB of available memory. Alternatively, the source code may be implemented in the first processing unit **12** as firmware, as an erasable read only memory (EPROM), etc. It is understood that one skilled in the art would be able to use programming languages other than C++ to implement the disclosed point-to-point network protocol and system **10**.

The processor **14** receives input commands and data from a first user associated with the first processing unit **12** though the input device **18**, which may be an input port connected by a wired, optical, or a wireless connection for electromagnetic transmissions, or alternatively may be transferable storage media, such as floppy disks, magnetic tapes, compact disks, or other storage media including the input data from the first user.

The input device **18** may include a user interface (not shown) having, for example, at least one button actuated by the user to input commands to select from a plurality of operating modes to operate the first processing unit **12**. In alternative embodiments, the input device **18** may include a keyboard, a mouse, a touch screen, and/or a data reading device such as a disk drive for receiving the input data from input data files stored in storage media such as a floppy disk or, for example, an 8 mm storage tape. The input device **18** may alternatively include connections to other computer systems to receive the input commands and data therefrom.

The first processing unit **12** may include a visual interface for use in conjunction with the input device **18** and output device **20** similar to those screens illustrated in FIGS. **5–6**, discussed below. It is also understood that alternative devices may be used to receive commands and data from the user, such as keyboards, mouse devices, and graphical user interfaces (GUI) such as WINDOWS™ 3.1 available form MICROSOFT Corporation, Redmond, Wash., and other operating systems and GUIs, such as OS/2 and OS/2 WARP, available from IBM CORPORATION, Boca Raton, Fla. Processing unit **12** may also include microphones and/or telephone handsets for receiving audio voice data and commands, speech or voice recognition devices, dual tone multi-frequency (DTMF) based devices, and/or software known in the art to accept voice data and commands and to operate the first processing unit **12**.

In addition, either of the first processing unit **12** and the second processing unit **22** may be implemented in a personal digital assistant (PDA) providing modem and E-mail capabilities and Internet access, with the PDA providing the input/output screens for mouse interactions or for touch-screen activation as shown, for example, in FIGS. **5–6**, as a combination of the input device **18** and output device **20**.

For clarity of explanation, the illustrative embodiment of the disclosed point-to-point Internet protocol and system **10** is presented as having individual functional blocks, which may include functional blocks labeled as "processor" and "processing unit". The functions represented by these blocks may be provided through the use of either shared or dedicated hardware, including, but not limited to, hardware capable of executing software. For example, the functions of each of the processors and processing units presented herein may be provided by a shared processor or by a plurality of individual processors. Moreover, the use of the functional blocks with accompanying labels herein is not to be construed to refer exclusively to hardware capable of executing software. Illustrative embodiments may include digital signal processor (DSP) hardware, such as the AT&T DSP16 or DSP32 C, read-only memory (ROM) for storing software performing the operations discussed below, and random access memory (RAM) for storing DSP results. Very large scale integration (VLSI) hardware embodiments, as well as custom VLSI circuitry in combination with a general purpose DSP circuit, may also be provided. Any and all of these embodiments may be deemed to fall within the meaning of the labels for the functional blocks as used herein.

The processing units **12**, **22** are capable of placing calls and connecting to other processing units connected to the Internet **24**, for example, via dialup SLIP/PPP lines. In an exemplary embodiment, each processing unit assigns an unsigned long session number, for example, a 32-bit long sequence in a *.ini file for each call. Each call may be assigned a successive session number in sequence, which may be used by the respective processing unit to associate the call with one of the SLIP/PPP lines, to associate a <ConnectOK> response signal with a <Connect Request> signal, and to allow for multiplexing and demultiplexing of inbound and outbound conversations on conference lines, as explained hereinafter.

For callee (or called) processing units with fixed IP addresses, the caller (or calling) processing unit may open a "socket", i.e. a file handle or address indicating where data is to be sent, and transmit a <Call> command to establish communication with the callee utilizing, for example, datagram services such as Internet Standard network layering as well as transport layering, which may include a Transport Control Protocol (TCP) or a User Datagram Protocol (UDP) on top of the IP. Typically, a processing unit having a fixed IP address may maintain at least one open socket and a called processing unit waits for a <Call> command to assign the open socket to the incoming signal. If all lines are in use, the callee processing unit sends a BUSY signal or message to the caller processing unit. As shown in FIG. **1**, the disclosed point-to-point Internet protocol and system **10** operate when a callee processing unit does not have a fixed or predetermined IP address. In the exemplary embodiment and without loss of generality, the first processing unit **12** is the caller processing unit and the second processing unit **22** is the callee processing unit. When either of processing units **12**, **22** logs on to the Internet via a dial-up connection, the respective unit is provided a dynamically allocated IP address by an Internet service provider.

Upon the first user initiating the point-to-point Internet protocol when the first user is logged on to the Internet **24**,

the first processing unit **12** automatically transmits its associated E-mail address and its dynamically allocated IP address to the connection server **26**. The connection server **26** then stores these addresses in the database **34** and time stamps the stored addresses using timer **32**. The first user operating the first processing unit **12** is thus established in the database **34** as an active on-line party available for communication using the disclosed point-to-point Internet protocol. Similarly, a second user operating the second processing unit **22**, upon connection to the Internet **24** through an Internet service provider, is processed by the connection server **26** to be established in the database **34** as an active on-line party.

The connection server **26** may use the time stamps to update the status of each processing unit; for example, after 2 hours, so that the on-line status information stored in the database **34** is relatively current. Other predetermined time periods, such as a default value of 24 hours, may be configured by a systems operator.

The first user with the first processing unit **12** initiates a call using, for example, a Send command and/or a command to speeddial an N^{TH} stored number, which may be labeled [SND] and [SPD] [N], respectively, by the input device **18** and/or the output device **20**, such as shown in FIGS. **5–6**. In response to either the Send or speeddial commands, the first processing unit **12** retrieves from memory **16** a stored E-mail address of the callee corresponding to the N^{TH} stored number. Alternatively, the first user may directly enter the E-mail address of the callee.

The first processing unit **12** then sends a query, including the E-mail address of the callee, to the connection server **26**. The connection server **26** then searches the database **34** to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. If the callee is active and on-line, the connection server **26** then performs the primary point-to-point Internet protocol; i.e. the IP address of the callee is retrieved from the database **34** and sent to the first processing unit **12**. The first processing unit **12** may then directly establish the point-to-point Internet communications with the callee using the IP address of the callee.

If the callee is not on-line when the connection server **26** determines the callee's status, the connection server **26** sends an OFF-LINE signal or message to the first processing unit **12**. The first processing unit **12** may also display a message such as "Called Party Off-Line" to the first user.

When a user logs off or goes off-line from the Internet **24**, the connection server **26** updates the status of the user in the database **34**; for example, by removing the user's information, or by flagging the user as being off-line. The connection server **26** may be instructed to update the user's information in the database **34** by an off-line message, such as a data packet, sent automatically from the processing unit of the user prior to being disconnected from the connection server **26**. Accordingly, an off-line user is effectively disabled from making and/or receiving point-to-point Internet communications.

As shown in FIGS. **2–4**, the disclosed secondary point-to-point Internet protocol may be used as an alternative to the primary point-to-point Internet protocol described above, for example, if the connection server **26** is non-responsive, unreachable, inoperative, and/or unable to perform the primary point-to-point Internet protocol, as a non-responsive condition. Alternatively, the disclosed secondary point-to-point Internet protocol may be used independent of the primary point-to-point Internet protocol. In the disclosed secondary point-to-point Internet protocol, the first processing unit **12** sends a <ConnectReq> message via E-mail over the Internet **24** to the mail server **28**. The E-mail including the <ConnectReq> message may have, for example, the subject

[*wp#XXXXXXXX#nnn.nnn.nnn.#emailAddr]

where nnn.nnn.nnn.nnn. is the current (i.e. temporary or permanent) IP address of the first user, and XXXXXXXX is a session number, which may be unique and associated with the request of the first user to initiate point-to-point communication with the second user.

The following E-mail messages are transmitted to a remote users post office protocol server via simple mail transport protocol using MIME by the event manager, as explained hereinafter.

<ConnectRequest>
<CampRequest>
<VoiceMail>
<FileTransfer>
<E-mail>

The following E-mail messages are received from a local WebPhone users POP server via the POP protocol using MIME by the event manager, as explained hereinafter.

<Connect Request>
<Camp Request>
<Voice Mail>
<File Transfer>
<E-mail>
<Registration>

As described above, the first processing unit **12** may send the <ConnectReq> message in response to an unsuccessful attempt to perform the primary point-to-point Internet protocol. Alternatively, the first processing unit **12** may send the <ConnectReq> message in response to the first user initiating a SEND command or the like.

After the <ConnectRequest> message via E-mail is sent, the first processing unit **12** opens a socket and waits to detect a response from the second processing unit **22**. A timeout timer, such as timer **32**, may be set by the first processing unit **12**, in a manner known in the art, to wait for a predetermined duration to receive a <ConnectOK> signal. The processor **14** of the first processing unit **12** may cause the output device **20** to output a Ring signal to the user, such as an audible ringing sound, about every 3 seconds. For example, the processor **14** may output a *.wav file, which may be labeled RING.WAV, which is processed by the output device **20** to output an audible ringing sound.

Second processing unit **22** polls mail server **28** at an interval, for example, once a minute, to check for incoming E-mail. Generally, second processing unit **22** checks the messages stored on mail server **28** at regular intervals to wait for and detect incoming E-mail indicating a <CONNECT REQ> message from first processing unit **12**.

Typically, for sending E-mail to user's having associated processing units operatively connected to a host computer or server operating an Internet gateway, E-mail for a specific user may be sent over Internet **24** and directed to the permanent IP address of the mail server providing the target user's mail services. The E-mail is transported by a standard protocol, for example, SMTP, and stored into memory (not shown in FIG. **1**) associated with mail server **28**.

The E-mail may subsequently be retrieved by processing unit **22** on behalf of the user with another standard protocol, for example POP **3**. The actual IP address utilized by the

user's processing unit is immaterial to the retrieval of E-mail, as the mail server **28** can, for example, be polled or queried from any point on the network.

Upon receiving the incoming E-mail signal from the first processing unit **12**, the second processing unit **22** may assign or may be assigned a temporary IP address. Therefore, the delivery of the E-mail through the Internet **24** provides the second processing unit **22** with a session number as well as IP addresses of both the first processing unit **12** and the second processing unit **22**.

Point-to-point communication may then be established by the processing unit **22** processing the E-mail signal to extract the <ConnectRequest> message, including the IP address of the first processing unit **12** and the session number. The second processing unit **22** may then open a socket and generate a <ConnectOK> response signal, which includes the temporary IP address of the second processing unit **22** as well as the session number of the first processing unit.

The second processing unit **22** sends the <ConnectOK> signal directly over the Internet **24** to the IP address of the first processing unit **12** without processing by the mail server **28**, and a timeout timer of the second processing unit **22** may be set to wait and detect a <Call> signal expected from the first processing unit **12**.

Real-time point-to-point communication of audio signals over the Internet **24**, as well as video and voicemail, may thus be established and supported without requiring permanent IP addresses to be assigned to either of the users or processing units **12, 22**. For the duration of the realtime point-to-point link, the relative permanence of the current IP addresses of the processing units **12, 22** is sufficient, whether the current IP addresses were permanent (i.e. predetermined or preassigned) or temporary (i.e. assigned upon initiation of the point-to-point communication).

In the exemplary embodiment, a first user operating the first processing unit **12** is not required to be notified by the first processing unit **12** that an E-mail is being generated and sent to establish the point-to-point link with the second user at the second processing unit **22**. Similarly, the second user is not required to be notified by the second processing unit **22** that an E-mail has been received and/or a temporary IP address is associated with the second processing unit **22**. The processing units **12, 22** may perform the disclosed point-to-point Internet protocol automatically upon initiation of the point-to-point communication command by the first user without displaying the E-mail interactions to either user. Accordingly, the disclosed point-to-point Internet protocol may be transparent to the users. Alternatively, either of the first and second users may receive, for example, a brief message of "CONNECTION IN PROGRESS" or the like on a display of the respective output device of the processing units **12, 22**.

After the initiation of either the primary or the secondary point-to-point Internet protocols described above in conjunction with FIGS. **1–2**, the point-to-point communication link over the Internet **24** may be established as shown in FIGS. **3–4** in a manner known in the art. For example, referring to FIG. **3**, upon receiving the <ConnectOK> signal from the second processing unit **22**, the first processing unit **12** extracts the IP address of the second processing unit **22** and the session number, and the session number sent from the second processing unit **22** is then checked with the session number originally sent from the first processing unit **12** in the <ConnectReq> message as E-mail. If the session numbers sent and received by the processing unit **12** match, then the first processing unit **12** sends a <Call> signal directly over the Internet **24** to the second processing unit **22**; i.e. using the IP address of the second processing unit **22** provided to the first processing unit **12** in the <ConnectOK> signal.

Upon receiving the <Call> signal, the second processing unit **22** may then begin a ring sequence, for example, by indicating or annunciating to the second user that an incoming call is being received. For example, the word "CALL" may be displayed on the output device of the second processing unit **22**. The second user may then activate the second processing unit **22** to receive the incoming call.

Referring to FIG. **4**, after the second processing unit **22** receives the incoming call, realtime audio and/or video conversations may be conducted in a manner known in the art between the first and second users through the Internet **24**, for example, by compressed digital audio signals. Each of the processing units **12, 22** also display to each respective user the words "IN USE" to indicate that the point-to-point communication link is established and audio or video signals are being transmitted.

In addition, either user may terminate the point-to-point communication link by, for example, activating a termination command, such as by activating an [END] button or icon on a respective processing unit, causing the respective processing unit to send an <End> signal which causes both processing units to terminate the respective sockets, as well as to perform other cleanup commands and functions known in the art.

FIGS. **5–6** illustrate examples of display screens **36** which may be output by a respective output device of each processing unit **12, 22** of FIGS. **1–4** for providing the disclosed point-to-point Internet protocol and system **10**. Such display screens may be displayed on a display of a personal computer (PC) or a PDA in a manner known in the art.

As shown in FIG. **5**, a first display screen **36** includes a status area **38** for indicating, for example, a called user by name and/or by IP address or telephone number; a current function such as C2; a current time; a current operating status such as "IN USE", and other control icons such as a down arrow icon **40** for scrolling down a list of parties on a current conference line. The operating status may include such annunciators as "IN USE," "IDLE," "BUSY," "NO ANSWER," "OFFLINE," "CALL," "DIALING," "MESSAGES," and "SPEEDDIAL."

Other areas of the display screen **36** may include activation areas or icons for actuating commands or entering data. For example, the display screen **36** may include a set of icons **42** arranged in columns and rows including digits **0–9** and commands such as END, SND, HLD, etc. For example, the END and SND commands may be initiated as described above, and the HLD icon **44** may be actuated to place a current line on hold. Such icons may also be configured to substantially simulate a telephone handset or a cellular telephone interface to facilitate ease of use, as well as to simulate function keys of a keyboard. For example, icons labeled L1–L4 may be mapped to function keys F1–F4 on standard PC keyboards, and icons C1–C3 may be mapped to perform as combinations of function keys, such as CTRL-F1, CTRL-F2, and CTRL-F3, respectively. In addition, the icons labeled L1–L4 and C1–C3 may include circular regions which may simulate lamps or light emitting diodes (LEDs) which indicate that the function or element represented by the respective icon is active or being performed.

Icons L1–L4 may represent each of 4 lines available to the caller, and icons C1–C3 may represent conference calls using at least one line to connect, for example, two or more parties in a conference call. The icons L1–L4 and C1–C3 may indicate the activity of each respective line or confer-

ence line. For example, as illustrated in FIG. **5**, icons L1–L2 may have lightly shaded or colored circles, such as a green circle, indicating that each of lines 1 and 2 are in use, while icons L3–L4 may have darkly shaded or color circles, such as a red or black circle, indicating that each of lines 3 and 4 are not in use. Similarly, the lightly shaded circle of the icon labeled C2 indicates that the function corresponding to C2 is active, as additionally indicated in the status are **38**, while darkly shaded circles of icons labeled C1 and C3 indicate that such corresponding functions are not active.

The icons **42** are used in conjunction with the status area **38**. For example, using a mouse for input, a line that is in use, as indicated by the lightly colored circle of the icon, may be activated to indicate a party's name by clicking a right mouse button for 5 seconds until another mouse click is actuated or the [ESC] key or icon is actuated. Thus, the user may switch between multiple calls in progress on respective lines.

Using the icons as well as an input device such as a mouse, a user may enter the name or alias or IP address, if known, of a party to be called by either manually entering the name, by using the speeddial feature, or by double clicking on an entry in a directory stored in the memory, such as the memory **16** of the first processing unit **12**, where the directory entries may be scrolled using the status area **38** and the down arrow icon **40**.

Once a called party is listed in the status area **38** as being active on a line, the user may transfer the called party to another line or a conference line by clicking and dragging the status area **38**, which is represented by a reduced icon **46**. Dragging the reduced icon **46** to any one of line icons L1–L4 transfers the called party in use to the selected line, and dragging the reduced icon **46** to any one of conference line icons C1–C3 adds the called party to the selected conference call.

Other features may be supported, such as icons **48–52**, where icon **48** corresponds to, for example, an ALT-X command to exit the communication facility of a processing unit, and icon **50** corresponds to, for example, an ALT-M command to minimize or maximize the display screen **36** by the output device of the processing unit. Icon **52** corresponds to an OPEN command, which may, for example, correspond to pressing the O key on a keyboard, to expand or contract the display screen **36** to represent the opening and closing of a cellular telephone. An "opened" configuration is shown in FIG. **5**, and a "closed" configuration is shown in FIG. **6**. In the "opened" configuration, additional features such as output volume (VOL) controls, input microphone (MIC) controls, waveform (WAV) sound controls, etc.

The use of display screens such as those shown in FIGS. **5–6** provided flexibility in implementing various features available to the user. It is to be understood that additional features such as those known in the art may be supported by the processing units **12**, **22**.

Alternatively, it is to be understood that one skilled in the art may implement the processing units **12**, **22** to have the features of the display screens in FIGS. **5–6** in hardware; i.e. a wired telephone or wireless cellular telephone may include various keys, LEDs, liquid crystal displays (LCDs), and touchscreen actuators corresponding to the icons and features shown in FIGS. **5–6**. In addition, a PC may have the keys of a keyboard and mouse mapped to the icons and features shown in FIGS. **5–6**.

Referring to FIG. **7**, the disclosed point-to-point Internet protocol and system **10** is illustrated. First processing unit **12** initiates the point-to-point Internet protocol in step **56** by sending a query from the first processing unit **12** to the connection server **26**. If connection server **26** is operative to perform the point-to-point Internet protocol, in step **58**, first processing unit **12** receives an on-line status signal from the connection server **26**, such signal may include the IP address of the callee or a "Callee Off-Line" message. Next, first processing unit **12** performs the primary point-to-point Internet protocol in step **60**, which may include receiving, at the first processing unit **12**, the IP address of the callee if the callee is active and on-line. Alternatively, processing unit **60** may initiate and perform the secondary point-to-point Internet protocol in step **62**, if connection server **26** is not operable.

Referring to FIG. **8**, in conjunction with FIGS. **1** and **3–4**, the disclosed point-to-point Internet protocol and system **10** are illustrated. Connection server **26** starts the primary point-to-point Internet protocol, in step **64**, and timestamps and stores E-mail and IP addresses of logged-in users and processing units in the database **34** in step **66**. Connection server **26** receives a query from a first processing unit **12** in step **68** to determine whether a second user or second processing unit **22** is logged-in to the Internet **24**, with the second user being specified, for example, by an E-mail address. Connection server **26** retrieves the IP address of the specified user from the database **34** in step **70**, if the specified user is logged-in to the Internet, and sends the retrieved IP address to the first processing unit **12** in step **72** to enable first processing unit **12** to establish point-to-point communications with the specified second user.

The disclosed secondary point-to-point Internet protocol operates as shown in FIG. **9**. First processing unit **12** generates an E-mail signal, including a session number and a first IP address corresponding to a first processing unit in step **76**. First processing unit **12** transmits the E-mail signal as a <ConnectRequest> signal to the Internet **24** in step **78**. The E-mail signal is delivered through the Internet **24** using a mail server **28** to the second processing unit **22** in step **80**. Second processing unit **22** extracts the session number and the first IP address from the E-mail signal in step **82** and transmits or sends the session number and a second IP address corresponding to the second processing unit **22**, back to the first processing unit **12** through the Internet **24**, in step **84**. First processing unit **12** verifies the session number received from the second processing unit **22** in step **86**, and establishes a point-to-point Internet communication link between the first processing unit **12** and second processing unit **22** using the first and second IP addresses in step **88**.

The primary and secondary point-to-point Internet protocols previously described enable users to establish real-time direct communication links over the Internet or other computer networks without the need for any interaction with connection server **26**, the connection server providing only directory and information related services.

FIG. **10** illustrates an exemplary computer network **1000** over which the invention may operate. A first processing unit **1012** is coupled to a computer network, illustrated here as the Internet **1010**, through an Internet service provider **1014**. Similarly, a second processing unit **1022** is coupled to Internet **1010** through Internet service provider **1018**. The inventive directory server **1020** is similarly coupled to Internet **1010** through Internet service provider **1026**. Directory server **1020** further comprises a connection server **1022** and information server **1024**, as will be explained hereinafter. The first processing unit **1012**, second processing unit **1022** and directory server **1020** are operatively coupled to each other via the Internet **1010**. It will be obvious to those reasonably skilled in the art that network **1000** is not

restricted to implementation over the Internet **1010** but may comprise other network configurations such as a local area network (LAN), a wide area network (WAN), a global area network or any number of private networks currently referred to as an Intranet. Such networks may be implemented with any number of hardware and software components, transmission media and network protocols.

Exemplary Computer Architecture

FIG. **11** illustrates the system architecture for a computer system **1100** such as an IBM PS/2®, suitable for implementing first and second processing units **1012** and **1022**, respectively, of FIG. **10**, as well as global server **1020**. The exemplary computer system of FIG. **11** is for descriptive purposes only. Although the description may refer to terms commonly used in describing particular computer systems, such as in IBM PS/2 computer, the description and concepts equally apply to other computer systems ranging from personal digital assistants (PDAs) to workstations to mainframe systems.

Computer system **1100** includes a central processing unit (CPU) **1105**, which may be implemented with a conventional microprocessor. System **1100** further includes a random access memory (RAM) **1110** for temporary storage of information, and a read only memory (ROM) **1115** for permanent storage of information. A memory controller **1120** is provided for controlling RAM **1110**. A bus **1130** interconnects the components of computer system **1100**. A bus controller **1125** is provided for controlling bus **1130**. An interrupt controller **1135** is used for receiving and processing various interrupt signals from the system components.

Mass storage may be provided by diskette **1142**, CD ROM **1147**, or hard drive **1152**. Data and software may be exchanged with computer system **1100** via removable media such as diskette **1142** and CD ROM **1147**. Diskette **1142** is insertable into diskette drive **1141** which is, in turn, connected to bus **1130** by a controller **1140**. Similarly, CD ROM **1147** is insertable into CD ROM drive **1146** which is, in turn, connected to bus **1130** by controller **1145**. Hard disk **1152** is part of a fixed disk drive **1151** which is connected to bus **1130** by controller **1150**.

User input to computer system **100** may be provided by a number of devices. For example, a keyboard **1156** and mouse **1157** are connected to bus **1130** by controller **1155**. An audio transducer **1196**, which may act as both a microphone and a speaker, is connected to bus **1130** by audio controller **1197**, as illustrated. It will be obvious to those reasonably skilled in the art that other input devices, such as a pen and/or tablet may be connected to bus **1130** with an appropriate controller and software, as required. DMA controller **1160** is provided for performing direct memory access to RAM **1110**. A visual display is generated by video controller **1165** which controls video display **1170**. Computer system **1100** also includes a communications adaptor **1190** which allows the system to be interconnected to a network such as a local area network (LAN), a wide area network (WAN), or the Internet, schematically illustrated by transmission medium **1191** and network **1195**.

In the illustrative embodiment, computer system **1100** may include an Intel microprocessor such as the 80486DX-33 MHz, or faster, a 14.4 Kb communication modem or faster, and a sound card, as further described with reference to FIG. **12**.

Operation of computer system **1100** is generally controlled and coordinated by operating system software, such as the OS/2® operating system, available from International Business Machines Corporation, Boca Raton, Fla., or Windows® DOS-based operating system available from Microsoft Corp., Redmond, Wash. The operating system controls allocation of system resources and performs tasks such as process scheduling, memory management, networking, and I/O services, among other things.

FIG. **12** illustrates schematically an audio sound card **1200** which may be used to implement audio controller **1197** of FIG. **11**. Specifically, sound card **1200** may comprise, in the exemplary embodiment, an analog-to-digital (A/D) converter **1212**, an input buffer **1216**, a digital signal processor (DSP) **1222**, ROM **1224**, RAM **1226**, an output buffer **1220**, and an analog-to-digital (D/A) converter **1218**, all of which may be interconnected over a bus **1210**. Bus **1210** is in turn coupled to a bus interface **1228** which, in turn, is coupled to bus controller **1125** of computer system **1100** of FIG. **11**.

As illustrated in FIG. **12**, A/D converter **1212** is coupled to audio transducer **1214** which is typically a microphone. Conversely, D/A converter **1218** is coupled to audio transducer **1230**, typically a speaker. It will be obvious to those reasonably skilled in the art that audio transducers **1214** and **1230**, may be combined into a single element which serves as both a transmitter and receiver of audio signal.

In operation, A/D converter **1212** samples the audio signals supplied to it by transducer **1214** and stores the digital samples in buffer **1216**. The digital sampling occurs under control of a program typically stored in ROM **1224**, or, alternatively, under the control of digital signal processor **1222**. The digital samples stored in input buffer **1216** are forwarded periodically, typically when the buffer reaches near capacity, over bus **1210** to bus **1130** of FIG. **11**, for further processing by computer system **1100**. The device driver for audio sound card **1200** generates system interrupts which will cause the digital samples stored in input buffer **1216** to be retrieved for processing. In the exemplary embodiment, the digital samples are uncompressed as supplied to computer system **1100**. However, compression of the digital samples may occur using DSP **1222** executing an appropriate compression algorithm, if desired.

Digital audio samples from computer system **1100** are also be converted to analog signals by sound card **1200**. The digital samples are supplied to bus **1210** and temporarily stored into output buffer **1220**. The digital samples are then converted by D/A converter **1218** into an analog signals which are then supplied to audio transducer **1230**, i.e., a speaker, or to further amplification and processing devices.

Sound card **1200** contemplated for use with the present invention may be implemented with any number of Windows compliant sound cards, such as the Sound Blaster sound card, commercially available from Creative Technologies Ltd., Singapore. Such Window compliant sound cards have a Windows compliant software interface allowing a standardized mechanism for software programs to operate the sound card device, such as Winsock 1.1.

WebPhone Application

In the exemplary embodiment of the present invention, each of first processing unit **1012** and second processing unit **1022** of FIG. **10** are executing a software application capable of enabling point-to-point communication over network **1000**, such as an Internet telephone application. One such application suitable for use with the present invention is the WebPhone Version 1.0 or higher, software, hereafter referred as the "WebPhone," commercially available from NetSpeak Corporation, Boca Raton, Fla. A description of the architecture and operation of the WebPhone is provided herein with reference to FIGS. **5–6**, **13A–B** and **14**. An extensive detailed description of the architecture, application program interface, graphic user interface, and operation of the WebPhone can be found in copending U.S. patent application

Ser. No. 08/719,554, XXX entitled "Point-to-Point Computer Network Communication Utility Utilizing Dynamically Assigned Internet Protocol Addresses" by Mattaway et al. filed on an even date herewith and commonly assigned, the complete subject matter of which is incorporated herein by reference.

Referring to FIGS. **13**A–B, schematic block diagrams of the WebPhone architecture are illustrated. The WebPhone is an end-user software application which enables users to send real-time audio data to other WebPhone users over the Internet or any public or private TCP/IP based computer networks. The WebPhone application and architecture may be designed to run on any number of operating systems or computer architectures. In the illustrative embodiment, the WebPhone application is implemented as a Windows compatible application executable on an IBM PC architecture or a clone thereof.

Referring to FIG. **13**A, the WebPhone **1300** comprises a set of object modules, written in a programming language such as C++, which work together in a concerted fashion to provide real-time, multitasking, network-based media transmission and reception. WebPhone **1300** comprises a graphic user interface (GUI) **1310**, a user interface (UI) **1312**, an event manager **1314**, a media engine **1316**, a database dynamic link library **1318**, one or more audio compression/decompression (codecs) **1320**, an audio manager **1324**, a WebPhone application program interface (API) **1326**, and a network interface **1322**.

WebPhone GUI **1310** comprises the visual objects seen on a computer display by the user, as illustrated by the screen capture of FIG. **14** discussed hereinafter. WebPhone GUI **1310** serves only to display the artwork associated with the underlying objects of WebPhone UI **1312**. WebPhone GUI **1310** may be implemented in a modular fashion distinct from the WebPhone UI for rapid portability. In this manner, other graphic user interface environments such as those compatible with the Macintosh, X-Windows or OS/2 operating systems, may be substituted via the Plug and Play protocol, as would be understood by those reasonably skilled in the arts.

The WebPhone UI **1312** objects maintain the state of the WebPhone GUI and provide feedback to the WebPhone GUI objects from events originating from either the user or the event manager **1314**. When WebPhone changes a state that requires user notification, WebPhone UI objects notify associated WebPhone GUI objects to display the appropriate art work to the user. WebPhone UI objects also interface with the database dynamic link library **1318** to maintain the WebPhone database information, e.g. configuration information, phone directory information, etc.

The WebPhone event manager **1314** processes all the events originating from the user, via WebPhone UI **1312**, the media engine **1316**, and WebPhone API **1326**. Event manager **1314** may be implemented as a table-driven state machine that processes the above-identified events and performs the functions necessary to bring the WebPhone from one state to another. For example, event manager **1314** interacts with media engine **1316** to create, control and remove concurrently executing jobs managed by media engine **1316**. Event manager **1314** also interfaces with the WebPhone API **1326** to provide communications with other WebPhones and connection servers, as described in more detail hereinafter. WebPhone database **1318** is a dynamic link library of tree-based subroutines that provide fast database access to the WebPhone configuration information, personal phone directory, etc.

WebPhone media engine **1316** manages the allocation of associated resources to provide a multitasking environment and controls the flow of real-time data streams, e.g., conversations, outgoing messages, etc., and non-real-time data streams, e.g., voice mail, graphic images, files, etc., to and from a user network connection. The objects representing tasks are created by event manager **1314**, thereby freeing media engine **1316** to manage resource routing. Specifically, the media engine routes data streams from sources such as a microphone, file or network socket, to destinations such as speaker, destination file or other network socket. To perform such routing functions the media engine interfaces with the WebPhone API **1326** to control communication with other processes, and further communicates with audio manager **1324** to communicate with the system input/output apparatus, such as sound card **1200** of FIG. **12**. Media engine **1314** may be designed to employ heuristic methods to sense and efficiently utilize available bandwidth to achieve timely and accurate delivery of all data streams, both real-time and non-real-time.

Media engine **1316** further interacts with WebPhone codec **1320** to achieve compression and decompression of audio data streams. Codec **1320** provides coding of digital samples from the sound card **1200** of FIG. **12** into a compressed format more suitable for transmission over a computer network. Codec **1320** further provides decoding of a compressed signal prior to its submission to sound card **1200** for subsequent conversion to an audible analog signal. In the exemplary embodiment, WebPhone codec **1320** is implemented in a modular fashion so that codecs may be replaced and updated with newer, more efficient compression/decompression algorithms via the Plug and Play protocol. A codec suitable for use with the present invention is the True Speech codec, version 8.5, commercially available from the DSP Group, Inc., Santa Clara, Calif. The True Speech codec is an enhanced linear predicative coding algorithm, specifically designed to efficiently encode and decode human speech data. The True Speech codec samples the digital sample stream from sound card **1200**, and, using a look-up table-based algorithm, tries to predict the value of the next data sample in the digital data stream based on the history of prior data sample values. The compressed data stream comprises a combination of identifiers of the predicted sample values, as well as error values used to correct the predictive values. Accordingly, the amount of digital data actually transmitted to represent the audio signal is significantly reduced in comparison to transmission of the actual data samples generated by sound card **1200**. The True Speech codec provides temporal, frequency domain compression of the digital data representing the audio signal.

Audio manager **1324** handles communication with the audio sound card **1200** and presents a common interface to media engine **1314**. Audio manager **1324** interfaces with sound card **1200** through one or more application program interfaces. In the illustrative embodiment, audio manager **1324** utilizes low-level Microsoft Windows wave input/output routines to interface with MCI compliant sound cards. As with codecs **1320**, audio manager **1324** may be implemented to adhere to the Plug and Play protocol so other compliant audio sound cards or circuits, such as those for the Apple Macintosh, commercially available from Apple Computer Company, Cupertino, Calif., or a Unix compatible sound card or circuit may interact with the audio manager **1324**.

The WebPhone API **1326** enables the WebPhone to communicate with other WebPhones, connection and directory assistance servers, Internet gateway servers, credit processing servers, database access servers and other client pro-

cesses implementing the WebPhone API. As illustrated in FIG. **13B**, the WebPhone API utilizes sockets, i.e., a file handle or address indicating where data is to be sent, allowing WebPhone API enabled processes to reside on the same computer, on a local area network, on a wide area network, or over the Internet. A process **1328** communicates with the WebPhone API **1326** through a plurality of sockets **1322**. The sockets **1322** are accessible by network **1330** through a number of protocols including Internet Protocol (IP) **1332**, Transmission Control Protocol (TCP) **1334**, Real-Time Protocol (RTP) **1336** and User Datagram Protocol (UDP) **1338**. The WebPhone API provides remote command control of WebPhones and servers via the TCP. WebPhone API **1326** transfers real-time and streamed audio via the UDP protocol and real-time audio and video data via the UDP and RTP protocols. The WebPhone API utilizes TCP to transfer data of different types, i.e., file, image, graphics, etc. as well as to transfer streamline video and other multimedia data types, such as Java developed by Sun MicroSystems, Mountain View, Calif. In addition, the WebPhone API provides user definable commands and data types.

FIG. **14** illustrates the graphic display produced upon invoking the WebPhone application. Display **1400** is an alternative embodiment to that illustrated in FIGS. **5–6** with similar graphic elements, icons and display areas functioning as previously described with reference to FIGS. **5–6**.

WebPhone Global Server

Having described the architecture of the WebPhone software which enables the first and second processing units to establish point-to-point communication over a network, a discussion of the global connection/information server is appropriate.

Referring to FIG. **15A**, a network diagram, similar to that shown in FIG. **10**, is illustrated, including a schematic diagram of the global server **1500** and the various devices operatively coupling server **1500** to the Internet **1530**. A first processing unit executing the WebPhone application, hereafter referred to as WebPhone **1536**, is coupled to Internet **1530** through an Internet service provider **1532**. Similarly, a second processing unit executing the WebPhone application, referred to as WebPhone **1538**, is coupled to the Internet **1530** by an Internet service provider **1534**. Global server **1500** is coupled to Internet **1530** by an Internet service provider **1528**, a CSU/DSU **1526**, a router **1524**, and a fire wall server **1522**. In the illustrative embodiment, fire wall server **1522** and global server **1500** are connected through a local area network **1520**. Network **1520** may be implemented with an Ethernet or other suitable transport for TCP/IP communications. However, as will be obvious to those recently skilled in the arts, server **1500** may be connected directly to fire wall server **1522**.

In the illustrative embodiment, firewall server **1522** is a single firewall mechanism which protects unauthorized access from network **1530** into global server **1500**. Firewall server **1522** may be implemented on a work station, such as a SPARC 5 or SPARC 20 server from Sun MicroSystems, executing a commercially available firewall software application such as Raptor, available from Raptor Systems. Essentially, the firewall server prevents unauthorized access into global server **1500** and thereby prevents destruction of any of the information contained therein by checking the source of requests for information to global server **1500**.

Router **1524** translates logical addresses among networked topologies and may be implemented with any number of commercial router devices such as the CISCO model 2501 router executing CISCO 11.0 software, both commercially available from CISCO Systems, Inc., San Jose, Calif.

CSU/DSU **1526** (Channel Send Unit/Data Send Unit) functions as a sophisticated modem, converting network data to high speed serial data for transfer over a T1 or T3 line. Such high speed data is connected to another CSU/DSU, typically at the telephone company over the T1 or T3 line. An apparatus suitable for use in implementing CSU/DSU **1526** in the present invention is the AT&T Paradigm by AT&T Laboratories, Murray Hill, N.J.

FIG. **15A** further illustrates a logical schematic of global server **1500**. The server comprises a hardware platform **1508** on which an operating system **1510** executes. In the illustrative embodiment, hardware platform **1508** may comprise any number of commercially available high end work stations such as a DEC Alpha 4100 System, commercially available from Digital Equipment Corporation, Maynard, Mass., or a SPARC 5 or a SPARC 20, both commercially available from Sun Micro Systems, Mountain View, Calif. Operating system **1510**, in the illustrative embodiment, may comprise the Unix, commercially available from Novell, Windows NT, commercially available from Microsoft Corporation, or Solaris, commercially available from Sun MicroSystems, Inc. Executing on operating system **1510** are a number of processes including connection server **1512**, information server **1514**, database server **1518** and database **1516**.

Connection Server

Connection server **1512** provides a directory information service to WebPhone client processes currently on-line with respect to the computer network. Connection server **1512** behaves like a virtual machine within global server **1500** and interacts with database **1516** through database server **1518** and with network interface card **1540** through the WebPhone API. The basic function of connection server **1512** is to provide a one-to-one mapping between an identifier of a WebPhone client process, such as a E-mail address, and the current IP address, dynamic or fixed, associated with that WebPhone client process.

As described in further detail hereinafter, when a WebPhone client transmits a <CONNECT REQ> packet to global server **1500**, an E-mail address such as "Shane@netspeak.com" is provided to connection server **1512**. Connection server **1512** then compares the E-mail address with the values of the records contained in on-line table **1516B** and, if a match occurs with one of the records contained therein, transmits the value of the Internet Protocol address associated with that record to the requesting WebPhone client, i.e., a one-to-one matching between E-mail addresses and Internet Protocol addresses.

Referring to FIG. **16A**, a flow chart illustrating the basic process steps used by connection server **1512** to implement a one-to-one mapping of E-mail addresses to Internet Protocol addresses in accordance with the present invention is illustrated. The coding of the process steps of the flowchart of FIG. **16A** into instructions suitable to control global server **1500** will be understandable by those having ordinary skill in the art of programming. Connection server **1512** remains in an idle state until a <CONNECT REQ> packet is transmitted from a WebPhone client to global server **1500**, as illustrated by decisional block **1610** of FIG. **16A**. Upon receipt of the packet, connection server **1512** extracts the E-mail address from the packet and supplies the E-mail address to database server **1518** which them communicates using the ODBC standard with database **1516** to perform a search of On-line Table **1516B**, as illustrated by process blocks **1612** and **1614**. Database **1516** performs a search of on-line Table **1516B** and supplies the current Internet Protocol address of the WebPhone client associated with the

E-mail address to connection server **1512**, via database server **1518**. If a corresponding Internet Protocol address is found for the E-mail address contained in the query, connection server **1512** supplies the Internet protocol address to the requesting WebPhone client by transmitting a <CONNECT ACK> packet, as illustrated by decisional block **1616** and process block **1618**. If, however, there is no Internet Protocol address associated with the queried E-mail address or the WebPhone client is off line, connection server **1512** will send an <OFFLINE> packet to the WebPhone client, as illustrated by process block **1622**. Connection server **1512** will return to an idle state to await the receipt of another <CONNECT REQ> packet, as illustrated by FIG. **16**A. A description of the above described packets as well as a diagram illustrating the packet transfer sequence between a WebPhone client and global server **1500** can be found with reference to Tables **7–8** and FIG. **17**A, respectively.

Information Server

Information server **1514** provides an interface between requests from WebPhone client processes and database **1516**. Information server **1514** includes code written to extract the search criteria from an <INFO REQ> packet and supply the search criteria to the database search engine of database **1516** using the ODBC standard. In particular, referring to FIG. **16**B, a flow chart illustrating the basic process steps used by information server **1514** in performing information/directory service functions in accordance with the present invention is illustrated. The coding of the process steps of the flow chart into instructions suitable for execution by global server **1500** will be understood by those having ordinary skill in the art of programming. Information server **1514** remains idle until an <INFO REQ> packet is received from a WebPhone client process, as illustrated by decisional step **1630**. Next, information server **1514** extracts the data elements defined within the <INFO REQ> packet and supplies them to database server **1518** which, in turn, forward them to database **1516**, as represented by the process step **1634** and **1636**. The search engine contained within database **1516** performs the search and supplies to information server **1514** all client records meeting the search criteria specified in the <INFO REQ> packet, or a message indicating that no records were found. Next, information server **1514** transmits a <INFO ACK> packet to the WebPhone client process indicating the number of records satisfying the search criteria, as indicated by process step **1638**. The WebPhone client may wish to receive all records satisfying the search criteria, or, if the number is excessively large, may desire to further refine the search by transmitting a <INFO ABORT> packet to information server **1514** and defining new search parameters to be sent with a subsequent <INFO REQ> packet. If a <INFO ABORT> packet is received by information server **1514**, the process will return to an idle state, as illustrated by decisional block **1640**. If no <INFO ABORT> packet was received, information server **1514** will transmit one or more <INFO> packets to the requesting WebPhone client until all records have been received by the WebPhone client, as illustrated by process step **1642**. Information server **1514** will return to an idle state awaiting another <INFO REQ> packet, as illustrated in FIG. **16**B. A description of the packets comprising the WebPhone protocol is illustrated in Tables 7–8 and a diagram illustrating the packet transfer sequence defined in FIG. **17**A–B.

Network interface card **1540** interfaces with connection server **1512**, information **1514**, and database server **1518** using the WebPhone API definition, as described herein, and the Windows Sockets 1.1 Protocol, or, in a Unix-based operating system, Berkeley Sockets Network API. Network interface card **1514** may comprise, in illustrative embodiment, an Ethernet card capable of transmitting data at rates of 100 Mbps or greater, such cards being commercially available through a number of different vendors.

The connection from CSU/DSU **1526** to ISP **1528** may comprise a T1 connection, i.e., a long-distance, digital, point-to-point communication circuit capable of transmitting a signal at 1.544 Mbps with 24 channels at 64 Kbps. Alternatively, a T3 connection may be used, i.e., a connection is similar to a T1 connection except it is capable of transmitting at 44.746 Mbps per second with up to 28 T1 channels. Other connections may be suitable, depending on specific requirements and availability.

Database

Database **1516** of global server **1500** may be implemented with any of a number of commercially available structured query language (SQL) database engines, such as Oracle 7.x, Informix, or Microsoft SQL server 6.x. The SQL database resides on a RAID **1** and RAID **5** mirrored disk array. As will be explained hereinafter, database **1516** interacts with control server **1512** and information server **1514** through database server **1518**. In the illustrative embodiment, database **1516** comprises a Client table **1516**A, an On-line table **1516**B, a WebBoard table **1516**C, a WebBoard configuration table **1516**D and a WebBoard Source table **1516**E.

Client table **1516**A comprises a plurality of records, each of which may have the fields and corresponding data elements as described in Table 1. Each WebPhone user, hereinafter "client," has a separate record in table **1516**A containing the information defining the client's profile of personal information. In Table 1, the "activated," "paid," and "published" fields are boolean yes/no fields. The "id" field comprises a unique ID sequence identifying a particular WebPhone client. The "activation date," "address change date," and "access date" fields are time references measured in seconds since 00:00 Coordinated Universal Time (UTC), Jan. 1, 1970. The "IPAddr" field represents the Internet protocol address of the WebPhone client and, if unknown, has a default value of 0.0.0.0. The database record containing a WebPhone client's profile, is defined upon first logging-on to global server **1500** and may be updated each time a WebPhone user's profile changes, as explained hereinafter.

The On-line table **1516**B provides a dynamic list of those clients from **1516**A who are currently On-line, as well as their current Internet protocol address. On-line Table **1516**B comprises a plurality of records each of which may have the fields and data types illustrated in Table 2. The record entries of On-line table **1516**B are used by connection server **1512** and information server **1514**, as explained hereinafter, to provide a directory of those WebPhone client processes currently having on-line status with respect to the computer network.

The WebBoard™ is a virtual multimedia billboard which is transmitted as a series of multimedia data files to WebPhone client processes while the WebPhone application is activated. An extensive description of the WebBoard utility and its operation can be found in copending U.S. patent application Ser. No. 08/719,891 entitled Method and Apparatus for Distribution of Multimedia Data Over a Computer Network by Mattaway et al., commonly assigned, the subject matter of which is incorporated herein by reference.

A number of tables are associated with the WebBoard functionality including WebBoard table **1516**C, a WebBoard configuration table **1516**D, and a WebBoard source table **1516**E. WebBoard table **1516**C includes a plurality of

records each describing a specific WebBoard and having the field and data types illustrated in Table 3. The "id" field of Table 3 provides a unique identification number for the WebBoard file. The "imageType" field defines the video format of the image such as JPEG, TIF, GIF, etc. The "audio" field defines the nature of the audio file, e.g. a .wav file or a MIDI file, while the "audioType" field defines the codec, if any, used to compress/decompress the audio file. The "hits" field defines the number of times the WebBoard has been selected by WebPhone clients, while the "hits profile" field defines the file name of the file identifying those WebPhone clients generating hits to the subject WebBoard.

The WebBoard configuration table **1516**D may have at least one record having the fields and data types illustrated in Table 4. The count field represents the number of WebBoard records currently in the table **1516**C.

The WebBoard source table **1516**E may comprise a plurality of records each having the fields and data types defined in Table 5. The "URL" field of Table 5 defines a data link in accordance with Uniform Resource Locator protocol to the home page or Web site of the source. In the illustrative embodiment, any entity, including vendors, advertisers, individuals or groups wishing to post information or having a Web site or home page may have a WebBoard displayable through the present invention.

Database Server

Database server **1518** serves as the interface between database **1516** and connection server **1512** and information server **1514**. Specifically, connection server **1512** and information server **1514** communicate with database engine **1518** through application program interfaces embedded in the code implementation of both the connection server and the information server. Database server **1518** communicates with database **1516**, in the illustrative embodiment, using the open database connectivity (ODBC) standard, developed by Microsoft Corporation, Redmond, Wash. Database server **1518** functions to supply structured database queries to database **1516** and to supply the results therefrom to connection server **1514** and information server **1512**. In the illustrative embodiment, database server **1518** may be implemented as a "virtual machine" executing on global server **1500**, or, alternatively, may be implemented on a separate computer system such as a DEC Alpha 4100 Workstation executing DEC Unix operating system, both available from Digital Equipment Corporation, Maynard, Mass. Database server **1518** communicates with network interface card **1518** using the WebPhone Application Program Interface described herein.

Global Server Network

In the illustrative embodiment, global server **1500** is implemented as a single server apparatus on which a plurality of "virtual machines" execute simultaneously. However, it will be obvious to those reasonably skilled in the art that a plurality of separate servers, one dedicated to each of connection server **1512**, information server **1514**, and database server **1518** may be interconnected to database **1516** and to each other using a local area network, to form a composite "virtual" global server, as illustrated by FIG. **15**B, the construction of the system illustrated in FIG. **15**B being within the knowledge of those reasonably skilled in the art in light of the descriptions contained herein.

It is further contemplated within the present invention that more than one global server **1500** may be utilized, as illustrated by FIG. **15**C. In this implementation, multiple global servers **1500**A–D are maintained for fault tolerant load sharing, each one performing the above-described connection server, information server and database server processes. Each of global servers **1500**A–D are connected to the Internet via a separate T1 or T3 connection to different Internet service providers, and are synchronized with each other via database server replication. In such an embodiment, multiple global servers may be located in close proximity or in geographically disparate locations. In such an embodiment, the WebPhone application is provided with the network address information of each global server **1500**A–D. In the event that any one of the global servers initially contacted is nonresponsive the WebPhone application will attempt connection to one or more of the remaining global servers to obtain directory and information services.

Further, in an implementation with multiple global servers, if the initially contacted global server is unable to accommodate a WebPhone client request, or, is not geographically convenient, the global server can provide the network address of another global server capable of servicing the WebPhone client's request or which is logically more convenient. This process may occur during the initial log-in of the WebPhone client process, as described with references to messages **1**–**5** of FIG. **17**A.

As previously described, if none of the global servers are available, the WebPhone application can rely on the secondary Internet Protocol technique in which a WebPhone client process sends its current dynamically assigned Internet Protocol address to a prospective WebPhone callee through an E-mail message, as described herein.

WebPhone Protocol

Prior to describing the interaction of the connection server **1512** and information server **1514** with WebPhone client processes, a description of the WebPhone protocol by which the WebPhone client processes and the global server **1500** communicate is appropriate. Tables 6–7 below illustrate the packet definitions of the packets comprising the WebPhone protocol (WPP) including the packet type, the direction and the data elements comprising each packet. In Tables 6–7 the symbol "→" indicates a packet transmitted by a WebPhone client process, while the "←" symbol indicates a packet transmitted by the global server. Tables 8–9 define the data elements described in Tables 6–7. In Tables 6–9, the terms "ULONG" and "UNSIGNED LONG" designate an unsigned long integer value, i.e., 32-bit integer value. Similarly, the terms "USHORT" and "UNSIGNED SHORT" designate an unsigned short integer value, i.e., 16-bit integer value. The term "CHAR" designates a single character, typically assuming a binary value of either 1 or 0. The term "VARCHAR(X)", where X is an integer, value symbolizes a variable length character string, with the number of characters indicated with the integer value. The term "UNSIGNED CHAR" designates an 8-bit character code, i.e., no sign bit. Finally, the term "variable" indicates a variable length data field.

FIG. **17**A illustrates a schematic block diagram of a packet transfer sequence between a pair of WebPhone client processes and the global server, in accordance with the present invention. Each WebPhone application, also referred to as a WebPhone client process, connects to global server **1500** upon start up to inform global server **1500** that the WebPhone client process is on-line and available to make and/or receive calls. Specifically, as illustrated in FIG. **17**A, WebPhone **1536** opens a socket to the global server **1500** and transmits an <ONLINE REQ> packet from WebPhone **1536** to Global server **1500**, as illustrated by message **1** and FIG. **17**A. The <ON LINE REQ> packet may have the format and data illustrated in Table 6, and additional Feature bits which define the functionality of the WebPhone

application, as explained in greater detail hereinafter. In response, connection server **1512** and information server **1514** of global server **1500** use the information contained in the <ONLINE REQ> packet to update the status of database **1516**. In the event that the WebPhone client process is logging on for the first time, global server **1500** returns to the WebPhone **1536** a <USER INFO REQ> packet, as illustrated by message **2** of FIG. **17**A. The <USER INFO REQ> packet includes the elements as defined in Table 9. In response, WebPhone **1536** returns a <USER INFO> packet as illustrated by message **3** of FIG. **17**A. The <USER INFO> packet contains the data elements defined in Table 8. Connection server **1512** and information server **1514** of global server **1500** utilize the data in the <USER INFO> packet to update database **1516**. Specifically, information server **1514** utilizes such data to create a record in client table **1516**A representing WebPhone **1536**. Next, global server **1500** transmits to WebPhone **1536** a <REGISTRATION> packet, as illustrated by message **4** of FIG. **17**A. The <REGISTRATION> packet contains the data described in Table 7 plus Feature bits, as described hereinafter. The <REGISTRATION> packet returned to WebPhone **1536** enables certain functions within the WebPhone architecture based on predetermined criteria, for example, whether the user has paid for the product, or which version of the product the user possesses. Following the <REGISTRATION> packet, global server **1500** further transmits an <ONLINE ACK> packet, as illustrated by message **5** of FIG. **17**A. Prior to transmission of the <ONLINE ACK> packet, connection server **1514** updates database **1516**, specifically On-line table **1516**B to indicate that WebPhone **1536** is on-line with respect to the computer network. Upon receiving the <ONLINE ACK> packet, WebPhone **1536** closes the socket to global server **1500**.

In the event WebPhone **1536** had previously registered with global server **1500**, only messages **1** and **5** are required to establish WebPhone **1536** as being on-line. If WebPhone **1536** had new user information to supply to global server **1500**, then packet sequence illustrated by messages **3** and **4** would occur.

Although the packet sequence illustrated by messages **1–5** is described with reference to WebPhone **1536**, WebPhone **1538** interacts in a similar manner with global server **1500** to establish on-line status. No further interaction occurs between the respective WebPhone client processes and the global server unless the WebPhones require directory or search assistance about a prospective callee.

In one calling scenario, a WebPhone user knows the E-mail address of another WebPhone user to which he/she wishes to establish a point-to-point communication, however, the current dynamically assigned Internet protocol address of the callee is unknown to the caller. In this scenario, the user of WebPhone **1536** requests assistance from global server **1500** to obtain the current dynamically assigned Internet Protocol address of the prospective callee WebPhone. First, the user of WebPhone **1536** specifies the callee by entering all or part of the callee party's name or alias in the party name field area of the graphic user interface. If the party is not in the WebPhone user's local directory, the IP address or E-mail address of the callee WebPhone may be entered into the number field area of the graphic user interface, followed by activation of the send button or icon on the graphic user interface. As a result, WebPhone **1536** opens a socket to global server **1500** and transmits a <CONNECT REQ> packet having the format described in Table 6. Connection server **1512** of global server **1500** utilizes the value of the E-mail address specified in the <CONNECT REQ> packet to perform a one-to-one mapping in the on-line table **1516**B to determine the current Internet Protocol address of the indicated callee, as illustrated by the flowchart of FIG. **15**A. Once this mapping is performed, the server **1500** transmits to WebPhone **1536** a <CONNECT ACK> packet, as indicated by message **7**A of FIG. **17**A. The <CONNECT ACK> packet has the format and content as illustrated in Table 6 and includes the IP address of the callee as well as information such as an error code to indicate that no WebPhone application is associated with that callee. Alternatively, if the selected callee is off line, global server **1500** transmits to WebPhone **1536** an <OFF LINE> packet to indicate that the desired party is not on-line, as illustrated by message **7**B of FIG. **17**A. Following the receipt of either a <CONNECT ACK> or an <OFF LINE> packet by WebPhone **1536**, the socket to global server **1500** opened by WebPhone **1536** is closed.

If the current Internet Protocol address of the callee was returned from global server **1500**, the packet transmission sequence illustrated between WebPhones **1536** and **1538** of FIG. **17**A transpires. Whether a calling WebPhone knows the Internet Protocol address of the callee WebPhone, as in the case of a fixed Internet Protocol address, or obtains the Internet Protocol address from global server **1500**, as previously described, the calling sequence to establish a call occurs as follows. WebPhone **1536** opens a socket to WebPhone **1538**. Next, WebPhone **1536** transmits to WebPhone **1538** a <CALL> packet as illustrated by message **8** of FIG. **16**A. The <CALL> packet has the format illustrated in Table 6 and may, optionally, include information identifying the compression/decompression (codec) used by the caller WebPhone. In response to the <CALL> packet, WebPhone **1538** may return with a number of different packets, as illustrated by messages **9**A–D. First, callee WebPhone **1538** may respond to caller WebPhone **1538** with a <REJECT> packet, as illustrated by message **9**A, indicating that the callee WebPhone does not wish to be disturbed, e.g. total call blocking, or, that the callee WebPhone does not wish to talk to caller WebPhone, e.g. party specific or group specific call blocking. In the event of party or group specific call blocking, the user information contained within the <CALL> packet of message **9**A is compared by the caller WebPhone application to a predefined list of WebPhone user information profiles which the callee does not wish to converse, such list having been predefined by the callee in the WebPhone user's personal directory, as explained hereinafter. Upon receiving the <REJECT> packet the caller WebPhone annunciates the result to the user and the socket to the callee WebPhone is closed.

Alternatively, callee WebPhone **1538** may return a <BUSY> packet, as illustrated by message **9**B of FIG. **17**A. The <BUSY> packet indicates that the callee WebPhone is currently utilizing all available lines within its WebPhone application.

A further possible response from callee WebPhone **1538** is to issue an <ANSWER MACH> packet, as illustrated by message **9**C of FIG. **17**A. The <ANSWER MACH> packet includes data indicating whether the machine is capable of receiving voice mail type messages, as described in greater detail in copending U.S. patent application Ser. No. 08/719,898 entitled "Method and Apparatus for Providing Caller Identification Based Out-Going Messages in a Computer Telephony Environment," by Mattaway et al., commonly assigned and incorporated herein by reference.

The preferred response by callee WebPhone **1538** is to transmit a call acknowledge <CALL ACK> packet, as illustrated by message **9**D of FIG. **17**A. The <CALL ACK>

packet has the data content illustrated in Table 6. Both the <CALL> and <CALL ACK> packets contain the information of the WebPhone users sending the packet. This information is useful by the recipient of the packet for a number of purposes. For example, the user information is displayed on the enunciator area of the WebPhone graphic display to identify the party placing the call. Second, the user may select such information and, using the drag and drop functionality of the WebPhone graphic user interface, add the user information to the callee WebPhone user's personal directory resident within his/her specific WebPhone application. In such a manner, both parties are completely identified to each other prior to commencing audio communications. The transmission of complete caller identification information with the <CALL> and <CALL ACK> symbols packets enables such functions as individual or group specific call blocking, party specific outgoing messages, visual caller identification, and party specific priority ringing and sound effects, as explained herein.

Following transmission of <CALL ACK> packet by callee WebPhone **1538**, the callee WebPhone further transmits an <ANSWER> packet to caller WebPhone **1536**, as illustrated by message **10** of FIG. **17**A. Like the <BUSY> packet, the <ANSWER> packet is essentially empty, containing nothing more than a session ID number which is unique to the call. The socket previously opened by caller WebPhone **1536** over which the forgoing packets were transmitted remains open for the transmission of control information between caller WebPhone **1536** and callee WebPhone **1538**. Such control information may comprise an <END> packet signaling the end of a call, a <HOLD> packet indicating that one of the parties to a call has placed the call "on hold" or other packets related to advance functionality of the WebPhone architecture. In addition, caller WebPhone **1536** opens a second socket to callee WebPhone **1538** over which the respective WebPhones may exchange <AUDIO> packets, as illustrated by messages **11**A–B of FIG. **17**A. The <AUDIO> packets have the data content illustrated in Table 6. The WebPhone application enables the parties to converse in real-time, telephone quality, encrypted audio communication over the Internet and other TCP/IP based networks. If both WebPhone client processes are utilized with full duplex sound cards, such as that illustrated in FIG. **12**, the WebPhone users may transmit and receive audio packets simultaneously, similar to normal telephone conversation. However, if the WebPhone client processes are used with half duplex sound cards, a WebPhone user may only transmit or receive audio data simultaneously, similar to a speaker phone. Exchange of <AUDIO> packets continues until either the callee WebPhone or the caller WebPhone transmits an <END> packet, as illustrated by message **12** of FIG. **16**A. Following the receipt of an end packet, the WebPhone client process will cease to accept subsequent audio packets.

Following either transmission or receipt of an <END> packet by the caller WebPhone, the socket opened by the caller WebPhone to the callee WebPhone over which real-time audio communication occurred is closed. Similarly, the previously opened socket over which control information was transmitted between the callee and caller WebPhones is likewise closed.

Referring now FIG. **17**B, if a WebPhone caller seeks to determine whether a prospective WebPhone callee is connected to the computer network, but, has little information regarding the client process, information server **1514** may be utilized as described. The WebPhone user defines One or more of the first name, last name, company, city, state, or country values of the Query field contained within the <INFO REQ> packet sends the packet to the global server. WebPhone **1536** opens a socket to global server **1500** and forwards <INFO REQ> packet to global server **1500**, as illustrated by message **1** of FIG. **17**B. Information server **1514** extracts the values specified the query field of the <INFO REQ> packet and queries the database **1516**, as previously described with reference to FIG. **16**B. Global server **1500** then transmits a <INFO ACK> packet back to WebPhone **1536**, as illustrated by message **2** of FIG. **17**B. The <INFO ACK> packet has the format and data elements indicated in Table 7, including the number of parties satisfying the search criteria, specified in the <INFO REQ> packet. If the user of WebPhone **1536** wishes to receive the number of parties satisfying the search criteria global server **1500** automatically transmits to WebPhone **1536** one or more <INFO> packets, as illustrated by messages **3**A–C of FIG. **17**B. The <INFO> packet has the format and data elements as described in Tables 6–7. At any time following transmission of the <INFO ACK> packet, WebPhone **1536** may transmit an <INFO ABORT> packet to either prevent transmission of any <INFO> packets or to stop transmission of any remaining packets, as illustrated by message **4** of FIG. **17**B. The <INFO ABORT> packet has the format and data elements as described in Table 6–7.

Once the user receives the information contained within the <INFO> packets satisfying the search criteria, the user may store such information in his/her personal WebPhone directory by dragging and dropping the information from the annunciator area to the direction dialog box using the WebPhone GUI.

The methods and apparatus described herein provide computer users with a powerful protocol in which to directly establish real-time, point-to-point communications over computer networks directly without server required linking. The a directory server assists in furnishing the current dynamically assigned internet protocol address of other similarly equipped computer users or information about such users.

WebPhone Graphic User Interface

Referring again to FIG. **14**, the WebPhone GUI **1400** consists of a main window which has the look of a modern cellular flip phone and a set of dialog boxes launched from window. Operation of the WebPhone is controlled by selecting objects, i.e., buttons, text and images, and dragging objects, i.e., lines, parties, messages, etc., as explained hereinafter.

WebPhone GUI **1400** comprises a plurality of visual objects, including display **1402**, number pad **1406**, line pad **1404**, call function buttons **1408**, phone function buttons **1410** and audio controls (not shown). Display **1402** provides a number of distinct area for presentation of entering of information useful in operation of the WebPhone application. A party name field **1402**A displays the name of the caller when an incoming call arrives and may also be used for entering the name of a party, up to 25 characters. By entering the name of a party in the party name field **1402**A and pressing one or more of the phone function buttons **1410**, various activities may be accommodated. For example, entering the name of a party in the party name field and pressing the [SND] button causes the WebPhone to first search the personal information directory for the information profile of the party entered. If such party's information is not already resident in the personal information directory, the WebPhone will open up a directory assistance dialog allowing the user to enter information to be submitted to the information server **1514** for searching, as described previously. Further, clicking the entered party name with the right

mouse button causes a dialog box to appear enabling the user to modify the current directory entry, if any, for the party entered.

Entering the IP address of a party in the party IP address field followed by the [SND] button causes initiation of a call. If the callee's name exists within the caller's personal directory, or the call is established, the callee's name will appear in a party name field for caller ID purposes.

The third line of the display **1402** serves as a status annunciator line for displaying iconic feedback about the status of events within the WebPhone. Such status icons may include icons indicating enablement of call forwarding, call blocking, do not disturb, priority ringing, file transfer occurring, voice mail transfer occurring or call camping.

The line number annunciator indicates the line, i.e., lines 1–4, currently active, as illustrated by annunciated field **1402**J. A main LED **1402**F indicates when a line is active by changing color. Time field **1402**C displays the local time when no lines are active. When one of the lines L1–L4 are active, time field **1402**C displays the callee party's time. By single clicking the time field the user can cycle through the two different time values.

The line status field **1402**H displays the status of the currently selected line, illustrated in FIG. **14** as displaying "talk" status. A call duration field **1402**D displays the elapsed time in minutes and seconds since the currently displayed call commenced.

The V-mail field **1402**G displays the number of the new voice mail messages and the total number of voice mail messages received.

When one or more call functions such as call conferencing, call blocking, priority ringing, call camping, or call forwarding are activated, the list of those parties within the WebPhone personal directory having such functionality active for their information profile can be viewed in the party name field by selecting a list arrow (not shown) icon which appears whenever one of the previously described functions is activated. Pressing the icon arrow allows the parties to be viewed sequentially.

The number pad buttons **0–9** also serve as speeddial buttons. Right clicking on any one of the number pad buttons **0–9** causes the name, alias, e-mail address and IP address, if known, of the party assigned to that speed dial position to be displayed on display **1402**.

If a user right clicks on any of lines L1–L4 the name, alias, e-mail address and IP address of the party on that line will similarly appear for a predetermined period of time and then revert back to the normal display.

The keypad buttons displayed on WebPhone GUI **1400** may assume one of two states. A button may be a momentary button which, when pressed, i.e., left clicked, gets pushed in and then pops back out again. A second type of button is a toggle button which when pressed gets pushed in and stays in until pressed again. Number pad buttons **0–9** are momentary buttons which may be used to enter the Internet Protocol address of a party and which each house a speed-dial position. The user may assign a party to one of the ten speed-dial positions by selecting the user's information displayed in display **1402** and then dragging it onto the keypad button. To speed-dial one of the ten buttons the user simply presses the appropriate number followed by the [SND] button. As stated previously, if the user right clicks on one of the number pad buttons, the information about the party assigned to the speed-dial position will be displayed.

The line pad **1404** comprises four toggle buttons L1–L4, each of which has a letter, a number and an LED indicating the status of the line. When one or more parties are associated, i.e., dragged and dropped, with a line, the letter designating the appropriate line turns from an L to C indicating a conference call. When only one party is left on the line the letter designation reverts from a C back to an L indicating a regular call. Only one line, button may be selected at a time when an incoming call arrives. Pressing any of the line buttons assigns the incoming call to the selected line. Pressing a line button, i.e., left clicking, when the line is in use places the line on hold. Subsequent depressing the line button takes the call off hold.

A number of call function buttons **1408**, including the [RCL], [END], [SND], [DND], [MUT], [HLD], [CMP], [BLK], [PRI], [FWD], not all of which are shown in FIG. **14**, are used to control operation of calls. The [RCL] button is a momentary button used to recall the last number dialed. Pressing [RCL] recalls the last party called by displaying the party's name, alias, e-mail address and IP address, if known. Selecting a free line following depression of the [RCL] button followed by the [SND] button will cause the party last called to be dialed. The [END] button is a momentary button and terminates a call upon depression. The [SND] button is a momentary button and is used to both place and answer calls. Depressing the [SND] button when a call is being announced causes the call to be answered on a preselected line or a line indicated by the user. Depression of the [SND] button once a callee's information is entered into display **1402** causes the party to be called, if the required information is present, or otherwise causes an information server connection to be established and activated, as previously described.

The [DND] button is a toggle button and is used to activate the Do Not Disturb function of the WebPhone. When activated, the [DND] button causes all inbound calls to be routed to the answering machine.

The [MUT] button is a toggle button which, upon depression, causes disabling of the microphone associated with a user's WebPhone system. When the [MUT] button is enabled, the main LED **1402**F and the status line **1402**H change to indicate that the call muted. Depression of the [MUT] button is undetected by one or more callees.

The [HLD] button is a momentary button and is used to place a call on hold. When a user depresses the [HLD] button a party or parties to a conference call are placed on hold, e.g., the microphone and speaker of the system are effectively disabled. When a called is placed on hold, the main LED **1402**F and call status field **1402**H indicate the change. To take a call off hold, the user depresses the line button of the call being held.

The [CMP] button is a momentary button that causes the WebPhone user to camp on a party, i.e., perpetual redial. Camping on a party serves to insure that the user's call will go through when the party is available. After placing a call, if the callee responds with either a busy or on off-line status, the user may press the [CPM] button to camp on that party. To remove a camp from a party, the user presses the delete key from the computer keyboard.

The [BLK] button is a toggle button and enables or disables call blocking. Depression of the [BLK] button enables call blocking causing all inbound calls from parties who have call blocking designated in their information profile within the personal information directory to be either rejected or routed to the answer machine. Whether a call is to be rejected or routed to the answering machine is specified in a party's information profile record within the personal information directory, in a manner, as previously described.

The [PRI] button is a toggle button which enables or disables priority ringing. Depression of the button enables

priority ringing of all inbound calls from parties, i.e. generation of customized sound effects and/or graphic announcements when a call arrives. As with call blocking, priority ringing is specified within a party's information profile record in the user's personal information directory.

The [FWD] button is a toggle button which enables or disables call forwarding. Depression of the button enables call forwarding of selected inbound calls to the party specified in the appropriate information profile record in the personal information directory. The WebPhone will first search in the personal information directory for an information profile record which matches the inbound call. If a match occurs, and call forwarding is enabled, the inbound call will be forwarded to the party designated within the matched information profile record. If no party is designated, the call will be forwarded to a default forwarding party.

In addition to the call function buttons, a number of phone function buttons **1410** including a [CFG], [DIR], [MSG], [DAT], [LOG], [ ], and ? buttons enable users to further direct functions of a phone. Specifically, the ? button is a momentary button which invokes an interactive, multimedia tutorial and help system about the WebPhone. The [CFG] button is a momentary button, depression of which launches a configuration dialog which enables the user to change the operating parameters of the WebPhone. The [DIR] button is a momentary button, depression of which launches the phone directory dialog which enables a user to add, store, update, view, and delete parties and to obtain directory assistance from global server **1500**, as described previously. The [MSG] button is likewise a momentary button, depression of which launches the voicemail message dialog which enables a user to view, sort, playback, delete, save and restore voicemail messages, as well as to create, playback, delete, save, and restore custom outgoing messages and assign them to information profile records in the personal information directory.

The [DAT] button is a momentary button, depression of which launches a data file transfer dialog enabling a user to monitor and control the progress of a data file transferred over the communication link established with the WebPhone, such dialog further enables a user to retrieve and create E-mail.

The [LOG] button is a momentary button, depression of which launches a call activity log dialog which enables a user to use, sort, search for, print, and delete call related events. An "X" icon is provided to exit the WebPhone. If one or more calls are active when the X icon is selected, a dialog box will appear asking the user if he/she really wishes to exit and terminate active calls. Other icons are provided for minimizing or iconifying the WebPhone application.

In addition to the above-described display, the WebPhone GUI **1400** includes a number of audio control buttons and sliders (not shown in FIG. **14**). These graphic elements enable the user to control the recording the playback of voicemail and outgoing messages and operate similar to conventional audio tape deck controls. In the illustrative embodiment, and similar to that shown in FIG. **5**, a progress bar is illustrated which displays the extent of progress during playback and audio recording processes. Momentary buttons may be provided for rewinding the "virtual tape" to the beginning and for fast forwarding the tape to the end of a recording. Further, momentary buttons are provided for aborting, as well as stopping, playback of audio. A speaker card button, implemented as a toggle button, is provided to play back audio on the sound card's speaker. A special momentary button for audio playback is provided. When initially depressed, audio playing commences. The button then pops out and becomes a pause button. Subsequent depression pauses the audio. The button then pops out again to become a play button. A record button, in the form of a toggle button is provided to control recording of audio. When the button is depressed the user is in an audio record mode and can record voicemail or outgoing messages. To stop recording, the button is pressed again or the stop is button is pressed. A slider-type graphic potentiometer is provided to control speaker volume and enables the user to adjust output volume of the audio received during conversation and playback of voicemail and outgoing messages. The speaker control will attenuate the sound card speaker volume. A similar control is provided to control microphone volume and enables the user to adjust the input volume of audio recorded during conversation and recording of voicemail and outgoing messages. The microphone slider control attenuates the sound card's microphone volume.

WebPhone Application Object Implementation

As previously described, with reference to FIGS. **13**A–B, the WebPhone application comprises a set of object modules which work together in a concerted fashion to provide real-time, multitasking, network-based media transmission and reception. Specifically, the WebPhone GUI, user interface, event manager, and media engine utilize a number of objects to house and manipulate data associated with the operation of the WebPhone application. The GUI objects control the look and feel of the graphic user interface controls which comprise the WebPhone user interface. Some user interface objects maintain and manage many of the states of the WebPhone and control the behavior of the GUI controls, as illustrated in FIGS. **18**A–D.

FIG. **18**A illustrates the hierarchical relationship between objects within the WebPhone. The UIVirtualBase **1812** is a class from which UIVirtualControl object **1810** and UIVirtual object **1808** inherit their respective attributes and member functions. GUIControl object **1802** inherits its attributes and member functions from UIVirtualControl **1810**, as illustrated. UICollection object **1806** inherits its properties from the UIVirtual object class **1808**. The UIControl object inherits its attributes and member functions from both the UIVirtual control object class **1810** and the UIVirtual object class **1808**.

Referring to FIG. **18**B the UIControl object **1804** itself serves as a class from which the UIButton object **1828**, UISlider object **1826**, UIScroller object **1824**, UITab object **1822**, UIDisplay object **1818**, UIListBox object **1820**, UIComboBox **1814**, and UIEditBox **1816** are subclasses. As illustrated in FIG. **18**C, the UIPushButton **1842**, UIPlayRun object **1844** and UIToggle object **1846**, are subclasses of the UIButton object **1848**. As illustrated in FIG. **18**D, the UIPhone object **1838**, UICall object **1832**, UILine object **1834**, and UIPopUp object **1836** are derived from or inherit their attributes and member functions from the UICollection object class **1806**.

Each WebPhone control has two objects associated therewith, a windowing system specific GUIcontrol object **802** and a generic UI control object **1804**. When the GUIcontrol object's state is changed by the user, GUIcontrol **1802** verifies the change with UIcontrol **1804** to validate the change. UIcontrol **1804** is a child of the UIcollection **1806**. When UIcontrol's sibling, GUIcontrol **1802** requests UIcontrol **1804** to verify a change, and the change is accepted, GUIcontrol **1802** must verify the change with its parent object. The parent UIcollection **1806** may have its own parent, another UIcollection object, that it must verify the change with. The UIPhone object **1838** is a member of the

UI collection class. UIPhone has final approval over all changes in the state of the WebPhone. UIPhone **1838** further tells child objects when the event manager changes the phone state and further creates jobs for the event manager based on user actions.

The WebPhone drag and drop functionality utilizes the standard Windows® drag and drop interface and adds several unique object types to interact therewith. Specifically, each UIcontrol and GUIcontrol object has two new member functions added, e.g., set dragtype and acceptdrop types. The set dragtype call sets the type of drag that the control will perform if the mouse or other pointing device is moved out of the control window with the left mouse button down. The accept droptype defines the types of drags the control will accept.

Event Manager and Media Engine

The event manager is a state machine consisting of an array of pointers to functions and states which make up a state-event table. When an event occurs as caused by the mouse, keyboard, mic, speaker, or socket, it is up to the user interface to determine if the event requires the attention of the event manager. The event manager is not notified of events which effect only the graphic user interface, e.g., the user depresses the [DIR] button to open the phone directory dialog.

Referring to FIGS. **19**A–C, a conceptual block diagram illustrating the event manager and media engine objects utilized by the WebPhone is presented. Specifically, the following objects are utilized by both the user interface and the event manager to manager the state of calls and tasks that are to be performed:

line
job
party
task

As illustrated in FIG. **19**A, a Line object is represented by the pentagon shape with a number contained therein. The Line object has the attributes of state and duration and a *job pointer. Member functions for the Line object include createcall ( ) and removecall ( ). The Job object is illustrated with a rectangle having pointers extended therefrom as illustrated in FIG. **19**A. Attributes of the job object include, ID, type, state, and parties, and pointer attributes party, intask, outTask, nextjob, prevjob. The Job object has the member functions of AddParty, RemoveParty, CreateTask, and RemoveTask. The Party object, illustrated with a triangular symbol, includes the attributes of state, session, socket, and partyRec, and the member functions of LoadParty.

The Task object includes the attributes of command, source, destination, extent, fileHandle, fileType, fileLength, fileSize, mic, speaker, and flags, as wells as pointer attributes *job and *buf. The values assumable by the command attribute of the Task object may include initialize, close, start, stop, fill, and use, etc. The values assumable by the source and destination attributes of the task object may include microphone, speaker, socket, and file. FIG. **19**B illustrates the relationship between Line objects and Job objects and the pointers linking the two. FIG. **19** illustrates the relationship between Party objects, Job objects and Task objects and the pointers linking the Job objects to the parties and tasks.

Media Engine Implementation

FIGS. **20**A–D illustrate the process steps performed by the media engine of the WebPhone in accordance with the present invention. The coding of the process steps of the flowchart of FIGS. **20**A–D and to instructions suitable for use by the WebPhone will be understandable by those having ordinary skill in the programming arts. FIG. **20**A illustrates the process executed by the media engine when the CMD attribute of a Task object is defined as a AE_USEME command, as previously illustrated in FIG. **19**A. The Task objects are set up by the event manager. The media engine manages routing and resources. For example a microphone, file or socket may provide a source of data to media engine while a destination may comprise either a speaker file or socket. The media engine serves to perform compression/decompression as well as copying functions. For the purposes of describing flowcharts **20** A–D the media engine will referred to as media engine **2000**.

Referring to FIG. **20**A, media engine **2000** first determines the source of a data stream, as illustrated by decisional block **2002**. If the source is a microphone, media engine **2000** determines whether or not the current audio data from the microphone source is silence, as illustrated in decisional block **2004**. If the audio stream from the microphone is not silent the data will be accumulated into a microphone buffer, as illustrated by procedural block **2006**. Next, the media engine will determine whether or not the buffer is full, as illustrated by decisional **2008**. If the buffer is full, process flow will proceed to a determination of the destination via connector Q. If in decisional block **2004** the determination was made that the audio data from the microphone was silence, the media engine notes the length of the silence, as illustrated by procedural block **2010**. Next, the media engine determines whether or not the buffer is empty, as illustrated by decisional block **2012**. If the buffer is empty, process flow proceeds to a determination of the source, via connector R, as illustrated by decisional block **2030**.

Returning again to decisional **2014**, a determination of the destination of the audio data made after either a determination that the buffer is full, via connector Q, or that the source of the audio data is a socket, e.g., one of the branches of decisional block **2002**. If in decisional block **2014** a determination is made that the destination is a socket, media engine **2000** determines if a party is online, as illustrated by decisional block **2028**. If the party is online media engine **2000** will write to the socket associated with that party, as illustrated by procedural block **2026**. The process as illustrated by decisional **2028** and process block **2026** are repeated for every party associated with the Job object, i.e., conference calls include multiple parties. Following writing to the parties socket, process flow returns decisional block **2030** for a determination of the source, as illustrated. If in decisional block **2014** a determination was made that the speaker was the destination, media engine makes a further determination to whether or not the there is more than one party on the conversation, i.e., conference call, as illustrated by decisional block **2020**. If there is only one other party besides the user on the call, process flow proceeds to junction K where the audio data is written to the speaker, as illustrated by process block **2022**. If in decisional block **2020** a determination was made that multiple parties were associated with a call media engine **2000** mixes the audio data into a mixing buffer, as illustrated by process block **2016**. Next media engine **2000** determines whether or not the speaker is idle. If so, the audio data from the mixing buffer is written to the speaker as illustrated by procedural block **2022**. Otherwise, process flow proceeds to junction R. In decisional block **2030** media engine **2000** determines again what the source of an audio data stream is. If the source is determine to be a socket, media engine **2000** will place the empty buffer on the winSock queue, as illustrated by process block **2036**. If the source is determined to be a microphone, and the microphone is enabled, as determined in decisional

block **2032**, media engine **2000** will place the empty buffer on the mic sampling queue, as illustrated by process block **2034**. Otherwise, media engine **2000** will place the empty buffer in the free pool of buffer space, as illustrated by process **2038**. Either branch of decisional block **2030** will result in a return from the task execution process, as illustrated.

FIG. **20**B, illustrates the process flow performed by media engine **2000** upon receiving a task object from the event manager having the CMD attribute defined with a AE_START, i.e., the event manager instructs the media engine to start a copy operation from a source to a destination. First, media engine **2000** determines whether or not the source is a microphone or a file, as illustrated by decisional block **2040**. If the source is a file, process flow proceeds to block **2062** of FIG. **20**C via connector F, as described hereinafter. If the source is determined to be a microphone, media engine **2000** will determine whether or not the microphone is on, as illustrated by decisional **2044**. If the microphone is not on, an internal error notification will be generated, as illustrated by procedural block **2046**. If the microphone is on, media engine **2000** will enable microphone sampling, obtain space from the buffer pool, and perform an asynchronous read from the microphone, as illustrated by process blocks **2048**, **2050** and **2052**, respectively. If in decisional block **2040** media engine **2000** determined that the source was a socket, buffer space will be retrieved from the buffer pool, as illustrated by process block **2042**, and an asynchronous read from the socket will be performed, as illustrated by process block **2045**. Following the an asynchronous read from either a socket or a microphone, media engine **2000** will return the task to the event manager, as illustrated.

FIG. **20** illustrates the process flow performed by media engine **2000** upon receiving a Task object from the event manager in which the CMD attribute is defined with a AE_FILLME command value, i.e., an empty packet has been returned from either an MCI or WINSOCK asynchronous write operation upon completion. First, media engine **2000** determines whether the source is from a file or either a socket or speaker, as illustrated by decisional block **2054**. If the source is a file, media engine **2000** will read a portion of the file, as illustrated by process block **2062**. Next, media engine **2000** will make a determination as to whether the destination is either a socket or a speaker, as illustrated by decisional block **2068**. If the destination is a socket process flow will return to decisional block **2028** of FIG. **20**A via connector S, as illustrated. If the destination is a speaker, process flow will proceed to process block **2022** of FIG. **20**A via connector K as illustrated.

If a determination was made in decision **2056** that the destination is a socket, media engine **2000** will place the buffer associated with the task or message in the WINSOCK free pool of buffer space, as illustrated by process block **2058**. If the destination is determined to be a speaker, media engine **2000** next determines whether or not the buffer is empty, as illustrated by decision block **2060**. If the buffer is not empty, the data within the mixing buffer will be written to the speaker, as illustrated by message **2064**. If the buffer is empty, the buffer associated with the message, i.e., task, will be placed in the MCI message free pool, as illustrated by process block **2066**. Both branches decisional block **2056** result in a return from the task by media engine **2000**, as illustrated. In the above-described flow diagrams, a message may be a task implementation similar to the manner in which Microsoft Windows uses messages for task completion operations.

FIG. **20**D illustrates the process path taken by media engine **2000** when the CMD attribute of a Task object is defined as a AE_STOP value, i.e., the event manager instructs the media engine to stop the current operation on behalf of a specified task. The process begins with the determination of whether or not the source is a microphone or file, as illustrated by decisional block **2070**. If it is determined that the source is a file, process flow proceeds to block **280** where the source is set to none, i.e., no further data will retrieved or processed. If the process is determined to be a socket, media engine **2000** cancels any pending asynchronous reads from the socket, as illustrated by process block **2074**. If a determination is made that the source is a microphone, media engine **2000** will determine whether or not the microphone is on, as illustrated by decisional block **2072**. If the microphone is on, media engine **2000** cancels sampling of the audio signal from the microphone, as illustrated by process block **2076**, and, discards the pending data in the mix buffer, as illustrated by process block **2078**. Regardless of the determination of the source, all branches of the process flow terminate with the setting of the source to none or null, indicating a termination of the operation and a return by media **2000** from the task, as illustrated.

In an alternate embodiment, the various aspects of the invention may be implemented as a computer program product for use with a computer system. Such implementation may comprise a series of computer instructions either fixed on a tangible medium, such as a computer readable media, e.g. diskette **1142**, CD-ROM **1147**, ROM **1115**, or fixed disk **1152** of FIG. **11**, or transmittable to a computer system, via a modem or other interface device, such as communications adapter **1190** connected to the network **1195** over a medium **1191**. Medium **1191** can be either a tangible medium, including but not limited to optical or analog communications lines, or may be implemented with wireless techniques, including but not limited to microwave, infrared or other transmission techniques. The series of computer instructions embodies all or part of the functionality previously described herein with respect to the invention. Those skilled in the art will appreciate that such computer instructions can be written in a number of programming languages for use with many computer architectures or operating systems. Further, such instructions may be stored using any memory technology, present or future, including, but not limited to, semiconductor, magnetic, optical or other memory devices, or transmitted using any communications technology, present or future, including but not limited to optical, infrared, microwave, or other transmission technologies. It is contemplated that such a computer program product may be distributed as a removable media with accompanying printed or electronic documentation, e.g., shrink wrapped software, preloaded with a computer system, e.g., on system ROM or fixed disk, or distributed from a server or electronic bulletin board over a network, e.g., the Internet or World Wide Web.

Although various exemplary embodiments of the invention have been disclosed, it will be apparent to those skill in the art that various changes and modifications can be made which will achieve some of the advantages of the invention without departing from the spirit and scope of the invention. These and other obvious modifications are intended to be covered by the appended claims.

TABLE 1

Client Table

Field	Data Type	Comments
id	ulong	Unique ID Sequence
activated	char	0 = NO, 1 = YES
activationDate	ulong	Secs since 00:00 UTC Jan 1, 1970
version capability	ushort	Version of the Webphone
version protocol	ushort	
version vendor	ushort	
paid	char	0 = NO, 1 = YES
prePaidCode	varchar (16)	
firstName	varchar (10)	
lastName	varchar (25)	
alias	varchar (20)	
emailAddr	varchar (90)	
IPAddr	varchar (80)	0.0.0.0 if not known
street	varchar (50)	
apt	varchar (5)	
city	varchar (20)	
state	varchar (20)	
country	varchar (20)	
postalCode	varchar (20)	
phone	varchar (25)	
fax	varchar (25)	
feature bits	ulong	WebPhone Feature Definitions
company	varchar (25)	Company Name
addrChanges	char	No. of address changes
addrChangeDate	ulong	Secs since 00:00 UTC
publish	char	0 = NO, 1 = YES
accessDate	ulong	Secs since 00:00 UTC
accessCount	ulong	# of log ons
callCount	ulong	# of outbound calls
social security number	ulong	optional
age	ushort	optional
occupation code	ushort	optional
interest codes	ushort	optional
household income range	ushort	optional

TABLE 2

Online Table

Field	Data Type	Comments
emailAddr	varchar (90)	
IPAddr	varchar (80)	
flags	char	
onlineDate	ulong	Secs since 00:00 UTC

TABLE 3

WebBoard Table

Field	Data Type	Comments
id	ulong	Unique ID Sequence
image	varchar (255)	Filename of image file
imageType	char	GIF = 0, JPG = 1, RLE = 3
audio	varchar (255)	Filename of TSP encoded.WAV file
audioType	char	GSM = 0, TRUESPEECH = 1
hits	ulong	Number of accrued hits
hitsprofile	varchar (8)	Filename of Demographics
version	ulong	version of WebBoard
URL	varchar (255)	home page url

TABLE 4

Weboard Config Table

Field	Data Type	Comments
count	ulong	Number of WebBoards

TABLE 5

Source Table

Field	Data Type	Comments
id	ulong	Unique ID Seqence
weboardID	ulong	Link to WebBoard record
name	varchar (50)	Company's name
url	varchar (80	URL to Home Page
street	varchar (50)	
apt	varchar (5)	
city	varchar (20)	
state	varchar (20)	
country	varchar (20)	
postalCode	varchar (20)	
phone	varchar (25)	
fax	varchar (25)	
contact	varchar (35)	Name of contact

TABLE 6

WebPhone Protocol (WPP) Packet Definitions

Packet	Packet Type	Direction	Data
Invalid	WPP_INVALID	← →	WPP_INVALID
Online Req	WPP_ONLINEREQ	→	WPP_ONLINEREQ, sid, version, emailAddr, IPAddr, onlineState, feature bits
OnlineACK	WPP ONLINEACK	←	WPP_ONLINEACK, sid onlineStatus, feature bits
Offline	WPP_OFFLINE	← →	WPP_OFFLINE, sid
Hello	WPP_HELLO	← →	WPP_HELLO, sid, version
Connect Req	WPP_CONNECTREQ	→	WPP_CONNECTREQ, sid, version, callType, partyEmailAddr, emailAddr,

TABLE 6-continued

WebPhone Protocol (WPP) Packet Definitions

Packet	Packet Type	Direction	Data
			IPAddr, connectState
Connect ACK	WPP_CONNECTACK	← →	WPP_CONNECTACK, sid, connectStatus, partyIPaddr
Call	WPP_CALL	← →	WPP_CALLACK, sid, version, emailAddr, IpAddr, userInfo
CallACK	WPP_CALLACK	← →	WPP_CALLACK, sid, version, emailAddr, IpAddr, userInfo
CnfCall	WPP_CNFCALL	← →	WPP_CNFCALL, sid, version, emailAddr, IpAddr, userInfo
CnfCallACK	WPP_CNFCALLACK	← →	WPP_CNFCALLACK, sid, version
Answer	WPP_ANSWER	← →	WPP_ANSWER, sid
Busy	WPP_BUSY	← →	WPP_BUSY, sid
AnsMachine	WPP_ANSMACH	← →	WPP_ANSMACH, sid, state
End	WPP_END	← →	WPP_END, sid
Hold	WPP_HOLD	← →	WPP_HOLD, SID, (ON/OFF)
Reject	SPP_REJECT	← →	WPP_REJECT, sid
Camp	WPP_CAMP	← →	WPP_CAMP, sid
CampACK	WPP_CAMPACK	← →	WPP_CAMPACK, sid
Audio	WPP_Audio	← →	WPP_AUDIO, sid, audioType, silence, length, audioData
Pulse	WPP_PULSE	→	WPP_PULSE, sid
Adjpulse	WPP_PULSE	←	WPP_ADJPULSE, sid, adjPulse
Vmail	WPP_VMAIL	← →	WPP_VMAIL, sid, audioType, silence, length, audioData
VmailEnd	WPP_VMAILEND	← →	WPP_VMAILEND, sid
OgmEnd	WPP_OGMEND	← →	WPP_OGMEND, sid
CnfAdd	WPP_CNFADD	← →	WPP_CNFADD, sid, partyEmailAddr, partyIPaddr, partInfo
CnfDrop	WPP_CNFDROP	← →	WPP_FILEXMTREQ, sid, file Type, fileName, fileSize

TABLE 7

WebPhone Protocol (WPP) Packet Definitions

Packet	Packet Type	Direction	Data
FileXmtAck	WPP_FILEXMTACK	← →	WPP_FILEXMTACK, sid
File	WPP_FILE	← →	WPP_FILE, sid, length, fileData
FileXmtEnd	WPP_FILEXMTEND	← →	WPP_FILEXMTEND, sid
FileXmtAbort	WPP_FILEXMTABORT	← →	WPP_FILEXMTABORT, sid
InforReq	WPP_INFOREQ	→	WPP_INFOREQ, sid, query
InfoACK	WPP_KNFOACK	←	WPP_INFOACK, sid, nparties
Info	WPP_INFO	←	WPP_INFO, sid, partyInfo
InfoAbort	WPP_INFORABORT	→	WPP_INFOABORT, sid
UserInfoReq	WPP_USRINFOREQ	←	WPP_USRINFOREQ, sid
UserInfo	WPP_USRINFO	→	WPP_USRINFO, sid, version, userInfo
WBImageStart	WPP_WBIMAGESTART	←	WPP_WBIMAGESTART, sid, fileSize, imageType, url
WBImage	WPP_WBIMAGE	←	WPP_WBIMAGE, sid, length, imageData
WBImageEnd	WPP_WBIMAGEEND	←	WPP_WBIMAGEEND, sid
WBAudioStart	WPP_WBAUDIOSTART	←	WPP_WBAUDIOSTART, sid, fileSize, audioType
WBAudio	WPP_WBAUDIO	←	WPP_WBAUDIO, sid, length, audioData
WBAudioEnd	WPP_WBAUDI(OEND	←	WPP_WBAUDIOEND, sid
Registration	WPP_REG	←	WPP_REG, sid, feature bits, EEMAILAddr, customer id
Audio Start	WPP_AUDIO START	← →	WPP_AUDIO START, sid
Audio End	WPP_AUDIO END	← →	WPP_AUDIO END, sid
Caller OK	WPP_CALLEROK	→	WPP_CALLEROK, sid, version, emailAddr, feature bits
Caller ACK	WPP_CALLERACK	←	WPP_CALLERACK, sid, callerStatus, feature bits
Key Pad	WPP_KEYPAD	←	WPP_KEYPAD, size (ON/OFF)
Key	WPP_KEY	→	WPP_KEY, sid, ascii character
WBLIST	WPP_WBLIST	←	WPP_WBLIST, sid, list of WB IDs
WBLIST REQ	WPP_WBLISTREQ	→	WPP_BBLISTREQ, sid

TABLE 7-continued

WebPhone Protocol (WPP) Packet Definitions

Packet	Packet Type	Direction	Data
WB REQ	WPP_WEBBOARDREQ	→	WPP_WEBBOARDREQ, sid, WBid, Client id
WB HIT	WPP_WEBBOARDHIT	→	WPP_WWBOARDHIT, sid, WB id, Client id
ANS FULL	WPP_ANS FULL	→	WPP_ANS FULL, sid

TABLE 8

WebPhone Protocol (WPP) Packet Data Definitions

Element	Data Type	Comment
WPP_*	unsigned char	WPP message identifier
sid	unsigned long	session id unique per call
version	unsigned(3)	version of the webphone (capability, protocol, vendor)
emailAddr	varchar(90)	email address of caller
IPAddr	varchar(80)	IP Address
onlineState	unsigned char	bit 0 (ACTIVE/INACTIVE) bit 1 (Merchant Phone) bit 2 (Connection Server) bit 3 (webboard disabled) bit 4 Not Used bit 5 Not Used bit 6 Not Used bit 7 Not Used
call Type	unsigned char	call type 0: EMAIL/1:IPCALL
party EmailAddr	varchar(90)	email address of person to call
connectStatus	unsigned char	0: NO WEBPHONE 1: ONLINE 2: OFFLINE 3: RECONNECT 4: PERM_RECONNECT
partyIPAddr	varchar(80)	IP Address of person to call
userInfo	varchar(120)	firstName, LastName, alias, emailAddr, street, apt, city, state, country, postalCode, phone, fax, company
audioType	unsigned char	audio compress type 0: GSM 1: TRUESPEECH

TABLE 9

WebPhone Protocol (WPP) Packet Data Definitions

Element	Data Type	Comment
length	unsigned short	length of audio or data in bytes
audioData	512 Bytes	compressed audio data
feature bits	unsigned long	WebPhone feature definition
fileType	unsigned char	file type 0: DATA 1: EMAIL 2: TEXT 3: BINARY
fileName	varchar(13)	name of file to be transmitted.
fileSize	unsigned long	size of file to be transmitted in bytes
fileData	variable	file data
query	varchar(120)	firstName, lastName, company, city, state, country
nparties	unsigned long	number of parties or query records being sent
size	unsigned long	size of file (IMAGE or AUDIO) to be sent
imageType	unsigned char	image type 0: GIF 1: JPG
imageData	512 Bytes	image data

TABLE 9-continued

WebPhone Protocol (WPP) Packet Data Definitions

Element	Data Type	Comment
eemailAddr	varchar(90)	encrypted email Address
onlineStatus	unsigned char	0 OK −1 Error
callerStatus	unsigned char	0 is unpaid 1 if paid
onlineState	unsigned char	bit 0 webboard disabled bit 1 Not Used bit 2 Not Used bit 3 Not Used bit 4 Not Used bit 5 Not Used bit 6 Not Used bit 7 Not Used
WBid	unsigned long	link to WebBoard record
adjpulse	unsigned long	timer offset in secs

TABLE 10

Feature Definition

feature bit 0	0 = 1 line	1 = 4 lines
bit 1	0 = Limited Call Time	1 = Unrestricted Call Time
bit 2	0 = Limited VMail OGM	1 = Unlimited Vmail OGM
bit 3	0 = Limited Directory Entries	1 = Unlimited Dir Entries
bit 4	0 = Webboard Not Disabled	1 = Allowed to Disable
bit 5	0 = Conferencing (audio) Disabled	1 = Conferencing Enabled
bit 6	0 = Conferencing (video) Disabled	1 = Conferencing Enabled
bit 7	0 = Whiteboard Disabled	1 = Whiteboard Enabled
bit 8	0 = Offline voicemail Disabled	1 = Offline voicemail Enabled
bit 9–27	Reserved	
bit 28–30	Type of Phone 0 - Normal webphone 1 - Agent 2 - Business webphone 3 - Gateway 4 - ACD 5 - 7 reserved	
bit 31	1 = Disable all WebPhone features	

TABLE 11

Offset	Name	Size	Description
	Reserved		Reserved
+1	SessionID	4	Unique value for duration of this connection
+5	Version	6	WebPhone version and distributor stamp

TABLE 11-continued

Offset	Name	Size	Description
+11	Codec	1	Audio compression algorithm selected
+12	FirstName	10	Given name, middle initial
+22	LastName	25	Surname
+47	Alias	20	Nickname
+67	EmailAddr	90	Caller's electronic mail address
+157	IpAddr	80	Caller's WebPhone's Internet address
+237	Street	50	Street address of user
+287	Apt	20	Apartment or suite number
+307	City	20	City name
+327	State	20	State or province
+347	Country	20	Country name
+367	ZipCode	20	Zip or postal code
+387	Phone	25	Telephone number
+412	Fax	25	Facsimile telepone number
+437	Company	25	Employer or organization name
+487	File Name	25	Name of file
+512	Action Code	25	Action descriptor
+537	File Type	10	File type descriptor
+547	Status	25	Status of WebPhone utility

We claim:

1. A computer program product for use with a computer system having a display and an audio transducer, the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium comprising:

a. program code for generating a user-interface enabling control a first process executing on the computer system;

b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network;

c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process; and

d. program code means, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network.

2. The computer program product of claim **1** wherein the program code for establishing a point-to-point communication link further comprises:

d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network.

3. The computer program product of claim **2** wherein the program code for establishing a point-to-point communication link further comprise:

d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network; and

d.3 program code means for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.

4. The computer program product of claim **2** wherein the program code for establishing a point-to-point communication link further comprises:

d.2 program code means for transmitting an E-mail message containing a network protocol address from the first process to the server process over the computer network;

d.3 program code means for receiving a second network protocol address from the second process over the computer network.

5. In a computer system having a display and an audio transducer, the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes comprising:

A. determining the currently assigned network protocol address of the first process upon connection to the computer network;

B. establishing a communication connection with the server process once the assigned network protocol of the first process is known;

C. forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process; and

D. establishing a point-to-point communication with another process over the computer network.

6. The method of claim **5** wherein the program step D comprises:

D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network; and

D.2 receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.

7. The method of claim **5** wherein the program step D comprises:

D.1 transmitting an E-mail message containing a network protocol address from the first process to the server process over the computer network;

D.2 receiving a second network protocol address from a second process over the computer network.

8. In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network, the method comprising the steps of:

A. generating a user-interface element representing a first communication line;

B. generating a user interface element representing a first callee process;

C. guerving the server process to determine if the first callee process is accessible; and

D. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line.

9. The method of claim **8** wherein step C further comprises the steps of:

C.1 querying the server process as to the on-line status of the first callee process; and

C.2 receiving a network protocol address of the first callee process over the computer network from the server process.

10. The method of claim 8 further comprising the step of:

E. generating a user-interface element representing a second communication line.

11. The method of claim 8 further comprising the step of:

F. terminating the point-to-point communication from the caller process to the first callee process, in response to the user disassociating the element representing the first callee process from the element representing the first communication line; and

G. establishing a different point-to-point communication from the caller process to the first callee process, in response to the user associating the element representing the first callee process with the element representing the second communication line.

12. The method of claim 8 further comprising the steps of:

E. generating a user interface element representing a second callee process; and

F. establishing a conference point-to-point communication between the caller process and the first and second callee processes, in response to the user associating the element representing the second callee process with the element representing the first communication line.

13. The method of claim 8 further comprising the step of:

G. removing the second callee process from the conference point-to-point communication in response to the user disassociating the element representing the second callee process from the element representing the first communication line.

14. The method of claim 8 further comprising the steps of:

E. generating a user interface element representing a communication line having a temporarily disabled status; and

F. temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status.

15. The method of claim 14 wherein the element generated in step E represents a communication line on hold status.

16. The method of claim 15 wherein the element generated in step E represents a communication line on mute status.

17. The method of claim 8 wherein the display further comprises a visual display.

18. The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO :6,009,469

DATED :December 28, 1999

INVENTOR(S) :Shane D. Mattaway, Glenn W. Hutton and Craig B. Strickland

It is certified that errors appear in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

IN THE CLAIMS:

In claim 1, column 41, line 23, after "having a display", please delete "and an audio transducer";

In claim 1, column 41, line 43, after "program code", please delete "means";

In claim 3, column 41, line 60, after "program code", please delete "means";

In claim 4, column 42, line 1, after "program code", please delete "means";

In claim 4, column 42, line 5, after "program code", please delete "means";

In claim 5, column 42, lines 8 and 9, after "having a display", please delete "and an audio transducer";

Signed and Sealed this

Eighth Day of May, 2001

Attest:

Nicholas P. Godici

NICHOLAS P. GODICI

Attesting Officer

Acting Director of the United States Patent and Trademark Office

Exhibit L

Declaration of Alon Cohen

Customer No.: 8791

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Sunnyvale, California 94085-4040
Telephone (408) 720-8300
Fax (408) 720-8383

DECLARATION OF ALON COHEN

I, Alon Cohen, declare under penalty of perjury that the following is true and correct:

1. I have personal knowledge of the facts stated in this declaration and, if asked to do so, I could and would competently and truthfully testify to these facts under oath.

2. In 1989, I helped co-found VocalTec, Ltd. ("VocalTec"). VocalTec was and still is a provider of software that enables voice and multimedia communications over packet based networks, such as the Internet and corporate intranets. VocalTec is a pioneer in communications over computer networks.

3. One of VocalTec's first voice communications products was VocalChat. VocalChat enabled real-time voice communications over local area networks. The first version of the VocalChat product was commercially released to the public in 1993.

4. The attached Exhibit A is a true and correct copy of VocalChat 1.01 Networking Information. The document was publicly distributed in 1994 as part of the VocalChat version 1.01 software, which was commercially released and on sale to the general public in 1994. The VocalChat version 1.01 software was sold as a boxed product, which included an electronic copy of the VocalChat 1.01 Networking Information document.

5. The attached Exhibit B is a true and correct copy of VocalChat 2.0 User's Guide. The document was publicly distributed in 1994 as part of the VocalChat version 2.0 software, which was commercially released and on sale to the general public in 1994. The VocalChat version 2.0 software was sold as a boxed product, which included a printed copy of the VocalChat 2.0 User's Guide.

6. The attached Exhibits C, D and E are true and correct copies of README.TXT, VocalChat Troubleshooting, and VocalChat Information, respectively. The documents are true and correct print outs of VocalChat version 2.02's README.TXT, TROUBLE.HLP, and

INFO.HLP files, respectively. Electronic copies of these documents were publicly distributed in 1994 as part of the VocalChat version 2.02 software, which was commercially released and on sale to the general public as a boxed product in 1994.

Executed this 11th day of February, 2009, at Tenafly, New Jersey.

Alon Cohen

Exhibit M

Claim Chart for Claims 1-3, 5-6, 8-9, and 14-18 of '469 Patent

- **NetBIOS under 35 U.S.C. § 102(b)**
- **NetBIOS in view of RFC 1531 under 35 U.S.C. § 103(a)**
- **NetBIOS in view of Pinard under 35 U.S.C. § 103(a)**
- **NetBIOS in view of Pinard and Further in View of VocalChat User's Guide under 35 U.S.C. § 103(a)**

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EXHIBIT M
Claim Chart – NetBIOS

	Prior Art and Relevant Statute
1. A computer program product for use with a computer system having a display, the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium comprising:	**35 U.S.C. §102 (b) – NetBIOS** NetBIOS nodes are personal computers which inherently include displays. *See* NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems.") (emphasis added). *See also id.* (NetBIOS has generally been confined to personal computers to date). NetBIOS discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. That NetBIOS discloses a computer program product for use with a computer system can be seen from NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems."). In addition, NetBIOS describes that the computer systems (or "nodes") execute software, which is a computer-implemented "process." *See id.* ("NetBIOS defines a software interface . . . . NetBIOS has generally been confined to personal computers to date. However, . . . this specification has been designed to allow an implementation to be built on virtually any type of system where the TCP/IP protocol suite is available."); *id.* at 357 ("NetBIOS is the foundation of a large body of existing applications."). Finally, NetBIOS discloses a "server" to which all processes are operatively coupled over a network. For example, the figure on page 371 of NetBIOS illustrates a NetBIOS Name Server ("NBNS") coupled to point-to-point nodes ("P nodes") over the Internet. After retrieving addressing information from the NBNS, NetBIOS processes communicate directly with one another. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added).
a. program code for generating a user-interface enabling control a first process executing on the computer system;	NetBIOS inherently describes a user-interface which allows users to "control" processes on the computer system. For example, NetBIOS describes that the computers on the network may execute MS-DOS and PC-DOS operating systems, which included text-based user interfaces that allowed users to control computer

	Prior Art and Relevant Statute
	processes. *See, e.g.*, NetBIOS at 359 ("One of the first implementations was for personal computers running the PC-DOS and MS-DOS operating systems. It is possible to implement NetBIOS within other operating systems, or as processes which are, themselves, simply application programs as far as the host operating system is concerned."). *See also id.* at 356 ("it is expected that on computers operating under the PC-DOS and MS-DOS operating systems that the existing NetBIOS interface will be preserved by implementers."); *id.* at 507 (describing NetBIOS as "The de facto standard programmatic interface to networks for DOS systems.").
b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network;	As mentioned above, the functionality of NetBIOS is implemented in software, which is "program code." An IP address and name is assigned to uniquely identify each networked computer. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Furthermore, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, the computer systems on which NetBIOS was used received IP addresses dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the NetBIOS reference. **35 U.S.C. § 103 – NetBIOS in view of RFC 1531** Alternatively, Claim 1 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over the NetBIOS reference in view of RFC 1531, which describes how TCP/IP addresses are dynamically

	Prior Art and Relevant Statute
	assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). A motivation to combine NetBIOS with RFC 1531 exists because the NetBIOS reference describes NetBIOS operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine the NetBIOS reference with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood at the time of the alleged invention of the '469 patent that personal computers connected to the Internet as described in RFC 1001/1002 of NetBIOS would frequently have their IP addresses dynamically assigned.
c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process; and	NetBIOS describes the network nodes forwarding assigned IP addresses and unique names to the NetBIOS Name Server (NBNS). For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names.") (emphasis added); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); *id.* at 461-464 (disclosing program code for the P-node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.
d. program code, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network.	Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one

	Prior Art and Relevant Statute
	or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401: > This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session. *See also id.* at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages."). In sum, NetBIOS discloses all of the elements of, and hence anticipates, claim 1 of the '469 Patent.
2. The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises: d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network.	Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401: > This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the

	Prior Art and Relevant Statute
	caller this TCP connection is accepted as the connection for the data transfer phase of the session. *See also id.* at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages.").
3. The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise: d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network; and	As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "whether the second process is connected to the computer network." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NetBIOS Name Server, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is

	Prior Art and Relevant Statute
	deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g.*, *id.* at 389.
d.3 program code for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").
5. In a computer system having a display,	NetBIOS nodes are personal computers which inherently include displays. *See* NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems.") (emphasis added). *See also id.* (NetBIOS has generally been confined to personal computers to date).
the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes comprising:	NetBIOS discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. That NetBIOS discloses a computer program product for use with a computer system can be seen from NetBIOS at 356 ("The NetBIOS service has become the dominant mechanism for personal computer networking. NetBIOS provides a vendor independent interface for the IBM Personal Computer (PC) and compatible systems."). In addition, NetBIOS describes that the computer systems (or "nodes") execute software, which is a computer-implemented "process." *See id.* ("NetBIOS defines a software interface . . . . NetBIOS has generally been confined to personal computers to date. However, . . . this specification has been designed to allow an implementation to be built on virtually any type of system where the TCP/IP protocol suite is available."); *id.* at 357 ("NetBIOS is the foundation of a large body of existing

	Prior Art and Relevant Statute
	applications."). Finally, NetBIOS discloses a "server" to which all processes are operatively coupled over a network. For example, the figure on page 371 of NetBIOS illustrates a NetBIOS Name Server ("NBNS") coupled to point-to-point nodes ("P nodes") over the Internet. After retrieving addressing information from the NBNS, NetBIOS processes communicate directly with one another. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added).
A. determining the currently assigned network protocol address of the first process upon connection to the computer network;	NetBIOS discloses that an IP address and name is assigned to uniquely identify each networked computer. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Furthermore, on many networks, including the TCP/IP networks described in NetBIOS, network addresses are assigned "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, the computer systems on which NetBIOS was used received IP addresses dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the NetBIOS reference. **35 U.S.C. § 103 – NetBIOS in view of RFC 1531** Alternatively, Claim 5 should be rejected under 35 U.S.C. § 103(a) as being unpatentable over the NetBIOS reference in view of RFC 1531, which describes how TCP/IP addresses are dynamically

	Prior Art and Relevant Statute
	assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). A motivation to combine NetBIOS with RFC 1531 exists because the NetBIOS reference describes NetBIOS operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine the NetBIOS reference with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood at the time of the alleged invention of the '469 patent that personal computers connected to the Internet as described in RFC 1001/1002 of NetBIOS would frequently have their IP addresses dynamically assigned.
B. establishing a communication connection with the server process once the assigned network protocol of the first process is known;	NetBIOS describes the network nodes establishing a communication connection with the NBNS once the network protocol address of the first process is known. For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); NetBIOS at 461-464 (disclosing program code for the P-node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.
C. forwarding the assigned network protocol address of the first process to the	As described above, NetBIOS describes the network nodes forwarding assigned IP addresses and unique names to the NBNS.

	Prior Art and Relevant Statute
server process upon establishing a communication connection with the server process; and	For example, to engage in NetBIOS communications, a point-to-point ("P") or mixed ("M") node must register with a NBNS by transmitting a notice of the end node's name (a distinguishing identifier) and current IP address to the NBNS. *See* NetBIOS, page 385 (illustrating the "P-NODE REGISTRATION PROCESS"). Specifically, a NetBIOS "Name Registration Request" sent by an M or P node to a NetBIOS Name Server includes the field "NB_ADDRESS," which is the "IP address of the name's owner." *Id.* at 431. *See also id.* at 367 (describing how the NBNS may act as a "'bulletin board' on which name/address information is freely posted (and removed) by P and M nodes without validation by the NBNS. Alternatively, the NBNS may elect to completely manage and validate names."); *id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."); NetBIOS at 461-464 (disclosing program code for the P-node name registration process) and 480-482 (disclosing program code for NBNS incoming packet processing for name registration). The NBNS thereby contains a list of names and corresponding IP addresses of point-to-point and mixed end-nodes.
D. establishing a point-to-point communication with another process over the computer network.	Once the node seeking to initiate the communication has obtained from the NBNS the IP address for the node to receive the communication, a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401: > This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session. *See also id.* at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange, conducted between a pair of NetBIOS applications. Sessions are

	Prior Art and Relevant Statute
	fullduplex, sequenced, and reliable. Data is organized into messages."). In sum, NetBIOS discloses all of the elements of, and hence anticipates, claim 5 of the '469 Patent.
6. The method of claim 5 wherein the program step D comprises: D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network; and	As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id.* *See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "whether the second process is connected to the computer network." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NBNS, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or

	Prior Art and Relevant Statute
	NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g.*, *id.* at 389.
D.2 receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").
8. In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network, the method comprising the steps of:	**35 U.S.C. § 103 – NetBIOS in view of Pinard** Any computer system includes a display and is capable of executing software, which is a computer-implemented process. Moreover, as described above, in NetBIOS, once the node seeking to initiate the communication (the "caller process") has obtained from the NBNS the IP address for the node to receive the communication (the "callee process"), a point-to-point communication is established between the nodes. "The NetBIOS session service begins after one or more IP addresses have been found for the target name . . . NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve only directed (point-to-point) communications." NetBIOS at 397 (emphasis added). *See also id.* at 401: > This first diagram shows the sequence of network events used to successfully establish a session without retargeting by the listener. The TCP connection is first established with the well-known NetBIOS session service TCP port, SSN_SRVC_TCP_PORT. The caller then sends a SESSION REQUEST packet over the TCP connection requesting a session with the listener. The SESSION REQUEST contains the caller's name and the listener's name. The listener responds with a POSITIVE SESSION RESPONSE informing the caller this TCP connection is accepted as the connection for the data transfer phase of the session. *See also id.* at 398-400 ("16.1: Overview of NetBIOS Session Service"), 361 ("A session is a reliable message exchange,

	Prior Art and Relevant Statute
	conducted between a pair of NetBIOS applications. Sessions are fullduplex, sequenced, and reliable. Data is organized into messages.").
A. generating a user-interface element representing a first communication line;	Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30. A motivation to combine NetBIOS and Pinard exists considering the problem sought to be solved. Pinard relates to the field of computer-implemented telephony, and in particular to a computer-implemented method of indicating the status of various calls, to a user. *See* Pinard, Col. 1, lines 5-7. Pinard explicitly states that the invention "can be used with any system in which a . . . personal computer in conjunction with a server operates." Pinard, col. 2, lines 43-46. Given that NetBIOS describes networking software executed on personal computers (such as IBM PCs), one of ordinary skill in the art would have recognized that the particular design choices reflected in the graphical user interface of Pinard could readily be implemented within the context of the systems described in NetBIOS. Moreover, NetBIOS describes that it may be implemented using different operating systems. *See, e.g.*, NetBIOS at 359 ("It is possible to implement NetBIOS within other operating systems, or as processes which are, themselves, simply application programs as far as the host operating system is concerned.").
B. generating a user interface element representing a first callee process;	Pinard describes "a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.
C. querying the server process to determine if the first callee process is accessible; and	As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NetBIOS Name Server for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NetBIOS Name

	Prior Art and Relevant Statute
	Server "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "if the first callee process is accessible." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NetBIOS Name Server, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent" releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NetBIOS Name Server. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g., id.* at 389.
D. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first	As described above, NetBIOS describes establishing a point-to-point communication link between nodes. *See, e.g.*, NetBIOS at 397 ("NetBIOS session service transactions, packets, and protocols are identical for all end-node types. They involve <u>only directed (point-to-point) communications</u>.") (emphasis added). Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first

	Prior Art and Relevant Statute
communication line.	callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user Debbie merely drags the John icon to the call icon 29.").
9. The method of claim 8 wherein step C further comprises the steps of:	**35 U.S.C. § 103 – NetBIOS in view of Pinard**
C.1 querying the server process as to the on-line status of the first callee process; and	As disclosed in NetBIOS, an end-node sends a "query" to the NBNS to determine whether another end-node with the target name is currently logged onto the computer network, and hence is registered with the NBNS. "Name query (also known as 'resolution' or 'discovery') is the procedure by which the IP address(es) associated with a NetBIOS name are discovered." *Id.* at 377. NetBIOS point-to-point nodes "perform name resolution" by "ask[ing]" the NBNS for the IP address and other information of the target node with whom they wish to communicate. *Id. See also id.* at 388 ("Name query transactions are initiated by end-nodes to obtain the IP address(es) and other attributes associated with a NetBIOS name."). The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure"). "Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder." *Id.* at 446. The query determines "the on-line status of the first callee process." NetBIOS discloses a number of mechanisms to track the online status of nodes. For example, "NetBIOS names may be released explicitly or silently by an endnode. Silent release typically occurs when an end-node fails or is turned off." *id.* 377. For point-to-point nodes, the "explicit name release" involves "send[ing] a notification to their NBNS [NetBIOS Name Server]." *Id.* That is, upon going off-line, the node sends a "log-out" message to the NBNS, which then deletes the node's name/address entry from its database. *See also id.* at 393-394 (describing "NAME RELEASE TRANSACTIONS"). NetBIOS also discloses mechanisms designed to detect "silent"

	Prior Art and Relevant Statute
	releases, *i.e.*, when a nodes goes off-line without sending an explicit log-out message to the NBNS. *Id.* at 360 ("An explicit name deletion function is specified, so that applications may remove a name. Implicit name deletion occurs when a station ceases operation."). These mechanisms include the refresh mechanism discussed above. Nodes which do not send a refresh message to their NBNS within a determined period of time are deemed to have gone off-line and their name/address entry is deleted from the NBNS. *Id.* at 378, 382-383, 394-395. *See also id.* at 378 (describing "name challenge" operation), 380 (describing "Node Status Request" operation), 381 ("15.1.7 CONSISTENCY OF THE NBNS DATA BASE"), 383 ("A very cautious NBNS is free to poll nodes (by sending NAME QUERY REQUEST or NODE STATUS REQUEST packets) to verify that their name status is the same as that registered in the NBNS."). Thus, by design, only logged-in nodes are registered with the NBNS. *See, e.g., id.* at 446 ("Each NODE_NAME entry represents an active name in the same NetBIOS scope as the requesting name in the local name table of the responder."). In sum, the requesting node receives the target node's IP address from the NBNS only if the target node is currently logged in; otherwise, the NBNS responds to the requesting node's name query request with a negative response. *See, e.g.*, *id.* at 389.
C.2 receiving a network protocol address of the first callee process over the computer network from the server process.	The NBNS "answers queries from a P node with a list of IP address and other information for" the target name. *Id.* at 389. *See also id.* at 440 (RFC 1002 describing "Name Query Request"); *id.* at 464-465 (describing "P-Node Find Name Procedure").
14. The method of claim 8 further comprising the steps of:	**35 U.S.C. § 103 – NetBIOS in view of Pinard**
E. generating a user interface element representing a communication line having a temporarily disabled status; and	Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
F. temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status.	As described above, Figure 12 of Pinard illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

	Prior Art and Relevant Statute
15. The method of claim 14 wherein the element generated in step E represents a communication line on hold status.	**35 U.S.C. § 103 – NetBIOS in view of Pinard** See above. Figure 12 of Pinard illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
16. The method of claim 15 wherein the element generated in step E represents a communication line on mute status.	**35 U.S.C. § 103 – NetBIOS in view of Pinard and further in view of the VocalChat User's Guide** As described above, NetBIOS and Pinard describe all of the elements of Claim 16 except for a "communication line on mute status." VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57. A motivation to combine VocalChat with NetBIOS and Pinard exists considering the problem sought to be solved. All three references relate to the field of communications over a computer network, and VocalChat and Pinard relate to the use of a computer system to implement telephony features. *See, e.g.,* Pinard, Col. 1, lines 5-7. One of ordinary skill in the art would have recognized the need for a "mute" function to enable users to mute the audio of a call as needed.
17. The method of claim 8 wherein the display further comprises a visual display.	**35 U.S.C. § 103 – NetBIOS in view of Pinard** This claim element is redundant as any display comprises a "visual display." Nonetheless, Pinard describes a graphical user interface which is displayed on a "visual display." *See, e.g.,* Pinard, col. 4, lines 10-11 ("Turning now to FIG. 2, a display 11 of the personal computer 1 is illustrated.").
18. The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements.	**35 U.S.C. § 103 – NetBIOS in view of Pinard** Pinard describes a graphical user interface in which the elements in steps A and B are graphic elements. *See, e.g.,* Pinard, Figures 2-16 (illustrating multiple embodiments of a GUI on a computer system for managing telephone calls).

Exhibit N

Claim Chart for Claims 1-3, 5-6, 8-9, and 14-18 of '469 Patent

- **Etherphone under 35 U.S.C. § 102(b)**
- **Etherphone in view of Vin and further in view of RFC 1531 under 35 U.S.C. § 103(a)**
- **Etherphone in view of Pinard under 35 U.S.C. § 103(a)**
- **Etherphone in view of Pinard and Further in View of VocalChat references under 35 U.S.C. § 103(a)**

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EXHIBIT N
Claim Chart – Etherphone

	Prior Art and Relevant Statute
1. A computer program product for use with a computer system having a display, the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium comprising:	**35 U.S.C. § 102(b) – Etherphone** The computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)). Etherphone discloses a computer program product for use with a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. The functionality of the Etherphone system is implemented in software, which is inherently stored on a "computer usable medium." As described in Swinehart 2, the capabilities provided by the Etherphone system "are presented to application programmers as program packages and network services." Swinehart 2, page 1. *See also* Zellweger 1, page 2 ("Etherphone software is written in C"); *id.* ("Centralized server software limited the necessary size and speed of the Etherphone processor, and thus its cost . . ."); *id.*, page 1 (describing how the Etherphone system uses "microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server . . ."); Terry, page 4 ("The server software and the initial workstation software was developed in the Cedar programming environment."). In the pending litigation, Net2Phone argued that the term "server" should be defined broadly. Plaintiff Net2Phone, Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), page 3. More specifically, Net2Phone argued: Consistent with the use of the term 'server' in the specification, the claims do not refer to any specific

	Prior Art and Relevant Statute
	server configuration. They simply require a 'server' (also referred to as a 'connection server,' 'address server,' or 'server process'). There is nothing in any of the claims that require that the server be in the form of a single computer with a centralized database, as defendants contend. *Id.*, page 4. Similarly, Net2Phone argued that "[a] server in a 'client/server system' can be implemented in any number of ways, from one to multiple computers, in one location or many, and from a single large computer acting as the server to a network of personal computers." Plaintiff Net2Phone Inc.'s Reply Brief on Claim Construction (Oct. 19, 2007) (Exhibit W), page 7 (citing to the declaration of Professor Larry L. Peterson). Thus, under Net2Phone's interpretation, a "server" is not limited to any particular hardware or software configuration. This interpretation is not supported by the intrinsic record and is inconsistent with the arguments made by Net2Phone during the prosecution of the '121 patent. *See* Office Action response (October 20, 1998), page 9 ("the present invention provides a global server that can be queried to locate any user anywhere using a known unique identifier or handle") (emphasis added). Under any interpretation, the Voice Control Server described in Etherphone is a "server." The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Oct. 19, 2007) (Exhibit X), pages 2-9. For the sake of brevity, these interpretations are not repeated below with respect to the other claims of the '469 patent which require a "server."
a. program code for generating a user-interface enabling control a first process executing on the computer system;	The workstations described in Etherphone include a graphical user interface (GUI). *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)). The workstations may be Apple Macintoshes or Xerox 6085s. *See* Swinehart 1, page 1. The workstations are operatively connectable to the callee process and a server over the computer network. As previously described, "[t]he telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 2.
b. program code for determining the currently assigned network protocol	As mentioned above, the functionality of the Etherphone system is implemented in software, which is a "process." A network address

	Prior Art and Relevant Statute
address of the first process upon connection to the computer network;	is assigned to uniquely identify each workstation/Etherphone. *See, e.g.,* Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. In addition, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3. *See also* Terry, Abstract ("the voice manager stores voice on a special voice file server that is accessible via the local internet."). Moreover, another Etherphone reference, Vin, explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). Vin may be combined with Etherphone under 35 U.S.C. § 102. *See* MPEP 2131.01 (stating that a §102 rejection over multiple references is proper when the extra references are cited to explain the meaning of a term used in the primary reference or to show an inherency in the primary reference). In this case, the primary reference is Etherphone and Vin is used to define the complete meaning of the term "Etherphone" or show its inherent features. **35 U.S.C. § 103 – Etherphone in view of Vin and further in View of RFC 1531** In any case, as described below, it would have been obvious to combine Vin with Etherphone because they both describe the same Etherphone system. In addition, to the extent this limitation is held to require the dynamic assignment of network addresses (a position with which the Requestor respectfully disagrees), this claim is unpatentable based on Etherphone in view of Vin and further in view of RFC 1531. Vin explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). RFC 1531 describes how TCP/IP addresses are dynamically assigned. *See* RFC 1531, Dynamic Host Configuration Protocol (1993), Section 2.2 (describing the "dynamic allocation of network addresses"). A strong motivation to combine Etherphone and Vin exists because

	Prior Art and Relevant Statute
	they both describe the same Etherphone system. In addition, a motivation to combine these references with RFC 1531 exists due to the problem to be solved. In particular, Vin describes the use of IP addresses within an Etherphone system and RFC 1531 describes techniques for dynamically assigning IP addresses. One of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers (e.g., workstations and Etherphones) and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). Moreover, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3.
c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process; and	Each time a user logs in to a particular workstation/ Etherphone, the identity of the user and the network address of the workstation/ Etherphone are transmitted to the Voice Control Server so that callers can locate the user. As described in Swinehart 1: "The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, the Telephone Control Server (also referred to as the Voice Control Server) stores a list of network addresses which are made available to workstations and Etherphones. In addition, the Voice Control Server associates different user identifiers with each network protocol address. For example, a user may log in to any workstation and, thereafter, calls to that user will be directed to that workstation and its associated Etherphone. As described in Swinehart 1: > The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues. Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows

	Prior Art and Relevant Statute
	him to register his presence with a second workstation or Etherphone, such as during a meeting.").
d. program code means, responsive to user input commands, for establishing a point-to-point communications with another process over the computer network.	As stated above, after acquiring the network address of a callee, "voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4.
2. The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises:	**35 U.S.C. § 102(b) – Etherphone**
d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network.	In Etherphone, once a caller process receives the network address of the callee process from the Voice Control Server, the caller process establishes a point-to-point communication link with the callee process over the network. *See, e.g.*, Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server.") (emphasis added).
3. The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise:	**35 U.S.C. § 102(b) – Etherphone**
d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network; and	As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is

	Prior Art and Relevant Statute
	logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").
d.3 program code means for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").
5. In a computer system having a display, the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes comprising:	**35 U.S.C. § 102(b) – Etherphone** The computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)). Etherphone discloses a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. Additionally, the computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure

	Prior Art and Relevant Statute
	3) and icons representing callers, callees and telephone lines (Figure 4)).
A. determining the currently assigned network protocol address of the first process upon connection to the computer network;	As mentioned above, the functionality of the Etherphone system is implemented in software, which is a "process." A network address is assigned to uniquely identify each workstation/Etherphone. *See, e.g.,* Swinehart 1, page 4 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants."). Any networked computer is capable of "determining" its network protocol address upon connection to the computer network. The computer must "determine" its internet protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. In addition, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3. *See also* Terry, Abstract ("the voice manager stores voice on a special voice file server that is accessible via the local internet."). Moreover, another Etherphone reference, Vin, explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). Vin may be combined with Etherphone under 35 U.S.C. § 102. *See* MPEP 2131.01 (stating that a §102 rejection over multiple references is proper when the extra references are cited to explain the meaning of a term used in the primary reference or to show an inherency in the primary reference). In this case, the primary reference is Etherphone and Vin is used to define the complete meaning of the term "Etherphone" or show its inherent features. **35 U.S.C. § 103 – Etherphone in view of Vin and further in View of RFC 1531** In any case, it would have been obvious to combine Vin with Etherphone because they both describe the same Etherphone system. To the extent this limitation is held to require the dynamic assignment of network addresses (a position with which the Requestor respectfully disagrees), this claim is unpatentable based on Etherphone in view of Vin and further in view of RFC 1531. Vin explicitly describes using the Internet Protocol (IP) within the Etherphone system. *See, e.g.*, Harrick M. Vin, et al., *Multimedia Conferencing in the Etherphone Environment*, IEEE COMPUTER SOCIETY (Oct. 1991), page 77, Figure 5 (Exhibit D of this request) (illustrating a "protocol stack and format" which includes internet protocol (IP) packets). RFC 1531 describes how TCP/IP addresses are dynamically assigned. *See* RFC 1531, Dynamic Host

	Prior Art and Relevant Statute
	Configuration Protocol (1993), Section 2.2 (describing the "dynamic allocation of network addresses"). A strong motivation to combine Etherphone and Vin exists because they both describe the same Etherphone system. In addition, a motivation to combine these references with RFC 1531 exists due to the problem to be solved. In particular, Vin describes the use of IP addresses within an Etherphone system and RFC 1531 describes techniques for dynamically assigning IP addresses. One of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers (e.g., workstations and Etherphones) and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). Moreover, the Etherphone system was intended for use in "multiple networks and communication protocols." Terry, page 3.
B. establishing a communication connection with the server process once the assigned network protocol of the first process is known;	Each workstation/Etherphone is capable of establishing a communication connection with the Voice Control Server. For example, each time a user logs in to a particular workstation/Etherphone, the identity of the user and the network address of the workstation/ Etherphone are transmitted to the Voice Control Server so that callers can locate the user. As described in Swinehart 1: "The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, the Telephone Control Server (also referred to as the Voice Control Server) stores a list of network addresses which are made available to workstations and Etherphones. In addition, the Voice Control Server associates different user identifiers with each network protocol address. For example, a user may log in to any workstation and, thereafter, calls to that user will be directed to that workstation and its associated Etherphone. As described in Swinehart 1: > The *telephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing* without involving workstation programs. It uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues.

	Prior Art and Relevant Statute
	Swinehart 1, page 4 (underline emphasis added). *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting.").
C. forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process; and	As described above, whenever a user logs in to a workstation/ Etherphone, the identity of the user and the network address of the workstation/Etherphone are "forwarded" to the Voice Control Server so that the location of the user can be identified. As described above, the Voice Control Server "uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations and the registration of *visitors* in the offices of their colleagues." Swinehart 1, page 4.
D. establishing a point-to-point communication with another process over the computer network.	As stated above, after acquiring the network address of a callee, "voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4.
6. The method of claim 5 wherein the program step D comprises:	**35 U.S.C. § 102(b) – Etherphone**
D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network; and	As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including

	Prior Art and Relevant Statute
	"visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").
D.2 receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").
8. In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network, the method comprising the steps of:	**35 U.S.C. § 102(b) – Etherphone** Etherphone discloses a computer system which executes a "first process" and is operatively connectable to a "second process" and a server over a computer network. For example, the Etherphone system is "based on a hardware architecture that uses microprocessor-controlled telephones to transmit voice over an Ethernet that also supports a voice file server and a voice synthesis server, this system has been used for applications such as directory-based call placement, call logging, call filtering, and automatic call forwarding." Zellweger 1, page 1. *See also id.*, Figure 1 (illustrating Etherphones, computer workstations and servers communicating over an Ethernet network). The system components shown in Figure 1 of Zellweger 1 provides communication "between two or more parties (Etherphones, servers, and so on)." *Id.*, page 3. Additionally, the computer systems described in Etherphone include a display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).
A. generating a user-interface element representing a first communication line;	**35 U.S.C. § 102(b) – Etherphone** Etherphone discloses this limitation. For example, Figure 3 of Zellweger 1 depicts the Etherphone telephone management windows, including Phone and Answer buttons, a conversation log, and a portion of a personal telephone directory, which is a set of speed-dialing buttons. As described in Zellweger 1, "[a] variety of convenient workstation dialing methods are provided: a user can . . . select names or numbers from anywhere on the [Etherphone

	Prior Art and Relevant Statute
	telephone management windows], use either of two directory tools that present browsable lists of names and associated telephone numbers as speed-dialing buttons, or redial any previously-made call by clicking on its conversation log entry. Calls can also be placed by name or number from the telephone keypad." Zellweger 1, page 4. In addition, Figure 4 of Zellweger 1 illustrates telephone icons representing telephone lines and icons with graphical images of a caller/callee which represent active telephone lines. As such, the Etherphone telephone management windows provide a "user interface element representing a first communication line." **35 U.S.C. § 103(a) – Etherphone in view of Pinard** Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30. Note that Etherphone also describes a user-interface element representing a first communication line. *See* anticipation rejections above.
B. generating a user interface element representing a first callee process;	**35 U.S.C. § 102(b) – Etherphone** Etherphone discloses user interface elements in the form of speed-dial buttons which represent frequently called callees. As described in Zellweger 1, the GUI provides "browsable lists of names and associated telephone numbers as speed-dialing buttons." Zellweger 1, page 4. *See also* Zellweger 1, Figure. 3 (depicting portion of a personal telephone directory, which is a set of speed-dial buttons). As another example, in Zellweger 1, Figure 4, the top left user interface icon represents a personal telephone directory in the form of a graphical rolodex. **35 U.S.C. § 103(a) – Etherphone in view of Pinard** Pinard describes "generating a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30. Note that Etherphone also describes a user interface element representing a first callee process. *See* anticipation rejections above.
C. querying the server process to determine if the first callee process is	**35 U.S.C. § 102(b) or § 103(a) – Etherphone or Etherphone in**

	Prior Art and Relevant Statute
accessible; and	**view of Pinard** As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").
D. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line.	**35 U.S.C. § 102(b) – Etherphone** First, Etherphone describes establishing a point-to-point communication link between a caller process and a callee process. *See, e.g.*, Swinehart 1, page 2 ("voice datagrams are transmitted directly among the participants, bypassing the control server"). Second, Etherphone discloses that the point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, the top row of Figure 4 of Zellweger 1 shows a series of graphical icons used for placing a call including a personal telephone directory, a telephone, and a picture of a user on the phone (to indicate a call is in process). In this example, the personal telephone directory, displayed as a graphical rolodex, includes a plurality of graphical elements representing callees (i.e., with a separate card in the

	Prior Art and Relevant Statute
	rolodex for each callee). The icon of the telephone and the icon with the picture of a user talking on the phone represents a telephone communication line. As described in Zellweger 1, "[a]n active conversation is represented as a conversation between two people with a superimposed indication of the other party's name (also shown in Figure 4)." Zellweger 1, pages 4-5. Thus, when the user makes a call, the name from the graphical rolodex (PolleZ in the example) is "associated with" the graphical element representing the communication line (the image with the user talking on the phone). **35 U.S.C. § 103(a) – Etherphone in view of Pinard** Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user Debbie merely drags the John icon to the call icon 29."). Note that Etherphone also describes this limitation. *See* anticipation rejections above.
9. The method of claim 8 wherein step C further comprises the steps of:	**35 U.S.C. § 102(b) or § 103(a) – Etherphone or Etherphone in view of Pinard**
C.1 querying the server process as to the on-line status of the first callee process; and	As described in Zellweger 1, "conversations are established between two or more parties (Etherphones, servers, and so on) by performing remote procedure calls to the Voice Control Server." Moreover, as mentioned above, the Voice Control Server "manages voice switching by sending to each Etherphone or service the network addresses of the other participants. Thereafter, voice datagrams are transmitted directly among the participants, bypassing the control server." Swinehart 1, page 4. Thus, when a first user at a first Etherphone (a callee "process") calls a second user at a second Etherphone (a caller "process"), the first Etherphone transmits a query in the form of a remote procedure call

	Prior Art and Relevant Statute
	to determine the location of the second Etherphone. *See also* Swinehart 1, page 2 ("Calls are to individuals, not locations . . . Logging in tells the telephone system where Karmen is."); Zellweger 1, page 5 ("An additional feature, called visiting, allows him to register his presence with a second workstation or Etherphone, such as during a meeting."). Consequently, if a user is logged in to a particular Etherphone, the user's online status is "online" and associated with that Etherphone. The query will then return the current location of the user to the requesting process (executed on another Etherphone or workstation). Swinehart 1 describes different types of "on-line status" for users including "visiting" a workstation or Etherphone and "offline." *See* Swinehart 1, page 2 (describing how a user "turns to his workstation and registers Karmen as a visitor" and also describing a "do-not-disturb option" in which "internal callers were given an on-screen explanation for being turned away, while outside callers were routed to an attendant").
C.2 receiving a network protocol address of the first callee process over the computer network from the server process.	Etherphone describes that the Voice Control Server sends the network protocol address of the callee process to the caller process upon request. *See, e.g.*, Swinehart 1, page 2 ("The telephone control server manages voice switching by sending to each Etherphone or service the network addresses of the other participants.").
14. The method of claim 8 further comprising the steps of:	**35 U.S.C. § 103(a) –Etherphone in view of Pinard**
E. generating a user interface element representing a communication line having a temporarily disabled status; and	Examples of a "temporarily disabled status" provided in the '469 patent include "line on hold" and "line on mute." *See, e.g.*, '469 patent, Claims 15-16. Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
F. temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status.	In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").

	Prior Art and Relevant Statute
15. The method of claim 14 wherein the element generated in step E represents a communication line on hold status.	**35 U.S.C. § 103(a) –Etherphone in view of Pinard** In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, 6:36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
16. The method of claim 15 wherein the element generated in step E represents a communication line on mute status.	**35 U.S.C. § 103(a) –Etherphone in view of Pinard and further in view of VocalChat User's Guide** VocalChat User's Guide describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57.
17. The method of claim 8 wherein the display further comprises a visual display.	**35 U.S.C. § 102(b) or § 103(a) – Etherphone or Etherphone in view of Pinard** This claim element is redundant. Every computer display is a "visual display." As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).
18. The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements.	**35 U.S.C. § 102(b) or § 103(a) – Etherphone or Etherphone in view of Pinard** As described above, the workstations described in Etherphone includes a graphical user interface (GUI) displayed on a visual display. *See, e.g.*, Figures 1-10 of Swinehart 1 (illustrating various GUI features presented on the workstation display). *See also* Zellweger 1, Figures 3-4 (illustrating "telephone management windows" (Figure 3) and icons representing callers, callees and telephone lines (Figure 4)).

Exhibit O

Claim Chart for Claims 1-3, 5-6, 8-9, and 14-18 of '469 Patent

- **Combined VocalChat References under 35 U.S.C. § 103(a)**
- **VocalChat References in view of RFC 1531 under 35 U.S.C. § 103(a)**
- **VocalChat References in view of Pinard under 35 U.S.C. § 103(a)**

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EXHIBIT O
Claim Chart – VocalChat

	Prior Art and Relevant Statute
1. A computer program product for use with a computer system having a display and an audio transducer, the computer system capable of executing a first process and connecting to other processes and a server process over a computer network, the computer program product comprising a computer usable medium having computer readable code means embodied in the medium comprising:	**35 U.S.C. §102 (b) – VocalChat** VocalChat clients are personal computers which inherently included displays. *See, e.g.*, User's Guide, page 11 (illustrating the VocalChat GUI displayed in a window). As software, VocalChat is inherently stored as program code on a computer-usable medium. *See, e.g.*, Readme, page 1 (listing the VocalChat files copied during installation). *See also* VocalChat User's Guide, page 8 (describing how VocalChat is installed by inserting "the VocalChat Disk in drive A"). As illustrated in the figure on page 5 of the VocalChat User's Guide (reproduced above), computers with VocalChat installed connect directly to a server to register their current network protocol addresses. In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on the server. As described in VocalChat Network Information: > When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. > > Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file*. VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), referred to the USERS file as a "Connection List" stored within a 'Post-Office' directory. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.").
a. program code for generating a user-	VocalChat comprises a graphical user interface (GUI) for

	Prior Art and Relevant Statute
interface enabling control a first process executing on the computer system;	registering with the post office server, and communicating with other VocalChat clients. *See, e.g.*, User's Guide, page 11 (illustrating the primary VocalChat GUI including a Call button, a volume slider and a plurality of Quick Dial buttons).
b. program code for determining the currently assigned network protocol address of the first process upon connection to the computer network;	As mentioned above, the functionality of the VocalChat system is implemented using "program code." *See, e.g.*, Readme, page 1 (listing the VocalChat files copied during installation). *See also* VocalChat User's Guide, page 8 (describing how VocalChat is installed by inserting "the VocalChat Disk in drive A"). Moreover, any networked computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Moreover, on many networks, including the TCP/IP networks described in VocalChat, network addresses are assigned dynamically, "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, a computer system executing VocalChat receives its IP address dynamically, following connection to the computer network. Consequently, dynamic address assignment is inherent in the VocalChat system. **35 U.S.C. § 103(a) – VocalChat in view of RFC 1531** Alternatively, a SNQ of patentability of Claims 1-3 and 5-6 is raised under 35 U.S.C. § 103 based on VocalChat in view of RFC 1531, which describes how TCP/IP addresses are dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). A motivation to combine VocalChat with RFC 1531 exists because VocalChat describes the VocalChat software operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine VocalChat with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood

	Prior Art and Relevant Statute
	at the time of the alleged invention of the '469 patent that VocalChat software would be installed and executed on personal computers that would frequently have their IP addresses dynamically assigned.
c. program code responsive to the currently assigned network protocol address of the first process, for establishing a communication connection with the server process and for forwarding the assigned network protocol address of the first process and a unique identifier of the first process to the server process upon establishing a communication connection with the server process; and	In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information: > When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. > Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file*. VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), refer to the USERS file as a "Connection List" file. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.") (emphasis added). Regardless of the file name, the Connection List/USERS file is stored on a server for access by VocalChat clients. *See, e.g.*, VocalChat Network Information, page 2 ("**Server Installation** is used to install the VocalChat program files on the network, for use by the different network users."). *See also* Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory."); Help File, page 8 ("the Setup program crates a Connection List File which is used to identify and access users").
d. program code means, responsive to user input commands, for establishing a	VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page

	Prior Art and Relevant Statute
point-to-point communications with another process over the computer network.	17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").
2. The computer program product of claim 1 wherein the program code for establishing a point-to-point communication link further comprises:	**35 U.S.C. § 102(b) -- VocalChat**
d.1 program code, responsive to the network protocol address of a second process, for establishing a point-to-point communication link between the first process and the second process over the computer network.	VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons."). In general, when an IP address of a second process is known by a first process, the first process may establish a point-to-point communication link with the second process over any TCP/IP network (including the Internet).
3. The computer program product of claim 2 wherein the program code for establishing a point-to-point communication link further comprise:	**35 U.S.C. § 102(b) -- VocalChat**
d.2 program code for transmitting, from the first process to the server process, a query as to whether the second process is connected to the computer network; and	As discussed above, a VocalChat caller sends a query to the post office server with the Connection List/USERS file to locate a particular callee. *See, e.g.*, Help File, page 22 (VocalChat "will use the CONNLIST.VC files to get network addresses"); page 8 ("the Setup program creates a Connection List file which is used to identify and access users"). Consequently, the server identifies an entry in the directory corresponding to the identified callee (the Connection List file in a TCP/IP implementation), and, if the callee is connected, provides the corresponding IP address associated with that callee in the directory to the caller.

	Prior Art and Relevant Statute
d.3 program code means for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	As discussed in the previous claim element, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added). Obviously, the first process will receive the network protocol address "when the second process is connected to the computer network." In Claim Construction Briefs filed in the pending litigation, the patentee argued that the term > 'connected' means 'logged on,' and *vice versa* . . . To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status— *e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say. Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), pages 24-25. Thus, under Net2Phone's interpretation, the information retained in the "server" as to which processes are "connected to the computer network" or "online" may be imperfect. As described above, while the server "endeavors to identify accurately who is on line, it is not possible to achieve perfection." *Id.* This interpretation is not supported by the intrinsic record and is inconsistent with the specification of the '469 patent. *See* '469 patent, col. 7, lines 34-36 (stating that the server "determine[s] whether the callee is logged-in by finding any stored information . . . indicating that the callee is active and on-line."). Nonetheless, under any interpretation, a first VocalChat process receives the network protocol address of a second VocalChat

	Prior Art and Relevant Statute
	process from the "post office" server when the second VocalChat process is "connected to the computer network." The Requester's interpretation of this claim limitation in the pending litigation can be found in the Claim Construction Briefs. *See, e.g.*, Reply Claim Construction Brief of Skype Technologies SA, Skype, Inc. and EBay Inc (Exhibit X), pages 12-14. For the sake of brevity, these interpretations are not repeated below with respect to the other claims of the '469 patent which require a process to be "connected to" the computer network or "on-line."
5. In a computer system having a display and an audio transducer, the computer system capable of executing a first process and communicating with other processes and a server process over a computer network, a method for establishing point-to-point communications with other processes comprising:	**35 U.S.C. § 102(b) -- VocalChat** VocalChat clients are personal computers which inherently included displays. *See, e.g.*, User's Guide, page 11 (illustrating the VocalChat GUI displayed in a window). As illustrated in the figure on page 5 of the VocalChat User's Guide (reproduced above), computers with VocalChat installed connect directly to a server to register their current network protocol addresses. In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on the server. As described in VocalChat Network Information: > When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. > Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file*. VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), referred to the USERS file as a "Connection List" stored within a 'Post-Office' directory. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.").

	Prior Art and Relevant Statute
A. determining the currently assigned network protocol address of the first process upon connection to the computer network;	Any networked computer must "determine" its network protocol address in order to communicate with other computers on the network, regardless of whether the network protocol address is assigned statically or dynamically. Moreover, on many networks, including the TCP/IP networks described in VocalChat, network addresses are determined "upon connection to the computer network." *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). Thus, in at least some instances, a computer system executing VocalChat receives its IP address following connection to the computer network. Consequently, dynamic address assignment is inherent in the VocalChat system. **35 U.S.C. § 103(a) – VocalChat in view of RFC 1531** Alternatively, a SNQ of patentability of Claims 1-3 and 5-6 is raised under 35 U.S.C. § 103 based on VocalChat in view of RFC 1531, which describes how TCP/IP addresses are dynamically assigned. *See, e.g.*, Dynamic Host Configuration Protocol, RFC 1531 (Oct. 1993) ("RFC 1531"), Section 2.2 (describing the "dynamic allocation of network addresses" on TCP/IP networks). A motivation to combine VocalChat with RFC 1531 exists because VocalChat describes the VocalChat software operating on a TCP/IP network and RFC 1531 describes a well known technique for dynamically assigning IP addresses within a TCP/IP network. One of ordinary skill in the art would have been motivated to combine VocalChat with RFC 1531 to realize the benefits associated with dynamic IP address assignment. For example, one of ordinary skill in the art would have been motivated to use dynamic IP address assignment because it eliminates the burdensome task of manually assigning IP addresses for all networked computers and allows for "automatic reuse of an address that is no longer needed by the host to which it was assigned." RFC 1531, page 2 (Section 1, Introduction). In fact, one of skill in the art would have understood at the time of the alleged invention of the '469 patent that VocalChat software would be installed and executed on personal computers that would frequently have their IP addresses dynamically assigned.
B. establishing a communication connection with the server process once the assigned network protocol of the first process is known;	In the initial VocalChat implementations (versions 1.x) each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information: When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users.

	Prior Art and Relevant Statute
	Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to work properly, *all users must have access to the same USERS file, and all must have read/write access to that file*. VocalChat Network Information, page 10 (underline emphasis added); Troubleshooting Help File, page 28 ("VocalChat needs the TCP/IP software to recognize your own comptuers host name and IP address."). Later VocalChat implementations (e.g., version 2.02), refer to the USERS file as a "Connection List" file. *See, e.g.*, Help File, page 2 ("a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory.") (emphasis added). Regardless of the file name, the Connection List/USERS file is stored on a server for access by VocalChat clients. *See, e.g.*, VocalChat Network Information, page 2 ("**Server Installation** is used to install the VocalChat program files on the network, for use by the different network users."). *See also* Readme File, page 2 ("VocalChat creates a central directory on the network, shared by all users called 'Post-Office.' All users must use the same Post-Office, otherwise they won't be able to communicate or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory."); Help File, page 8 ("the Setup program crates a Connection List File which is used to identify and access users").
C. forwarding the assigned network protocol address of the first process to the server process upon establishing a communication connection with the server process; and	See response to previous claim element. Each VocalChat client transmits its name and network protocol address to a USERS file stored on a server. As described in VocalChat Network Information: When the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file. Thus other users can add this user's name as a Quick Dial button even if the user is not running VocalChat at the moment. However, in order for VocalChat to

	Prior Art and Relevant Statute
	work properly, *all users must have access to the same USERS file, and all must have read/write access to that file*. VocalChat Network Information, page 10 (underline emphasis added)
D. establishing a point-to-point communication with another process over the computer network.	VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file." Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").
6. The method of claim 5 wherein the program step D comprises:	**35 U.S.C. § 102(b) – VocalChat**
D.1 transmitting, from the first process to the server process, a query as to whether a second process is connected to the computer network; and	As discussed above, a VocalChat caller sends a query to the post office server with the Connection List/USERS file to locate a particular callee. *See, e.g.*, Help File, page 22 (VocalChat "will use the CONNLIST.VC files to get network addresses"); page 8 ("the Setup program creates a Connection List file which is used to identify and access users"). Consequently, the server identifies an entry in the directory corresponding to the identified callee (the Connection List file in a TCP/IP implementation), and, if the callee is connected, provides the corresponding IP address associated with that callee in the directory to the caller.
D.2 receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network.	As discussed in the previous claim element, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added). Obviously, the first process will receive the network protocol address "when the second process is connected to the computer network."
8. In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being operatively connected to the callee process and a server process over the computer network, the method comprising the steps	**35 U.S.C. § 102(b) or § 103(a) – VocalChat or VocalChat in view of Pinard** As discussed above, VocalChat clients connect to a server to locate and establish point-to-point connections with other VocalChat clients over a network. For example, VocalChat discloses that "[u]ser-to-user access is facilitated automatically through the [Connection List] file" which is stored on a server. Help File, page 17. VocalChat also discloses "the peer-to-peer nature of Windows for Workgroups, which VocalChat "uses . . . for user services." *Id.* In fact, VocalChat is a voice over computer network product for use

	Prior Art and Relevant Statute
of:	on various networks that "enables communication between" VocalChat users. *Id.* at 8. *See also* User Guide, page 2 ("Talk with other users over the network, and broadcast to network users or groups. Access network users with the Address Book and Quick-Dial buttons.").
A. generating a user-interface element representing a first communication line;	**35 U.S.C. § 102(b) – VocalChat** A VocalChat user makes a point-to-point call to another user by using the VocalChat "Call" button, which is a user interface element representing a first communication line. *See, e.g.*, User Guide, page 14 ("Select Call from the Chat menu, or click on the tool bar Call button"). In addition, the VocalChat graphical user interface (GUI) includes a plurality of Quick Dial buttons. *See* User Guide, page 12. Depending on the implementation, either the Call button or the Quick Dial button comprises an "element representing a first communication line." **35 U.S.C. § 103(a) – VocalChat in view of Pinard** Pinard discloses a user interface element representing a first communication line. For example, Figure 6 of Pinard illustrates a first call icon 23 which represents a first communication line and a second call icon 29 which represents a second communication line. In the example shown in Figure 6, the first call icon 23 represents a telephone call between "Debbie" and "John" and the second call icon 29 represents a telephone call between "Debbie" and "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.
B. generating a user interface element representing a first callee process;	**35 U.S.C. § 102(b) – VocalChat** The VocalChat GUI displayed the names of potential callees in a dialog box. *See, e.g.*, Help File, page 14 ("just select a user from the user list, and choose "OK"). Callees are also represented as Quick Dial buttons. *See* Help File, pages 11, 20-21 ("Setting a Quick Dial Button"). Depending on the implementation, either the callee names listed within the dialog box or the Quick Dial buttons comprise "a user interface element representing a first callee process." **35 U.S.C. § 103(a) – VocalChat in view of Pinard** Pinard describes "a user interface element representing a first callee process." In the example shown in Figure 6 of Pinard, a first user interface element 21 is shown for the callee named "John" and a second user interface element is shown for the callee named "Mary." *See, e.g.*, Pinard, Col. 5, lines 23-30.
C. querying the server process to determine if the first callee process is accessible; and	**35 U.S.C. § 102(b) or § 103(a) – VocalChat or VocalChat in view of Pinard** In a TCP/IP implementation, the server on which the Connection List/USERS file was located received queries from VocalChat clients (first processes) to determine the on-line status of other

	Prior Art and Relevant Statute
	VocalChat clients (second processes). As described in the Help File: Method of determining users address: Netware Get Users information from Netware 2.x/3.x bindery WinWorkgroups Get users information from Windows for Workgroups. Generic User VocalChats files for users information. (See Generic network, below). Help File, page 26. With any protocol other than Netware or Windows for Workgroups (such as TCP/IP or NetBIOS), a "generic" method is used where the VocalChat client queries VocalChat files (the Connection List/USERS files) locating users on the network. As described in greater detail in the Help File: When **NetBIOS** or **IPX** are used, but not with NetWare or Window for Workgroups, or when TCP/IP is used, a shared CONNLIST.VC file is used by the different running copies of VocalChat to hold user names and addresses. This file is placed in the Post Office directory. In this case, the user name for each user, is entered when performing the **User Installation** in the Setup program. You should make sure that this name is not used by any other user on the network. Help File, page 2. With NetWare, the VocalChat client queries existing NetWare Bindery services locating "currently logged-in users;" with Windows for Workgroups, the VocalChat client queries the Windows for Workgroups services locating online users; and with other protocols, such as TCP/IP and NetBIOS, the VocalChat client queries the shared Connection List file (CONNLIST.VC). Regardless of protocol, the query determines whether the second process (the VocalChat client of another user) is connected to the computer network. For example, "[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file." VocalChat Network Information, page 10. Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users."

	Prior Art and Relevant Statute
D. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line.	**35 U.S.C. § 102(b) – VocalChat** As mentioned above, a VocalChat user makes a point-to-point call to another user with the Call button or a Quick Dial Button representing a frequently called callee. *See* Help File, page 14 (describing use of the Call button) and 20 (describing use of the Quick Dial buttons). Selecting the Call button opens a dialog box displaying a list of connected VocalChat users. A caller then clicks on a user's name in the list and then clicks the OK button to establish a point-to-point communication link. *See*, *e.g.,* Help File, page 14. In this example, the graphical representation of the user in the list is an "element representing the first callee process" and the OK button is an "element representing a first communication line." Alternatively, a user can associate any VocalChat user with a Quick Dial button by right-clicking on a Quick Dial button, which presents the user with the VocalChat users list. *See* Help File, page 20. After the user selects a user name from the list, that user is associated with the quick dial button. *See* Help File, page 21 ("From the user list, choose the user name that you want the button to hold."). The caller then places a call to the callee by selecting the Quick Dial button. VocalChat also assigns Quick Dial buttons automatically ("When you call a user with the Call command, a vacant button changes to hold the user's name if one does not hold it already."). In these examples, the graphical representation of the user in the list is an "element representing the first callee process" and the quick dial button is an "element representing a first communication line." In both cases, the element representing the callee process is "associated with" an element representing a communication line. **35 U.S.C. § 103(a) –VocalChat in view of Pinard** Pinard discloses that a point-to-point communication link is established in response to a user associating an element representing the first callee process with the element representing a first communication line. For example, Figure 3 of Pinard illustrates clicking and dragging an icon representing a callee from a directory 17 into a call setup icon 15. Once the callee answers the call, the call setup icon 15 becomes a call icon 23 as illustrated in Figure 4 of Pinard. *See, e.g.*, Pinard, Col. 4, lines 38-51 (describing how "[t]he user can then drag the icon or the name of the person to be called into the call setup icon . . . As soon as John answers the call, the application software program changes the call setup icon to a call icon designated as 23, and establishes a new call setup icon 24 spaced from the icon 23."). Similarly, Figure 6 illustrates how a point-to-point communication link may be established by clicking and dragging a callee icon 21 into an existing call icon 29. *See* Pinard, Col. 5, lines 36-37 ("Now to conference all parties, the user

	Prior Art and Relevant Statute
	Debbie merely drags the John icon to the call icon 29.").
9. The method of claim 8 wherein step C further comprises the steps of:	**35 U.S.C. § 102(b) or § 103(a) – VocalChat or VocalChat in view of Pinard**
C.1 querying the server process as to the on-line status of the first callee process; and	The second process (the second VocalChat client) may query the post office server to determine whether the first process (the first VocalChat client) is on-line. For example, "[w]hen the network used is not NetWare or Windows for Workgroups, VocalChat maintains a shared USERS file with the names of logged in users. Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file." VocalChat Network Information, page 10 (emphasis added). Thus, a distinction is made between logged in users and logged out users. Similarly, as described above, in the NetWare implementation, the query retrieves a list of "currently logged in users." Help File, page 2.
C.2 receiving a network protocol address of the first callee process over the computer network from the server process.	As discussed above, VocalChat "will use the CONNLIST.VC files to get network addresses." Help File, page 22 (emphasis added).
14. The method of claim 8 further comprising the steps of:	**35 U.S.C. § 103(a) –VocalChat in view of Pinard**
E. generating a user interface element representing a communication line having a temporarily disabled status; and	Examples of a "temporarily disabled status" provided in the '469 patent include "line on hold" and "line on mute." *See, e.g.*, '469 patent, Claims 15-16. VocalChat discloses a user interface element representing a MUTE function. As described in VocalChat, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57 (illustrating a special user interface element "when in Manual Activation mode"). Additionally, Pinard describes a user interface element representing a communication line having a temporarily disabled status. For example, Figure 12 illustrates a "hard hold" icon 39 to which user icons representing callers/callees 41 may be dragged to put the callers/callees on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
F. temporarily disabling the point-to-point communication between the caller process and the first callee process, in response to the user associating the	In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold,

	Prior Art and Relevant Statute
element representing the first callee process with the element representing the communication line having a temporarily disabled status.	Debbie drags Mary's icon 28 to the hard hold icon 39.").
15. The method of claim 14 wherein the element generated in step E represents a communication line on hold status.	**35 U.S.C. § 103(a) –VocalChat in view of Pinard** In Pinard, in response to an icon of a caller/callee 41 being moved into the hard hold icon 39, the caller/callee is placed on hold. *See, e.g.*, Pinard, Col. 6, lines 36-53 ("To place Mary on hard hold, Debbie drags Mary's icon 28 to the hard hold icon 39.").
16. The method of claim 15 wherein the element generated in step E represents a communication line on mute status.	**35 U.S.C. § 103(a) –VocalChat in view of Pinard** VocalChat describes a "communication line on mute status." As described in the User's Guide, "Manual Activation can also be used like the MUTE option in many phones: it lets you talk without being heard on the other user's system." User's Guide, page 57.
17. The method of claim 8 wherein the display further comprises a visual display.	**35 U.S.C. § 102(b) or § 103(a) – VocalChat or VocalChat in view of Pinard** This claim element is redundant. Any display (as understood by one of ordinary skill in the art) is a "visual display." As previously discussed, VocalChat discloses a visual display. *See, e.g.*, User's Guide, page 11 (illustrating the primary VocalChat graphical user interface (GUI)).
18. The method of claim 17 wherein the user interface is a graphic user interface and the user-interface elements generated in steps A and B are graphic elements.	**35 U.S.C. § 102(b) or § 103(a) – VocalChat or VocalChat in view of Pinard** The user interface in VocalChat is a graphical user interface (GUI) and all of the elements discussed above are graphical elements. *See, e.g.,* User's Guide, pages 11-26 (illustrating the VocalChat primary GUI, including Quick Dial and Call buttons within the VocalChat GUI).

Exhibit P

Comments on Arguments Made by Net2Phone's Expert to Distinguish over NetBIOS

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EXHIBIT P
COMMENTS ON ARGUMENTS MADE BY NET2PHONE'S EXPERT TO DISTINGUISH OVER NETBIOS

During the Net2Phone Litigation, Net2Phone attempted to distinguish the claims of the '469 patent over NetBIOS. The court has yet to render an opinion on these arguments. As set forth below, these arguments fail to distinguish the claims of the '469 patent over NetBIOS for a variety of reasons.

A. Net2Phone argued that NetBIOS does not disclose "Processes" because, according to Net2Phone, NetBIOS describes a set of software components executed at the operating system level.

This argument fails for at least two reasons. First, the claims of the '469 patent are not limited to software processes at the application layer (i.e., outside of the operating system). No meaningful distinction can be made between processes executed as applications and processes executed within an operating system. In both cases, they are "processes" as recited in the claims of the '469 patent.

Second, NetBIOS, in fact, describes that the NetBIOS software may be implemented either as an application or within an operating system. For example, Appendix B of NetBIOS provides "Implementation Models" for implementing NetBIOS as applications and within an operating system. *See, e.g.*, NetBIOS at 411 (describing a "Combined Service and Application Model" in which "[t]he NetBIOS service and application are both contained within a single process" as well as a "Common Kernel Element Model" in which "[t]he NetBIOS Service is part of the operating system (perhaps as a device driver or a front-end processor).)."

Thus, Net2Phone's assertion that NetBIOS does not describe "processes" as claimed in the '469 patent is incorrect.

B. Net2Phone argued that NetBIOS describes a system designed to work on Local Area Networks (LANs) and Wide Area Networks (WANs) but not on the Internet.

This argument is both untrue and irrelevant. First, NetBIOS explicitly describes that NetBIOS name servers (NBNS) and clients may be connected over the Internet. For example, the Figure on page 371 of NetBIOS clearly shows a NBNS and multiple client nodes connected over the "INTERNET." In addition, as recited on the first page of RFC 1001:

> This RFC defines a proposed standard protocol to support NetBIOS services in a TCP/IP environment. Both local network and internet operation are supported. Various node types are defined to accommodate local and internet topologies and to allow operation with or without the use of IP broadcast.

NetBIOS *id.* at 350. *See also id.* at 355 ("This RFC specifies a proposed standard for the Internet community. Since this topic is new to the Internet community, discussions and suggestions are specifically requested."); *id.* at 358 (due to the need to "ALLOW INTERNET OPERATION . . .[t]he proposed standard recognizes the need for NetBIOS operation across a set of networks interconnected by network (IP) level relays (gateways)."). NetBIOS also describes that it is interoperable with the Internet's Domain Name System. *See, e.g., id.* at 368 ("The NBNS design attempts to align itself with the Domain Name System in a number of ways. First, the NetBIOS names are encoded in a form acceptable to the domain name system."). *See also id.* at 367 ("A single NBNS may be implemented as a distributed entity, such as the Domain Name Service.").

Second, even the LAN embodiments described in NetBIOS anticipate the claims of the '469 patent. Specifically, a single NBNS on a LAN with two or more NetBIOS clients connected to the LAN communicate using the Internet Protocol, the same protocol used on the Internet. *See, e.g., id.* at 1 ("This RFC defines a proposed standard protocol to support NetBIOS services in a TCP/IP environment."). Thus, the NBNS performs the same basic operations on a

LAN using TCP/IP as it does on "the Internet" (i.e., responding to queries for IP addresses from caller nodes to identify the locations of callee nodes).

Thus, Net2Phone's assertion that the NetBIOS reference does not operate on the Internet is both incorrect and irrelevant.

C. Net2Phone Argued That the NetBIOS protocol does not provide for permanently-assigned unique identifiers.

Once again, this assertion is both irrelevant and untrue. It is irrelevant because the claims of the '469 patent do not require "permanently-assigned unique identifiers." Claim 1 simply requires "a unique identifier" to identify a process on the network, not a "permanent" unique identifier.

The assertion is untrue because the NetBIOS names are permanently-assigned unique identifiers. As stated unambiguously in NetBIOS, "[e]very node has a permanent unique name." *Id.* at 376. Net2Phone calls this statement "aspirational" because two nodes may improperly acquire the same name, resulting in an error condition. As described in NetBIOS, "[a] unique name should be held by only one station at a time. However, duplicates ('name conflicts') may arise due to errors." NetBIOS also describes how name conflicts are resolved, thereby ensuring that each node is identified by a unique name. *See, e.g.*, *id.* at 380 (if a node improperly acquires a name which is already in use "can no longer be used by that node for any session establishment or sending or receiving datagrams."). *See also id.* ("The only valid user function against a [name with a conflict] is DELETE NAME. Any other user NetBIOS function returns immediately with an error code of 'NAME CONFLICT'."). Consequently, using name conflict detection and resolution techniques, NetBIOS ensures that each node has a permanent unique name. *See id.* at 379 (section entitled "Name Conflicts").

D. Net2Phone Argued That a Name Query to an NBNS was limited to the "Scope" associated with that NBNS and, as such, a NetBIOS network would

be "implemented in a series of nonintersecting network fragments, not in a large single network such as the Internet with a global server designed to facilitate communications among all of the client processes connected to that network."

Once again, this assertion is both irrelevant and untrue. It is irrelevant because any network which operates using NetBIOS, including a single LAN within a single "scope," includes all of the limitations found in the claims. The particular size of the network is irrelevant.

The assertion is untrue because NetBIOS naming was structured so as to be compatible with the Internet's Domain Name Service (DNS). As described in NetBIOS:

> The NBNS design attempts to align itself with the Domain Name System in a number of ways.
>
> First, the NetBIOS names are encoded in a form acceptable to the domain name system.
>
> Second, a scope identifier is appended to each NetBIOS name. This identifier meets the restricted character set of the domain system and has a leading period. This makes the NetBIOS name, in conjunction with its scope identifier, a valid domain system name.
>
> Third, the negotiated responsibility mechanisms permit the NBNS to be used as a simple bulletin board on which are posted (name, address) pairs. This parallels the existing domain sytem query service.

NetBIOS, page 368. *See also id.* at 367 ("A single NBNS may be implemented as a distributed entity, such as the Domain Name Service."); 426 ("The NetBIOS Name Service packets follow the packet structure defined in the Domain Name Service (DNS)."); *id.* at 502 ("[the NetBIOS SCOPE_ID] is expressed as a character string meeting the requirements of the domain name system and without a leading or trailing 'dot'. An implementation may elect to make this a single global value for the node or allow it to be specified with each separate NetBIOS name (thus permitting cross-scope references."). Consequently, NetBIOS describes that NetBIOS

names may be used across network "Scopes" and, in fact, may be integrated within the Internet using the Domain Name Service.

Exhibit Q

Comments on Arguments Made by Net2Phone's Expert to Distinguish Over Etherphone

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EXHIBIT Q
COMMENTS ON ARGUMENTS MADE BY NET2PHONE'S EXPERT TO DISTINGUISH OVER ETHERPHONE

During the Net2Phone Litigation, Net2Phone attempted to distinguish the claims of the '469 patent over the Etherphone papers. The court has yet to render an opinion on these arguments. As set forth below, these arguments fail to distinguish the claims of the '469 patent over the Etherphone papers for a variety of reasons.

A. Net2Phone argued that "an Etherphone user is not associated with a single process."

This argument is unpersuasive for at least two reasons. First, assuming, for the sake of argument, that the Net2Phone claims require that a user must be associated with a single process, Net2Phone is relying on a single implementation of the Etherphone system, i.e., an implementation in which a user is associated with both a workstation and an Etherphone. However, in another implementation, as described in Vin, the functionality of a workstation and Etherphone are physically combined into a single SPARCstation associated with a user. Vin at 70-71. In that embodiment, a user is associated with a single process.

By arguing that an Etherphone user is not associated with a single process, Net2Phone suggests that an Etherphone caller may not be able to locate an Etherphone callee because the callee may be associated with two separate locations, a workstation and an Etherphone. However, even in an implementation where a user is associated with both a workstation and an Etherphone, the workstation and Etherphone function together as a single process. The mere fact that a callee's workstation is physically separated from the callee's Etherphone does not mean that a caller would be unable to locate a callee. Indeed, the Etherphone papers describe the workstation and Etherphone as "integrated," "combined," and "associated," the combination of

which is able to "satisfy nearly all of a user's communications and computing needs." Zellweger 1, page 1; Swinehart 1, page 2; Terry, page 3. The fact that the workstation and Etherphone are not contained within the same piece of hardware or share the same processor is, therefore, irrelevant.

B. Net2Phone argued that Etherphone "describes a variety of server processes," none of which is identified as the claimed server process.

This argument fails because the alleged variety of server processes are to a large extent variations in name only. For instance, Zellweger 1 refers to the server as the voice control server, whereas Swinehart 1 refers to it as the telephone control server. However, both Zellweger 1 and Swinehart 1 are clearly referring to the same server process. Indeed, they both rely on the same figure to depict the components of the Etherphone system environment. *Compare* Zellweger 1 at 2 (Figure 1) *with* Swinehart 1 at 4 (Figure 11). Similarly, the connection manager in Vin refers to the same server process, albeit in a later implementation of the Etherphone system. Vin at 70. Whether identified as the voice control server, telephone control server, or connection manager, all three refer to the component of an Etherphone system that provides, among other things, directory-based call placement.

C. Although Net2Phone concedes that Etherphone discloses network addresses, Net2Phone argues that "[t]here is no discussion as to how the server receives addresses (and how prior to that point a process obtains an address), where or how the server stores or obtains the address, and in what circumstances those addresses are retrieved and sent to Etherphones."

This argument is directly contradicted by the Etherphone papers. For instance, Etherphone discloses a feature known as "visiting," which allows an Etherphone user "to register his presence with a second workstation or Etherphone, such as during a meeting. Registering with the destination location allows users to travel more freely than forwarding calls from the home location does. Each visit request cancels any earlier requests." Zellweger 1, page 5. In

order for a visiting user to be located, the network address of that user must be known by the Voice Control Server. Net2Phone argues that the visiting feature lacks detail on how the feature operates and, to the extent there is a hint as to the operation, the registration seems to involve a local registration, not a server registration. However, Net2Phone ignores the disclosure in Swinehart 1 that visiting registers the Etherphone with the server:

> The t*elephone control server* controls voice conversations, implements the stand-alone behavior of telephone instruments, and coordinates the activities of workstations and adjacent telephones in their implementation of the various voice capabilities. In addition, it stores personal preference information about each user that allows it to support advanced features such as *ring motifs* and *subdued ringing,* without involving workstation programs. It [(the telephone control server)] uses dynamic information linking users to workstations in order to provide calls to individuals rather than fixed locations, and the registration of *visitors* in the offices of their colleagues.

Swinehart 1, page 4 (italics original; underline added); *see also id.* page 2 ("logging in tells the telephone system where Karmen is."). The Etherphone papers, therefore, disclose that a visiting user process transmits its network address to the server, and that the server stores the address. Moreover, as discussed in this Reexamination request, an Etherphone process may receive its network address dynamically, following connection to the network, via the Dynamic Host Configuration Protocol (DHCP). And, Etherphone, which is a "directory-based call placement" system, enables Etherphone callers to retrieve the network address of a callee by, *inter alia,* merely specifying the callee's name. Zellweger 1, pages 1, 4. Doing so causes the user process to "consult[] the system directory to locate the desired party." *Id.* at 4.

Exhibit R

Comments on Arguments Made by Net2Phone's Expert to Distinguish over VocalChat

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EXHIBIT R
COMMENTS ON ARGUMENTS MADE BY NET2PHONE'S EXPERT TO DISTINGUISH OVER VOCALCHAT

During the Net2Phone Litigation, Net2Phone attempted to distinguish the claims of the '469 patent over VocalChat. The court has yet to render an opinion on these arguments. As set forth below, these arguments fail to distinguish the claims of the '469 patent over VocalChat for a variety of reasons.

A. Net2Phone argued that VocalChat does not disclose transmitting a network address to a server, because, according to Net2Phone, when a VocalChat user process connects to the shared user file "it reads [the] shared user file containing information on other VocalChat users and then writes a revised version of the shared user file that includes its network protocol address." Net2Phone contends that "[t]he difference between transmitting a process's own network address and writing a file that includes information about every user on the network is significant."

This argument is unpersuasive because it is based on a non-existent claim limitation. None of the claims of the '469 patent preclude the transmission of other network addresses in addition to the user process' own network address.

B. Net2Phone argued that VocalChat does not disclose the ability to determine the online status of a callee process through a query to the server, because, according to Net2Phone, "[i]f the client software terminated non-gracefully, its network address would remain in the shared user file indefinitely."

This argument is irrelevant. It makes no difference how VocalChat handles non-graceful terminations. In circumstances where non-graceful terminations have not occurred, VocalChat discloses the ability to determine whether a callee process is online. For example, in the Netware implementation, "VocalChat uses the NetWare Bindery services to get the list of servers, known users and groups on each server, currently logged-in users, and the addresses of specific users." Help File, page 2 (emphasis added).

It is settled law that "a prior art product that sometimes, but not always, embodies a claimed method nonetheless teaches that aspect of the invention." *Hewlett-Packard Co. v. Mustek Sys.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003). Furthermore, Net2Phone's own claims do not even claim a way to detect non-graceful terminations.

Moreover, it should be noted that this argument is inconsistent with Net2Phone's Claim Construction argument related to the definition of the terms "connected to the computer network" and "on-line." In particular, In Claim Construction Briefs filed in the pending litigation, the patentee argued that the term

> 'connected' means 'logged on,' and *vice versa* . . . To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status—*e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say.

Plaintiff Net2Phone Inc.'s Response Brief on Claim Construction (Oct. 18, 2007) (Exhibit U), pages 24-25. Thus, under Net2Phone's interpretation, the information retained in the server as to which processes are "connected to the computer network" or "online" may be imperfect. As described above, while the server "endeavors to identify accurately who is on line, it is not possible to achieve perfection." *Id.* VocalChat employs similar techniques as address entries for off-line VocalChat processes are

removed through the use of log-out messages. *See, e.g.*, VocalChat Network Information, page 10 ("Each time a user loads VocalChat, its entry in the USERS file is updated with its IPX/NetBIOS address. When exiting VocalChat, the address is removed, but the user name is kept in the file.").

C. Net2Phone argued that VocalChat does not disclose unique identifiers associated with a user process because "a user was able to chose a user name that had already been chosen by another VocalChat user."

This argument is directly contradicted by VocalChat. The VocalChat Help file specifically discloses that: "When using a network other then Novell NetWare or Windows for Workgroups, the user name should be entered in the Setup. It must be unique within the Post Office, and it is highly recommended to use the user network login name." Help File, page 5 (emphasis added).

D. Net2Phone argued that VocalChat does not disclose the ability to determine the network protocol address of a callee process, because, according to Net2Phone, "[i]f a caller and prospective callee did not share a common Post Office, then generic VocalChat could not determine whether the callee was on-line or obtain the callee's network protocol address – even if the callee and the caller were connected to the same computer network."

This argument fails because it is based on a non-existent claim limitation. None of the claims of the '469 patent require a server that maintains the network addresses of users on *separate* computer networks. Indeed, the claims provide no disclosure of processes connected to different connection servers being able to determine each other's online status. As described in the '469 patent, users must be connected to the *same*

connection server to utilize the connection server protocol claimed in the '469 patent.[1] VocalChat clearly discloses that user processes that are connected to the same Post Office can connect to any other logged in VocalChat user process: "VocalChat creates a central directory on the network, shared by all users called 'Post-Office'. All users must use the same Post-Office, otherwise they won't be able to comunicate [sic] or leave messages to each other. This means that all users must be attached to one file-server which will be used for the Post-Office, and all have write permission for the Post-Office directory." Readme, page 2.

[1] *See, e.g.*, '469 patent, cols. 6:66-7:13; 7:30-59.

Exhibit T

Reformatted Skype Opening Claim Construction Brief

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UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

NET2PHONE, INC.,

Plaintiff,

vs.

EBAY INC., SKYPE TECHNOLOGIES SA, SKYPE, INC., and JOHN DOES 1-10,

Defendants.

AND RELATED COUNTERCLAIM.

CIVIL ACTION NO. 06-2469 (KSH)

REFORMATTED OPENING CLAIM CONSTRUCTION BRIEF OF SKYPE TECHNOLOGIES SA, SKYPE, INC. AND EBAY INC.

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Page(s)

Statutes

Other Authorities

Page(s)

I. INTRODUCTION

Net2Phone purchased the Asserted Patents from a now-defunct company, NetSpeak Corporation, and in its efforts to monetize its investment is now straining to construe them, unnaturally, to cover innovative products created by Skype. The Asserted Patents all relate to a very narrow and simple feature: a dedicated server hosting a central "phonebook" of network address listings that members currently logged onto a computer network can access to find each other. Skype's approach is an altogether different paradigm: Skype designed its system *not* to rely on servers to keep track of users' network addresses, thereby dramatically reducing costs and providing other benefits. Skype's revolutionary server-less technology allows for free computer-to-computer calls, enabling Skype to become the fastest growing community for voice communications on the Internet ("VoIP"). Skype is roundly recognized as a VoIP pioneer.

The patents' intrinsic record could not be clearer that Net2Phone's solution, unlike Skype, is based on a *dedicated* server hosting a *centralized* database, which the inventors told the Patent Office is what distinguishes their patents from the prior art. Indeed, the inventors repeatedly and expressly disclaimed any broader scope, representing to the Patent Office that "[i]n the disclosed system, a client process contacts a *dedicated address directory server*." *See infra,* Section IV.A.1.a. Yet now, in its efforts to find infringement in this case, Net2Phone is attempting to recraft its claims and distort the core teachings of its patents. The main claim construction issue before the Court, then, involves the proper construction for the terms and phrases pertaining to the claimed "server" that provides the address directory service: the dedicated and centralized nature of the server and the directory it hosts cannot be erased from the public record. This and all other constructions must stay true to the public record and the actual invention.

The public is entitled to rely on a patentee's representations to the Patent Office to obtain its patent. Otherwise, businesses could only guess as to the boundaries of a patent's zone of

protection, stifling competition and free enterprise. Allowing patentees free reign to reinvent the scope of their purported inventions years later, in litigation, would create a dysfunctional patent system where patents would cease to serve their constitutional goal of promoting the useful arts, and would instead drag the market into a game of Russian roulette. Certainty and public notice form the fundamental policies at the heart of the Supreme Court's seminal *Markman* decision:

> [T]he limits of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public. Otherwise, a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention . . . and the public would be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights.

Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996) (citations omitted).

Here, given its admissions to the Patent Office and disavowal of claim scope, Net2Phone cannot now argue that its claims cover server-less systems and methods such as Skype's. As with everyone else, Skype is entitled to rely on the public record Net2Phone's predecessor created, and devise products that are distinctly different. It is during claim construction that the Court must affirm these fundamental principles on which the patent system is based, and hold Net2Phone, in the interest of certainty, to the representations made to secure its patents. Constructions that stay true to the public record will lead to an early termination of this case.

II. FACTUAL BACKGROUND

A. The Asserted Patents

The five Asserted Patents are attached as Exhibits A-E to the Declaration of Alan J. Heinrich ("Heinrich Decl."). They are: U.S. Patent Nos. 6,108,704 ("'704 patent") (Ex. A); 6,009,469 ("'469 patent") (Ex. B); 6,131,121 ("'121 patent") (Ex. C); 6,513,066 ("'066 patent") (Ex. D); and 6,701,365 (the "'365 patent") (Ex. E). All claim priority to the '704 patent. The '704, '365, and '066 patents share the same disclosure; here, we only cite to the '704 patent. The

'469 and '121 patents share the same disclosure with each other; both are continuations-in-part of the '704 patent and include the disclosure of that patent, plus additional new matter. Here, we only cite to the '469 patent. Net2Phone has recently represented that it will no longer assert against Skype a sixth patent named in Net2Phone's Third Amended Complaint, U.S. Patent 6,226,678, another continuation-in-part of the '704 patent. For the Court's convenience, Skype is lodging herewith a CD-ROM with the complete file histories of the Asserted Patents.

The '704 patent issued on an application filed on September 25, 1995, and is the parent to each of the other Asserted Patents in this case. The Asserted Patents do not concern VoIP technology itself. That is, they do not teach how to send voice data – *i.e.*, to "talk" – over computer networks such as the Internet. That technology existed years earlier. Rather, the Asserted Patents purport to solve a problem of *locating* other users on a computer network. Just as Alice cannot call Bob on the telephone without knowing Bob's telephone number (*i.e.*, his telephone address), for Alice to communicate with Bob over a *computer* network, she must first know Bob's current network address. *See* '704, 1:21-23.

In the telephone arena, Alice can find out Bob's telephone "address" by looking him up in a phonebook or by calling 411 directory assistance. The difference in the computer network arena is that computer network addresses are often temporary or "dynamic" – that is, they can change frequently. For example, a computer may be assigned a different network address each time it connects to a network, making it difficult for users to keep track of each other's network addresses. This is the problem to which the Asserted Patents are directed. '704, 1:53-56 ("Due to the dynamic nature of temporary IP addresses of some devices accessing the Internet, point-to-point communications in real-time of voice and video have been generally difficult to attain."); Heinrich Decl., Ex. F at SKYPE-N2P00290653 ("Applicants' invention solves a fundamental

problem associated with the Internet . . . . The problem is: How can a global network user be located if he/she has no permanent network address?").

The Asserted Patents disclose two, and only two, approaches for locating a user's current network protocol address: (1) a primary protocol whereby users register their current network addresses with a dedicated server hosting an online directory database that keeps track of the current network addresses of all users logged onto the network; and (2) a secondary protocol whereby users exchange their current network addresses by email. *See, e.g.*, '704, abstract; 1:59-2:21 (Summary of the Invention); 5:25-38. The Asserted Patents describe these two protocols as separate and independent "alternative[s]." '704, 6:17-23. Indeed, during the prosecution of the '704 application, the Examiner issued a restriction requirement pursuant to 35 U.S.C. § 121, stating that the two approaches were "distinct" inventions and thus should be prosecuted separately. Heinrich Decl., Ex. G at SKYPE-N2P00290586-88. Only the connection server protocol is at issue in this case; it is undisputed that Skype does not use the email protocol, and Net2Phone has thus not asserted any claims covering the email protocol against Skype.

In the server protocol, the Asserted Patents attempt to solve the problem of dynamic network addresses by introducing a static server, a stable middleman, that all users can always find. Users register their current network address with the dedicated server upon logging on to the network. '704, 5:25-38. If Alice wants to communicate with Bob, Alice's computer will send a "query" to the dedicated server, asking, "Is Bob online, and if so, what is his Internet address?" '704, 5:55-6:5. The server will then check its database records. *Id.* If Bob is online, Alice will receive his address from the server and can now communicate directly with Bob. *Id.* If Bob is not online, the server will return an "off-line" message. *Id.* Because the server is dedicated and centralized, all users always know where to register at log-in and where to search for other users.

To obtain issuance of the Asserted Patents and attempt to overcome the prior art cited by the Examiner, the applicants repeatedly characterized their claims on the server protocol as requiring "a dedicated server which acts as a network address/information directory from which calling processes can obtain information." Heinrich Decl., Ex. H ('704 history, 12/4/97 amendment) at SKYPE-N2P00290581 (emphasis added). The applicants also attempted to distinguish the cited prior art by representing that their directory server is "central." *See, e.g., id.*, Ex. I ('365 history, 9/20/02 applicants' agenda for examiner interview) at SKYPE-N2P00291907 ("differences between the present invention" and the cited reference include "the lack of disclosure in [the reference] of a central server").

As it turns out, the patented technology was known and in widespread use years before the purported "invention" by the NetSpeak inventors. In its preliminary invalidity contentions, Skype has identified over 190 prior art references, the vast majority of which Net2Phone did not disclose to the Patent Office. Skype will raise invalidity with the Court at the appropriate time.

B. Skype's Innovative Peer-to-Peer Technology

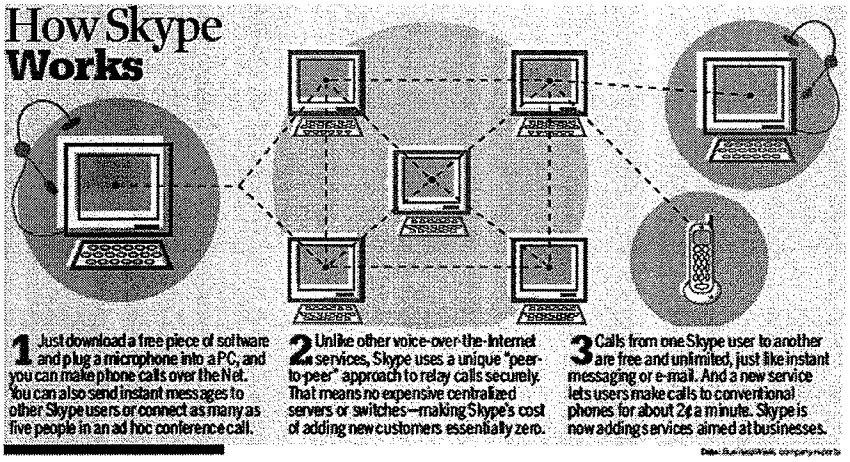
Knowledge of the accused product provides meaningful context for claim construction. *Wilson Sporting Goods Co. v. Hillerich & Bradsby*, 442 F.3d 1322, 1326-1327 (Fed. Cir. 2006); *Pall Corp. v. Hemasure Inc.*, 181 F.3d 1305, 1308 (Fed. Cir. 1999) ("Although the construction of the claim is independent of the device charged with infringement, it is convenient for the court to concentrate on those aspects of the claim whose relation to the accused device is in dispute.").

Skype tackled the user location problem very differently. Skype intentionally chose not to use servers to track users' locations. Instead, the computers of Skype's actual *users* – "peers" – handle network addresses, in what is known as a "peer-to-peer" network. Among other problems, servers are expensive to maintain and operate. Skype's pioneering use of peer-to-peer technology for VoIP was revolutionary and has dramatically lowered its costs, allowing Skype to

provide free computer-to-computer calls.

In relevant part, Skype's server-less technology operates as follows. At any given moment, a user's desktop or laptop computer running Skype can function as an *ordinary node*, which allows it to make calls, or as a *supernode*, which performs the same functions and in addition also temporarily handles address information for a limited set of other nodes. A single supernode handles address information for only a few ordinary nodes – perhaps a few hundred out of the many million online users at any given time. Which, and how many, users' ordinary computers become supernodes changes constantly. One moment Alice's computer might be asked to become a supernode to temporarily handle a subset of network addresses; the next moment, detecting that the peer-to-peer network no longer needs her computer's help, her computer will revert back to an ordinary node. Thus, it is the network of *peers*, not servers, that handle address information. Skype, therefore, devised its own, extremely complex and revolutionary indexing system. *See* Heinrich Decl., Ex. J ("Skype Explained" webpage located at http://www.skype.com/products/explained.html (last visited Aug. 26, 2007)); *id.*, Ex. K (Andy Reinhardt, "Net Phone Calls, Free – And Clear: Skype's radical technology and marketing threaten the very foundations of telecom," BUSINESSWEEK, Nov. 1, 2004) at 60-61.

Users' general purpose computers that temporarily function as supernodes are not "servers," and are certainly not "dedicated." Nor can a directory spread across thousands of supernodes flickering in and out of existence be considered "central." Indeed, Skype was intentionally designed to be the opposite of a central network of dedicated servers. *See id.*, Ex. L at MSIPLC 000074 (comparing Skype's "decentralized infrastructure" to other VoIP providers' "centralized infrastructure"). *See also* the "How Skype Works" figure from Reinhardt, *supra*:



Point number 2 in the figure highlights Skype's innovative and distinctly different approach:

> "2. Unlike other voice-over-the-Internet services, Skype uses a unique "peer-to-peer" approach to relay calls securely. That means no expensive centralized servers or switches – making Skype's cost of adding new customers essentially zero."

III. THE LAW OF CLAIM CONSTRUCTION

A. The Key To Claim Construction Is To Determine, Objectively, What The Inventors Actually Invented

The touchtone for claim construction is what the inventors actually invented. As the Federal Circuit explained in *Phillips v. AWH Corp.*, "[u]ltimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." 415 F.3d 1303, 1316 (Fed. Cir. 2005).

"It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history. . . . Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Thus, in construing patent claims, the court "cannot

look at the ordinary meaning of the term . . . in a vacuum. Rather, [the court] must look at the ordinary meaning in the context of the written description and the prosecution history." *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005).

For example, in *On Demand Machine Corp. v. Ingram Indus., Inc.*, the Federal Circuit reversed a jury verdict of infringement on the ground that the district court's claim construction did not account for the description of the invention in the specification. The district court had construed "customer" with the plain meaning definition of "one who buys goods or services." 442 F.3d 1331, 1339 (Fed. Cir. 2006). The Federal Circuit, however, noted that the "specification repeatedly reinforces its usage of the term customer as the retail customer," which was, therefore, the proper construction. *Id.* at 1340 (emphasis added). *See also Netword LLC v. Centraal Corp.*, 242 F.3d 1347, 1353 (Fed. Cir. 2001) ("local server" construed as "requiring a local server computer that has a limited database of aliases and that may request updates from a central registry computer" based on specification and prosecution history; claims may not "enlarge what is patented beyond what the inventor has described as the invention").

B. The Prosecution History Can Reveal Surrendered Subject Matter

"Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent" and is "part of the intrinsic evidence." *Phillips*, 415 F.3d at 1317. The prosecution history "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.* This bedrock principle of patent law has been reaffirmed again and again. *See, e.g., Chimie v. PPG Indus.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (prosecution history must be consulted "to exclude any interpretation that was disclaimed during prosecution."); *Springs Window Fashions LP v. Novo Indus.*, 323 F.3d 989, 995 (Fed. Cir. 2003) ("The public notice

function of a patent and its prosecution history requires that a patentee be held to what he declares during the prosecution of his patent."); *Standard Oil Co. v. American Cyanide Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985) (prosecution history "limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution.").

Furthermore, claim limitations arising from the prosecution of a parent application apply with equal force to child applications. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999). Similarly, an applicant's representations to the Patent Office in a child application may limit the scope of claims in the parent patent. *Microsoft v. Multi-Tech Sys.*, 357 F.3d 1340, 1350-51 (Fed. Cir. 2004) (claims in parent patent limited by prosecution history of child).

C. Extrinsic Evidence Is Admissible To Show The Understanding Of Those Of Ordinary Skill In The Art

The Federal Circuit has "also authorized district courts to rely on extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317 (citation omitted). In particular, the Federal Circuit has "especially noted the help that technical dictionaries may provide to a court to better understand the underlying technology and the way in which one of skill in the art might use the claim terms." *Id.* at 1318. Of course, "[e]xtrinsic evidence may never be relied upon, however, to vary or contradict the clear meaning of terms in the claims." *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003).

D. The Special Case Of Means-Plus-Function Elements

Net2Phone has asserted several claims that include means-plus-function claim elements subject to 35 U.S.C. § 112 ¶ 6. Accordingly, the court must identify the function explicitly recited in the claim. *Budde v. Harley Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed. Cir. 2001). The

court must then consult the specification to determine the structure corresponding to this function. *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1428 (Fed. Cir. 1997).

IV. SKYPE'S PROPOSED CONSTRUCTIONS TRACK THE PURPORTED "INVENTION" OF THE ASSERTED PATENTS AND SHOULD BE ADOPTED

Net2Phone has asserted an unwieldy number of claims (comprising almost two hundred elements), many of which are mere slight variations of each other. Skype has set forth its proposed constructions for these slight variations, based on the intrinsic evidence and supporting arguments discussed herein, in Appendix A. Skype also anticipates that it will respond to Net2Phone's proposed constructions, and offer alternative definitions as appropriate.

A. Claim 1 And Other Similarly Phrased Claims

Claim 1 of the '704 patent is representative of many of the claims that Net2Phone has asserted against Skype. Claim 1 recites:

> 1. A computer program product for use with a computer system, the computer system executing a first process and operatively connectable to a second process and a **server** over a computer network, the computer program product comprising:
>
> a **computer usable medium** having program code embodied in the medium, the program code comprising:
>
> program code for transmitting to the **server** a network protocol address received by the first process following connection to the computer network;
>
> program code for **transmitting, to the server, a query as to whether the second process is connected to the computer network**;
>
> program code for **receiving a network protocol address of the second process from the server, when the second process is connected to the computer network**; and
>
> program code, responsive to the network protocol address of the second process, for establishing a point-to-point communication link between the first process and the second process over the computer network.

Skype proposes constructions for the foregoing highlighted terms and phrases. As set forth in Appendix A, identical, or substantively equivalent, terms and phrases appear in other asserted claims, to which Skype's following constructions and explanations equally pertain.

1. "server"

The term "server," which is in nearly every asserted independent claim ('704 patent, claims 1, 10, 21, 43-44; '469 patent, claims 1, 5, 8; '365 patent, claims 1-3; '121 patent, claims 3, 6-8, 10-14; and '066 patent, claims 1, 6), should be construed as: *a dedicated computer that provides a centralized address directory service to a client.* Objectively, this is "what the inventors actually [thought they] invented." *Phillips*, 415 F.3d at 1316. As discussed in Section II.A, the "problem" to which the Asserted Patents are directed is that of locating users with dynamically assigned network addresses. To solve this problem, the inventors claimed to have conceived of a server that is dedicated to providing a centralized address directory service. '704, 5:25-67. In other words, the patents introduced a dedicated server that serves as a central, stable rendezvous point whose own address is known to all users. Every user who logs into the network goes to the same server, at the same known address, to report its presence and current network address. When a user needs to find another user, she will go to that same known server and ask where the other user is currently located. For this to function according to the patents, the server must be stable and central. If not – if, for example, the server itself had a dynamically assigned address – the server would have contributed to the very problem the patents purported to solve: in addition to users not knowing where to find each other, they would also not know where to find the server.

a) Skype's Proposed Construction For "Server" Is Compelled By The Prosecution Histories Of The Asserted Patents, In Light Of The Applicants' Express Disavowal Of Non-Dedicated Servers

In their attempts to distinguish over the prior art, the applicants *repeatedly* represented to the Patent Office that their invention centers on the use of a "*dedicated server*" that provides a centralized address directory – thereby disavowing broader claim scope. Skype's proposed

construction for "server," therefore, tracks the patentee's own binding characterization of their invention. For example, the applicants explained during prosecution of the '704 parent patent:

> **Applicants' invention** solves a fundamental problem associated with the Internet . . . . The problem is: How can a global network user be located if he/she has no permanent network address? Applicants have **disclosed a solution** to the above-described problem. The **solution** utilizes a client/server system. **In the disclosed system**, a client process contacts a **dedicated address directory server** and forwards to the server the network protocol address to which it has been assigned upon connection to the computer network, along with other identification information. The **dedicated address directory server** maintains a compilation or list of entries, each of which contain a process identifier and the corresponding network protocol address forwarded to the server by the process itself. Other processes wishing to contact a desired target process simply query the address directory server to determine whether the target process is on-line and the current network protocol address at which the target process is located.

Heinrich Decl., Ex. F (3/1/99 amendment) at SKYPE-N2P00290653 (emphasis added). These statements expressly describe the applicants' "invention" and "solution," rather than merely pointing out a preferred embodiment of their alleged invention.

The applicants repeated these representations to the Patent Office multiple times, creating a binding record which Net2Phone cannot now avoid. *See id.*, Ex. H at SKYPE-N2P00290581 ('704 history, 12/4/97 amendment) (characterizing invention as "utiliz[ing] a **dedicated server** which acts as a **network address/information directory** from which calling processes can obtain information.") (emphasis added); Ex. M ('365 history, 4/19/02 amendment) at SKYPE-N2P00291884 ("a **dedicated server** . . . acts as a **network address/information directory** from which calling processes can obtain information") (emphasis added); Ex. N ('365 history, 7/17/02 request for reconsideration) at SKYPE-N2P00291896 ("**a dedicated server** [] acts as a **network address/information directory** from which calling processes can obtain information") (emphasis added); Ex. O ('121 history, 9/7/99 amendment) at SKYPE-N2P00291477-78 ("a client process contacts a **dedicated address directory server** and forwards to the server the network protocol address to which it has been assigned upon connection to the computer network . . . . The **dedicated address directory server** maintains a compilation or list of entries, each of

which contain a process identifier and the corresponding network protocol address forwarded to the server by the process itself.") (emphasis added).

The applicants also overcame Patent Office rejections by (1) emphasizing the *centralized* nature of their address directory server and (2) distinguishing non-centralized approaches. During the prosecution of the '365 patent, for example, the Patent Office Examiner rejected all claims based on the prior art references Perkins and Higgins. The applicants requested an interview with the Examiner and, prior to the interview, faxed to the Examiner the following agenda for the meeting:

> Discuss differences between present invention and the combination of Perkins and Higgins, including but not limited to: [1] the lack of disclosure in Perkins of a central server that receives network protocol addresses from client processes and receives queries of the stored network protocol addresses from client processes; . . . ; [3] the lack of disclosure in Higgins of the establishment of point-to-point communication between client processed based on addresses stored in a central server.

Ex. I ('365 history, 9/20/02 applicants' agenda for examiner interview) at SKYPE-N2P00291907. In repeatedly characterizing their "invention" as requiring use of a *dedicated, central* server, the applicants necessarily disavowed systems and methods that do not use such servers.

Net2Phone may not now recapture in litigation subject matter that the applicants expressly disclaimed during prosecution. This is a fundamental principle underlying the patent system. *Microsoft v. Multi-Tech Systems*, 357 F.3d 1346 (Fed. Cir. 2004), is particularly instructive on this issue. The patents-in-suit in that case related to the simultaneous transmission of voice and/or computer data. The patentee, Multi-Tech, contended that its asserted claims covered data transmission over the Internet and were not limited to data transmission over a telephone line. The defendants disagreed, contending that Multi-Tech had disavowed Internet transmission in prosecution by stating to the Patent Office that its claims were limited to a telephone line connection. **One of those defendants was none other than *Net2Phone* itself**.

Net2Phone pointed to Multi-Tech's characterization of its invention in a response to an Office action, where Multi-Tech stated: "Applicants disclose a communications system which operates over a standard telephone line . . . . Applicants' invention . . . transmits the packets across a ['plain old telephone service'] line to a remote site." *Id.* at 1349. Net2Phone thus argued on appeal that "[i]t was proper for the District Court to conclude that Multi-Tech's patents are limited to use over a circuit switched network [*i.e.*, regular telephone line] because that interpretation comports with the statements Multi-Tech made when attempting to overcome a prior art rejection." Heinrich Decl., Ex. P (Net2Phone's 4/7/03 Federal Circuit brief) at 40.

The Federal Circuit agreed with Net2Phone that *all* claims were limited to calls over a telephone line, including claims that did not explicitly recite this limitation. 357 F.3d at 1347. The prosecution history, the court reasoned, "confirm[ed] that Multi-Tech viewed its inventions as being limited to communications over a telephone line." *Id.* at 1349. The court explained:

> Multi-Tech viewed the local and remote sites of its inventions as communicating directly over a telephone line . . . . That statement unambiguously reflects Multi-Tech's own understanding of its inventions in the '627, '649, and '532 patents as being limited to the transmission of data packets over a telephone line. We cannot construe the claims to cover subject matter broader than that which the patentee itself regarded as comprising its inventions and represented to the PTO.

Id. (emphasis added). Net2Phone's own arguments in *Multi-Tech* apply with equal force against it here. Just as Multi-Tech disavowed claim scope by telling the Patent Office that it "disclosed a communications system which operates over a standard telephone line," so too did Net2Phone disavow claim scope by telling the Patent Office that "[i]n the **disclosed system**, a client process contacts a **dedicated address directory server** . . . ." Heinrich Decl., Ex. F ('704 history, 3/1/99 amendment) at SKYPE-N2P00290653 (emphasis added). Net2Phone thus disavowed systems (such as Skype's) that do not use a "dedicated address directory server" and must be held to its public statements.

b) Skype's Proposed Construction For "Server" Is Supported By The Specifications Of The Asserted Patents

The specifications of the Asserted Patents also make clear that the server protocol, to which all of the claims at issue are directed, uses a dedicated, static server to solve the problem of dynamic network addresses. Beginning with the "Summary of the Invention," the '704 patent explains that this protocol involves the use of a "connection server," a dedicated computer that provides a central address directory service to clients via the following steps:

> (a) storing in a database a respective IP address of a set of processing units that have an on-line status with respect to the Internet;
> (b) transmitting a query from a first processing unit to a connection server to determine the on-line status of a second processing unit; and
> (c) retrieving the IP address of the second unit from the database using the connection server, in response to the determination of a positive on-line status of the second processing unit, for establishing a point-to-point communication link between the first and second processing units through the Internet.

'704, 1:65-2:9 (emphasis added). The written description further explains:

> Upon the first user initiating the point-to-point Internet protocol when the first user is logged on to Internet 24, the first processing unit 12 automatically transmits its associated E-mail address and its dynamically allocated IP address to the connection server 26. The connection server 26 then stores these addresses in the database 34 and timestamps the stored addresses using timer 32. The first user operating the first processing unit 12 is thus established in the database 34 as an active on-line party available for communication using the disclosed point-to-point Internet protocol. Similarly, a second user operating the second processing unit 22, upon connection to the Internet 24 through a connection service provider, is processed by the connection server 26 to be established in the database 34 as an active on-line party.
>
> . . .
>
> The first processing unit 12 then sends a query, including the E-mail address of the callee, to the connection server 26. The connection server 26 then searches the database 34 to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. If the callee is active and on-line, the connection server 26 then performs the primary point-to-point Internet protocol; i.e. the IP address of the callee is retrieved from the database 34 and sent to the first processing unit 12. The first processing unit 12 may then directly establish the point-to-point Internet communications with the callee using the IP address of the callee.

'704, 5:25-67 (emphasis added). Of note, it is the *same* connection server 26 that stores the dynamically assigned addresses for all on-line users in its database and that retrieves network addresses and forwards them to users requesting them. This means that the server is *centralized.*

As the applicants repeatedly emphasized to the Patent Office, the connection server is also *dedicated* to providing an address directory service for all clients in the network. As a result, the connection server has a stable, known network address that every client "*automatically*" contacts and registers with upon log-in. '704, 5:25-29. In fact, the server's address must be stable and known. The server is designed to function as a central rendezvous point where every client can register its own, and look up others', network addresses. If the server's own network address were not stable and known to all clients in the network, it would contribute to the very problem the patents were trying to solve. Also, the disclosed server is not a general purpose PC, but rather a powerful computer, such as "a SPARC 5 server or a SPARC 20 server, available from SUN MICROSYSTEMS," '704, 3:22-24, whose specific function is to maintain the database of client address information.

The patents have no disclosure whatsoever to even suggest a server that is not dedicated or a database that is not centralized. Net2Phone's attempt to expand its claims during litigation ignores its actual alleged invention. The law of claim construction does not countenance this:

> Although their claim language does not expressly recite automatic control of the finish tooth positioning, that is what they mean, and that is all that the specification describes; the specification does not support operator positioning. Moreover, the prosecution of the '562 patent, with the same specification, makes clear that the inventors understood their invention to encompass only automatic positioning because they so argued in order to distinguish their claims over Lemchen. We are mindful of the precaution that we must not incorporate into the claims limitations only found in the specification. We are not doing so here, nor did the district court. We are interpreting the claims in light of the specification. The situation here involves specifications that in all respects tell us what the claims mean, buttressed by statements made during prosecution in order to overcome a rejection over prior art. Accordingly, to attribute to the claims a meaning broader than any indicated in the patents and their prosecution history would be to ignore the totality of the facts of the case and exalt slogans over real meaning.

Ormco Corp. v. Align Tech., Inc., 2007 U.S. App. LEXIS 20185 (Fed. Cir. August 24, 2007) (emphasis added).

c) Skype's Construction Tracks The Ordinary Meaning Of "Server"

It is not surprising that the patentees defined, in 1995, the term "server" as requiring a dedicated computer, because that was the accepted industry understanding at that time. *Phillips*, 415 F.3d at 1311 ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.").

At the time the Asserted Patents were being drafted and filed with the Patent Office, for example, a standards coordinating committee of the Institute of Electrical and Electronics Engineering (IEEE) (*see* www.ieee.org), adopted on June 14, 1995, standard number 610.7, titled: "IEEE Standard Glossary of Computer Networking Terminology." Heinrich Decl., Ex. Q. The term "server" was defined there, *id.* at 35, and then incorporated in the general and widely accepted IEEE dictionary as: "*In a network*, a device or computer system that is *dedicated* to providing specific facilities to other devices attached to the network. *Contrast:* client." *Id.*, Ex. R (THE IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONICS TERMS, 6th ed. (1996)) at 972-73 (emphasis added). This definition continues to appear in more recent editions of the IEEE dictionary. *Id.*, Ex. S (7th ed. (2000)) at 1031. The Asserted Patents, just like the IEEE definition, "relate[] to *network* communication protocols . . . ." *E.g.*, '704, 1:5-6.

In sum, the term "server," as used and defined by the patentees in the intrinsic record, as well as understood by those of skill in the art in 1995, must be construed as: *a dedicated computer that provides a centralized address directory service to a client.*

2. "computer usable medium"

The phrase "computer usable medium" means *a physical storage device for storing computer-readable data.* The specification makes clear that this claim phrase refers to a physical storage device, such as a CD-ROM or other storage medium. *See, e.g.*, '704, 3:55-62 ("The

processor receives input commands and data from . . . transferable storage media, such as floppy disks, magnetic tapes, compact disks, or other storage media including the input data from the first user.") (emphasis added); '469, 13:31-40. *See also* Heinrich Decl., Ex. T (AMERICAN HERITAGE COLLEGE DICTIONARY, 4th ed. (2004)) at 863 ("**medium** . . . *Computer Science*: An object or device, such as a disk, on which data is stored.").

3. "transmitting, to the server, a query as to whether the second process is connected to the computer network"

This claim phrase means: *sending, to the server, a question as to whether the computer to receive the communication is currently logged onto the computer network.* It describes one of the key steps of the user location process as described and claimed in the Asserted Patents – asking the dedicated directory server whether a particular user is online. Skype's construction tracks the language of the patent specifications themselves:

> The first processing unit 12 then sends a query, including the E-mail address of the callee, to the connection server 26. The connection server 26 then searches the database 34 to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line.

'704, 5:55-60 (emphasis added). *See also* '704, 2:1-3 ("transmitting a query from a first processing unit to a connection server to determine the on-line status of a second processing unit") (Summary of the Invention). Skype's construction also tracks how the applicants described their invention to the Patent Office. *See, e.g.,* Heinrich Decl., Ex. F ('704 history, 3/1/99 amendment) at SKYPE-N2P00290653 ("Other processes wishing to contact a desired target process simply query the address directory server to determine whether the target process is on-line and the current network protocol address at which the target process is located.") (emphasis added). Skype's construction also comports with the plain and ordinary meaning of

the word "query." *Id.*, Ex. U (MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY, 10th ed. (1995)) at 958 ("**query** . . . QUESTION, INQUIRY . . . to ask questions of . . . .").

The "second process," of course, is the computer to receive the communication. (The first process is the computer initiating the communication.) The specification describes these processes as the processing units, or computers, of user initiating and receiving the communication. *See, e.g.*, '704, 2:58-3:5; 3:40-54; 4:33-43; 5:16-20.

4. "receiving a network protocol address of the second process from the server, when the second process is connected to the computer network"

The claim phrase "receiving a network protocol address of the second process from the server, when the second process is connected to the computer network" means: *receiving a network protocol address of the computer to receive the communication from the same server referred to above only if the computer to receive the communication is active and online.*

The Asserted Patents make clear that the transmission of the second computer's network protocol address is conditioned on its being on-line. This begins with the claim language itself, which uses the conditional term "when." Obviously, the address is not transmitted when the second computer is *not* on-line. Otherwise, the entire conditional phrase would be rendered superfluous. *Lantech, Inc. v. Keip Machine Co.*, 32 F.3d 542, 546 (Fed. Cir. 1994) ("All limitations in a claim must be considered meaningful.").

The specification confirms that the "directory assistance" step is conditioned on the second computer being on-line. Its network address is retrieved from the connection server and sent to the requesting computer if and only if the second computer is active and on-line:

> The first processing unit 12 then sends a query, including the E-mail address of the callee, to the connection server 26. The connection server 26 then searches the database 34 to determine **whether the callee is logged-in** by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. **If the callee is active and on-line, . . . the IP address of**

> **the callee is retrieved from the database 34 and sent to the first processing unit** . . . . If the callee is not on-line when the connection server 26 determines the callee's status, the connection server 26 sends an OFF-LINE signal or message to the first processing unit 12.

'704, 5:55-6:4 (emphasis added). This is necessarily so, as the connection server only monitors network addresses of those users that are online. *See* '704, 10:24-27 ("the connection server . . . stor[es] E-mail and IP addresses of logged-in users and processing units in the database 34") (emphasis added). As discussed above, it is only upon logging onto the network that users register their network addresses with the server. '704, 5:25-38.

The invention's purpose is to determine the network address of other active users so that a direct communications link can be established. '704, 1:58-2:9 (Summary of the Invention) ("A point-to-point Internet protocol is disclosed [including step (c):] retrieving the IP address of the second unit from the database using the connection server, in response to the determination of a positive on-line status of the second processing unit, for establishing a point-to-point communication link between the first and second processing units") (emphasis added). If the second computer were not online, then obviously no communication link could be established. Skype's construction thus tracks the specifications and follows from the purpose of the invention.

Finally, Skype's proposed construction makes clear that "the server" that provides the network protocol address of the second process is *the same server* referred to in the previous claim element. In other words, the antecedent basis for "*the* server," modified by the definite article, in this claim element is the same server referred to in previous claim elements. *See NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1306 (Fed. Cir. 2005) (noting that "the definite article 'the' refers to the antecedent 'at least one of a plurality of destination processors in the electronic mail system'; holding, therefore, that each claim element must be performed by "[t]he *same* destination processor"); *MercExchange, LLC v. eBay, Inc.*, 401 F.3d 1323, 1338 (Fed. Cir.

2005) (the definite article "the," before the phrase "seller's account," refers to the antecedent phrase "a seller's account," and thus the two accounts are the *same* account), *rev'd on other grounds*, 126 S.Ct. 1837 (2006). Thus, for the computer program product of claim 1 and similar claims, it is the same server (1) to which clients transmit their current network addresses; (2) to which clients send queries; and (3) from which clients receive the current network addresses of other users currently on-line.

B. Claim 2 And Other Similarly Phrased Claims

A small minority of Net2Phone's asserted independent claims (six in total) do not contain the word "server." *See* '704, claims 2, 4, 32-33, 38 & '121, claim 9. During prosecution, however, the applicants made clear that these claims nevertheless are drawn to the same dedicated computer discussed in Section IV.A.1, above, which stores and retains the centralized database of network addresses. *See, e.g.,* Heinrich Decl., Ex. F ('704 history, 3/1/99 amendment) at SKYPE-N2P00290655 ("Claim [2] is an apparatus claim directed to the **server** portion of Applicants' inventive system.") (emphasis added) (Claim 2 was originally numbered claim 23 in the '704 application). Although most limitations in these claims are similar to those discussed above for claim 1, and therefore need not be addressed separately, there is one that does merit separate attention.

1. "a memory . . . for storing a network protocol address for selected of a plurality of processes" ('704, claim 2)

The above claim phrase is from claim 2 of the '704 patent, and is representative of the "memory" limitation appearing in this set of claims. Skype proposes the following construction: *a dedicated storage medium for retaining a centralized database of network protocol addresses. A "process" is a computer and the software operating on it.* (Claims 2, 4, 32-33 and 38 of the '704 patent and claim 9 of the '121 patent all repeat substantively the same concept, and this

construction applies equally to the "memory," "maintaining" and "database" elements of those claims. *See* Appendix A.)

In the computer context, "memory" is a "storage medium," and to "store" means to "retain" data. Heinrich Decl., Ex. S (THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS, 7th ed. (2000)) at 684, 1113. The claimed memory at issue here is the memory of the connection server that stores the database of network addresses. '704, 3:18-21 ("The connection server 26 includes a processor 30, a timer 32 for generating timestamps, and a memory such as a database 34 for storing, for example, E-mail and Internet Protocol (IP) addresses of logged-in units."); *see also* '704, 5:29-38; 5:55-64; 10:25-34; '469, 4:59-62; 7:3-8, 33-40; 12:15-28. The specification describes various types of storage media, such as a hard drive, DRAM, etc., to store the directory database. '704, 3:27-29 (connection server may have "a hard drive or fixed drive as well as dynamic random access memory (DRAM) for storing the database 34").

Moreover, as described in detail in Section IV.A.1 above, the purported invention here requires a *dedicated* server whose memory holds a *centralized* database of network addresses. '704, 5:29-31 ("The connection server 26 then stores these addresses in the database 34 and timestamps the stored addresses using timer 32"); Heinrich Decl., Ex. H ('704 history, 12/4/97 amendment) at SKYPE-N2P00290581 (the disclosed system has "a dedicated server which acts as a network address/information directory from which calling processes can obtain information"); *id.*, Ex. I ('365 history, 9/20/02 applicants' agenda for examiner interview) at SKYPE-N2P00291907 ("differences between the present invention" and a prior art reference include "the lack of disclosure in [the prior art] of point-to-point communication between client processes based on addresses stored in a central server"). There can be no dispute that the intrinsic record limits Net2Phone's "invention" to a dedicated server that stores a centralized

database in its memory. Net2Phone must be held to statements made in the public record during prosecution. *Multi-Tech*, 357 F.3d at 1347 (all claims limited to calls over a regular telephone line, including claims that do not explicitly recite this limitation, because that is what "the patentee itself regarded as comprising its inventions and represented to the PTO").

Net2Phone is not entitled to claim a generic memory, because this is not what its inventors described as their invention. *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1344 (Fed. Cir. 2005) ("The specification provides only a single way of creating a seamless DWT, which is by maintaining updated sums of DWT coefficients. There is no evidence that the specification contemplates a more generic way of creating a seamless array of DWT coefficients."). Instead, the inventors purported to have invented a memory on a dedicated server that stores a central database of network addresses. All users currently logged onto the network register with the same, known server, and the database it retains in its memory, so that they can later go to the same, known database to find each other. The patents disclose no other embodiment and are not entitled to broader scope for all of the reasons set forth above.

C. Means-Plus-Function Claim Elements

Many of Net2Phone's asserted claims contain means-plus-function limitations subject to 35 U.S.C. § 112 ¶ 6. Hence, the Court must identify the function explicitly recited in the claim. *Budde*, 250 F.3d at 1376. The court must then consult the specification to determine the structure corresponding to this function. *Sage Prods.*, 126 F. 3d at 1428.

1. "means, responsive to a query from the first process, for determining the on-line status of the second process and for transmitting a network protocol address of the second process to the first process in response to a positive determination of the on-line status of the second process" ('704, claim 2)

This element appears in claim 2 of the '704 patent and describes the directory assistance function of the dedicated directory server from the server's own perspective. The claimed

function is twofold: "determining the on-line status of the second process" and "transmitting a network protocol address of the second process to the first process in response to a positive determination of the on-line status of the second process." For the reasons previously discussed, the "second process" means the "computer receiving the communication" and the "first process" means the "computer initiating the communication." *See supra* at Section IV.A.3. The phrase "in response to a positive determination of the on-line status of the second process" means "only if the called computer is determined to be active and on-line." *Id.* The corresponding structure for accomplishing these functions is the dedicated connection server itself, which is described throughout the specification as performing the function claimed in this claim element – namely, providing an address directory service in response to clients' queries. This structure includes the following: '704, 2:4-7; 3:18-33; 5:29-38; 5:55-6:14; 10:8-18; 10:21-36; fig. 1 (26), fig. 8.

2. "means for receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network" ('469, claim 3)

The claimed function in the above phrase is "receiving a network protocol address of the second process from the server process, when the second process is connected to the computer network." This phrase describes the same directory assistance function discussed above, from the client's perspective. Thus, the same structure identified above also applies here.

3. "program code for..." (numerous claims)

A number of Net2Phone's asserted claims include limitations involving generic "program code," "program code means," and/or "program logic" for performing various functions. *See, e.g.*, '704, claim 1 ("program code"); '469, claim 1 ("program code means"); '121, claim 14 ("program logic"). All of these limitations are means-plus-function limitations subject to 35 U.S.C. § 112 ¶ 6. Although the absence of the term "means" creates a presumption that § 112 ¶ 6 does not apply, that presumption can be, and is here, rebutted where the claim limitation "is

drafted as a function to be performed rather than definite structure or materials." *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1213 (Fed. Cir. 1998) (holding that claim limitation, "a substantially non-resilient lever moving element for moving the lever," was subject to § 112 ¶ 6).

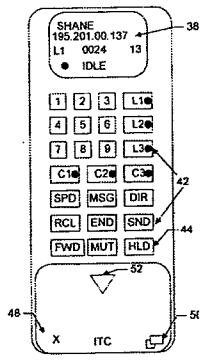
Here, the term "program code" (or "program logic") fails to recite any "definite structure." Instead, it simply connotes generic software commands for performing the recited functions, which the Federal Circuit has held to be subject to § 112 ¶ 6. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1376 (Fed. Cir. 2003). In *Altiris*, the claim term at issue claimed "a means of booting [a] digital computer," including a "first set of commands" and a "second set of commands." The patentee argued that the term "commands" connoted sufficient structure to avoid application of § 112 ¶ 6. The Federal Circuit disagreed, explaining: "because 'commands' (i.e., software) is so broad as to give little indication of the particular structure used here and is described only functionally, one must still look to the specification for an adequate understanding of the structure of that software." *Id.* So too here, "program code" or "logic" – generic "software" – gives insufficient indication of particular structure. *Id.*

At least one district court has concluded that the term "program code" is not subject to § 112 ¶ 6. *Trading Techs. Int'l v. eSpeed, Inc.*, 2006 U.S. Dist. LEXIS 80153 (N.D. Ill. 2006). However, that court's reasoning was unsound, as it distinguished the Federal Circuit's *Altiris* decision solely on the ground that "the court began with the presumption of means-plus-function." *Id.* at *41. But it was precisely *because* generic "software" *fails to recite sufficient structure* to avoid § 112 ¶ 6, directly contrary to the district court's analysis in *Trading Techs.*, that the Federal Circuit concluded that the presumption was not rebutted.

The corresponding structure for the generic software limitations at issue here is set forth in Appendix B.

D. Claim 10 And Other Similarly Phrased Claims

The '704 and '469 patents contain several claims directed towards a graphical user interface ("GUI") that mimics a telephone with multiple lines. *See* '704, claims 10, 21; '469, claim 8. Figure 6 from the '704 patent is representative:



In essence, the GUI claims require graphics that represent at least (1) "communication lines" (like telephone lines L1-L3 in the figure) and (2) users to be called (like "Shane" in the figure). In addition, the claims require: (3) picking a line for the call by "associating" the icon for the user to be called with one of the lines L1-L3, and (4) establishing a point-to-point call (like dialing a regular phone or pressing the green or "send" button on a cell phone).

These claims contain a number of the limitations discussed above, as well as a few other limitations that are also in need of construction. Claim 10 in the '704 patent is representative:

> 10. In a computer system, a method for establishing a point-to-point communication link from a caller process to a callee process over a computer network, the caller process having a user interface and being operatively connectable to the callee process and a server over the computer network, the method comprising the steps of:
>
> A. providing a **user interface element representing a first communication line**;
>
> B. providing a user interface element representing a first callee process; and
>
> C. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user **associating the element representing the first callee process with the element representing the first communication line**.

1. "user interface element representing a first communication line"

This refers to the icons for telephone lines L1-L3 in the figures, and means: *an icon representing one of a number of simulated telephone lines (not call-initiation buttons).*

These claims are directed to the GUI, that is, the graphical interface on a computer screen as described by the patents. They do not teach any technical details regarding how the "first communication line" is opened or closed, for example, or how data is actually transmitted and received over the "first communication line." Indeed, the claims themselves explicitly recite that the claimed subject matter is a "user interface" and/or "user interface element[s]." '704, claims 10, 21; '469, claim 8. These are icons depicted on a computer screen. '704, 9:3 ("*Icons* L1-L4 may represent each of 4 lines") (emphasis added); *see also* '704, figs. 5-6.

The "communication line" of the GUI described and claimed in the patents must be a simulated telephone line. This is evident from the figures showing icons labeled L1, L2, and L3 on a telephone, as well as from the file history, which described the GUI as having the "look[] and feel[]" of "a modern cellular flip phone." Heinrich Decl., Ex. V at SKYPE-N2P00290487.

Importantly, the claimed "communication line" is *not* a call-initiation button. It is instead like a line on an office phone with multiple buttons for multiple lines. It is *not* similar to the "SEND" or green button, for example, on a cellular telephone that merely initiates a call. The claimed "communication line" simulates the communication *path* or *medium* through which the call will be placed, *not* the function of actually placing the call. *See, e.g.,* Heinrich Decl., Ex. S (THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS, 7th ed. (2000)) at 197, 1154 ("communication line" and "telecommunication line" defined as "A *medium*, such as a wire or circuit, that connects equipment which enables data to be sent and received.").

The specification draws a sharp distinction between "lines" depicted as L1-L3 in figure 6, on the one hand, and "command" buttons such as the SND ("send") button in figure 6, on the

other. *See, e.g.,* '704, 5:45-49; 8:55-56; 9:3-13. Specifically, calls are initiated or established by using the "Send" command button. '704, 5:45-49. Lines, on the other hand, represent the medium over which the call, once initiated, travels: "Dragging the reduced icon 46 to any one of the line icons L1-L4 transfers the called party in use to the selected line." '704, 9:38-39. The claims themselves make it clear that lines should not be confused with call buttons used to establish calls. According to the claim, the step of "establishing" a call is *different* from the step of providing a "line." *See, e.g.,* '704, claim 10 (step A providing a "first communication line;" and step C for "*establishing* a point-to-point communication link") (emphasis added). The two different limitations must mean two different things. *See Datamize, LLC v. Plumtree Software, Inc.*, 2004 U.S. Dist. LEXIS 28382, at *21 (N.D. Cal. 2004), *aff'd*, 417 F.3d 1342, 1346 (Fed. Cir. 2005) (separate claim limitations in the same claim must be construed differently).

Finally, the claimed "a *first* communication line" describes one *of a number* of simulated telephone lines. Otherwise, the word "first" would essentially be vitiated from the claim, and the claim might as well have read "a communication line." "It is a fundamental principle of patent law that all words in a claim must be given meaning." *Id.* at *21; *see, e.g., Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1306 (Fed. Cir. 2005) (rejecting claim construction that rendered a claim term superfluous). If there is a *first* line, there must also be at least a second. This is fully supported by the specification, which describes only multi-line GUIs, and does not provide any embodiment with only one line. *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1277 (Fed. Cir. 2001) (when "patentees used the term 'channel' throughout the entire patent specification, consistent with a single meaning, they defined that term 'by implication.'").

Skype's construction, therefore, tracks the specifications, using the patentee's own words (*e.g.*, icon, phone, call buttons). This limitation should thus be construed as: *an icon representing one of a number of simulated telephone lines (not call-initiation buttons).*

2. "a user associating the element representing the first callee process with the element representing the first communication line"

This phrase, or slight variations, appears in the '704 patent, claims 10 and 21, and the '469 patent, claim 8. It means: *a caller drags the icon representing the first computer to receive the communication along the graphical user interface to the icon representing the first of the simulated telephone lines.*

In terms of manipulating objects on the GUI, the patents disclose only one configuration: a standard computer interface mechanism commonly called "drag-and-drop." Drag-and-drop means that users use a mouse (or some other input device) to click on and literally "drag" graphical icons around the computer screen and "drop" them onto other objects or to other locations. *See* Heinrich Decl., Ex. W (Wikipedia entry for "drag-and-drop") ("In computer graphical user interfaces, **drag-and-drop** is the action of . . . clicking on a virtual object and dragging it to a different location or onto another virtual object."). In the applicants' purported invention, lines are assigned by dragging and dropping an icon representing the person they are speaking with onto an icon representing one of the fixed number of telephone "lines" described above. '704, 9:34-42; '469, 27:65-28:3.

Here, the patentees acted as their own lexicographers, and explicitly defined the word "associating" as a drag-and-drop function: "associated, i.e., dragged and dropped." '469, 28:1. Therefore, Net2Phone is not entitled now to a different definition. *Bell Atlantic Network Services, Inc.* 262 F.3d at 1268 ("a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning"). The specifications are unmistakable that

the claimed "associating" step means to "drag-and-drop." '704, 9:35-42 ("[T]he user may transfer the called party to another line or a conference line by clicking and dragging the status area 38, which is represented by a reduced icon 46. Dragging the reduced icon 46 to any one of line icons L1-L4 transfers the called party in use to the selected line, and dragging the reduced icon 46 to any one of conference line icons C1-C3 adds the called party to the selected conference call.") (emphasis added); '469, 26:43-46 ("Operation of the WebPhone is controlled by selecting objects, i.e., buttons, text and images, and dragging objects, i.e., lines, parties, messages, etc., as explained hereinafter."). There is no other configuration disclosed for the "associating" function, and Net2Phone should not be permitted to invent one in litigation.

Additionally, during the prosecution of the '704, the Examiner rejected all claims based on various prior art references. Rather than distinguish the prior art, the applicants swore behind the cited references. As evidence of their earlier date, the applicants sent to the Patent Office a WebPhone design document, which is hence part of the file history and intrinsic record. This design document described the "WebPhone Structure and Function" as consisting of "a main window which looks and feels like a modern cellular flip phone . . . . The webPhone is controlled by clicking on objects (i.e. buttons, text and images) and **dragging** objects (i.e. lines, parties, messages, etc.)." Heinrich Decl., Ex. V at SKYPE-N2P00290487.

Finally, Skype's definition comports with the ordinary meaning. To "associate" generally means to "join or connect together," to "combine," to "unite." Heinrich Decl., Ex. U (MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY, 10th ed. (1995)) at 70. This concept of bringing together is what the patent contemplates when it describes the dragging and dropping operation. The icon for the callee must be brought together, "associated," with the icon for the line. The intrinsic and extrinsic records both lead to the definition of this phrase as Skype proposes.

V. CONCLUSION

Skype's proposed constructions accurately reflect what the inventors claimed to have invented, in particular a dedicated connection server that provides a centralized database of network addresses of online users. This was made abundantly clear in the specifications and during prosecution, in statements on which the public is entitled to rely. Claim constructions must stay true to what the inventors claimed to have invented, as described in the public record. Skype respectfully requests that the Court construe the claims as proposed by Skype, which will prevent uncertainty and preserve the integrity of the patent system.

Dated: October 18, 2007

GRAHAM CURTIN, P.A.

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Exhibit V

Reformatted Skype Responsive Claim Construction Brief

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UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

NET2PHONE, INC.,

Plaintiff,

vs.

EBAY INC., SKYPE TECHNOLOGIES SA, SKYPE INC., and JOHN DOES 1-10,

Defendants.

AND RELATED COUNTERCLAIM.

CIVIL ACTION NO. 06-2469 (KSH)

REFORMATTED RESPONSIVE CLAIM CONSTRUCTION BRIEF OF SKYPE TECHNOLOGIES SA, SKYPE, INC. AND EBAY INC.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

I. INTRODUCTION

The parties are in agreement on the core principles of claim construction. As Net2Phone acknowledges in its Opening Claim Construction Brief ("Net2Phone Brief"), "neither party can rewrite history, and in accordance with established Federal Circuit law, these claim terms are to be interpreted ... against the record that was made before the Patent Office when the patents were applied for and prosecuted." Net2Phone Brief at 7. Unfortunately, however, Net2Phone does not apply this principle. As a result, its claim constructions ignore the intrinsic record to which Net2Phone purports to swear allegiance.

In particular, Net2Phone's construction of the "server"-related terms ignores the applicants' repeated statements during prosecution, to overcome the prior art of record, that the server must be *dedicated* and *centralized*. *See, e.g.*, Declaration of Alan J. Heinrich in support of Skype's Opening Claim Construction Brief (Docket No. 98) ("Heinrich Decl."), Ex. F. (3/1/99 amend.) ("In the disclosed system, a client process contacts a dedicated address directory server ...."); s*ee also* Skype Opening Brief at 11-14. Net2Phone also ignores its representations to the Patent Office – and, therefore, to the public – that the patented "solution utilizes a *client/server* system." Heinrich Decl., Ex. F. This is not surprising, as claim constructions that give force to Net2Phone's own admissions and disclaimers will lead to summary judgment of non-infringement in Skype's favor. As Skype explained in its Opening Brief, Skype intentionally designed its system *not* to rely on servers that keep track of users' network addresses, in sharp contrast to the Patents-in-Suit. Skype is based on a server-less "peer-to-peer" architecture that is a fundamentally different paradigm than the patents' "client/server" architecture.

Nevertheless, Net2Phone's Brief does reveal several important points of agreement among the parties. In addition to its nod in favor of core claim construction principles, Net2Phone recognizes that the connection server "plays a key role in the invention" of the

Patents-in-Suit. Net2Phone Brief at 19. Net2Phone also acknowledges that "during prosecution of the patents, Net2Phone described the server as a 'dedicated server,'" and that this description was "[c]onsistent with its use in the specification." *Id.* at 19-20. Net2Phone further states that a "dedicated server" means "a server designed for a particular function." *Id.* In fact, as Skype explained in its Opening Brief, the dedicated server of Net2Phone's Patents-in-Suit was designed to provide a centralized address directory service to clients – a central "phonebook" of network address listings that members currently logged onto a computer network can access to find each other. *See, e.g.*, Heinrich Decl., Ex. I ('365 history, 9/20/02 applicants' agenda for examiner interview) at SKYPE-N2P00291907 ("differences between the present invention" and the cited reference include "the lack of disclosure in [the reference] of a central server"). Net2Phone disavowed systems (such as Skype's) that do not use a "central" and "dedicated address directory server." As even Net2Phone acknowledges, the Court must construe the claims consistent with these public representations.

II. NET2PHONE'S PATENTS DESCRIBE OLD TECHNOLOGY

Far from being pioneering, as Net2Phone's opening paragraph argues, the technology described in the Patents-in-Suit was developed by others who, in fact, did it better. While Net2Phone puffs that the inventors' WebPhone product "won industry acclaim," the only evidence Net2Phone cites in support is a college student's review of the "early beta release" of WebPhone in February 1996. Net2Phone Brief at 1; Declaration of Kevin Hardy (Docket No. 97) ("Hardy Decl."), Ex. 1. This same college student, Forrest Stroud, also reviewed a number of prior art programs, and his reviews highlight the lack of novelty of NetSpeak's "invention." For example, in August 1995 – before the inventors even filed for their first patent – Stroud published a review of a prior art program called PowWow. As Stroud's review shows, PowWow used the very same address directory server concept to provide the very same network address

look-up service, mapping users' identifiers (e.g., email addresses) with their current dynamic IP addresses, as the NetSpeak inventors later attempted to claim as their own invention:

> How would you like to take up to four of your closest friends on a cruise through Netscape? How about being able to talk to an associate without needing to know his/her Internet Protocol (IP) address – much less what an IP address even is? PowWow gives you the opportunity to do both of these tasks and more. *By registering yourself with the PowWow server, anyone on the Internet who is also using PowWow can contact you for text-based one-to-one conversation – all they need to know is your e-mail address! . . . As with VocalTec's Internet Phone, even users with dynamic IP addresses can send and receive calls.*

Declaration of Alan J. Heinrich in support of Skype's Responsive Claim Construction Brief, ("Heinrich Responsive Decl."), Ex. A (emphasis added). Stroud's reference to VocalTec's Internet Phone refers to another product that is prior art to the Patents-in-Suit, a product that Stroud described in another review as a "1995 killer communications app" and "the first application to offer real-time voice communication over the 'net." *Id.*, Ex. B. Even at the late date of February 1996, long after PowWow and Internet Phone were publicly released, WebPhone was still at the unfulfilled "wish list" and "promises" stage. Hardy Decl., Ex. 1. Months after Stroud's review of WebPhone, Stroud wrote that VocalTec's "Internet Phone remains the best client in a now over-crowded market of 'net phone products," while PowWow "is *the* client of choice" for "all of your text and voice-based chatting needs." Heinrich Responsive Decl., Ex. B. The named inventors were decidedly followers, not pioneers.

During litigation, Net2Phone can now only claim pioneering status based on its own *ipse dixit*. But the record is clear and indelible: Net2Phone's "inventions" are marginal at best, and in any event, circumscribed by the inventors' repeated public representations to the Patent Office to secure the patents. Net2Phone should not be permitted to manufacture during litigation broad claims that cover technology it did not invent. Net2Phone's attempt to encompass technology that does not employ a client/server model, much less a centralized and dedicated address

directory server, should be soundly rejected. Skype respectfully requests that the Court reject Net2Phone's proposed constructions and, instead, adopt the claim constructions that Skype has proposed in its Opening Brief.

III. SKYPE'S RESPONSE TO NET2PHONE'S PROPOSED CONSTRUCTIONS

Skype has set forth its proposed claim constructions for the primary disputed terms of the Patents-in-Suit in its Opening Brief, along with the support in the intrinsic record for those constructions. Skype will not repeat that discussion here. Instead, in this Responsive Brief, Skype focuses on the issues raised in Net2Phone's Brief and the claim constructions Net2Phone has proposed.

A. Skype's Response To Net2Phone's Constructions For Terms Covering What Net2Phone Describes As The "Core Concepts" Of The Patents-In-Suit (Net2Phone Brief at 18-30)

Skype first addresses Net2Phone's discussion and proposed constructions for the claim terms that Net2Phone considers the "core concepts" of the Patents-in-Suit. *See* Net2Phone Brief at 18-30. Skype's response to the section of Net2Phone's Brief purporting to address "basic computer-related claim terms," Net2Phone Brief at 11-17, begins at page 28, *infra.*

1. "Address Server, Connection Server, Server Process *and* Server" (Net2Phone Brief at 19-22): Net2Phone's Vague And Boundless Construction For The "Server" Claim Elements Is Contradicted By The Intrinsic Record

The main claim construction dispute before the Court involves the proper construction for the elements pertaining to the "server" described and claimed in the Patents-in-Suit. *See* Net2Phone Brief at 19-21. The intrinsic record demonstrates that the "server" of Net2Phone's asserted claims is a "dedicated computer that provides a centralized address directory service to a client." Skype Opening Brief at 11-17. As set forth in the accompanying declaration of Prof. David B. Johnson, this is also how a person of ordinary skill in the field of computer networking

at the time of filing in 1995 would understand the meaning of the claim term "server" as used in these patents. Declaration Of Professor David B. Johnson In Support Of Skype's Responsive Claim Construction Brief ("Johnson Decl.") at ¶¶ 7, 12-23. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. . . . [T]he court starts the decisionmaking process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.") (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)).

a. Net2Phone Concedes That The Patents Describe A "Dedicated Server" Which Plays A "Key Role In The Invention"

At the outset, there are a number of points of agreement among the parties bearing on the proper claim construction for the "server" claim elements. First, Net2Phone recognizes, as it must, that the server "plays a key role in the invention." Net2Phone Brief at 19. Skype concurs. Indeed, the server provides the centralized address directory service that is at the heart of the purported "invention" of the Patents-in-Suit. Net2Phone also recognizes that the Patents-in-Suit describe only two protocols for finding the network addresses of users connected to a computer network – a "connection server" protocol and an "email" protocol – and that only the connection server protocol is at issue in this case. *Id.* at 4-6 (stating that the Patents-in-Suit describe "two protocols" and noting that "[t]he claims that Net2Phone has asserted in this case do not relate to the second [i.e., email] protocol.").

Second, Net2Phone acknowledges that the applicants explained to the Patent Office during prosecution that the server playing this admittedly key role in the invention is a "*dedicated* server." *Id.* at 19-20 (emphasis added). Indeed, Net2Phone's introduction to the claim terms that "lie at the core of the Internet protocol" of the Patents-in-Suit begins with a

quote from the prosecution history of the '704 patent, in which the applicants explained to the Patent Office that their connection server technique "utilizes a *dedicated server* which acts as a network address/information directory from which calling processes can obtain information." *Id.* at 18-19 (citing Dec. 2, 1997 Amend. at 8) (emphasis added). A "dedicated server," according to Net2Phone, is "a server designed for a particular function." *Id.* at 19-20. Net2Phone also acknowledges that the inventors' statement that the claimed "server" is a dedicated server is "consistent with its use in the specification." *Id.* at 19 Skype again concurs.

Third, Skype agrees with Net2Phone that the terms "address server," "connection server," "server process" and "server" are used "interchangeably" in the Patents-in-Suit. *Id.* Each of these terms, as used in the claims, refers synonymously to the connection server described in the specification of the parent '704 patent.

At minimum, then, by Net2Phone's own admission, the "server" of its asserted claims is "a server designed for a particular function," namely, an address directory function. *Id.* at 19-20. Any other possible understanding of "server" was necessarily disclaimed by the applicants during prosecution. *See* Skype Opening Brief at 11-14. In Skype's innovative peer-to-peer software, in contrast, no servers – and certainly no "servers designed for a particular function" – are used to locate other users. Indeed, Skype intentionally avoided the use of dedicated servers. *See* Skype Opening Brief at 5-7. Net2Phone's own admissions confirm that Skype does not infringe the Patents-in-Suit. A claim construction that gives force to Net2Phone's admissions will be case dispositive.

b. Net2Phone's Proposed Construction For "Connection Server" Is Contradicted By The Intrinsic Record

Elsewhere in its Opening Brief, however, Net2Phone raises inconsistent arguments in an apparent attempt to avoid the case-dispositive consequences of its foregoing admissions, which

are compelled by the intrinsic record. In particular, Net2Phone argues that the "'connection server' is a term that must be defined according to the service it provides, as opposed to defined with reference to any specific hardware implementation." Net2Phone Opening Brief at 21. Net2Phone goes on to construe the claimed "connection server" as "a computer system, or collection of coordinated computer systems, running software that fulfills requests from, or provides a service to, other processes." *Id.* at 21-22. Net2Phone's proposed construction should be rejected for a number of reasons: (1) the patents' "connection server" does, in fact, refer to a "specific hardware implementation"; (2) Net2Phone's construction contradicts the inventors' own description of their invention to the Patent Office during prosecution; (3) Net2Phone's vague, overbroad construction is without support in the specification.

i. The "Connection Server" Refers To A "Specific Hardware Implementation"

Net2Phone contends that "the 'connection server' is a term that must be defined according to the service it provides, as opposed to defined with reference to any specific hardware implementation." Net2Phone Brief at 21. This contention is inconsistent with the specification of the Patents-in-Suit, their prosecution histories, and Net2Phone's own admissions elsewhere in its Opening Brief.

The intrinsic record demonstrates that the connection server protocol of the Patents-in-Suit does, in fact, require a "specific hardware implementation": it must be implemented using a "dedicated address directory server." Indeed, as set forth in Skype's Opening Brief, the applicants repeatedly represented to the Patent Office that "[i]n the disclosed system, a client process contacts a dedicated address directory server." *See* Skype Opening Brief at 11-14. Net2Phone's own Opening Brief makes clear that this refers to a "specific hardware implementation." Net2Phone itself cites to an extrinsic definition of "server" as "a computer

running software that fulfills requests from clients across a network." Net2Phone Brief at 22. And a "dedicated server," according to Net2Phone, is a "server" that is "designed for a particular function." *Id.* at 19-20.

Moreover, the applicants explained to the Patent Office during prosecution of the '704 patent that their "solution" to the dynamic network address problem "utilizes a client/server system." Heinrich Decl., Ex. F (3/1/99 amend.) ("Applicants have disclosed a solution to the above-described problem. The solution utilizes a *client/server system.* In the disclosed system, a client process contacts a dedicated address directory server . . . .") (emphasis added). As explained in the accompanying declaration of Prof. David B. Johnson, a "client/server" system is a term of art in the field of computer networking that refers to a particular type of network architecture with a particular hardware implementation. Johnson Decl. at ¶ 16. A 1995 computer dictionary that Net2Phone itself relies on in its Brief defines "client/server network" as:

> The most common model for a network of personal computers. One centralized, high-powered computer, called the server, is the network's hub. It is connected to many less powerful personal computers or workstations, called clients, throughout an organization. The clients run programs that are stored on the server. They also access data stored there, such as a common schedule of meetings or a database of customers. The server typically acts as an electronic mail post office.

Heinrich Responsive Decl., Ex. C (*Dictionary of Computer Words: An A to Z Guide to Today's Computers* at 44 (entry for "client/server network") (Houghton Mifflin Co. 1995)) (emphasis omitted); *see also* Johnson Decl. at ¶ 16. A "client/server" system is contrasted with a "peer-to-peer" system, in which users' own general purpose computers are used to dispense with the need for a dedicated, central server. Heinrich Responsive Decl., Ex. C at 213; Johnson Decl. at ¶ 17. A "peer-to-peer" network is an altogether different paradigm of network architecture, with a different hardware implementation, than a "client/server" system. Johnson Decl. at ¶ 17. Thus, Net2Phone's contention that the Patents-in-Suit do not require a "specific hardware

implementation" cannot withstand scrutiny. Net2Phone cannot now stretch its claims to encompass a peer-to-peer architecture nowhere described in the specifications of the Patents-in-Suit, and expressly disclaimed during prosecution in favor of the alternative and altogether different "client/server" implementation.

ii. Net2Phone's Proposed Construction For "Connection Server" Cannot Be Reconciled With The Prosecution History

Net2Phone's proposed construction simply ignores the fact that the applicants repeatedly represented to the Patent Office that their invention requires the use of a *dedicated* directory assistance server. *See* Skype Opening Brief at 11-14. Net2Phone thus runs afoul of its own admonition that "neither party can rewrite history, and in accordance with Federal Circuit law, the[] claim terms are to be interpreted . . . against the record that was made before the Patent Office when the patents were applied for and prosecuted." Net2Phone Brief at 7. Net2Phone's proposed construction for "connection server" fails this test. Net2Phone attempts to erase history with a construction that cannot be reconciled with the record that it made before the Patent Office when the patents were applied for and prosecuted. For this reason alone, Net2Phone's proposed construction must be rejected. *See, e.g.*, *Gillespie v. Dywidag Sys. Int'l*, __ F.3d __ (Fed. Cir. Sept. 6, 2007) ("The patentee is held to what he declares during the prosecution of his patent."); *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003) ("The public notice function of a patent and its prosecution history requires that a patentee be held to what he declares during the prosecution of his patent.").

Net2Phone also tries to nullify the applicants' representation during prosecution that their invention was patentably distinct from the prior art Perkins and Higgins patents (U.S. Patent Nos. 5,159,592 and 5,953,350) because their invention employed a "central server." Net2Phone Brief at 21; *see* Heinrich Decl., Ex. I ('365 history, 9/20/02 applicants' agenda for examiner

interview) at SKYPE-N2P00291907. Net2Phone incorrectly argues that neither of these prior art patents was directed to a "multiple server system." Net2Phone Brief at 21. On the contrary, the Perkins patent specifically discloses a system that employs multiple "local gateway" servers that assist a "global gateway" in facilitating network communication functions by allocating network addresses to mobile communication units. Heinrich Responsive Decl., Ex. D at Figs. 2-6; col. 2:62-3:38 (U.S. Patent Nos. 5,159,592).

iii. Net2Phone's Proposed Construction For The "Connection Server" Has No Support In The Specification

Net2Phone's proposed claim construction for "connection server" as "a computer system, or collection of coordinated computer systems, running software that fulfills requests from, or provides a service to, other processes" is so broad and so vague as to potentially encompass any network configuration imaginable. Indeed, Net2Phone's proposed construction would apply to virtually any computer on a network. Net2Phone's vague and overbroad construction is without support in the specification. The parent '704 patent does not describe the connection server as a "computer system or a collection of coordinated computer systems." As Net2Phone itself concedes, "the exemplary embodiment of the '704 patent depicts the connection server as a single server." Net2Phone Brief at 20. In fact, what Net2Phone refers to as the "exemplary embodiment" is the *only* embodiment of the connection server described in the '704 patent.

Net2Phone cites to only two passages of the '704 patent to support its proposed construction for "connection server." In fact, neither passage supports Net2Phone's construction. One is the general discussion of the connection server at col. 5, lines 55-67:

> The first processing unit then sends a query, including the E-mail address of the callee, to the connection server. The connection server then searches the database to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. If the callee is active and on-line, the connection server then performs the primary point-to-point Internet

> protocol; i.e. the IP address of the callee is retrieved from the database and sent to the first processing unit. The first processing unit may then directly establish the point-to-point Internet communications with the callee using the IP address of the callee.

'704, col. 5:55-67; *see* Net2Phone Brief at 21-22. Plainly, nothing here remotely suggests that the connection server is a "computer system or a collection of coordinated computer systems." On the contrary, this passage refers to the "exemplary embodiment" of a single connection server. As Net2Phone itself recognizes, this "exemplary embodiment," as well as the specification as a whole, is entirely consistent with the inventors' characterization of their invention to the Patent Office as requiring a "dedicated server." Net2Phone Brief at 19-20.

The only other portion of the '704 patent Net2Phone cites in purported support of its construction for "connection server" is col. 4, lines 33-43. Net2Phone Brief at 20. According to Net2Phone, this passage "specifically state[s] that the functionality of the server 'may be provided through the use of either shared *or* dedicated hardware,' *or* 'by a shared processor *or* by a plurality of individual processors.'" *Id.* (emphasis added by Net2Phone). Contrary to Net2Phone's misleading suggestion, however, this passage simply does not refer – "specifically" or otherwise – to the "functionality of the server." In fact, it says nothing about the server, much less does it actually teach or enable how to implement the connection server protocol using an entire "computer system or a collection of coordinated computer systems." In fact, this section merely discusses the configuration of internal computer hardware, such as central processing units and memory chips. It is unremarkable that computers can be built in a variety of ways.

In any event, even if this passage had referred to implementing the functionality of the connection server using "either shared or dedicated hardware" (and taught how to do so), it would still be of no avail to Net2Phone. During prosecution, the applicants limited their claims to a *dedicated* connection server to distinguish over the prior art of record, thereby disclaiming broader claim scope. *See* Heinrich Decl., Ex. F at SKYPE-N2P00290653 (3/1/99 amendment)

("**In the disclosed system**, a client process contacts a **dedicated address directory server** and forwards to the server the network protocol address to which it has been assigned upon connection to the computer network") (emphasis added); Ex. H at SKYPE-N2P00290581 ('704 history, 12/4/97 amendment) (characterizing invention as "utiliz[ing] a **dedicated server** which acts as a **network address/information directory** from which calling processes can obtain information") (emphasis added); Ex. M ('365 history, 4/19/02 amendment) at SKYPE-N2P00291884 ("[A] **dedicated server** . . . acts as a **network address/information directory** from which calling processes can obtain information.") (emphasis added); Ex. N ('365 history, 7/17/02 request for reconsideration) at SKYPE-N2P00291896 ("**[A] dedicated server** . . . acts as a **network address/information directory** from which calling processes can obtain information.") (emphasis added); Ex. O ('121 history, 9/7/99 amendment) at SKYPE-N2P00291477 ("[A] client process contacts a **dedicated address directory server** and forwards to the server the network protocol address to which it has been assigned upon connection to the computer network . . . . The **dedicated address directory server** maintains a compilation or list of entries, each of which contain a process identifier and the corresponding network protocol address forwarded to the server by the process itself.") (emphasis added).

Thus, assuming arguendo (and incorrectly) that the '704 patent discloses, in this single instance, "shared hardware" as an alternative to "dedicated hardware" for implementing the functionality of the connection server, Net2Phone unmistakably disclaimed any such "shared hardware" implementation during prosecution to obtain its patents.

Not surprisingly, Net2Phone attempts to downplay the role of the prosecution history in claim construction, stating that its "utility in a claim construction analysis is limited." Net2Phone Brief at 10. However, "[i]t is well established that 'the prosecution history limits the

interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." *Springs Window Fashions*, 323 F.3d at 994 (internal quotations omitted). In fact, contrary to Net2Phone's suggestion otherwise, cases holding the patentee to its representations during prosecution are legion. *See, e.g.*, *Gillespie*, __ F.3d __ (Fed. Cir. Sept. 6, 2007) (reversing district court's claim construction because patentee's disclaimer of claim scope during prosecution was sufficiently clear); *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1373 (Fed. Cir. 2007) (holding that patentee's representations during prosecution constituted disavowal of claim scope); *Seachange Int'l, Inc. v. C-COR Inc.*, 413 F.3d 1361, 1372-75 (Fed. Cir. 2005) (same); *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1345 (Fed. Cir. 2005) (same); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319, 1325 (Fed. Cir. 2002) (same; observing that "[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution") (citing *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995)); *Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 956-57 (Fed. Cir. 2000) (patentee's proposed claim construction in face of prosecution disclaimer "reduces to a request for a mulligan that would erase from the prosecution history the inventor's disavowal of a particular aspect of a claim term's meaning. Such an argument is inimical to the public notice function provided by the prosecution history."). *See also* Skype Opening Brief at 7-9.

Net2Phone correctly points out that disclaimer of claim scope in prosecution must be "clear and unmistakable," citing *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). In *Omega* itself, however, the Federal Circuit concluded that the patentee had, in fact, surrendered claim scope by "repeatedly insist[ing]" to the Patent Office "that its invention directs energy in a way that does not affect temperature measurement," thereby "stat[ing] in a

public record what his invention could not be." 334 F.3d at 1327. Here, similarly, the applicants repeatedly insisted to the Patent Office that their claimed invention requires a "dedicated address directory server" in an attempt to distinguish the prior art. *See supra* at 12-13. As in *Omega*, Net2Phone's public statements unmistakably amount to a "clear and unmistakable" disclaimer of claim scope. The file wrapper must mean something, and the public – including Skype – is entitled to rely on statements made there. Net2Phone's attempt to regain subject matter disclaimed in prosecution – such as using *non-dedicated* computers to provide a directory service – must be rejected.

c. Net2Phone's Reliance On New Matter In Its Continuation-In-Part Patents Is Legally Unsound And Factually Misplaced

Net2Phone also attempts to rely on new matter added in its continuation-in-part applications leading to the '121 and '469 patents to support its proposed construction for "connection server." Net2Phone Brief at 20. ("A continuation-in-part application is one that repeats a portion of an earlier application but also adds matter not disclosed in the earlier one." *Chemithon Corp. v. Procter & Gamble Co.*, 287 F. Supp. 291, 298 (D. Md. 1968).) In particular, Net2Phone relies on a multiple server configuration disclosed in the later '121 patent, a configuration that does not appear anywhere in the parent '704 patent. *Id.* (citing '121 patent, fig. 15C). Net2Phone's reliance on this new matter added to its later-filed '121 and '469 continuation-in-part patents fails for a number of reasons.

First, it is of no help to Net2Phone in its attempt to evade the prosecution history. Net2Phone can find no support in this new matter for a proposed construction that fails to account for the fact that the claimed "connection server" must be a *dedicated* server. *See supra* at 11-13. In other words, even if the new matter did disclose a server that was not centralized and dedicated (which it does not), that embodiment was disclaimed in prosecution as discussed

above. Net2Phone's attempt to erase the "centralized" and "dedicated" nature of the claimed "server" from the public record must be rejected.

Second, as a matter of law, Net2Phone may not rely on new matter in these later continuation-in-part patents to support a broad construction for claims that claim priority to the parent '704 patent. Here, Net2Phone contends that *all* of the asserted claims of Net2Phone's Patents-in-Suit claim priority to the filing date of the '704 patent. Net2Phone Brief at 4 & 29 ("every patent-in-suit does claim priority to the '704 patent"); Heinrich Responsive Decl., Ex. E (Net2Phone's Response to Skype's Interrog. No. 13). As a result, Net2Phone may not rely on subsequently added new matter in its continuation-in-part applications to support the scope of any of its claims; the '704 patent alone must fully support Net2Phone's asserted claims. *See* 35 U.S.C. § 120 (for an invention to claim priority to an earlier-filed application, it must be disclosed in that application "in the manner provided by the first paragraph" of 35 U.S.C. § 112, which requires, inter alia, "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains."). *See generally Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1255 (Fed. Cir. 2004) ("The written description requirement prevents applicants from using the amendment process to update their disclosures (claims or specifications) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating an accurate accounting of the priority of invention.").

New matter added in a continuation-in-part application may not broaden the scope of claims claiming priority to the parent patent, because new matter added to a continuation-in-part application does not form part of the intrinsic record of the parent patent. "A separate patent, . . .

even if it is a continuation-in-part application, does not constitute relevant intrinsic evidence for the [parent patent]." *Kenall Mfg. Co. v. Genlyte Thomas Group LLC*, 413 F. Supp. 2d 937, 944-45 (N.D. Ill. 2006) (refusing to interpret claims of parent patent in light of new matter included in continuation-in-part applications, because such new matter was not part of the intrinsic record of the parent patent); *see also, e.g.*, *Visto Corp. v. Sproqit Techs., Inc.*, 445 F. Supp. 2d 1104, 1110 (N.D. Cal. 2006) (court may not use new matter in later-filed application to broaden the scope of claims in an earlier parent patent). *Cf. Goldenberg v. Cytogen*, 373 F.3d 1158, 1167 (Fed. Cir. 2004) (while first patent cited in prosecution history of patent-in-suit was part of its intrinsic record, continuation-in-part of first patent contained new matter that was "not part of the intrinsic record" of patent-in-suit and hence should not have been used to construe its claims). (On the other hand, of course, statements made during the prosecution of a child application may *limit* the scope of a parent patent by demonstrating disavowal of claim scope. *See, e.g.*, *Microsoft v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004) (holding that statements made during prosecution of child application disclaimed claim scope in parent patent).)

Thus, because Net2Phone contends that all of the asserted claims are entitled to claim priority to the filing date of the '704 patent application, the new matter added to the '121 and '469 applications does not constitute any part of the intrinsic record of the asserted claims. Accordingly, the new matter concerning a multiple server configuration added to the '121 and '469 specification is simply irrelevant to the claim construction issues before the Court.

Third, even if the new matter in the '121 patent could have been relied on for the construction of Net2Phone's asserted claims, that new matter still does not support Net2Phone's construction of "connection server" as encompassing a "computer system or a collection of coordinated computer systems." Indeed, the specification of the '121 patent makes clear that the

multiple servers shown in Figure 15C of that patent are actually just mirrors of each other, and thus, for practical purposes, form a single centralized and dedicated connection server, *not* a "collection of coordinated computer systems." Between the partial statements Net2Phone quotes, out of context, on page 20 of its Opening Brief, the specification provides:

> In this implementation, multiple global servers are maintained for *fault tolerant load sharing*, each one performing the above-described connection server, information server and database server processes. Each of global servers are connected to the Internet via a separate T1 or T3 connection to different Internet service providers, and are *synchronized with each other via database server replication.*

'121 patent, col. 21:58-65 (emphasis added and internal reference numbers omitted). Each of these servers is the same and contains the entire database. The "database server replication" referred to in this passage means that each of the servers described in this configuration has the *same* centralized database of directory information. As named inventor Mattaway testified at deposition with respect to this passage, "each global server has the same database. That means if I talk to one global server and touch its database, what is changed will be reflected in the other databases." Heinrich Responsive Decl., Ex. F at 239:2-13; *see also id.* at 237:19-25. These servers are thus "like mirrors to each other, in case one goes down, you can go to another one." Heinrich Responsive Decl., Ex. F at 245:16-18. Accordingly, even if Net2Phone could rely on this new matter, the '121 patent's disclosure of mirrored servers fails to support Net2Phone's attempt to broaden the dedicated "connection server" claimed in its patents into a "computer system or collection of coordinated computer systems." There is simply no support in the intrinsic record for that construction. Even accepting the new matter, the connection server still contains a *centralized* database.

Likewise, there is nothing in the new matter Net2Phone points to that indicates its server can be anything but *dedicated*. The patents do not teach – either in the old matter or the new –

how to implement a system where the connection server is not dedicated to providing an address directory service, located at a stable address that all users know and can reach at log-in. Net2Phone cannot be allowed, through vague and creative claim constructions during litigation, to expand its claims to encompass subject matter it did not teach in the specification and indeed expressly disclaimed in prosecution.

2. "Database, Directory Database, 'Internet Accessible List' *and* 'Compilation of Entries" (Net2Phone Brief at 22-23): Net2Phone's Attempt To Encompass Any And All Ways Of Storing Network Address Information Is Contrary To The Intrinsic Record

As discussed in Skype's Opening Brief, several of Net2Phone's claims contain elements directed to the computer memory that stores the centralized database of on-line users' network addresses accessed by the connection server. Skype Opening Brief at 21-23 & Appendix A at 5-6. For the reasons explained in Skype's Opening Brief, these substantially similar "memory" claim elements should be construed as: "a dedicated storage medium for retaining a centralized database of network protocol addresses." *Id.*

Net2Phone's treatment of its "memory" group of claim elements suffers from the same defect that pervades its construction for "server." Just as Net2Phone attempts to encompass any and all hardware configurations with its boundless construction for its claimed "connection server," so too does it seek to sweep within the scope of its claims any and all ways of storing network address information. According to Net2Phone, "the precise manner in which the [network address] information is stored is immaterial." Net2Phone Brief at 24. The intrinsic record, however, makes abundantly clear that "the precise manner in which the [network address] information is stored" is *highly* material to the claimed inventions, particularly in light of how the inventors repeatedly and insistently described those inventions to the Patent Office. The applicants described a single, "precise manner" for storing network address information: a

dedicated storage medium for retaining a centralized database of network protocol addresses. *See* Skype Opening Brief at 21-23. The specifications are clear that each memory stores the entire database. The inventors of the Patents-in-Suit did not invent, and they did not purport to invent, any and all ways of storing network address information, any more than they purported to invent any and all hardware configurations for retrieving such information.

In support of its argument that the "precise manner" for storing network address information is somehow "immaterial" to the claimed invention, Net2Phone relies in part on a statement in the applicants' March 1, 1999 Amendment and Remarks in the prosecution history of the '704 patent. Net2Phone Brief at 24. Net2Phone, however, provides only a partial quotation of this statement in its brief, that the "server 'maintains a compilation or list of entries, each of which contain a process identifier and the corresponding network protocol address forwarded to the server by the process itself.'" *Id.* (quoting in part from Mar. 1, 1999 Amend. at 14). Net2Phone conveniently omits from its quote the first four words of the applicants' actual statement to the Patent Office, which explain that in the applicants' invention, it is a *dedicated address directory server* that maintains the compilation or list of entries. The applicants' complete statement reads: "**The dedicated address directory** server maintains a compilation or list of entries, each of which contain a process identifier and the corresponding network protocol address forwarded to the server by the process itself." Heinrich Decl., Ex. F at SKYPE-N2P00290653 (3/1/99 amendment). Thus, the very portion of the intrinsic record on which Net2Phone itself relies confirms that the precise manner in which network address information is stored is crucial to the applicants' claimed invention. The applicants claimed a *dedicated* storage medium for retaining a centralized database of network protocol addresses. *See supra* at 12-14

& Skype Opening Brief at 21-23. Net2Phone's attempt to erase the record that the applicants created in the Patent Office must be rejected.

3. "Transmitting to the Server a Network Protocol Address Received by a Process 'Following Connection' to the Computer Network" (Net2Phone Brief at 24-25): Net2Phone's Attempt To Read An "*Automatic*" Transmission Limitation Into Its Claims Is Not Supported By The Intrinsic Record

Net2Phone attempts to read an extraneous "automatic" claim limitation into the claim elements that involve "transmitting to the server a network protocol address received by the process 'following connection' or 'upon connection' to the computer network." Net2Phone Brief at 24-25. Net2Phone contends that such transmission must necessarily take place "automatically" following connection. *Id.* However, neither the claim language nor the intrinsic record supports Net2Phone's proposed construction.

4. "Query" (Net2Phone Brief at 25-26): Net2Phone Recognizes That A "Query" Is A "Question"

As set forth in Skype's Opening Brief, a "query" simply means a "question." Skype Opening Brief at 18-19. Net2Phone agrees, in part. Net2Phone states that a "query" is a "question or request." Net2Phone Brief at 26. "Question," however, is the better construction here. The intrinsic record is clear that a query is a *question* that the computer initiating the communication poses to the connection server – specifically, whether the computer that is to receive the communication is on-line, and if so, what its current network address is – to which it expects an *answer* in response. '704 patent, col. 5:55-64; *see* Net2Phone Brief at 4 ("If Alice . . . wishes to call Bob, the software running on Alice's computer contacts the server, which checks to see whether Bob is on-line and to determine which IP address is currently assigned to Bob's computer. Having retrieved that information, the software on Alice's computer is able to locate

Bob's computer and establish" a communication.) (internal citations omitted). Unlike a question, a "request" does not imply the expectation of an answer back.

Net2Phone's own description of the invention actually confirms that a "query" is a question posed to the connection server – specifically, a question asking whether a prospective callee is on-line and, if so, its current network protocol address. For example, Net2Phone states, "[a] process wishing to communicate with another process *ascertains whether that second process is on-line and its current network protocol address by sending a 'query' to the server.*" Net2Phone Brief at 25 (emphasis added). *See also id.* at 22 ("[T]he purpose of the connection server is to respond to queries from a process (e.g., a caller) *which is seeking to ascertain whether another process is on-line and, if so, its current network protocol address.*") (emphasis added).

5. "In Response To A Positive Determination Of The On-Line Status Of The Second Process" (Net2Phone Brief at 26-27): Net2Phone Recognizes That The Connection Server Only Retrieves Network Addresses Of On-Line Processes

Throughout Net2Phone's Brief, Net2Phone recognizes that the connection server protocol involves several steps, the first of which is a determination of the on-line status of a prospective callee. Net2Phone thus claims that the applicants "invented a method of enabling a user of a communication system (e.g., . . . the 'caller') to [1] determine whether another user (the 'callee') is on-line and [2] to determine his or her currently assigned IP address, so that [3] the software can find the callee and enable the call to be connected." Net2Phone Brief at 3. In other words, first the on-line status of the callee is determined, and then, only if the callee is on-line, is its current network address retrieved and sent to the caller (otherwise, by definition, the callee has no "currently assigned IP address"). As Net2Phone itself states: "***If*** the callee is logged-in, ***then*** 'the IP address of the callee is retrieved from the database and sent to the caller.'" Net2Phone Brief at

5 (emphasis added). Indeed, as discussed in the preceding section, the query that the caller poses to the connection server is a question asking whether the callee is on-line, and if so, what its current network protocol address is. *See supra* at Section III.A.4.

The determination of the callee's on-line status is a necessary first step of the "invention" for a simple reason: The central database that the dedicated connection server accesses in responding to client queries is a database of *on-line* users. Net2Phone explains:

> "The On-line table 'provides a dynamic list of those clients from the Client table who are ***currently*** On-line, as well as their current Internet protocol address. When one process (the 'first process') seeks to determine whether a second process is on-line, it sends a request to the connection server; the On-line table within the database is searched; *and* ***if*** *the second process is on-line* (***and thus in the On-line table***), *the connection server provides the first process with the current network protocol address of the second process.*"

Net2Phone Brief at 23 (emphasis added) (internal citations omitted).

Accordingly, the claims of Net2Phone's Patents-in-Suit make clear that the callee's network address is retrieved by the connection server if and only if the connection server first determines that the callee is on-line. For example, as Net2Phone also points out, claim 5 of the '704 patent recites "retrieving a network protocol address of the second process *in response to a positive determination of the on-line status* of the second process." '704 patent, cl. 5 (emphasis added); '704 patent, cl. 2; '066 patent, cl. 1, 2, 7. *See* Net2Phone Brief at 26. This identical concept appears in other claims reciting that the network protocol address of the second process is retrieved "*when* the second process is connected to the computer network." '704 cl. 1; *see also* '704 patent, cl. 44; '469 patent, cl. 3, 6; '121 patent, cl. 4, 6-8, 12-14.

Net2Phone appears to seek to draw a distinction between "*when* the second process is connected to the computer network" as in claim 1 of the '704 patent, and "*in response to a positive determination of the on-line status* of the second process," as in claim 5 of the same

patent. Net2Phone Brief at 26. Net2Phone's point is unclear. What is clear, however, is that claim 1 of the '704 patent and similar claims provide that the network address of the callee is retrieved only "when" the callee is on-line. The retrieval, in other words, is conditional. When the callee is *not* on-line, the connection server *does not* retrieve its network address – because in that case, as Net2Phone itself recognizes, the callee is not listed in the connection server's central database of on-line users. Net2Phone Brief at 22; *see* Skype Opening Brief at 19-21. *See also* '704 patent, col. 5:55-6:16.

6. "Point-to-Point Communication" (Net2Phone Brief at 26-28): Direct Communication Link Between Two Computers On A Computer Network

Although the parent '704 patent is titled "Point-to-Point Internet Protocol," the applicants of the Patents-in-Suit did not invent, and did not purport to invent, point-to-point internet communications. Heinrich Responsive Decl., Ex. F at 220:18-25 (deposition of named inventor Shane Mattaway) ("Q. *Now, you are not the first to come up with a program code for establishing a point-to-point communication with another process over the computer network; right?* A. When you say "communication," please define it. Q. Transmission of data. A. *No, I'm not.*"). Net2Phone concedes this fact, pointing out that during prosecution of a related application, the applicants stated to the Patent Office that "the term point-to-point has been well understood for a number of years," citing to a computer dictionary from 1987. Net2Phone Brief at 28.

The computer dictionary Net2Phone cites defines "point-to-point transmission" as "transmission of data directly between two points without use of an intermediate terminal or computer." *Id.* However, the construction Net2Phone proposes for the substantially identical term "point-to-point communication" does not appear to be entirely consistent with this dictionary definition that Net2Phone itself has introduced. Net2Phone proposes to construe that

term as "communication between two processes over a computer network that are not intermediated by a connection server, gateway or similar device." *Id.* at 29. Net2Phone does not explain why its proposed construction deviates from the ordinary meaning of a term that, according to Net2Phone itself, was "well understood for a number of years." *Id.* at 28. Neither is Net2Phone's construction even clear, and hence is not a helpful elaboration of the claim language. *See Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1580 (Fed. Cir. 1991) ("the construction of claims is simply a way of elaborating the normally terse claim language"); *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 780 (Fed. Cir. 2002) (recognizing that purpose of claim construction is to "clarify the claim meaning and hence provide definiteness"). For example, what does Net2Phone mean by "similar device"? Further, Net2Phone does not explain why the only impermissible deviations from a direct communication are the listed items: "connection server, gateway or similar device." In fact, any intermediary terminals or computers – including servers and gateways, but also other routers – would render a communication link not "point-to-point." As claimed in the patents, a "point-to-point communication link" is a "*direct* communication link between two computers on a computer network."

Skype does, however, agree with Net2Phone that a system "which converts non-IP communications into IP-based communications" is "*not* point to point." Net2Phone Brief at 27-29. For example, communications between a telephone and a computer – which necessarily requires conversion, through special gateways and the like, from the "non-IP communications" of the traditional, circuit switched telephony system to "IP-based communications" of packet switched computer networks such as the internet – are not "point-to-point" communications within the meaning of the Patents-in-Suit.

7. "User Interface," "User Interface Element," *and* "Associating" (Net2Phone Brief at 28-30): The Patents-in-Suit Define "Associating" as "Dragging and Dropping"

As discussed in Skype's Opening Brief, the Patents-in-Suit also include claims on a graphical user interface ("GUI"). Skype Opening Brief at 26-30. In the GUI of the Patents-in-Suit, users initiate, transfer, and end calls by "associating" – that is, by dragging and dropping – an icon representing the callee onto an icon representing a telephone line. Indeed, the Patents-in-Suit define the term "associating" as dragging and dropping. *See* '469 patent, col:28:1 ("associated, i.e., dragged and dropped."). This express definition, which is dispositive on this issue, confirms that the inventors understood "associated" to refer to the drag and drop interface described throughout the Patents-in-Suit, including in the specification of the original '704 patent. Indeed, the entire GUI is consistently described as a "drag-and-drop" interface. *See also* '704 patent, 9:35-42 ("[T]he user may transfer the called party to another line or a conference line by clicking and dragging the status area 38, which is represented by a reduced icon 46. Dragging the reduced icon 46 to any one of line icons L1-L4 transfers the called party in use to the selected line, and dragging the reduced icon 46 to any one of conference line icons C1-C3 adds the called party to the selected conference call.") (emphasis added); '469 patent, 25:7-9 ("[T]he user may select . . . information . . . using the drag and drop functionality of the WebPhone graphic user interface . . . .") (emphasis added); '469 patent, 26:26-30 ("[T]he user may store such information in his/her personal WebPhone directory by dragging and dropping the information from the annunciator area to the direction dialog box using the WebPhone GUI.") (emphasis added); '469 patent, 27:57-60 ("The user may assign a party to one of the ten speed-dial positions by selecting the user's information displayed in display 1402 and then dragging it onto the keypad button.") (emphasis added).

There is nothing remotely novel about these GUI claims; "drag and drop" interfaces have been notoriously well known for a generation. Nevertheless, Net2Phone seeks to expand the scope of its GUI claims even further. According to Net2Phone, "'associating' refers to the manner by which a user manipulates a user interface element, e.g., by *clicking*, dragging or dropping the element." Net2Phone Brief at 32 (emphasis added). However, there is no evidence in the intrinsic record, and Net2Phone cites none, supporting Net2Phone's construction of "associating" to encompass "clicking" alone, without the use of a drag and drop interface. Net2Phone's unsupported attempt to expand the scope of its GUI claims should be rejected.

B. Skype's Response To Net2Phone's Constructions For What Net2Phone Describes as "Basic Computer-Related Claim Terms" (*See* Net2Phone Brief at 11-18)

Net2Phone also offers constructions for a number of terms Net2Phone considers "basic computer-related claim terms." Net2Phone Brief at 11. Many of Net2Phone's proposed constructions, however, are either affirmatively incorrect, less clear than the claim language itself, or simply unnecessary.

1. "computer data signal embodied in a carrier wave" (Net2Phone Brief at 17-18)

Claims 7, 9 and 12 of the '121 patent and claim 2 of the '365 patent are directed to a "computer data signal embodied in a carrier wave." Skype agrees with Net2Phone that the claimed "computer data signal" refers to an intangible waveform transmitting computer data "in transit." Net2Phone Brief at 17-18. As such, these claims are not directed to any category of subject matter patentable under 35 U.S.C. § 101 under the Federal Circuit's recent decision in *In re Petrus A.C.M. Nuijten*, __ F.3d __ (Fed. Cir. Sept. 20, 2007). In that case, the Federal Circuit held that claims directed to a "signal" with "embedded data" are not patentable. The court explained that, even though such signals must necessarily be embedded in some "physical

carrier," given their intangible nature they are not encompassed by any of the four enumerated statutory categories of patentable subject matter: "process, machine, manufacture, or composition of matter." Hence here, for precisely the same reasons, Net2Phone's claims directed to a "computer data signal embodied in a carrier wave" are too transitory and intangible to fall within any of the four categories of patentable subject matter and are thus invalid.

2. "computer usable medium" (Net2Phone Brief at 16-17)

A number of Net2Phone's other claims are directed to a "computer usable medium" on which program code is embodied. *See* '704 patent, cl. 1, 21, 23, 25, 27, 38; '121 patent, cl. 3; '469 patent, cl. 1. In contrast to the claims directed to an intangible "computer data signal embodied in a carrier wave," Net2Phone's "computer usable medium" claims require a tangible storage device for storing the claimed computer program code. *See* Skype's Opening Brief at 16-17. Indeed, this is what distinguishes these two sets of claims.

Net2Phone, however, incorrectly attempts to construe the phrase "computer usable medium" to cover intangible transmission of computer data – thereby creating overlap with its "signal embodied in a carrier wave" claims. Net2Phone Brief at 16-17 (arguing that "computer usable media" encompasses a "tangible or intangible medium for storing or transmitting computer data"). To the extent that Net2Phone prevails with this argument, then Net2Phone's "computer usable medium" claims, like its "signal" claims, encompass intangible and transitory subject matter that is unpatentable under *In re Nuitjen* and are accordingly invalid in precisely the same way as are its "carrier wave" claims.

(Skype notes that Net2Phone's "computer usable medium" claims and other software claims are invalid in any event, either under 35 U.S.C. § 101 and/or § 103, regardless of whether they are construed to encompass intangible transmission of data. *See, e.g., In re Gulack*, 703 F.2d 1381, 1387 (Fed. Cir. 1983) (holding that under the "printed matter" doctrine, if the only

distinction between a prior art storage medium and a claimed storage medium is the information stored thereon—rather than a different "functional relationship between the printed matter and the substrate"—then the claimed storage medium (with associated information) is unpatentably obvious over the prior art because the information lacks "patentable weight."). *See also, e.g.*, *Leapfrog Enters. v. Fisher Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (holding that "the adaptation of an old idea or invention . . . using newer technology that is commonly available and understood in the art" is obvious under 35 U.S.C. § 103).)

Net2Phone's attempt to encompass intangible transmissions of data within its "computer usable medium" claims is also undermined by the very passages of the specification on which Net2Phone purports to rely. These passages demonstrate that the patents describe tangible media for storing computer data as distinct from and as an alternative to intangible transmission of computer data. For example, the '704 patent states that data may be received from "wired, optical, or a wireless connection for electromagnetic transmissions, or ***alternatively*** [from] transferable storage ***media***, such as floppy disks, magnetic tapes, compact disks, or other storage ***media***." '704 patent, col. 3:58-62 (emphasis added). Similarly, the '121 patent states that the invention may be implemented as a computer program whose instructions are "either fixed on a tangible medium, such as a computer readable media, e.g. diskette, CD-ROM, ROM or fixed disk of Fig. 11, or transmittable to a computer system, via a modem or other interface device." '121 patent, col. 34:17-22. Net2Phone's "computer usable medium" claims are directed to the "alternative" identified in these passages of storing computer data on fixed, tangible storage media. The other alternative – the intangible transmission of computer data – is covered by Net2Phone's "computer data signals embodied in a carrier wave" claims, discussed above. Net2Phone's attempt to confuse these two sets of distinct claims should be rejected.

3. "process" (Net2Phone Brief at 12-13)

Net2Phone argues that a "process" refers to "the computer program itself," divorced from the computer on which it is actually running. Net2Phone Brief at 12-13. Net2Phone's construction is unsupported by the specification. Net2Phone relies on a partial quote from the specification, which Net2Phone takes out of context. *Id.* The complete sentence reads: "Moreover, the use of the functional blocks with accompanying labels herein is not to be construed to refer *exclusively* to hardware capable of executing software." '704 patent, col. 4:43-46 (emphasis added); *see* Net2Phone Brief at 12-13. Even if this sentence had any bearing on the construction for "process" (which it does not), it still would not support Net2Phone's attempt to construe that term to refer exclusively to software, divorced from the hardware on which it runs. Plainly, a term that does not refer *exclusively* to hardware cannot be said to *exclude* hardware. Construed in light of the specification, "process" must be interpreted to refer to a computer running an instance of a computer program or application. In fact, the '704 patent's written description never mentions a "process"; instead, it discusses the invention in terms of a "first processing unit" and a "second processing unit," which are computers capable of running a computer program or application. *See, e.g.*, '704 patent, col. 3:40-42; 5:18-20.

Net2Phone also cites to two lines of new matter in the '121 patent. Net2Phone Brief at 12 (citing '121 patent, col. 22:50-51). The "WebPhone client process" referred to there is a computer running an instance of the WebPhone application program.

4. "identifier" (Net2Phone Brief at 14):

Net2Phone proposes that the claim term "identifier" be construed as a "distinguishing name." Net2Phone Brief at 14. However, the term "identifier" is not in need of construction. Moreover, the construction that Net2Phone proposes is too narrow. As Net2Phone itself admits, an identifier may be anything that allows "a system to distinguish among the on-line entities."

Id. Hence, an identifier is not restricted to an identifying "name," but rather can include, for example, an email address, a number, a symbol, etc.

5. "network protocol address" (Net2Phone Brief at 14):

Finally, Skype agrees with Net2Phone that a "network protocol address" is "the information necessary to direct data to a particular device or process on a computer network, which acts as a pointer to the device or process associated with that address." Net2Phone Brief at 13.

IV. CONCLUSION

For the foregoing reasons, Skype respectfully requests that this Court reject the constructions Net2Phone has proposed that are contradicted by, or inconsistent with, the intrinsic record. Instead, for the reasons set forth here and in Skype's Opening Brief, Skype urges that Skype's proposed constructions be adopted.

Dated: October 18, 2007

GRAHAM CURTIN, P.A.

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Exhibit S

Net2Phone Opening Claim Construction Brief

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UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

NET2PHONE, INC., **Plaintiff,** **vs.** **EBAY, INC., SKYPE TECHNOLOGIES SA, SKYPE, INC. and JOHN DOES 1-10,** **Defendants.** **AND RELATED COUNTERCLAIM.**	**Civil Action No. 06-2469-KSH-PS** **PLAINTIFF NET2PHONE, INC.'S OPENING CLAIM CONSTRUCTION BRIEF**

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

STATUTES

MISCELLANEOUS

INDEX OF EXHIBITS

Exhibit No.	Description
1	F. Stroud, *Consummate Winsock Apps*, Boardwatch (Feb. 1996)
2	U.S. Patent No. 6,108,704 (the "'704 patent")
3	Amendment ('704 prosecution) (Dec. 2, 1997)
4	Amendment ('704 prosecution) (Mar. 1, 1999)
5	U.S. Patent No. 6,513,066 (the "'066 patent")
6	U.S. Patent No. 6,701,365 (the "'365 patent")
7	U.S. Patent No. 6,131,121 (the "'121 patent")
8	U.S. Patent No. 6,009,469 (the "'469 patent")
9	Amendment ('469 prosecution) (Oct. 20, 1998)
10	Amendment ('121 prosecution) (Sept. 7, 1999)
11	A. Bruce Carlson, *Communication Systems: An Introduction to Signals and Noise in Electrical Communication* (3d ed. 1986) (excerpt)
12	Proposed Agenda for Examiner Interview ('365 prosecution) (Sept. 20, 2002)
13	Robert M. Blissmer, *Introducing Computers: Concepts, Systems and Applications* (1994) (excerpt)
14	Preliminary Amendment (Pros. of U.S. Patent No. 6,226,678) (May 14, 1999)
15	Appeal Brief (Pros. of U.S. Patent No. 6,829,645) (Apr. 16, 2004)
16	*Dictionary of Computer Words: An A to Z Guide of Today's Computers* (Houghton Mifflin 1995) (excerpt)
17	Amendment ('469 prosecution) (Mar. 3, 1999)

INTRODUCTION

Plaintiff Net2Phone, Inc. ("Net2Phone") was a pioneer in the Voice Over Internet Protocol ("VoIP") industry, and it continues to compete in that industry today, offering products and services in the United States and more than 100 other countries. In 2001, through a since-dissolved joint venture, Net2Phone acquired another pioneer in the industry, NetSpeak Corporation ("NetSpeak"), which developed and marketed one of the very first VoIP products ever made available to consumers. NetSpeak first launched that product—a software product known as "WebPhone"—in late 1995, a time when few people appreciated the potential of using the Internet as a medium for transmitting voice. Although a handful of other companies were developing competing products at the time, the other products paled in comparison to the WebPhone, which won industry acclaim and, shortly before its full release, was touted as a potentially "killer app that puts to shame similar offerings" from NetSpeak's competitors. F. Stroud, *Consummate Winsock Apps*, Boardwatch 82 (Feb. 1996) (Ex. 1).

Like most companies that develop new technologies, NetSpeak applied for and obtained a series of patents to protect its intellectual property. Five of those patents are at issue here—U.S. Patent Nos. 6,108,704 (the "'704 patent"), 6,131,121 (the "'121 patent"), 6,701,365 (the "'365 patent"), 6,009,469 (the "'469 patent), and 6,513,066 (the "'066 patent") (collectively, the "patents-in-suit"). The patents-in-suit are all "related"—that is, they all ultimately derive from one original patent application. In general, the patents cover the innovations that were at the heart of the WebPhone's early success, namely the ability to determine whether a person whom a user wished to call was "on line" and the currently-assigned network address of that person's computer device (even though that address was "dynamic," *i.e.*, would change each time a user connected to the Internet) so that the two users could be put in "point-to-point" contact with one another. By virtue of its acquisition of NetSpeak, Net2Phone owns the NetSpeak patents.

Net2Phone has sued Defendants eBay, Inc., Skype, Inc., and Skype Technologies, S.A. (collectively "eBay") for patent infringement because NetSpeak's patented technology lies at the heart of eBay's VoIP product, known as "Skype." Last month, the parties exchanged lists of the claim terms that they believe require construction by the Court. Defendants rejected Net2Phone's suggestion that the parties exchange their proposed constructions of those terms. In addition, while many of Net2Phone's proposed claim constructions were apparent from the highly detailed infringement contentions it served in May, eBay thus far has refused to provide Net2Phone with its *non*-infringement contentions, which would indicate the claim elements that are truly in dispute. As a result, Net2Phone is left with no choice but to respond to eBay's proposed constructions in its responsive claim construction brief.

Fortunately, the majority of the claim terms at issue reflect basic computer-related terminology for which, we hope, there will be little if any actual dispute. The remaining claim terms relate to the core concepts underlying the inventions claimed in the patents-in-suit, and while eBay may disagree with Net2Phone's proposed constructions, Net2Phone's constructions are firmly rooted, as the law requires, in the "intrinsic record"—that is, the claims themselves, the patents' written descriptions, and their prosecution histories. As the en banc Federal Circuit reaffirmed in 2005, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (quotation omitted). Net2Phone's proposed constructions are written on the basis of that principle.

BACKGROUND

The inventions claimed in the patents-in-suit were made in 1995. The key problem solved by those inventions is as follows. A computer linked to the Internet is identified by an Internet Protocol ("IP") address. *See* '704 patent, col. 1, ll. 22-26 (Ex. 2) (Net2Phone's exhibits

are attached to the accompanying Declaration of Kevin Hardy.). Generally speaking, an IP address can be thought of as the equivalent of a street address or phone number for a computer on the Internet. Just as each street address or phone number uniquely identifies a building or telephone, an IP address can uniquely identify a specific computer. A user who wishes to find and communicate with another user needs to know whether the other user is on-line and also needs to know the IP address associated with the other user's computer. *Id.* What makes this difficult is that IP addresses often change each time a user connects to the Internet. *Id.* at col. 1, ll. 35-47. In computer terminology, they are "dynamic." IP addresses change for many reasons. For example, because there are a finite number of IP addresses, some computers are temporarily assigned an address only during the time that they are on-line. In that way, computers that are off-line are not taking up valuable IP addresses.

As the inventors explained during prosecution of the application that led to the '704 patent, "[o]ne of the major factors inhibiting dynamic communications over the Internet, and other computer networks, is the inability to obtain the current dynamically assigned network protocol address of a user process connected to the network. This problem is analogous to trying to call someone whose telephone number changes after each call." Amend. at 7-8 ('704 pros.) (Dec. 2, 1997) (Ex. 3). Put differently, "[t]he problem is: How can a global network user be located if he/she has no permanent network address?" Amend. at 14 ('704 pros.) (Mar. 1, 1999) (Ex.4). The inventors of the patents-in-suit invented a method of enabling a user of a communications system (*e.g.*, a person wishing to make a call using WebPhone—the "caller") to determine whether another user (the "callee") is on-line and to determine his or her currently-assigned IP address, so that the software can find the callee and enable the call to be connected.

Like many significant inventions, the patented method, once explained, provides an

ingeniously simple solution to a long-standing problem. By way of example, when a user of the software (*e.g.*, a person named Bob) logs on to the computer network, the software sends to a server his username (*e.g.*, bob@WebPhone.com) and the current IP address of the computer on which he has logged on (*e.g.*, 123.45.67.89). '704 patent, col. 5, ll. 24-28. If Alice then wishes to call Bob, the software running on Alice's computer contacts the server, which checks to see whether Bob is on-line and to determine which IP address is currently assigned to Bob's computer. *Id.* at col. 5, ll. 55-67. Having retrieved that information, the software on Alice's computer is able to locate Bob's computer and establish a telephone-like connection over which they can begin talking. *Id.* This user-to-user communication is referred to as "point to point" in Net2Phone's patents. *Id.*

A. Background on the Patents-in-Suit

The original patent application describing Net2Phone's invention was filed on September 25, 1995, and led directly to the '704 patent. (For convenience, we refer throughout to "Net2Phone," although at the relevant time, the relevant company was NetSpeak, which as explained above, Net2Phone later acquired.) The four remaining patents-in-suit all issued from applications that claim priority to that original application. Two of those patents—the '066 and '365 patents (Exs. 5 and 6, respectively)—have virtually identical written descriptions to that of the '704 patent. The other two patents—the '121 and '469 patents (Exs. 7 and 8, respectively)—are what is known as continuations-in-part, and they contain not only the content of the original application that led to the '704 patent, but also additional content that further elucidates the claimed inventions. (The written descriptions of the '121 and '469 patents are basically identical. For ease of reference and to avoid repetitious citations, Net2Phone will cite to the '704 patent, although the discussion is equally applicable to the '066 and '365 patents, and Net2Phone will cite to the '121 patent, although the discussion is equally applicable to the '469 patent.)

As the title of the '704 patent reflects, the patents-in-suit concern a point-to-point Internet protocol—*i.e.*, a procedure for facilitating exchanges of data between computers. After briefly describing the two protocols, the patents describe how the protocols are used with reference to "an exemplary embodiment." '704 patent, col. 2, l. 58 (Ex. 2). The patents describe two separate "processing units," *i.e.*, computers running software and connected to the Internet. *Id.* at col. 2, l. 58–col. 3, l. 13. The two processing units are able to connect to a connection server, which includes a database for storing a unique username (such as one's e-mail address) and a current IP address for each on-line processing unit. *Id.* at col. 3, ll. 14-33. The first user—the caller—executes the protocol by running a computer program, which may be downloaded from the Internet. *Id.* at col. 3, ll. 40-46. The computer program described in the exemplary embodiment includes a graphical user interface (which, for example, would be seen on a computer screen) that receives commands from the user. *Id.* at col. 4, ll. 7-16 & Fig. 5.

When the caller launches the computer program, it "automatically transmits its associated E-mail address and its dynamically allocated IP address to the connection server[,]" which then stores the information in a database. *Id.* at col. 5., ll. 26-30. Each user operating the software does the same thing, thus establishing themselves in the database as an active on-line party. *Id.* at col. 5, ll. 34-38. When the caller wishes to call someone, he or she sends a query to the connection server, which "then searches the database to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line." *Id.* at col. 5, ll. 55-60. If the callee is logged-in, then "the IP address of the callee is retrieved from the database and sent to the [caller]. The [caller] may then directly establish the point-to-point Internet communications with the callee using the IP address of the callee." *Id.* at col. 5, ll. 60-67. (The patents-in-suit also describe a second protocol, which

involves the use of an email server. The claims that Net2Phone has asserted in this case do not relate to the second protocol.)

Although the patents-in-suit describe a specific implementation of the point-to-point Internet protocol, the patents make it perfectly clear that the protocol can be used in any number of configurations (*e.g.*, with a single connection server or a collection or network of servers). *See, e.g.*, *id.* at col. 4, ll. 33-55, col. 10, ll. 60-67. The key is not the hardware used to conduct the protocol, but the protocol itself.

B. Representative Asserted Claims of the Patents-in-Suit

As stated above, Net2Phone is currently asserting five patents against eBay. Two representative claims are set forth below:

1. '704 patent, claim 4:

> A method for enabling point-to-point communication between a first process and a second process over a computer network, the method comprising the steps of:
>
> A. receiving and storing into a computer memory a respective network protocol address for selected of a plurality of processes that have an on-line status with respect to the computer network, each of the network protocol addresses received following connection of the respective process to the computer network;
>
> B. receiving a query from the first process to determine the on-line status of the second process;
>
> C. determining the on-line status of the second process; and
>
> D. transmitting an indication of the on-line status of the second process to the first process over the computer network.

2. '469 patent, claim 8:

> In a computer system having a display and capable of executing a process, a method for establishing a point-to-point communication from a caller process to a callee process over a computer network, the caller process capable of generating a user interface and being

> operatively connected to the callee process and a server process over the computer network, the method comprising the steps of:
>
> A. generating a user-interface element representing a first communication line;
>
> B. generating a user interface element representing a first callee process;
>
> C. guerving [*sic*—querying] the server process to determine if the first callee process is accessible; and
>
> D. establishing a point-to-point communication link from the caller process to the first callee process, in response to a user associating the element representing the first callee process with the element representing the first communication line.

ARGUMENT

The asserted claims of the patents-in-suit are not difficult to understand. For ease of presentation, Net2Phone has broken up the disputed claim terms into two categories. The first category is made up of the many simple, computer-related terms that are present in the claims. These terms—such as "computer network," "network protocol address," and "process"—are basic terms that are easily understood by persons of skill in the computer science arts. The second category of terms—such as "server," "database," and "point to point"—reflect the core concepts underlying Net2Phone's inventions, and it is with respect to these terms that Net2Phone anticipates the parties may have some disagreement. But neither party can rewrite history, and in accordance with established Federal Circuit law, these claim terms are to be interpreted, as Net2Phone has done, against the record that was made before the Patent Office when the patents were applied for and prosecuted—namely, the patents themselves and their prosecution histories.

I. The Law of Claim Construction

Claim construction is a matter of law for the Court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). In order to ascertain the

meaning of patent claim terms, courts look to "'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). Depending on the circumstances of a particular case, those "sources" include so-called intrinsic evidence—"'the words of the claims themselves, the remainder of the specification, [and] the prosecution history'"—as well as "'extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" *Id.* (*quoting Innova*, 381 F.3d at 1116). As the Federal Circuit has made clear, however, some of these sources of claim construction guidance are more important than others in determining the proper meaning of claim terms.

The Federal Circuit's relatively recent en banc decision in *Phillips* is the authoritative statement on the law of claim construction. The Court began its analysis by reflecting on the "'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Id.* at 1312 (*quoting Innova*, 381 F.3d at 1115). "Because the patentee is required to 'define precisely what his invention is,' the Court explained, it is 'unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.'" *Id.* (*quoting White v. Dunbar*, 119 U.S. 47, 52 (1886)).

This discussion in *Phillips* accords with a long line of precedent establishing that a court must be mindful, when reviewing a specification to determine the meaning of a claim term, not to import extraneous limitations from the specification into the claims. *See, e.g.*, *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 906 (Fed. Cir. 2005) ("The court must take care in its analysis, when locating in the written description the context for a disputed term, not to import a limitation from that written description. It must use the written description for

enlightenment and *not to read a limitation from the specification.*") (emphasis added). As the Supreme Court put it in *McCarty v. Lehigh Valley Railroad Co.*, "if we once begin to include elements not mentioned in the claim in order to limit such claim . . ., we should never know where to stop." 160 U.S. 110, 116 (1895) (*quoted approvingly in Phillips*, 415 F.3d at 1312).

Accordingly, "the words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips*, 415 F.3d at 1312 (*quoting Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). In that regard, the Court noted that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313. The Court then proceeded to explain how courts should ascertain "the meaning of a claim term as understood by persons of skill in the art." *Id.* at 1314.

The first step in claim construction is an examination of the words of the claims, as "the claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* And any claim construction analysis must "begin and remain centered on the claim language itself." *Innova*, 381 F.3d at 1116. But the claims of a patent, of course, do not exist in a vacuum. "Rather, they are part of 'a fully integrated written instrument,' consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part.'" *Phillips*, 415 F.3d at 1315 (quotation omitted). As the Federal Circuit held in *Phillips*, "the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* at 1315 (quotation omitted). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316 (quotation omitted).

While the specification is an important guide to the meaning of the claims, the Federal Circuit has repeatedly admonished courts not to limit the claimed invention to the specific or exemplary embodiments in the specification. *Id.* at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."). In *Phillips*, the en banc Federal Circuit held that the term "baffle" could include structures that extend at a 90 degree angle from the walls, even though "every textual reference in the Specification and its diagrams show baffle deployment at an angle *other* than 90 [degrees] to the wall faces." *Id.* at 1309, 1327 (emphasis added, quotations omitted). The law does not require a patent applicant "to describe in the specification every conceivable and possible future embodiment of his invention." *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001). Indeed, in order to limit or "disavow" claim scope, "words or expressions of manifest exclusion or explicit disclaimers in the specification are necessary." *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1374 (Fed. Cir. 2005).

In addition to the specification, courts should also consider a patent's prosecution history. *Phillips*, 415 F.3d at 1317. The prosecution history is "the complete record of the proceedings before the PTO" when the patentee was applying for the patent. *Id.* "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Id.* "Furthermore, like the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent." *Id.* While the prosecution history can provide some relevant evidence, the Federal Circuit has observed that its utility in a claim construction analysis is limited, as "it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* Indeed, given its limitations, courts require a very high standard to be met before the prosecution history can be controlling as to the meaning of a claim

term. The "prosecution history may not be used to infer the intentional narrowing of a claim absent the applicant's clear disavowal of claim coverage." *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1327 (Fed. Cir. 2003). In order to define the scope of a claim, any "alleged disavowing actions or statements made during prosecution" must "be both clear and unmistakable." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003).

Although it emphasizes the importance of intrinsic evidence in claim construction, the Federal Circuit has "authorized district courts to rely on extrinsic evidence," that is, all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises. *Phillips*, 415 F.3d at 1317. However, while such evidence may "shed useful light on the relevant art," it is "less significant" and "less reliable" than the intrinsic record in determining the meaning of claim terms. *Id.* at 1317-18 (quotations omitted).

In the end, "the court's focus [must be] on understanding how a person of ordinary skill in the art would understand the claim terms." *Id.* at 1323. That focus aids courts in "avoid[ing] the danger of reading limitations from the specification into the claim[s]" and also "against confining the claims to th[e] embodiments" described in the patent. *Id.*

II. Interpretation of the Disputed Claim Terms

A. Basic Computer-Related Claim Terms

As the Federal Circuit observed in *Phillips*, "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. With respect to the ten terms discussed in this Section, this is the case. These terms are clear on their face, and the patents' specifications show that the terms are being used in their ordinary sense.

1. Process

A "process," as that term is used in the claims of the patents-in-suit, refers to a running instance of a computer program or application. As discussed above, the patents-in-suit are directed to a communications protocol that is performed by computer software. *See* '704 patent, col. 3, ll. 40-42 ("The first processing unit may operate the disclosed point-to-point Internet protocol by a computer program described hereinbelow") (Ex. 2) (N.B. To make the quotes from the specifications easier to read, throughout this brief we have omitted the internal reference numbers that refer back to the figures of the patents.); '121 patent, col. 14, ll. 44-50 ("In the exemplary embodiment of the present invention, each of first processing unit and second processing unit of Fig. 10 are executing a software application capable of enabling point-to-point communication over network, such as an Internet telephone application.") (Ex. 7). Indeed, the patents make clear that although they may refer to "processing units" in the specification, they are directed to the *functionality* performed by the processing unit and that the use of the term processing unit "is *not* to be construed to refer exclusively to hardware capable of executing software." '704 patent, col. 4, ll. 33-55 (emphasis added). (The claims of the '704 patent originally referred to "processors," but the language was changed to "processes." *See*, *e.g.*, Amend. at 15 ('704 pros.) (Mar. 1, 1999) (Ex. 4).) Thus, the claims refer to a "process"— the computer program itself—as opposed to a hardware component. Indeed, the specification of the '121 patent clearly states that each WebPhone program or application will be "referred to as a WebPhone client process." '121 patent, col. 22, ll. 50-51 (Ex. 7).

2. Processor

Unlike the term "process," the term "processor" refers to a piece of hardware that receives and processes input commands and data from a computer user. As an example of a processor, the patents refer to a "central processing unit (CPU)." '704 patent, col. 3, ll. 24-25

(Ex. 2). "The processor receives input commands and data from a first user associated with the first processing unit through the input device . . . ." *Id.* at ll. 55-57.

3. Computer Network

The term "computer network" appears in many of the asserted claims. A computer network refers to an interconnected group of computer systems that "may communicate with each other upon establishing respective device addresses." '704 patent, col. 1, ll. 23-24 (Ex. 2). The computer network referenced in the exemplary embodiment described in the '704 patent is the Internet. *Id.* at col. 1, ll. 5-7 ("This disclosure relates to network communications protocols, and in particular to a point-to-point protocol for use with the Internet."); *id.* at col. 3, ll. 11-13; *see also* '121 patent, col. 12, ll. 41-59 (Ex. 7). Of course, the claims are not limited to the preferred embodiment, *see Phillips*, 415 F.3d at 1323, and the '121 patent explains why: "It will be obvious to those reasonably skilled in the art that network 1000 [in Figure 10] is not restricted to implementation over the Internet but may comprise other network configurations such as a local area network (LAN), a wide area network (WAN), a global area network or any number of private networks currently referred to as an Intranet." '121 patent, col. 12, ll. 59-65 (Ex. 7).

4. Network Protocol Address

A "Network Protocol Address" is the information necessary to direct data to a particular device or process on a computer network, which acts as a pointer to the device or process associated with that address. As explained in the '704 patent, "[g]enerally, devices interfacing to the Internet and other online services may communicate with each other upon establishing respective device addresses. One type of device address is the Internet Protocol (IP) address, which acts as a pointer to the device associated with the IP address." '704 patent, col. 1, ll. 21-26 (Ex. 2). Network protocol addresses, such as IP addresses, may be permanent or dynamic. *See id.* at col. 1, ll. 35-56. As the patents explain, dynamically-assigned IP addresses are often

assigned to a computer system by an Internet service provider (such as AOL) when the computer system connects to the Internet. *See id.* at col. 5, ll. 21-24. This is reflected in the three claims of the '365 patent (Ex. 6), all of which require that the network protocol address of one of the processes be received "from an Internet access server." In addition, claims 1 and 5 of the '469 patent (Ex. 8) recite "program code for determining the currently assigned network protocol address upon connection to the computer network."

5. Identifier

A handful of the asserted claims refer to maintaining a list of entries in which each entry includes an identifier and a corresponding network protocol address of processes connected to a computer network. *See, e.g.*, '704 patent, claims 32 & 33 (Ex. 2). In the preferred embodiment described in the '704 patent, this identifier was an e-mail address, *see id.*, col. 3, l. 21; col. 5, ll. 27-28, but any name would suffice if it allowed a system to distinguish among the on-line entities. As Net2Phone explained to the Patent Office during prosecution of the '469 patent, the identifier is simply a "unique handle, e.g., the client's e-mail address." Amend. at 7 ('469 pros.) (Oct. 20, 1998) (Ex. 9). An identifier is simply a distinguishing name.

6. Connected *and* On-Line

For a caller process to perform the communications protocol claimed in the patents-in-suit, the caller must be "connected" to the computer network, or "on-line." As described in the '704 patent, a "first user initiating the point-to-point Internet protocol when the first user is *logged on* to [the] Internet . . . automatically transmits its associated E-mail address and dynamically allocated IP address to the connection server . . . [and] is thus established in the database as an active *on-line* party available for communicating using the disclosed point-to-point Internet protocol." '704 patent, col. 5, ll. 24-33 (emphases added) (Ex. 2); *see also id.* at col. 5, l. 60 (caller queries to determine whether the callee "is active and on-line"); '121 patent,

col. 2, ll. 55-57 (Ex. 7) ("a need exists for a way to determine whether computer users are actively connected to a computer network"); *id.*, col. 22, ll. 50-54 (a process "connects to global server upon start up to inform [it] that the WebPhone client process is on-line and available to make and/or receive calls."). Connected simply means on-line, and *vice versa.*

Conversely, "off-line" means *not* connected to the computer network. "When a user logs off or goes off-line from the Internet, the connection server updates the status of the user in the database; for example, by removing the user's information, or by flagging the user as being off-line." '704 patent, col. 6, ll. 6-9 (Ex. 2). This concept is clearly embodied in claim 7 of the '704 patent, which recites "generating an off-line message when the second process is determined . . . to have a negative on-line status with respect to the computer network; and . . . transmitting the off-line message to the first process." While eBay has suggested this phraseology requires construction, Net2Phone believes the language is clear on its face, particularly in light of the unambiguous statements in the specification.

7. Operatively Connectable, Operatively Connected, *and* Operatively Coupled

Several of the claims require that the two processes—*e.g.*, a caller and callee—are "operatively connected," "operatively connectable" or "operatively coupled" over a computer network to one another and to a server. *See, e.g.*, '704 patent, claims 10, 21, 38 & 43 (Ex. 2); '121 patent, claims 8, 10, & 14 (Ex. 7); '469 patent, claim 8 (Ex. 8). This language is found in numerous references in the specifications of the patents, which refer to a computer being "operatively connected via wired and/or wireless communication connections to the Internet," *see, e.g.*, '704 patent, col. 2, ll. 64-65 (Ex. 2), or "operatively connected to the Internet," *id.* at col. 3, l. 12, as well as to different computers being "operatively interconnected through the Internet to a connection server, [which] may also be operatively connected to a mail server

associated with the Internet," *id.* at col. 3, ll. 14-17. *See also* '121 patent, col. 12, ll. 57-59. Based on the patents' specifications, the terms "operatively connected," "operatively connectable" and "operatively coupled" are used interchangeably and all mean effectively connected over a computer network—*i.e.*, connected over a computer network such that they can interoperate with one another to perform the claimed protocol.

8. Timer

Claim 9 of the '066 patent (Ex. 5) requires that the connection server include "a timer for timestamping IP addresses of the set of processing units having a positive on-line status with respect to the Internet." According to the specification of the '704 patent (and thus the '066 patent, *see supra* at p. 4 & n. 4), a timer—no particular type of timer is specified or required—is "for generating timestamps." '704 patent, col. 3, ll. 18-19 (Ex. 2). When processes send their network protocol addresses to the server, the server "stores these addresses in the database and timestamps the stored addresses using the timer." *Id.*, col. 5, ll. 29-31. "The connection server may use the timestamps to update the status of each processing unit; for example, after 2 hours, so that the on-line status information stored in the database is relatively current." *Id.*, col. 5, ll. 39-42. Timestamping is simply a process for keeping track of the creation and modification of data, and the meaning of the term "timer" is clear—it means a timer for timestamping.

9. Computer Usable Medium

Several of the asserted claims are directed to a "computer program product," such as a software product. *See*, *e.g.*, '704 patent, claims 1, 21, 38 (Ex. 2); '365 patent, claim 1 (Ex. 6); '469 patent, claim 1 (Ex. 8). Among the elements of those claims is the requirement that the computer program product comprise a "computer usable medium." The patents describe in detail precisely what that means:

> [T]he various aspects of the invention may be implemented as a computer program product for use with a computer system. Such implementation may comprise a series of computer instructions either fixed on a tangible medium, such as a computer readable media, e.g., diskette, CD-ROM, ROM, or fixed disk of Fig. 11, or transmittable to a computer system, via a modem or other interface device, such as communications adapter connected to the network over a medium. Medium can be either a tangible medium, including but not limited to optical or analog communications lines, or may be implemented with wireless techniques . . . .

'121 patent, col. 34, ll. 16-27 (Ex. 7); *see also* '704 patent, col. 3, ll. 58-61 (Ex. 2) (describing "a wireless connection for electromagnetic transmissions, or . . . transferable storage media, such as floppy disks, magnetic tapes, compact disks, or other storage media").

"Computer Usable Medium" thus means what it says—a tangible or intangible medium for storing or transmitting computer data. In the words of the '121 patent, the computer program product "may be stored using any memory technology, present or future, including, but not limited to, semiconductor, magnetic, optical or other memory devices, or transmitted using any communications technology, present or future, including but not limited to optical, infrared, microwave, or other transmission technologies." '121 patent, col. 34, ll. 34-41 (Ex. 7).

10. "Computer Data Signal Embodied in a Carrier Wave"

Several of the asserted claims are directed to a "computer data signal embodied in a carrier wave." *See*, *e.g.*, '121 patent, claims 7, 9, and 12 (Ex. 7). These are known in patent practice as "propagated signal claims." Stephen G. Kunin & Bradley D. Lytle, *Patent Eligibility of Signal Claims*, 87 J. Pat. & Trademark Off. Soc'y 991, 991 (2005) (hereinafter "*Signal Claims*"). "A propagated signal claim is directed to a transient manufactured phenomena, such as an electrical, optical or acoustical signal." *Id.* In other words, such claims are understood to be designed to capture computer data, such as computers programs, in transit. *Id.* (signal claims "provide an excellent way of obtaining patent protection for software . . . transported via or in

connection with a propagation medium"). As discussed above in the context of "computer usable medium," the patents-in-suit envisioned that the claimed computer program product might be "transmitted using any communications technology, present or future, including but not limited to optical, infrared, microwave, or other transmission technologies," or might be "distributed from a server or electronic bulletin board over a network, e.g., the Internet or World Wide Web." '121 patent, col. 34, ll. 38-41, 46-47 (Ex. 7); *see also* '704 patent, col. 3, ll. 45-46 (Ex. 2); Amend. at 21-22 ('121 pros.) (Sept. 7, 1999) (adding signal claims) (Ex. 10). The term at issue—a "computer data signal embodied in a carrier wave"—comes straight from training materials provided to patent examiners by the PTO. *Signal Claims*, *supra*, at 996. A carrier wave is a mechanism used to transmit data—it is a waveform that is modified or "modulated" to carry information. *See, e.g.*, A. Bruce Carlson, *Communication Systems: An Introduction to Signals and Noise in Electrical Communication* 6 (3d ed. 1986) (Ex. 11). Thus, the term at issue simply means computer data in transit, where the transit mechanism uses a modified waveform.

B. Core Concepts Underlying Net2Phone's Invention

With an understanding of the basic computer terminology referenced throughout Net2Phone's patents, we now address the claim terms and phrases that lie at the core of the Internet protocol that Net2Phone invented. As Net2Phone explained during prosecution of the application that led to the '704 patent:

> Applicant's invention provides techniques for determining the current dynamically assigned network protocol address of a user process connected to the network. The first technique utilizes a dedicated server which acts as a network address/information directory from which calling processes can obtain information. When a first process connects to the network, the process logs-on to the server and provides the server with the network protocol address under which the first process is currently operating. A second process wishing to establish communications with the first process connects to the server and request[s] the network protocol address under which the first process is currently operating. Upon receipt of

> the network protocol address of the first process, the second process establishes communications with the first process directly, without any intervention from the address/information server.

Amend. at 8 ('704 pros.) (Dec. 2, 1997) (Ex. 3). Point-to-point communication between the two processes with dynamically-assigned network protocol addresses is thus enabled—hence the title of the '704 patent: "Point-to-Point Internet Protocol."

1. Address Server, Connection Server, Server Process *and* Server

As reflected in the above summary of the invention, the server—referred to interchangeably as the address server, connection server, server process, or simply the server—plays a key role in the invention. As described with reference to the illustrative embodiment, the "connection server includes a processor, a timer for generating timestamps, and a memory such as a database for storing, for example, E-mail and Internet Protocol (IP) addresses of logged-in units." '704 patent, col. 3, ll. 18-22 (Ex. 2). Once processes transmit their identifiers and network protocol addresses to the connection server, it "then stores these addresses in the database and timestamps the stored addresses using [the] timer." *Id.* at col. 5, ll. 29-31.

> The first processing unit then sends a query, including the E-mail address of the callee, to the connection server. The connection server then searches the database to determine whether the callee is logged-in by finding any stored information corresponding to the callee's E-mail address indicating that the callee is active and on-line. If the callee is active and on-line, the connection server then performs the primary point-to-point Internet protocol; i.e. the IP address of the callee is retrieved from the database and sent to the first processing unit.

Id. at col. 5, ll. 55-64. As aptly summarized in the '121 patent, "[t]he basic function of [the] connection server is to provide a one-to-one mapping between an identifier of a WebPhone client process . . . and the current IP address, dynamic or fixed, associated with that WebPhone client process." '121 patent, col. 18, ll. 25-29 (Ex. 7). Consistent with its use in the specification, during prosecution of the patents, Net2Phone described the server as a "dedicated server" (*see*,

e.g., Amend. at 8 ('704 pros.) (Dec. 2, 1997) (Ex. 3)—*i.e.*, a server designed for a particular function.

Although the exemplary embodiment of the '704 patent depicts the connection server as a single server available from Sun Microsystems (*see* '704 patent, col. 3, ll. 22-25), the specification makes it clear that the "server" described in the patents is to be defined according to its "function," *i.e.*, as a provider of a service, rather than according to any specific hardware. *Id.* at col. 4, ll. 33-40. In other words, the server performs a service and may be implemented in many different ways. Indeed, far from limiting the invention to one piece of hardware, the patents specifically state that the functionality of the server "may be provided through the use of either shared *or* dedicated hardware," *or* "by a shared processor *or* by a plurality of individual processors." *Id.* at col. 4, ll. 38-43 (emphases added); *see also* '121 patent, col. 6, ll. 6-11 (Ex. 7). "Any and all of these embodiments may be deemed to fall within the meaning of the labels for the functional blocks as used herein." '704 patent, col. 4, ll. 53-55; '121 patent, col. 6, ll. 21-23.

In the '121 and '469 patents, the specification describes a "global server," which includes the connection server along with other functionality. *See* '121 patent, col. 18, ll. 21-25 (Ex. 7). Again underscoring the functional nature of the server, and the focus on the service provided to the clients, the specification makes clear that the global server can be implemented in different ways, *e.g.*, "as a single server apparatus" or that "more than one global server maybe utilized, as illustrated by FIG. 15C." *Id.* at col. 21, ll. 45, 56-58. In the multi-server implementation, "multiple global servers . . . may be located in close proximity or in geographically disparate locations." *Id.* at col. 21, ll. 58-59, 65-67. Figure 15C illustrates the multiple server implementation:

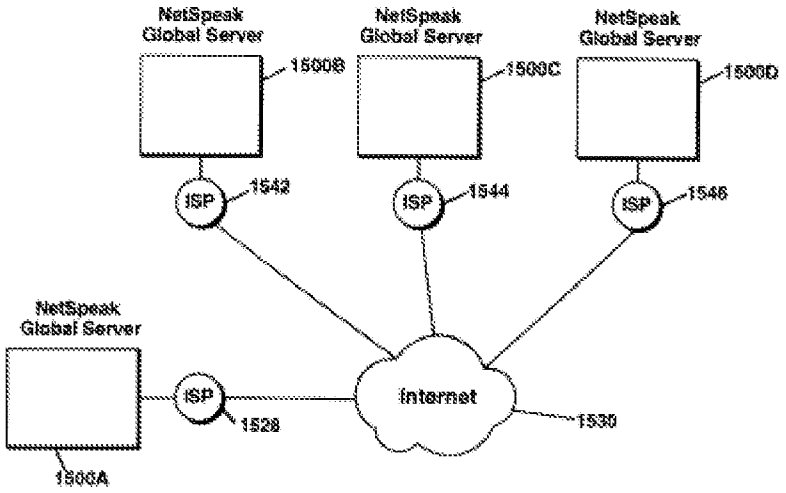

Figure 15C

In one instance, Net2Phone described two prior art references as lacking a "central server" that receives or stores network protocol addresses. *See* Proposed Agenda for Examiner Interview ('365 pros.) (Sept. 20, 2002) (Ex. 12). In context, considering the two prior art patents that Net2Phone was referencing, neither of which was directed to a distributed or multiple server system, it is clear that the reference to a central server simply reflects the concept of a common resource or service from which all clients of the system can obtain the requested information.

The specifications of the patents-in-suit confirm that the "connection server" is a term that must be defined according to the service it provides, as opposed to defined with reference to any specific hardware implementation. And, as the en banc Federal Circuit held in *Phillips*, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (quotation omitted). Thus, "connection server"—sometimes referred to simply as a server, or an address server, or a server process—should be construed to mean a computer system, or collection of coordinated computer systems, running software that fulfills requests from, or

provides a service to, other processes. *See* '704 patent, col. 5, ll. 55-67 (Ex. 2) (in response to a query, the server determines whether a process is on-line and, if so, retrieves the IP address from the database and sends it to the requesting process); '121 patent, col. 18, ll. 19-20 (Ex. 7) ("Connection server provides a directory information service"). That reading is consistent both with the patents and with how the term "server" is used in the field generally. *See*, *e.g.*, Robert M. Blissmer, *Introducing Computers: Concepts, Systems and Applications* 302 (1994) (Ex. 13) (A "server" is "[a] computer running software that fulfills requests from clients across a network.").

2. Database, Directory Database, "Internet Accessible List Having a Plurality of Selected Entries," *and* "Network Accessible Compilation of Entries"

As described above, the purpose of the connection server is to respond to queries from a process (*e.g.*, a caller) which is seeking to ascertain whether another process is on-line and, if so, its current network protocol address. As described in the '704 patent, that information is stored in the memory of the computer system that comprises the connection server: "The connection server includes . . . memory such as a database for storing, for example, E-mail and Internet Protocol (IP) addresses of logged-in units." '704 patent, col. 3, ll. 18-22 (Ex. 2); *see also id.* at col. 5, ll. 29-30 ("The connection server then stores these addresses in the database"); *id.* at col. 5, ll. 34-38 (when a process connects to the computer network, it "is processed by the connection server to be established in the database as an active on-line party"). In the illustrative embodiment described in the '704 patent, the database is contained within the connection server (*see*, *e.g.*, '704 patent, Fig. 1 (Ex. 2)), but that need not always be the case (*see id.* at col. 4, ll. 33-55). The '121 patent, for example, describes the database and connection server as separate components of a "global server." '121 patent, Fig. 15A & col. 18, ll. 14-25 (Ex. 7).

In the illustrative embodiment described in the '121 patent, the database is comprised of a

number of separate "tables," including a "Client table" and an "On-line table." *See* '121 patent, col. 20, ll. 15-18 (Ex. 7). The tables are basically lists of records—each "comprises a plurality of records," containing fields and corresponding data. *Id.* at col. 20, ll. 19-21, 39-41. The "Client table" is a separate record for each WebPhone user with a profile of personal information. *Id.* at col. 20, ll. 21-32. The On-line table "provides a dynamic list of those clients from [the Client table] who are currently On-line, as well as their current Internet protocol address." *Id.* at col. 20, ll. 37-39. When one process (the "first process") seeks to determine whether a second process is on-line, it sends a request to the connection server; the On-line table within the database is searched; and if the second process is on-line (and thus in the On-line table), the connection server provides the first process with the current network protocol address of the second process. *Id.* at col. 18, ll. 48-66.

Not surprisingly, some of the claims in the patents-in-suit spell this process out explicitly. For example, claim 43 of the '704 patent (Ex. 2) recites "program code configured to access a directory database, the database having a network protocol address for a selected plurality of processes having on-line status with respect to the computer network, the network protocol address of each respective process forwarded to the database following connection to the computer network." Claim 6 of the '066 patent (Ex. 5) recites a similar process, but with specific reference to a connection server accessing the database: "a connection server, responsive to the query, for determining the on-line status of the second processing unit by searching the database." Similarly, but in a more generic fashion, claim 5 of the '704 patent (Ex. 2) refers to "searching the computer memory for an entry relating [to] the second process" and "retrieving a network protocol address of the second process in response to positive determination of the on-line status of the second process." Defendants have proposed construing

these phrases as a whole, but Net2Phone believes that they are better understood when broken down into their component parts. With an understanding of the terminology used in the claims, Net2Phone believes that the phrases cited by eBay (and referenced in this paragraph) are easily understood and do not require construction.

As stated in the written descriptions of the patents, the information that resides in the database—an identifier and associated network protocol address for each process that is currently on-line—*may* be contained within a traditional database, such as those commercially available from Oracle or Microsoft. *See, e.g.*, '704 patent, col. 3, ll. 18-20 (Ex. 2) ("The connection server includes . . . memory *such as* a database") (emphasis added). But the precise manner in which the information is stored is immaterial—it simply must be accessible by the connection server and, of course, accessible in turn by the requesting processes. The patents thus refer to the stored information in a variety of ways—specifically as a "database" or "directory database," and more generally as an "Internet accessible list having a plurality of selected entries" or a "network accessible compilation of entries." *See* Amend. at 10, 14 ('704 pros.) (Mar. 1, 1999) (server "maintains a compilation or list of entries, each of which contain[s] a process identifier and the corresponding network protocol address forwarded to the server by the process itself") (Ex. 4). In each case, these claim terms refer simply to a list or compilation of data stored in computer memory. With respect to the two generic descriptions ("Internet accessible list" and "network accessible compilation"), the claims further indicate that the information must be accessible over the Internet, or other relevant computer network (*see supra* at p. 13).

3. Transmitting to the Server a Network Protocol Address Received by a Process "Following Connection" or "Upon Connection" to the Computer Network

In order for Net2Phone's communications protocol to work, the connection server must be updated with information about the location of each process that is connected to the computer

network. As the specifications explain, "[u]pon the first user initiating the point-to-point Internet protocol when the first user is logged on to the Internet, the first processing unit automatically transmits its associated E-mail address and its dynamically allocated IP address to the connection server." '704 patent, col. 5, ll. 24-29 (Ex. 2). As Net2Phone explained to the Patent Office, "[e]ach client process, upon receiving an Internet Protocol address after connection to an IP-based network, automatically and transparently notifies the global server that it is currently on line, its E-mail address and the network protocol address at which the client process may be contacted." Amend. at 7-8 ('469 pros.) (Oct. 20, 1998) (Ex. 9). When the patents refer to a process transmitting (or a server receiving) a network protocol address "following connection" or "upon connection" of the process to the computer network, that means automatically, following connection (or upon connection) to the computer network, forwarding the information. *See* '704 patent, claims 1-2, 4, 43-44 (Ex. 2); '121 patent, claims 6-11 (Ex. 7); '469 patent, claims 1, 5 (Ex. 8).

4. Query

A process wishing to communicate with another process ascertains whether that second process is on-line and its current network protocol address by sending a "query" to the server. This concept is reflected in many of the patents' claims. *See*, *e.g.*, '704 patent, claim 1 ("transmitting, to the server, a query as to whether the second process is connected to the computer network"); claim 4 ("receiving a query from the first process to determine the on-line status of the second process"); claim 11 ("querying the server as to the on-line status of the first callee process"); claim 44 ("querying the address server as to whether the second process is connected to the computer network"); *see also* '121 patent, claims 4, 6-8, 12-14 (Ex. 7); '469 patent, claims 3, 6, 8-9 (Ex. 8); '066 patent, claims 1-2, 6 (Ex. 5); '365 patent, claims 1-3 (Ex. 6). And, of course, the concept is described in the specification. In the exemplary embodiment,

"[t]he first processing unit . . . sends a query, including the E-mail address of the callee, to the connection server. The connection server then searches the database to determine whether the callee is logged-in." '704 patent, col. 5, ll. 55-58 (Ex. 2). As used consistently throughout the claims and the specification, and consistent with its plain and ordinary meaning, the "query" referenced in the claims is simply a question or request.

5. "In Response to a Positive Determination of the On-Line Status of the Second Process" *and* "Responsive to a Positive Determination of On-Line Status of the Second Processing Unit."

Some of the asserted claims specify a particular procedure by which the server processes queries for on-line status and address information. For example, claim 5 of the '704 patent recites "retrieving a network protocol address of the second process in response to a positive determination of the on-line status of the second process." *See also* '704 patent, claim 2 ("transmitting a network protocol address of the second process to the first process in response to a positive determination of the on-line status of the second process") (Ex. 2); '066 patent, claim 1 ("retrieving the IP address of the second unit from the database using the connection server, in response to the determination of a positive on-line status of the second processing unit") (Ex. 5); *id.*, claim 2 ("retrieving the IP address of the second processing unit in response to the positive on-line status of the second processing unit"). (Claim 2 of the '704 patent (Ex. 2) is written in "means plus function" format, 35 U.S.C. § 112, ¶ 6. It recites "means, responsive to a query from the first process, for determining the on-line status of the second process and for transmitting a network protocol address of the second process to the first process in response to a positive determination of the on-line status of the second process." As a result, "1) the court must first identify the function of the limitation; and 2) the court must then look to the specification and identify the corresponding structure for that function." *Biomedino, LLC v. Waters Tech. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007). Here, the function is determining on-

line status and transmitting a network protocol address, and the structure in the specification is the connection server.)

Claim 7 of the '066 patent (Ex. 5) puts it slightly differently, but the concept is the same: "the connection server, responsive to a positive determination of on-line status of the second processing unit, retrieves the respective IP address of the second processing unit from the database and transmits the on-line message, including the IP address, to the first processing unit." In both cases, the phrases are easily understood, when considered in context of the Net2Phone's invention as a whole: in response to a determination that the second process is on-line, or connected to the computer network, the network protocol address of the second process is retrieved.

In contrast, claim 1 of the '704 patent (Ex. 2) refers to the first process "receiving a network protocol address of the second process from the server, when the second process is connected to the computer network." *See also* '704 patent, claim 44 (same); '469 patent, claims 3, 6 (same) (Ex. 8); '121 patent, claims 4, 6-8, 12-14 (same) (Ex. 7). These claims do not require retrieval of the network protocol address *in response to* a determination that the second process is on-line; the network protocol address of the second process simply is retrieved from the server when the second process is connected to the computer network. *See also* '704 patent, claims 11, 22 (including the steps, in no specific order, of querying the server as to the on-line status of a process and receiving its network protocol address from the server); '469 patent, claim 9 (same).

6. Point-to-Point Communication *and* Point-to-Point Communication Link

Net2Phone's invention enables "point-to-point" communications between two processes over a computer network. "The primary and secondary point-to-point Internet protocols previously described enable users to establish real-time direct communications links over the

Internet or other computer networks without the need for any interaction with [the] connection server, the connection server providing only directory and information related services." '121 patent, col. 12, ll. 41-46 (Ex. 7); *id.* at col. 26, ll. 23-26.

During prosecution of the patents, Net2Phone further explained what the patents mean by a "point-to-point" communication (a phrase used interchangeably in the patents with point-to-point communication link)—namely, communication between two processes without any further intervention from the connection server. Reiterating language from the specification, Net2Phone stated that "[u]pon receipt of the network protocol address of the first process, the second process establishes communications with the first process directly, without any intervention from the address/information server. . . . [That is], in the present invention, communications between two nodes, e.g. processes, are initiated solely by one of the processes. The address server may have optionally supplied address information to one of the processes, but the address server does not establish the point-to-point communication connection between the nodes." Amend. at 8 ('704 pros.) (Dec. 2, 1997) (Ex. 3). During prosecution of a related application, Net2Phone explained to the PTO that, consistent with its use in the specification, "the term 'point-to-point' has been well understood for a number of years, as evidenced by the publication dates and entries from various technical dictionaries, excerpts of which are enclosed for the Examiner's benefit." Prelim. Amend. at 9 (May 14, 1999) (Ex. 14) (*citing*, *e.g.*, IBM, *Dictionary of Computing* 325 (8th ed. 1987) (defining "point-to-point connection" as "[a] connection established between two data stations for data transmission."); *id.* at 326 (defining "point-to-point transmission" as the "[t]ransmission of data directly between two points without use of an intermediate terminal or computer")).

During prosecution of a related application, Net2Phone further explained to the Patent

Office what is meant by "point-to-point" in the family of patents that all claim priority to the '704 patent (not all such patents are at issue in this case, but every patent-in-suit does claim priority to the '704 patent). Net2Phone explained that "point to point" means communications between two processes "without the need to consult any other intermediary (e.g., gateways or nameservers) in order to ascertain the address of the first processing unit." Appeal Br. at 3 (Pros. of U.S. Patent No. 6,829,645) (Apr. 16, 2004) (Ex. 15). Net2Phone distinguished a prior art patent which disclosed a "system in which communication is enabled by intermediary servers and gateways which route data to mobile units," and which converts non-IP communications into IP-based communications, as *not* point to point. *Id.* at 13; *see also id.* at 14 ("point to point" communication is "not intermediated by gateways or similar mechanism") (emphasis omitted).

Aside from the fact that the communication is not intermediated by a connection server, gateway or similar device, the patents do not specify the path of the communication through the network, since Internet communications are often channeled through multiple relays, routers, and other devices. Further, the specification explains that the processing units described in the patents include modems and connect to the Internet by dial-up connections through the telephone network and through an Internet service provider. *See, e.g.*, '704 patent, col. 2, ll. 58-65; col. 4, ll. 56-58; col. 5, ll. 21-24 (Ex. 2); *see also id.*, col. 1, ll. 48-52.

Synthesizing the claim language itself, the description of the invention in the patents' specifications, and Net2Phone's statements to the Patent Office, "point to point" should be construed by this Court to mean communications between two processes over a computer network that are not intermediated by a connection server, gateway or similar device.

7. "User Interface," "User Interface Element," *and* "Associating"

In addition to inventing a new network communications protocol that would facilitate point-to-point communication between two processes with dynamically-assigned IP addresses,

Net2Phone invented a software product—called WebPhone—that could be manipulated by computer users to perform the protocol and to connect two users wishing to talk or exchange information over the Internet. Thus, for example, claim 21 of the '704 patent (Ex. 2) covers a software product "for establishing a point-to-point communication link from a caller process to a callee process over a computer network, the caller process having a user interface," "an element representing a first communication line," "an element representing a first callee process," and program code "responsive to a user associating" those two elements to establish a point-to-point communication. Although drafted using these technical terms, these terms are easily understood with reference to the patents' written description.

"User interface" is a commonly-used term in the computer sciences and means exactly what it says: "[t]he way in which a user enters commands in a given program." *Dictionary of Computer Words: An A to Z Guide of Today's Computers* 288-89 (Houghton Mifflin 1995) (Ex. 16). One type of interface is a "graphical user interface" in which "the user selects and activates functions by manipulating icons and pop-up windows on the screen." *Id.* As the patents explain, the processor within a processing unit (*e.g.*, a personal computer) "receives input commands and data from a first user . . . through the input device. . . . The input device may include a user interface (not shown) having, for example, at least one button actuated by the user to input commands to select from a plurality of operating modes to operate the first processing unit." '704 patent, col. 3, ll. 55-66 (Ex. 2). The input device may be a "keyboard, a mouse, a touch screen," a "graphical user interface," or even a "telephone handset[]." *Id.* at col. 4, ll. 1-25.

The graphical user interface designed by the inventors is depicted in Figures 5-6 of the patents. That interface contains "user interface elements" in the form of "icons for actuating commands or entering data." *Id.* at col. 8, l. 52; Amend. at 8 ('469 pros.) (Mar. 3, 1999) (Ex. 17)

("[E]stablishment of calls, conferencing of parties, transferring of parties among calls and disabling of calls are all achieved using elements representing communication lines and parties."); *id.* at 9 (software is operated "by manipulating user interface elements"). For example, "[i]cons L1-L4 may represent each of 4 lines available to the caller, and icons C1-C3 may represent conference calls using at least one line to connect, for example, two or more parties in a conference call." '704 patent, col. 9, ll. 3-6 (Ex. 2); *see also* '121 patent, col. 26, ll. 35-37 ("Operation of WebPhone is controlled by selecting objects, i.e., buttons, text and images, and dragging objects, i.e., lines, parties, messages, etc.") (Ex. 7). (The patents describe and claim a variety of call-related features. For example, claim 16 of the '704 patent (Ex. 2) recites "temporarily disabling a point-to-point communication link between the caller process and the first callee process, in response to the user associating the element representing the first callee process with the element representing the communication line having a temporarily disabled status." As the two claims that depend on claims 16 (claims 17-18) make plain, claim 16 refers to such functionality as putting a call on hold or mute. '704 patent, col. 8, ll. 57-58 (hold functionality) (Ex. 2); '121 patent, col. 28, ll. 27-29, 34-40 (mute/hold functionality) (Ex. 7).)

In the claims, the patents describe the caller's user interface as including "a user interface element representing a first communication line" (*e.g.*, "L1" or "SND") and a "user interface element representing a first callee process" (*e.g.*, "1"), with the user "associating the element representing the first callee process with the element representing the first communication line" (*e.g.*, by clicking on the icons using a computer mouse). Viewed in the context of the specification and prosecution history, these claim elements are readily understood. A "user interface" is a mechanism that allows a user to input commands to a computer program; a "user interface element" is an icon, button or similar aspect of a computer program that can be selected

or manipulated by a user; and "associating" refers to the manner by which a user manipulates a user interface element, *e.g.*, by clicking, dragging or dropping the element.

CONCLUSION

For the reasons set forth herein, Net2Phone respectfully submits that its proposed claim constructions should be adopted by this Court.

Respectfully submitted,

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Exhibit U

Net2Phone Response Brief on Claim Construction

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UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

NET2PHONE, INC., **Plaintiff,** **vs.** **EBAY, INC., SKYPE TECHNOLOGIES SA, SKYPE, INC. and JOHN DOES 1-10,** **Defendants.** **AND RELATED COUNTERCLAIM.**	**Civil Action No. 06-2469-KSH-PS** **PLAINTIFF NET2PHONE, INC.'S RESPONSE BRIEF ON CLAIM CONSTRUCTION**

TABLE OF CONTENTS

TABLE OF AUTHORITIES

FEDERAL CASES

FEDERAL STATUTES

INDEX OF EXHIBITS

Exhibit No.	Description
1	F. Stroud, *Consummate Winsock Apps*, Boardwatch (Feb. 1996)
2	U.S. Patent No. 6,108,704 (the "'704 patent")
3	Amendment ('704 prosecution) (Dec. 2, 1997)
4	Amendment ('704 prosecution) (Mar. 1, 1999)
5	U.S. Patent No. 6,513,066 (the "'066 patent")
6	U.S. Patent No. 6,701,365 (the "'365 patent")
7	U.S. Patent No. 6,131,121 (the "'121 patent")
8	U.S. Patent No. 6,009,469 (the "'469 patent")
9	Amendment ('469 prosecution) (Oct. 20, 1998)
10	Amendment ('121 prosecution) (Sept. 7, 1999)
11	A. Bruce Carlson, *Communication Systems: An Introduction to Signals and Noise in Electrical Communication* (3d ed. 1986) (excerpt)
12	Proposed Agenda for Examiner Interview ('365 prosecution) (Sept. 20, 2002)
13	Robert M. Blissmer, *Introducing Computers: Concepts, Systems and Applications* (1994) (excerpt)
14	Preliminary Amendment (Pros. of U.S. Patent No. 6,226,678) (May 14, 1999)
15	Appeal Brief (Pros. of U.S. Patent No. 6,829,645) (Apr. 16, 2004)
16	*Dictionary of Computer Words: An A to Z Guide of Today's Computers* (Houghton Mifflin 1995) (excerpt)
17	Amendment ('469 prosecution) (Mar. 3, 1999)
18*	Letter from A. Heinrich to N. Boyle (Jul. 2, 2007)
19*	Excerpts of the Deposition of Shane Mattaway (Sept. 10, 2007)

20*	Excerpts of the Deposition of Glenn Hutton (Aug. 24, 2007)
21*	Excerpts of the Deposition of Craig Strickland (Sept. 19, 2007)
22*	Skype Guide for Network Administrators
23*	Amendment ('365 prosecution) (Apr. 19, 2002)
24*	U.S. Patent No. 5,159,592 to Perkins
25*	U.S. Patent No. 5,953,350 to Higgins
26*	Office Action ('365 prosecution) (Jun. 20, 2002)
27*	Amendment ('365 prosecution) (Oct. 8, 2002)
28*	Excerpts of the American Heritage Dictionary of the English Language (Houghton Mifflin 4th ed. 2000)
29*	Excerpts of Webster's Unabridged Dictionary (Random House 2d ed. 2001)

N.B. An asterisk denotes a new exhibit. New Net2Phone exhibits are attached to the Second Declaration of Kevin Hardy, and the preexisting exhibit numbers correspond to the Declaration of Kevin Hardy filed with Net2Phone's Opening Claim Construction Brief.

INTRODUCTION

Defendants' opening claim construction brief is devoted overwhelmingly to a single issue—the construction of the term "server." In a transparent attempt surgically to exclude its VoIP product from the scope of Net2Phone's patents, defendants would have the Court construe the word "server" as limited to a single computer—even though that is inconsistent with the ordinary meaning of "server," even though the claims of the patents-in-suit say nothing to limit how the "server" is configured (*i.e.*, using one computer or several), and even though the patents all state that the server can be configured in any number of ways. What is more, the inventors themselves confirmed during their recent depositions that from the very beginning they understood that the server they invented could be implemented in a variety of ways. Contrary to what defendants now claim, the inventors never believed that their invention was limited to a single central computer. Rather, what they invented—and what is reflected in their patents—is a server that is defined, not according to any specific hardware configuration, but according to its function as a directory service in Net2Phone's communications protocol. Underscoring this point, the patents explain that the "server" is characterized by its "function" and that the functionality of the server "may be provided through the use of either shared *or* dedicated hardware," *or* "by a shared processor *or* by a plurality of individual processors"—in other words, through a single computer or a multitude of computers. *See*, *e.g.*, '704 patent, col. 4, ll. 33-43 (emphases added) (Ex. 2).

As is evident from defendants' brief, the plain meaning of "server," supported by the claim language itself, the inventors' testimony and the patent specifications, would give rise to a clear case of infringement. Thus, ignoring the plain meaning and supporting evidence, defendants are reduced to claiming that Net2Phone limited its patents to a central dedicated server by "disclaiming" all other implementations in statements made to the Patent Office during

prosecution of the patents-in-suit. But the statements to which defendants point in the prosecution history do not clearly and unambiguously disavow claim scope, as the law requires. Rather, in the passages cited by defendants, Net2Phone simply provided the Patent Office with a general synopsis of its invention in order to give the Patent Office the necessary background. Net2Phone never—in the claims, specifications or prosecution history—limited its invention to an implementation that uses a single computer, as defendants hypothesize. Despite defendants' best efforts to rewrite them, the claims in the patents mean what they say and say what they mean—they require only a "server," not a specific *type* of server.

Finally, after devoting the lion's share of their brief to the meaning of the term "server," defendants move on to a handful of other claim terms. In each instance, defendants either try again to incorporate the concept of a single server into the claims (even where the language says nothing about the server), or they attempt to narrow the claims in such a way so as to carve out their product. Defendants' attempts to rewrite the claims of Net2Phone's patents in order to manufacture a non-infringement position should be rejected.

ARGUMENT

I. Consistent with the Claims, Specifications, and Its Ordinary Meaning, the Term "Server" Should Be Defined Broadly.

Both Net2Phone and the defendants appear to agree that the ordinary meaning of "server" is a computer system, or group of computer systems, that provides a service to other computer systems, such as clients. Indeed, it would be difficult for the parties to argue otherwise. In a closely-watched case decided just last week, the Federal Circuit affirmed that the ordinary meaning of the term "server"—as used in patents related to VoIP, no less—is "a computer system, such as one or more computers and/or devices, that provides services to other computer systems over a network." *See Verizon Servs. Corp. v. Vonage Holdings Corp.*, No. 07-1240, ---

F.3d ---, 2007 WL 2781869, at *6 (Fed. Cir. Sept. 26, 2007). That is precisely how the term server is used in the claims and specifications of the patents-in-suit, and moreover, that is how the inventors understood their invention at the time they applied for the patents. (Both parties have submitted dictionary definitions that they believe support their respective constructions of the term "server." The ability to find a dictionary to suit one's purpose is part of the reason that such extrinsic evidence is less useful in claim construction. In any case, the Federal Circuit's clear holding regarding the ordinary meaning of "server" settles the matter.) Despite all of this, in an attempt to avoid a clear case of infringement, defendants claim that Net2Phone disclaimed that ordinary meaning and narrowed its invention down to a single server configuration—specifically, a single "*dedicated* computer that provides a *centralized* address directory service to a client." Defs. Open. Br. at 17 (emphasis added). Defendants are wrong.

A. The Patents-In-Suit Demonstrate that "Server" Should Be Defined Broadly, According to Its Ordinary Meaning.

As the Federal Circuit's en banc decision in *Phillips* makes plain, the claim construction analysis starts with the language of the claims themselves. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). And as Net2Phone explained in its opening brief, "the words of a claim 'are generally given their ordinary and customary meaning.'" *Id.* (*quoting Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). But, of course, the "claims must be read in view of the specification, of which they are a part." *Id.* at 1315 (quotations omitted). Indeed, "the specification is always highly relevant to the claim construction analysis. *Usually, it is dispositive; it is the single best guide to the meaning of a disputed term*." *Id.* at 1315 (emphasis added, quotation omitted). That certainly is true here.

The patents all contain descriptions of "exemplary embodiments" of the server—that is, examples of how the server might be implemented and configured. As laid out in detail in

Net2Phone's opening brief (at 19-22), in one configuration the server is a single server available from Sun Microsystems which "includes a processor, a timer for generating timestamps, and a memory such as a database for storing, for example, E-mail and Internet Protocol (IP) addresses of logged-in units." '704 patent, col. 3, ll. 18-25 (Ex. 2). Another example is described in the two continuation-in-part patents—the '121 patent (Ex. 7) and '469 patent (Ex. 8). Those patents describe and depict an implementation using "multiple global servers . . . [which] may be located in close proximity or in geographically disparate locations." '121 patent, col. 21, ll. 58-59, 65-67 & Fig. 15C (Ex. 7). But all of the patents make clear that the "server" is simply a provider of a service and that it can be implemented in a variety of ways—*e.g.*, through "shared *or* dedicated hardware," or "by a shared processor *or* by a plurality of individual processors." *See*, *e.g.*, '704 patent, col. 4, ll. 33-43 (Ex. 2) (emphases added). These statements in the specification flatly contradict defendants' cabined construction.

Consistent with the use of the term "server" in the specification, the claims do not refer to any specific server configuration. They simply require a "server" (also referred to as a "connection server," "address server," or "server process"). There is nothing in any of the claims that requires that the server be in the form of a single computer with a centralized database, as defendants contend. Defendants' argument that the specifications somehow support their tortured construction is based on the fallacy—repeatedly rejected by the Federal Circuit—that the claims of the patents are limited to the embodiment described in the patents. *See*, *e.g.*, *Phillips*, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."); *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004) ("[E]ven where a patent describes only a single embodiment, claims will not be

read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope.") (internal quotations omitted). Worse still, defendants would have the Court confine the claims to the embodiment referencing a single computer, even though the specification *specifically states* that multiple computers can be used, and even though the related patents specifically describe a multiple-computer server implementation. Given that clear language in the specifications, there simply is no basis for limiting the claims to a single, central computer. *See Saunders Group, Inc. v. Comfortrac, Inc.*, 492 F.3d 1326, 1333 (Fed. Cir. 2007) (rejecting narrow construction of claims because, like here, "the patent does not state that the only way to accomplish the goal" was to use the preferred embodiment).

B. The Inventors Confirmed that "Server" Should Be Defined Broadly.

Although less significant than the specification and other aspects of the intrinsic record, the Federal Circuit has recognized that testimony by inventors can be considered as extrinsic evidence in claim construction. *See Phillips*, 415 F.3d at 1317. For this very reason, defendants pushed aggressively to take the depositions of the inventors of the patents-in-suit during the claim construction process, pointing out that "what the inventors themselves thought the key phrases in their patent claims meant . . . obviously is relevant." *See* Letter from A. Heinrich to N. Boyle (Ex. 18) (*quoting Advanced Cardiovascular Sys., Inc. v. C.R. Bard, Inc.*, 144 F.R.D. 372, 379 (N.D. Cal. 1992)). The three inventors (all third parties in this case) testified unanimously that they understood the term "server" to be a term defined broadly and that, contrary to defendants' claim, the patents are not limited to a single, central computer.

Inventor Shane Mattaway, for example, explained with reference to the patents:

> ***It doesn't matter how the connection server is structured***, it doesn't matter truly how it is implemented, it doesn't matter if there is one or a million of them, it doesn't matter if they are connected through a hierarchical method or a star pattern over a local or wide area network, the fact is, it is performing a lookup function of an IP address given an identifier, and the example in here is an email

> address. . . . The fact is ***the only thing this patent is doing as far as a connection server is concerned is showing how the connection server is functioning*** as a lookup system to establish a point-to-point connection.

Dep. of Shane Mattaway at 210:8-23 (emphases added) (Ex. 19). Mr. Mattaway elaborated later in his deposition with reference to the '121 patent:

> You understand that [the server] ***can be implemented in numerous ways***, and the whole gist to this whole thing . . . is ***it is not the implementation that's the issue***. The fact is you are performing a lookup, I don't care who does the lookup . . . or how the data is distributed or where the database resides or if it is a distributed database, the concept here is, I need to get your IP address, I'm going to go into this entity, whatever it is, which we are calling some connection service or connection servers [and get] the IP address of somebody else out there so I can make this voice over IP call. . . .
>
> I think you are going to a lot of trouble and picky-uni [*sic*] through this to try to make the point that it is the implementation that is important when it is not. It is the concept that is important. ***And just this original patent here, this '704, this patent speaks for itself. It says, it doesn't really matter how it is implemented, it is the concept of doing that lookup***.

Id. at 240:25-242:1 (emphases added); *see also* Mattaway Dep. at 133:19-134:2 (The server "employ[ed] a database which could reside on the same computer or on one or more computers . . . . All of the components, all of the processes involved are—can be located on one computer or on multiple computers."). Indeed, from the very beginning of their work, the inventors understood that their invention encompassed a single, dedicated server as well as a network of servers. Dep. of Glenn Hutton at 196:22-197:16 (Ex. 20).

Another inventor, Craig Strickland, explained how the inventors viewed the server in practice: "It could be one server, it could be 20 mirrored redundant servers, it could be a hierarchy of servers. It could be a distributed, quote/unquote, server, actually meaning a whole bunch of physical boxes that as a collective implement one server." Dep. of Craig Strickland at 183:23-184:4 (Ex. 21). Indeed, with respect to the patents, Mr. Strickland explained that "the phrase 'plurality of servers,' . . . appears in one or more of the patent documents, . . . [and that]

there are multiple ways of implementing a plurality of servers, one of which could be a distributed database . . . ." *Id.* at 191:8-193:9.

Although the issue of infringement is not currently before Court, defendants nevertheless attempt to suggest that their system is fundamentally different from the patented invention. This is simply not so. As Mr. Strickland's testimony, and the plain language of the patents, demonstrate, the patents are agnostic as to how the "server" is implemented—whether in a single, central server, or in a distributed, multi-server fashion. Defendants have chosen the latter approach, using a network of "supernodes," which functions as the server, to reconcile dynamic network addresses. Defendants refer to this network of supernodes in the singular as the "global index," and it functions in the same manner as the server described in Net2Phone's patents. As defendants explain on their website, "when a Skype user attempts to communicate with others, the caller's Skype client checks with the global index—the distributed database of users that is maintained in the hierarchy of supernodes—to see whether the intended recipient is, in fact, online," and if she is, the caller retrieves "the recipient's Skype client's network address . . . from the global index." *Skype Guide for Network Administrators* 14 (2006), http://www.skype.com/security/guide-for-network-admins-30beta.pdf (Ex. 22). Defendants' description of their system tracks the language of the patents almost perfectly. While now is not the time to litigate infringement, Net2Phone is confident that when that time comes, defendants will be found to infringe.

In any case, defendants' claim that "the inventors purported to have invented a memory on a dedicated server that stores a central database of network addresses" is just wrong. Defs. Open. Br. at 23. Consistent with the claims and the specifications, the inventors testified that the server described in their patents can be implemented in any number of ways. None of the

inventors considered their invention to be limited to a single, central computer.

C. Net2Phone Did Not Limit the Scope of Its Claims During Prosecution.

Notwithstanding the clarity of the claim language and specifications, defendants contend that Net2Phone disclaimed coverage of anything but a single, central server during prosecution of the patents. Implicit in defendants' argument is that the claim language, on its face, actually *does* cover other server implementations—*e.g.*, the multi-server implementation described in the '121 patent, or any other configuration in which multiple computers are providing a service. Defendants' speculative theory is that Net2Phone surrendered that claim scope in statements made to the Patent Office. In making that argument, defendants gloss over the rigorous legal standard required in order to show a "prosecution disclaimer," ignore the countless statements by Net2Phone that are flatly inconsistent with the supposed disclaimer, and place an untenable construction on Net2Phone's statements to the Patent Office. There was no disclaimer.

1. A Very High Standard Must Be Met Before the Prosecution History Can Dictate the Meaning of a Claim Term.

The law of claim construction "indulge[s] a heavy presumption that claim terms carry their full ordinary and customary meaning, unless the patentee unequivocally imparted a novel meaning to those terms or expressly relinquished claim scope during prosecution." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) (internal citations and quotations omitted). The latter point, known as prosecution disclaimer, is intended to preclude patentees "from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Id.* However, the Federal Circuit has "declined to apply the doctrine of prosecution disclaimer where the alleged disavowal of claim scope is ambiguous." *Id.* at 1324 (citing cases). The Court "require[s] the alleged disavowing statements to be both so clear as to show reasonable clarity and deliberateness, and so unmistakable as to be unambiguous evidence

of disclaimer." *Id.* at 1325 (citation omitted). "Clear and unmistakable" is how the standard is most often articulated. *Id.* at 1326. And "[t]here is no 'clear and unmistakable' disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term." *SanDisk Corp. v. Memorex Prods., Inc.* 415 F.3d 1278, 1287 (Fed. Cir. 2005); *see also Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1359 (Fed. Cir. 2003) (A statement that is "amenable to multiple reasonable interpretations . . . does not constitute a clear and unmistakable surrender.").

As one might suspect from this rigorous standard, and as the Federal Circuit repeatedly has observed, statements made during prosecution rarely are sufficiently "unambiguous" or "unmistakable" so as to constitute a disclaimer; statements meeting that standard generally involve an applicant amending the claims or explicitly defining a claim term. *See*, *e.g.*, *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1327 (Fed. Cir. 2003); *Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324-25 (Fed. Cir. 2002). For example, in the recent *Vonage* case, the patentee was held to have disclaimed claim scope when it defined the term "'localized wireless gateway system'" so as to distinguish the prior art. *Vonage*, 2007 WL 2781869, at *8-9. During prosecution, the patentee said the following: "Applicant respectfully submits that although the term 'wireless' is used in [the prior art references], 'wireless' does not mean 'local wireless,' as claimed by the present invention, in the sense of a cordless phone that is *restricted to operate within a few feet from a base station* (i.e. wireless handsets)." *Id.* at *9 (alterations in original); *id.* ("The applicants also stated: '[A prior art reference] arguably appears to disclose a local cellular or local wireless system, such as, for example, a cordless phone that is *restricted to operate within a few feet from a base station.*'") (alterations in original). The Federal Circuit held "that this language clearly disclaimed coverage of systems

operating with a range greater than a 'few feet,' and that the district court erred in failing to construe the localized system as requiring a range of a few feet." *Id.* *Vonage* reflects the very sort of clear, unambiguous statement of disclaimer that the law requires.

2. Net2Phone Did Not Disclaim Claim Scope.

In this case, defendants contend that Net2Phone disclaimed coverage of every server implementation *except* a single, central computer when it used the term "dedicated" to describe the connection server during prosecution. Specifically, defendants point to portions of amendments filed by Net2Phone during prosecution of the patents. For example, in the amendment block quoted by defendants, Net2Phone explained:

> Applicants 'invention solves a fundamental problem associated with the Internet. . . . The problem is: How can a global network user be located if he/she has no permanent network address? Applicants have disclosed ***a solution*** to the above-described problem. The solution utilizes a client/server system. In the disclosed system, a client process contacts a ***dedicated*** address directory server and forwards to the server the network protocol address to which it has been assigned upon connection to the computer network, along with other identification information.

Amend. at 14 ('704 pros.) (Mar. 1, 1999) (emphases added) (Ex. 4); *see also* Amend. at 19 ('121 pros.) (Ex. 10) (same). Net2Phone did not distinguish any prior art in that passage; it simply provided the Patent Office with a general summary of how its invention solved the problem associated with dynamically assigned network addresses.

Similar background statements regarding Net2Phone's invention appeared in various filings with the Patent Office. In a December 1997 amendment, Net2Phone explained that its "invention provides techniques for determining the current dynamically assigned network protocol address of a user process connected to the network," and that "[t]he first technique utilizes a dedicated server which acts as a network address/information directory." Amend. at 8 ('704 pros.) (Dec. 2, 1997) (Ex. 3). In an October 1998 amendment, Net2Phone put it

differently: "The subject application discloses a client and server system and a protocol in which client processes, upon connection to an Internet Protocol based network, forward their current dynamically assigned Internet Protocol address to a ***global server*** which acts as a repository of directory information for all other client processes." Amend. at 7 ('469 pros.) (Oct. 20, 1998) (Ex. 9) (emphasis added); *see also* Amend. at 8 ('469 prosecution) (Mar. 3, 1999) (Ex. 17) ("The subject application discloses . . . a ***global server***") (emphasis added). As the patents explain, the "global server" "as a single server apparatus" or that "***more than one global server may be utilized***, as illustrated by FIG. 15C." '121 patent, col. 21, ll. 45, 56-58 (Ex. 7) (emphasis added).

Defendants' position is that these generic synopses of Net2Phone's invention—referring interchangeably to a "dedicated server" or a "global server"—effected a "clear and unmistakable" disavowal of claim scope in which Net2Phone plainly and unambiguously alerted the public that its invention was limited to a single, central computer. To recite defendants' argument is to answer it. Net2Phone did not tell the world that its invention was limited to a single, dedicated, central computer in the language to which defendants have pointed. Net2Phone did nothing but generally summarize its invention and the function that the server plays—as a directory/information service—in its novel communications protocol. Contrary to defendants' suggestion, Net2Phone did not say anything about how the server must be configured or implemented. Indeed, Net2Phone's use of the generic phrase "global server," which the patents explain can be implemented in any number of ways, confirms that.

Nor did Net2Phone ever avoid or distinguish a piece of prior art that would otherwise invalidate its claims by explaining that its claims were patentable because of a single, central server, as opposed to a multiple-server (or distributed server) implementation. To be sure, on a single occasion during six-plus years that the patents-in-suit were prosecuted, Net2Phone used

the words "central server" with reference to its invention, but not—as defendants suggest—to distinguish other ways of implementing the server. During prosecution of the'365 patent (Ex. 6), Net2Phone explained how its invention differed from that disclosed in a prior art patent to Perkins. Amend. at 4-5 ('365 pros.) (Apr. 19, 2002) (Ex. 23). Despite Net2Phone's arguments, the Patent Examiner did not agree, and he again rejected the claims, this time raising both the Perkins patent and another prior art patent to Higgins (Exs. 24 and 25, respectively). *See* Office Action at 2-3 (Jun. 20, 2002) (Ex. 26). After some back and forth, Net2Phone requested an interview and faxed the Examiner a one-page proposed agenda to discuss differences between the patent and the prior art he had cited. *See* Prop. Agenda ('365 pros.) (Sept. 20, 2002) (Ex. 12). What is reflected in the agenda, and in the changes to the claim language that eventually were made to distinguish that art, is that the distinguishing features had nothing to do with how the server was implemented (whether using a single computer or many), but rather the flow of IP addresses to and from the server.

In the patents-in-suit, there is a server—comprising a single computer or a coordinated group of computers—that receives IP addresses which have been assigned to client processes, and also receives queries for those addresses from other processes. By contrast, in the prior art cited by the Examiner, the server distributes (as opposed to receives) IP addresses to client processes, and does not receive queries for those addresses (instead it receives messages which it then forwards to the relevant client process). Net2Phone highlighted those two distinguishing characteristics in the meeting agenda. *See id.* ("Discuss differences between present invention and the combination of Perkins and Higgins, including but not limited to: the lack of disclosure in Perkins of a central server that receives network protocol addresses from client processes, and receives queries of the stored network protocol address from client processes[.]").

Unsurprisingly—and ignored by defendants—the consequent changes to the claim language in the patent reflected exactly those distinctions, and said nothing about how the server is implemented, whether with a single "central" computer or otherwise. The changes clarified that, unlike the prior art, the client processes described in the invention do not receive their IP addresses from the system's server (but instead from an Internet access server), and that the server described in the invention, unlike the prior art server, receives queries for those addresses. Amend. at 4 ('365 pros.) (Oct. 8, 2002) (Ex. 27) ("The claims have been amended to recite that a process receives a network protocol address being received by the process 'from an Internet access server' and that a query is received for a network protocol address 'at a connection server.'"). At no point did Net2Phone argue that its invention was patentable because it uses a single, central computer, as opposed to another server implementation. Indeed, such a statement would have made no sense because neither Perkins nor Higgins was directed to a particular server implementation. And, tellingly, the Patent Examiner did not insist on any "central server" language in the claims (just as he did not raise any issue with the language in the specification explaining that the server could be implemented using multiple computers).

Net2Phone used the terms "dedicated," "central," and "global" to describe a protocol that uses a resource, or service, that is both dependable and common, *i.e.*, from which all callers in the system can obtain the requested information about any prospective callee. That accords with the standard dictionary definitions of these terms: the inventive protocol depends on a server that is "[d]esigned for a particular use or function," "[e]asily reached from various points," and "comprehensive." *American Heritage Dictionary of the English Language* 474 (Houghton Mifflin 4th ed. 2000) ("*American Heritage*") ("dedicated") (Ex. 28); *id.* at 302 ("central"); *id.* at 748 ("global"); *see also Webster's Unabridged Dictionary* 336 (Random House 2d ed. 2001)

(central: "constituting something from which other related things proceed or upon which they depend: a central office") (Ex. 29). Net2Phone said nothing—let alone anything clear and unmistakable—that would limit the implementation of that service to a single computer. Indeed, as discussed above, it repeatedly said the opposite. Net2Phone did not disavow claim scope.

The Federal Circuit's decision in *Purdue Pharma L.P. v. Endo Pharmaceuticals Inc.*, 438 F.3d 1123 (Fed. Cir. 2006), is instructive. The claim there was to "[a] controlled release oxycodone formulation." *Id.* at 1126-27. Although there was no limitation in the claim relating to effective dosage ranges (just as there is no limitation in the claims here requiring a single, central computer), the district court construed the claims to require effective pain control for 90% of patients over a four-fold dosage range because of repeated statements by the applicant in prosecution that such pain control was the unexpected property distinguishing the claimed invention over the prior art. *Id.* at 1128, 1135-37. The Federal Circuit reversed, holding that although "Purdue relied on its 'discovery' of the four-fold dosage range to distinguish its claimed oxycodone formulations" from the prior art, "Purdue's statements *do not amount to a clear disavowal of claim scope*." *Id.* at 1136 (emphasis added). That was because the invention was defined in the claim without reference to any dosage range. Rather, the dosage range was simply a property of the invention, and Purdue never "present[ed] the four-fold dosage range as a necessary feature of the claimed oxycodone formulations." *Id.* The fact that Purdue pointed out this aspect of its patentable invention during prosecution did not thereby introduce an additional limitation into its claim. *Id.* This case is no different.

This case is decidedly *not* like *Microsoft Corp. v. Multi-Tech Systems, Inc.*, 357 F.3d 1340 (Fed. Cir. 2004), on which defendants rely. The primary issue in that case was whether the terms "sending," "transmitting," and "receiving" were "restricted to communications over a

telephone line or whether they may encompass communications over a packet-switched network such as the Internet." *Id.* at 1346. Recognizing the primacy of the claim language and specification, the Court noted that the specification "repeatedly and consistently describes the local and remote systems of the claimed inventions as communicating directly over a telephone line." *Id.* at 1348. Indeed, the Court noted that "[n]owhere does [the specification] even suggest the use of a packet-switched network," and then it held that the specification "leads to the inescapable conclusion that the communications between the local and remote sites of the claimed inventions must occur directly over a telephone line." *Id.* (internal quotation omitted). Only after so holding did the Court consider the prosecution history, which it simply found to "confirm[] that Multi-Tech viewed its inventions as being limited to communications over a telephone line." *Id.* at 1349. The Court did not hold that Multi-Tech had disclaimed a broader claim scope during prosecution, as defendants suggest; it simply found that the prosecution history supported the unambiguous statements in the specification limiting Multi-Tech's claims.

In this case, there is nothing in the claims that requires any particular kind of server, or any particular server configuration—the claims simply and generically require a "server." Indeed, as discussed above, both the specifications and the inventors' testimony make clear that the server described in the patents can be implemented in a single computer or a multitude of coordinated computers. In that respect, the use of "server" in the specifications is perfectly consistent with the ordinary and customary meaning of that term, which as the Federal Circuit just held in *Vonage* is "a computer system, such as one or more computers and/or devices, that provides services to other computer systems over a network." *See Vonage*, 2007 WL 2781869, at *6 (quotations omitted). Net2Phone never offered a more narrow definition during prosecution, nor did it distinguish the prior art on the ground that its invention used only a single,

central server, as opposed to a multiple-server (or distributed server) implementation reflected in the prior art. Net2Phone *never*—in the claims, specification, or prosecution history—limited itself to a particular way of providing that service. As a matter of law, since there is an interpretation of Net2Phone's statements that harmonizes the claims, specification and prosecution history, there was no disclaimer. *See SanDisk*, 415 F.3d at 1287 ("There is no 'clear and unmistakable' disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term.").

II. The Claims that Recite a "List" or "Memory" Are Not Limited to a "A Dedicated Storage Medium for Retaining a Centralized Database."

As defendants make plain in their opening brief, their goal is to manufacture a non-infringement argument, and they primarily hope to do so by limiting the patent claims to a single, central server—even those claims that do not require a server at all. *See, e.g.*, '704 patent, claims 32-33 (Ex. 2). For example, claim 32 recites "A method of locating a process over a computer network comprising the steps of [among other things] maintaining an Internet accessible list having a plurality of selected entries, each entry comprising an identifier and a corresponding Internet protocol address of a process currently connected to the Internet." The claim simply requires "an Internet accessible list." It does not specify how or where that list is maintained.

Undeterred by the claim language, defendants would have the Court construe the claim as follows: "maintaining, on a *dedicated* storage medium, an Internet accessible *centralized database*." *See* Defs. Open. Br. at 21-23. Nothing in the law of claim construction would permit such a tortured construction. *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1330-31 (Fed. Cir. 2007) ("[W]e cannot endorse a construction analysis that does not identify a textual reference in the actual language of the claim with which to associate a proffered claim construction.") (quotation omitted); *see also SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351,

1359 (Fed. Cir. 2006) ("[W]e are powerless to rewrite the claims and must construe the language of the claim at issue based on the words used."). The fact that defendants are even advancing such a construction underscores the lengths to which they will go to avoid infringement.

Consistent with the Federal Circuit's decision in *Phillips*, the analysis begins with the language of the claims, which are presumed to have their ordinary meanings. *Phillips*, 415 F.3d at 1312. The language of claim 32 says nothing about a "dedicated storage medium" or a "centralized database." The claim speaks simply of maintaining an Internet accessible list; it does not specify any particular location, nor does it specify the form the list must take.

With that understanding, *Phillips* directs courts to look next to the specification, which is "the single best guide to the meaning of a disputed term." *Id.* at 1315 (quotations omitted). In the example embodiment described in the '704 patent, the "list" is stored in the memory of the connection server, and it takes the form of a database. *See* '704 patent, col. 3, ll. 18-22 & Fig. 1 (Ex. 2); *see also id.* at col. 5, ll. 29-30. The specification makes clear, however, that this need not always be the case. *See id.* at col. 4, ll. 33-55. As explained above, the patents all indicate that they are agnostic as to how the connection server or database or list is implemented. *Id.* Consistent with that understanding the '121 patent, for example, describes the database and connection server as separate components of a "global server." '121 patent, Fig. 15A & col. 18, ll. 14-25 (Ex. 7). And the specification is similarly open-ended with respect to the form the "list" takes; it indicates that the information *may* be contained within a traditional database, such as those commercially available from Oracle or Microsoft. *See*, *e.g.*, '704 patent, col. 3, ll. 18-20 (Ex. 2) ("The connection server includes . . . memory *such as* a database") (emphasis added). But the patents do not state that any particular type of list is required—it simply must be accessible by the connection server and, of course, accessible in turn by the requesting processes.

(Defendants claim (at 23) that "Net2Phone is not entitled to claim a generic memory" because "the inventors purported to have invented a memory on a dedicated server that stores a central database of network addresses." As discussed above in Part I.B, that is not true. The inventors did not believe that their invention is dependent *at all* on the manner in which it is implemented.) It is thus not surprising that the patents refer to a variety of ways in which the information could be stored—a "database" or "directory database," and more generally as an "Internet accessible list having a plurality of selected entries" or a "network accessible compilation of entries."

In seeking to limit those claims, defendants point only to statements regarding the preferred embodiment. *See* Defs. Open. Br. at 21-22. But in urging the Court to limit Net2Phone's claims to what is described in that embodiment, defendants are inviting the Court to commit one of the cardinal sins of claim construction. In the words of the Federal Circuit: "[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments." *Phillips*, 415 F.3d at 1323. Indeed, in *Phillips* itself, the Court held that the term "baffle" could include structures that extend at a 90 degree angle from the walls, even though "every textual reference in the Specification and its diagrams show baffle deployment at an angle *other* than 90 [degrees] to the wall faces." *Id.* at 1309, 1327 (emphasis added, quotations omitted). Of course, in this case, the specification actually specifically explains that the "list" *can*, but need not, be in the form of a database, and that it *can*, but need not, be located within the memory of the server.

Finally, the Federal Circuit has instructed to courts to look at the prosecution history, recognizing that it is "less useful for claim construction purposes" than the specification. *See Phillips*, 415 F.3d at 1317. There is precious little in the prosecution history regarding how or where the "list" is to be stored, but in summarizing the invention Net2Phone stated that the

server "maintains a compilation or list of entries, each of which contain[s] a process identifier and the corresponding network protocol address forwarded to the server by the process itself." Amend. at 10, 14 ('704 pros.) (Mar. 1, 1999) (Ex. 4). Net2Phone never referred to a "centralized database" or a "dedicated storage medium"—those are defendants' words, and they simply appear nowhere in *any* of the patent documents. Defendants are simply running the same prosecution disclaimer argument that they made regarding "server," although now, in addition to disclaiming anything but a single, central server, defendants contend that Net2Phone clearly and unmistakably limited its claims to a "dedicated storage medium for retaining a centralized database." Defs. Open. Br. at 21. Of course, defendants cannot point to any instance in which Net2Phone actually *said* that; they just argue that it was *implicit* in how Net2Phone summarized its invention. But defendants' disclaimer argument regarding the "list" claims fails for all of the reasons that defendants' disclaimer argument regarding "server" fails, and for the additional reason that defendants can point to *nothing* in the prosecution history in which Net2Phone unambiguously limited the "list" claims to a centralized database on a central server.

The Court's mission in construing the claims is to adopt a construction "that stays true to the claim language and most naturally aligns with the patent's description of the invention." *Phillips*, 415 F.3d at 1316. That "will be, in the end, the correct construction." *Id.* Defendants' efforts to limit the claims to the preferred embodiment of the '704 patent is an invitation to commit legal error. Once again, the claims say what they mean and mean what they say. The server-less claims, such as claim 32 of the '704 patent, refer to a list or compilation of data stored in computer memory. *See also* '704 patent, claims 2, 4, 33, & 38 (Ex. 2), and '121 patent, claim 9 (Ex. 7), which according to defendants "all repeat substantively the same concept" (Defs. Open. Br. at 21-22). No location or particular type of list is referenced, and none is required.

III. The Claims Reciting "Program Code" Are Not Means-Plus-Function Claims.

In yet another attempt to limit the claims of the patents-in-suit to the exemplary embodiment, defendants argue that the claims that refer to "program code" or "program logic" should be construed as means-plus-function claims under 35 U.S.C. § 112, ¶ 6 (2000) ("An element of a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure . . . in support thereof, and such claim shall be construed to cover the corresponding structure . . . described in the specification and equivalents thereof."). A means-plus-function claim is a special kind of claim that is more closely tied to the embodiments described in the specification than typical claims. (As Net2Phone acknowledged in its opening brief (at 26-27), one of the asserted claims ('704 patent, claim 2, which *does* include the word "means") is a means-plus-function claim.) But if the language of the claim does not use the "means" language, there is a presumption that the claim is *not* to be so construed. In addition, in this case, the presumption carries particular weight because Net2Phone specifically amended its claims during prosecution of the patents to *remove* references to the word "means." Defendants' efforts to read that word back into the claims is without basis.

It is hardly surprising that in a patent directed to computer technology there are claims that recite "program code" or "program logic." For example, claim 1 of the '704 patent, which is directed to a "computer program product," requires, among other things, that the product comprise a "computer usable medium" and that it also comprises "program code for transmitting to the server a network protocol address received by the first process following connection to the computer network." Claim 11 of the '121 patent recites an "apparatus for use with a computer system" which comprises "program logic responsive to one of the network protocol addresses and configured to establish a point-to-point communication link." With one exception (claim 6 of the '121 patent), none of the claims referenced by defendants contain the word "means."

The fact that the claims do not reference the word "means" is not accidental. During prosecution of the patents-in-suit, Net2Phone removed references to means from the claims to make it clear that they were all typical patent claims, not means-plus-function claims. *See, e.g.*, Amend. at 15 ('704 pros.) (Mar. 1, 1999) (Ex. 4) ("Applicants have made global amendments to the claims to ensure consistent use of terminology throughout the claims and to conform the claims to 35 U.S.C. Section 112, 2nd paragraph. *Specifically, the term 'means' has been eliminated from the remaining pending claims*.") (emphasis added); Amend. at 18 ('121 pros.) (Sept. 7, 1999) ("*[T]he term 'means' has been eliminated from the remaining pending claims*.") (emphasis added). (In light of this amendment to the claims of the '121 patent, it is clear that the token reference to "means" in claim 6 is a mistake. In any case, none of the other claims includes such a reference.) Indeed, when the '469 patent first issued, the Patent Office inadvertently included the "means" language in claims 1 and 3, but when Net2Phone pointed out the mistake, the Patent Office issued a certificate of correction in which it *deleted* the word "means" from those claims. *See* '469 patent (Ex. 7) (last page). (Defendants' citation to claims 1 and 3 of the '469 patent as requiring "program code means" (Defs. Open. Br. at 24) is incorrect. As a result, heading "2" on page 24 of defendants' brief is incorrect; there is no "means" language in the referenced claim.) Net2Phone's desire *not* to avail itself of § 112, ¶ 6 thus could not be clearer; it purposefully avoided using the word "means."

The absence of the word "means" has legal significance. "[A] claim term that does not use 'means' will trigger the rebuttable presumption that § 112, ¶ 6 does not apply." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (internal quotation omitted). "The use of the term 'means' is central to the analysis, because the term 'means,' particularly as used in the phrase 'means for,' is part of the classic template for functional claim

elements, and has come to be closely associated with means-plus-function claiming." *Id.* (citations and internal quotations omitted). Although the "presumption that a limitation lacking the term 'means' is not subject to section 112 ¶ 6 can be overcome if it is demonstrated that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function," the Federal Circuit has made it clear that "*the presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome*." *Id.* (emphasis added, citations and internal quotations omitted).

As defendants acknowledge (Defs. Open. Br. at 25), at least one court has addressed the question of whether "program code" is subject to § 112, ¶ 6. *See Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, No. 04 C 5312, 2006 WL 3147697 (N.D. Ill. Oct. 31, 2006). The claim at issue in *eSpeed* covered a "computer readable medium having program code recorded thereon," and like the claims at issue here, it did not use the magic word—"means." Applying *Lighting World*, the court considered whether the term "program code" "is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies structures by their function." *Id.* at *12 (*quoting Lighting World*, 382 F.3d at 1359-60). The court recognized that the term "code" has a well-understood meaning to computer scientists—"computer instructions and data definitions expressed in a programming language or in a form output by an assembler, compiler, or other translator." *Id.* (quoting a technical dictionary). The court also noted that the Patent Office's Manual of Patent Examining Procedure ("MPEP") "provide[s] some evidence that computer-readable mediums . . . are known in the art to include a structural component." *Id.* at *13. The court held that the "program code" claim recites sufficiently definite structure such that it was not means-plus-function. *Id.*

In so holding, the *eSpeed* court distinguished the very case relied on by defendants—

Altiris, Inc. v. Symantec Corp., 318 F.3d 1363 (Fed. Cir. 2003). As the court in *eSpeed* noted, *Altiris* is inapposite because the claim at issue there actually *did* use "means" language, giving rise to a strong presumption that it was a means-plus-function claim. *See eSpeed*, 2006 WL 3147697, at *13. Moreover, the language of the claim at issue in *Altiris* was open-ended; it referred to "a means of booting said digital computer, said means of booting *including* a first set of commands, . . . and a second set of commands." *Altiris*, 318 F.3d at 1375 (emphasis added). The Federal Circuit picked up on this point. It noted that "'commands' represent structure (in the form of software)," but that in that case, it was "not sufficient structure to perform the entirety of the function." *Id.* at 1376. Specifically, "[t]he claim language uses 'including'—an open term—which suggests that the two sets of 'commands' are not sufficient structure; rather, something else is needed." *Id.* This contrasts with the claims at issue here, and in *eSpeed*, which do not use "means" language and which specifically recite a structure ("program code") and then explain what functions it is to perform.

For these reasons, the court in *Affymetrix, Inc. v. Hyseq, Inc.*, 132 F. Supp. 2d 1212 (N.D. Cal. 2001), held that a similar term—"computer code"—recited sufficient structure to avoid § 112, ¶ 6. The claim in *Affymetrix* was directed to a "computer program product" comprising "computer code" designed to perform various functions; it did not use the word "means," thus creating a heavy presumption that it was not a means-plus-function claim. *Id.* at 1231. Like the defendants here, the alleged infringer argued that "computer code" does not recite any definite structure. *Id.* The patentee—represented by counsel for defendants in this case—argued otherwise, and the court held that "'computer code' is not a generic term, but rather recites structure that is understood by those of skill in the art to be a type of device for accomplishing the stated functions." *Id.* at 1232. The court noted that were it to conclude otherwise, it

"improperly would subject every software patent and many electronics patents to § 112, ¶ 6." *Id.*

This Court should follow the roadmap laid out by the district courts in *eSpeed* and *Affymetrix*, both of which addressed substantially the same issue. Indeed, the argument that Net2Phone's "program code" claims are *not* means-plus-function is even stronger here, because Net2Phone specifically amended its claims to *remove* references to "means" prior to issuance. To construe them as subject to § 112, ¶ 6 thus would be directly contrary to the intrinsic record and inconsistent with the claim language as issued. Under these circumstances, defendants cannot overcome the strong presumption that Net2Phone's claims are not means-plus-function.

IV. Defendants' Constructions of the Claim Terms Relating to "Transmitting" or "Receiving" a Network Protocol Address Are Unduly Narrow.

Defendants' efforts to narrow the elements of Net2Phone's claims relating to the transmission and receipt of network protocol addresses are admittedly subtle, but subtle differences are often important, particularly in the hyper-technical world of patent litigation. With respect to the first claim term—"transmitting, to the server, a query as to whether the second process is connected to the computer network"—which is clear on its face, defendants would have the Court insert the word "currently" before connected. As regards the second claim term—"receiving a network protocol address of the second process from the server, when the second process is connected to the computer network"—which again is clear on its face, defendants effectively would do the same thing, construing "connected" as "active and on-line." In addition, defendants propose to change the word "when" to the words "only if" in a further attempt to narrow the claim. But try as defendants might, they cannot rewrite the claims.

First, defendants would take the term "connected" and construe it as "currently logged on." As set forth in its opening claim construction brief (at pp. 14-15), Net2Phone agrees that "connected" means "logged on," and *vice versa*. But there is no reason to insert the word

"currently" into the claim. To the extent defendants are trying to suggest that the claims require perfect information about who is on line at a given moment, that is simply incorrect. While Net2Phone's invention endeavors to identify accurately who is on line, it is not possible to achieve perfection. For example, it takes some time (albeit minimal) for the signal that a user has gone off-line to be communicated to the server, or a user's Internet connection may get interrupted before she can send an off-line message (and thus the server, for a time, assumes she is on-line, when in fact she is not). *See* Strickland Dep. at 140:7-141:7 (Ex. 21). Recognizing these issues, the patents explain that the server may use timestamps to update a person's status—*e.g.*, setting a default value of two hours, after which the server assumes that a party has gone off-line if it has not heard from her. *See* '704 patent, col. 5, ll. 39-44 (Ex. 2). In this respect, the patents explain, "the on-line status information stored in the database is ***relatively*** *current*." *Id.* at col. 5, ll. 42-43 (emphasis added). While Net2Phone believes that the claim language is clear, if the term "connected" (or "on-line") is going to be modified at all, it should be modified to say "*relatively* currently connected," because that is what the patents actually say.

Net2Phone's only other disagreement with defendants' construction of this claim term concerns the word "query," which defendants want construed to mean "question." Net2Phone's proposed construction is "question or request," and the dictionary cited by defendants defines it as "question" or "inquiry." Limiting "query" strictly to "question" is unduly narrow—the term "query" certainly encompasses a question, but also a request or inquiry.

Second, defendants similarly attempt to limit the term "receiving" on the other side of the equation—"receiving a network protocol address of the second process from the server, when the second process is connected to the computer network." Again, this claim term refers to a process being "connected to the computer network," and again, defendants try to capture the idea of

"currently connected"—this time construing connected to be "active and on-line" (it is not clear why defendants believe the same word, "connected," should be construed differently for two elements of the same claim). As discussed above, no modification of "connected" is necessary, but if it is modified, it should be modified to say "relatively currently connected."

Relying on a quote from the '704 patent describing the preferred embodiment (Defs. Open. Br. at 19-20), defendants also attempt to narrow the claim by construing "when" to "only if." *See Phillips*, 415 F.3d at 1323 ("[W]e have repeatedly warned against confining the claims to those embodiments."). But the term "when" is hardly ambiguous, and there is nothing in the specification that suggests that it is being used in anything but its ordinary sense. *See id.* at 1312 ("[T]he words of a claim are generally given their ordinary and customary meaning.") (internal quotation omitted). And "when" and "if" do not mean the same thing—the former has a temporal component to it; the latter does not. *Compare American Heritage* 1958 ("when" means, *inter alia*, "[a]t the time that," "[w]henever") *with id.* at 872 ("if" means, *inter alia*, "[i]n the event that," "[o]n the condition that") (Ex. 28). Thus, there is no basis in the law or in the intrinsic record for changing the words of the claim from "when" to "only if." (Defendants also point out that the "server" to which the process transmits its address is the same server from which other processes receive that address. To the extent Defendants are attempting again to require a single, central computer, Net2Phone obviously disagrees. However, Net2Phone does agree that the same "server"—comprising one or more computers and/or devices—transmits and receives network protocol addresses from client processes.)

V. The Claims Relating to a User Interface Are Not Limited to the Preferred Embodiment.

Finally, defendants attempt to narrow Net2Phone's claims relating to a user interface to the preferred embodiment. Defendants' proposed constructions are untenable.

1. "User Interface Element Representing a First Communication Line"

The parties agree that a "user interface element" is a computer icon. The parties disagree, however, over the meaning of "first communication line." Defendants would take those three simple words and construe them to mean "one of a number of simulated telephone lines (not call-initiation buttons)." It is only by limiting the claims to the preferred embodiment—something extremely disfavored in the law of claim construction—that defendants can achieve that result. *Phillips*, 415 F.3d at 1323. Indeed, the Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Id.*

Defendants first argue that the "communication line" referenced in the claim "must be a simulated telephone line." Defs. Open. Br. at 27. And as support, of course, they point to the embodiment disclosed in the specification to illustrate the invention. While the preferred embodiment looks like a phone with various lines (L1, L2, etc.), the claim language does not require the user interface to take the same form as the preferred embodiment—that would be both illogical (narrowing the patent to a single type of interface) and contrary to law (narrowing the patent to the preferred embodiment). All the claim language requires—unambiguously—is that the interface include an "element representing a first communication line." That element can take any form—it need not be in the form used in the preferred embodiment.

Defendants next assert that in addition to being limited to simulated telephone lines, the "element representing a first communication line" cannot be a "call-initiation button." Defendants make a nonsensical argument about paths of communication, relying on extrinsic evidence, and try to suggest that because the "call-initiation button" in the preferred embodiment (the "SND" button) is not the same as the simulated lines in that embodiment ("L1"), the call-initiation button can never be considered a "communication line." That is wrong. Both the SND

and line buttons in the preferred embodiment can be used to establish calls, and they all thus represent "communication lines." *See* '121 patent, col. 27, l. 57–col. 28, l. 22 (Ex. 7). There is nothing in the claims that limits the "first communication line" to something like an "L1," or even a "SND" button. To hold otherwise would limit the claim to the embodiment. All the claims require is an icon representing a communication line, whatever form that icon may take.

Finally, defendants argue that the reference to a "first communication line" means that it must be "one of a number of simulated telephone lines" and specifically that, in order to infringe, a user interface must have a second line. *See* Defs. Open. Br. at 28. In other words, defendants would like to rewrite the claims to require both an icon representing a first communication line and an icon representing a second communication line. But the independent user interface claims—claims 10 and 21 of the '704 patent, and claim 8 of the '469 patent—require only an icon representing a "first communication line," *i.e.*, a single communication line. *Dependent* claims in those patents—claims 12 and 23 of the '704 patent, and claim 10 of the '469 patent—add the requirement of an icon representing a *second* communication line. If the independent claims all required a second communication line, as defendants suggest, then the dependent claims requiring a second line would be entirely superfluous. As a matter of claim construction law, defendants' construction thus cannot be correct.

As the Federal Circuit observed in *Phillips*, "[d]ifferences among claims can . . . be a useful guide in understanding the meaning of particular claim terms. For example, *the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.*" *Phillips*, 415 F.3d at 1314-15 (emphasis added) (citation omitted). Indeed, as the Federal Circuit has observed, "the statute stresses that a dependent claim must add a limitation to those recited in the independent claim.

Thus, reading an additional limitation from a dependent claim into an independent claim would not only make that additional limitation superfluous, it might render the dependent claim invalid." *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (citation omitted). This rule—known as claim differentiation—"is at its strongest" "where the limitation that is sought to be 'read into' an independent claim already appears in a dependent claim." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004). Following the Federal Circuit, defendants' proposed construction of the claims as requiring an icon representing a *second* communication line must be rejected.

2. "Associating the Element Representing the First Callee Process with the Element Representing the First Communication Line"

The crux of the parties' dispute regarding this claim term relates to the word "associating." Defendants' argue that Net2Phone acted as its own lexicographer and defined the term "associating" to mean "dragging and dropping." In other words, defendants argue that while the term "associating" on its face certainly is not limited to dragging and dropping, Net2Phone *redefined* that word. Though defendants do not mention it, the standard for a redefinition is that it "must have sufficient clarity to put one reasonably skilled in the art on notice that the inventor intended to redefine the claim term." *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370-71 (Fed. Cir. 2005); *Renishaw PLC v. Marposs Societa' per Azioni,* 158 F.3d 1243, 1249 (Fed. Cir. 1998) ("The patentee's lexicography must, of course, appear 'with reasonable clarity, deliberateness, and precision' before it can affect the claim.") (internal quotation omitted). In practice, this means that if the description is amenable to more than one interpretation, then the ordinary meaning controls. *See Merck & Co.,* 395 F.3d at 1371.

To support their redefinition theory, defendants point to a single line of text from the specification of the '469 patent (and thus the '121 patent) which states "associated, i.e., dragged

and dropped." Defendants also reference in a parenthetical the language in the specification which explains that "[o]peration of WebPhone is controlled by selecting objects, i.e., buttons, text and images, and dragging objects, i.e., lines, parties, messages, etc." '121 patent, col. 26, ll. 35-37 (Ex. 7). While one possible reading is that the operation of WebPhone is controlled by selecting and then dragging objects, the more fair reading is that describes controlling the operation "by selecting objects" and by "dragging objects"—two separate ways. The fact that both readings are possible means, as a matter of law, that there has been no redefinition. *Abbott Labs. v. Syntron Bioresearch, Inc.*, 334 F.3d 1343, 1355 (Fed. Cir. 2003) ("Because the specification provides two alternative definitions for the term at issue, the specification does not define the claim term in the manner required under *Renishaw*."). It also bears noting that the patents refer to "[u]sing the icons," for example, "by double clicking" using a mouse, '704 patent, col. 9, ll. 26-32 (Ex. 2), and that during prosecution of the patents Net2Phone explained that the software it invented is operated generally "by manipulating user interface elements." Amend. at 9 ('469 pros.) (Mar. 3, 1999) (Ex. 17). (Defendants' reference to a non-technical dictionary in an attempt to support the construction they desire does not change the analysis. Such dictionaries have been generally disfavored since *Phillips* and in no event can they override what is clear from the intrinsic record.)

As for the WebPhone design document referenced by defendants (at 30), it does not support defendants' position. Defendants point to the statement that the "webPhone is controlled by clicking on objects (i.e. buttons, text and images) and dragging objects (i.e. lines, parties, messages, etc.)." Defs. Open. Br. at 30. When defendants asked one of the inventors about that very passage, he explained that it simply refers to manipulating the interface using a mouse or other device. Hutton Dep. at 221:2-223:20 (Ex. 20). When defendants pressed him on whether

the passage really just meant dragging and dropping, he explained "this is a little more broad than what you are trying to suggest. So it specifically states by clicking on ***or*** by dragging . . . ." *Id.* at 223:11-20 (emphasis added).

At no point—in the claims, specification, or in practice—did Net2Phone limit the word "associating" to "dragging and dropping" with "with reasonable clarity, deliberateness, and precision," as the law requires. *Renishaw*, 158 F.3d at 1249 (quotations omitted). To be sure, "dragging and dropping" is *one* way to "associate" the user interface elements, but it is not the *only* way—it also could be accomplished by the click of a mouse. Associating thus should given its plain and ordinary meaning—clicking, dragging *or* dropping.

CONCLUSION

For the reasons set forth herein, as well as those previously stated, Net2Phone respectfully submits that Net2Phone's proposed claim constructions should be adopted.

Respectfully submitted,

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Exhibit X

Skype Reply Claim Construction Brief

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UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

NET2PHONE, INC., Plaintiff, vs. EBAY INC., SKYPE TECHNOLOGIES SA, SKYPE INC., and JOHN DOES 1-10, Defendants.	CIVIL ACTION NO. 06-2469 (KSH) **REPLY CLAIM CONSTRUCTION BRIEF OF SKYPE TECHNOLOGIES SA, SKYPE, INC. AND EBAY INC.**
AND RELATED COUNTERCLAIM.	

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Page(s)

Statutes

Other Authorities

I. INTRODUCTION

Net2Phone turns the law of claim construction on its head. Net2Phone retreats from the intrinsic record and instead relies almost entirely on irrelevant extrinsic evidence. Net2Phone eschews the specification of the '704 patent in favor of new matter in later-filed patents, not part of the intrinsic record. Net2Phone tries to sweep aside the disclaimers it made to the PTO in order to secure its patents, yet relies heavily on the inventors' inconsistent testimony procured years later, during litigation. Net2Phone even argues that a construction of "server" in a different case, in a different patent, applies here. Skype's proposed definitions, in contrast, are firmly grounded in the intrinsic record. *See* Appendix 1, *infra*.

As Net2Phone would have it, a patentee could say anything to the PTO to secure its patent, and then, with patent in hand, sue competitors and concoct in litigation new boundaries for its alleged invention never before disclosed to the public. But this is not the law. Net2Phone's attempt to ignore the intrinsic record and rewrite history distorts the patent system and should be rejected.

II. SKYPE'S CLAIM CONSTRUCTIONS SHOULD BE ADOPTED

A. Net2Phone's "Server" Is Dedicated and Centralized

1. The Specification Requires a Dedicated, Central Server

The intrinsic record demonstrates that the term "server" in Net2Phone's claims means a "dedicated computer that provides a centralized address directory

service to a client." Skype Opening at 11-17; Skype Response at 4-18. Net2Phone misstates Skype's proposed claim construction for "server" throughout its Response Brief, repeatedly inserting the word "single" into Skype's proposed construction. The focus of the parties' dispute, however, is not whether the claims require a "single" server, but rather whether the claims require a *dedicated* computer that provides a *centralized* address directory service. Whether a single computer or several, the claimed server must be dedicated and centralized.

Putting aside Net2Phone's mischaracterizations, Net2Phone offers no argument against Skype's proposed construction of "server" as a "dedicated" computer. Indeed, Net2Phone concedes that the server described in the specification and prosecution history is "dedicated." Net2Phone Opening at 19-20.

As to *centralized,* the specification discloses no other type of address directory service. All users transmit their network addresses to the dedicated server, which maintains a central database of all on-line users. Other users query that same server to determine if a prospective callee is on-line and, if so, what its current network address is. *See, e.g.*, '704 patent, 2:1-6 (Summary of Invention). Net2Phone concedes that it is the "same server" that performs these functions. Net2Phone Response at 26. Thus, the server is necessarily centralized; it provides a central repository of network addresses of all on-line users. There is no disclosure of querying *some other* server, with *some other* database, if a callee is not located in

response to a first query. On the contrary: If a callee's network address is not in the server's database, the server responds with an "OFF-LINE" message. '704 patent, 5:55-6:4. Net2Phone erroneously relies on new matter in its later '469 and '121 continuation-in-part patents. But this is not part of the intrinsic record of the asserted claims, all of which claim priority to the '704 patent. Skype Response at 14-16. The new matter discloses a centralized directory server in any event. *Id.*

As a result, Net2Phone fails in its attempt to distinguish *Microsoft Corp. v. Multi-Tech Systems, Inc.*, 357 F.3d 1340 (Fed. Cir. 2004), in which the Federal Circuit rejected the patentee's broad claim construction that was supported "[n]owhere" in the intrinsic record and disclaimed during prosecution. *Id.* at 1348. Similarly here, "nowhere" does the intrinsic record describe the connection server as a "a computer system, or collection of coordinated computer systems," and even if it did, Net2Phone disclaimed any such interpretation during prosecution, just as the patentee had done in *Multi-Tech*. *Id.* at 1349; *see* Skype Opening at 11-14.

2. Net2Phone's Reliance On Inventor Testimony Is Misplaced

Lacking support in the intrinsic record for its construction of "server," Net2Phone turns to inventor testimony. Net2Phone Response at 5-8. In particular, Net2Phone cites inventor Mattaway's testimony suggesting that the patents cover a "hierarchy" of servers with a "distributed database." *Id.* at 6. When asked whether the '704 patent actually *describes* such an implementation, however, Mattaway's

answer was a categorical "no." Heinrich Reply Decl., Ex. A at 209:19-25 ("Q.: Does the '704 patent disclose a distributed hierarchical database of IP addresses? A: No, it doesn't. It doesn't go into the connection server architecture.").

Net2Phone cannot use the inventors' after-the-fact testimony to expand the claims beyond what the inventors *described* in their patents and statements to the PTO. "[T]he testimony of an inventor . . . concerning claim construction is . . . entitled to little or no consideration. The testimony of an inventor often is a self-serving, after-the-fact attempt to state what should have been part of his or her application." *Bell & Howell Doc. Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 706 (Fed. Cir. 1997); *Akamai Techs. v. Cable & Wireless Internet Servs.,* 344 F.3d 1186, 1194 (Fed. Cir. 2003) (inventor's subjective beliefs are "largely irrelevant"). Inventor testimony is particularly suspect here, as Skype was blocked from questioning the inventors about their pre-deposition discussions with Net2Phone's counsel, from whom they never sought legal advice. Heinrich Reply Decl., Ex. B.

3. The Prosecution History Is Dispositive

While Net2Phone rejects Skype's construction of "server" as "tortured" (Net2Phone Response at 4), it is Net2Phone's construction that can be found nowhere in the intrinsic record. *Skype's proposed definition uses precisely the words Net2Phone itself used* – "central" and "dedicated" – to describe its invention to the PTO while trying to obtain its patent. *See* Skype Opening at 11-13; Heinrich

Decl. (Docket No. 98), Exs. F, H-I, M-O. The intrinsic record cannot be shunned in favor of a construction that the patentee concocts years later during litigation.

Claim terms cannot be construed in a vacuum, as Net2Phone does. The context of the patents here makes clear that the claimed server is in a "client/server system," as Net2Phone repeatedly told the PTO. Heinrich Reply Decl., Ex. C (collecting statements to PTO during prosecution). Consistent with Net2Phone's description of its server as "dedicated" and "central," the very dictionary on which Net2Phone relies here defines a "server" in a client/server system as "centralized," "high-powered," a "hub," "connected to many less powerful personal computers . . . called clients." Heinrich Reply Decl., Ex. D (*Dictionary of Computer Words: An A to Z Guide to Today's Computers* at 44 (Houghton Mifflin Co. 1995)).

Peer-to-peer systems, such as Skype's, are vastly different. Johnson Decl. 17 (Docket No. 107-2). Net2Phone's own expert admitted that a client/server system is "an altogether different paradigm" from a peer-to-peer system. Heinrich Reply Decl., Ex. E at 53:12-54:19 (Bhattacharjee testimony). Net2Phone's internal documents also distinguish between its own centrally managed model versus a peer to peer model, and confirm that Net2Phone's technology uses a centralized system. *Id.*, Exs. F & G. Net2Phone's attempt to stretch its claims to cover Skype's peer-to-peer network turns the patent system on its head and should be rejected.

Net2Phone tries to sweep away its repeated admissions in the prosecution

history by characterizing those admissions as "general summaries" of "Net2Phone's invention." Net2Phone Response at 10-11. That is of no help to Net2Phone. Those admissions were, indeed, how it "summarize[d] *its invention*" to the PTO, thereby notifying the public as to the scope of what it claimed as its invention. *Id.* at 11. There is no "general summary" exception to prosecution history disclaimer. *See, e.g.*, *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1347 (Fed. Cir. 1998) (rejecting patentee's claim that "global comments" to PTO did not qualify as disclaimers); *Gillespie v. Dywidag Sys.*, – F.3d –, 2007 WL 2493339, at *5 (Fed. Cir. Sept. 6, 2007) ("The patentee is held to what he declares during prosecution"). Net2Phone must be held to its characterization or "summary" of its invention.

Net2Phone also asserts that it never "avoid[ed] or distinguish[ed] a piece of prior art . . . by explaining that its claims were patentable because of a single, central server, as opposed to a multiple-server (or distributed) implementation." Net2Phone Response at 11. This is not true. For example, during prosecution of the '469 patent, the PTO issued a rejection based on the VocalTec Internet Phone, in which multiple Internet Relay Chat ("IRC") servers are used to provide a network address lookup service. In its response, Net2Phone (inaccurately) asserted that with VocalTec, "in order to find a [] prospective callee, the caller would need to know which of many IRC servers around the world the callee frequented in an attempt to connect to the proper IRC server." Heinrich Reply Decl., Ex. H ('469 history,

10/20/98 Amend.) at SKYPE-N2P00291112.

In contrast, Net2Phone asserted that the "*present invention* provides a global server that can be queried to locate any user anywhere .... A perspective [sic] caller does not have to go through the time-consuming and annoying task of hunting for the correct IRC server ...." *Id.* at SKYPE-N2P002911113. Thus, Net2Phone distinguished VocalTec precisely on the ground that Net2Phone's invention uses a central server to locate any user anywhere, avoiding the need to contact multiple servers. This characterization of the "present invention" to overcome the prior art is a clear disclaimer that Net2Phone cannot now avoid. *See Verizon Servs. Corp. v. Vonage Holdings Corp.*, – F.3d –, 2007 WL 2781869 at *9 (Fed. Cir. Sept. 26, 2007) (patentee's characterization of its "present invention" in the prosecution history "clearly disclaimed" broader claim scope).

Net2Phone distinguished the Perkins reference on similar grounds. During prosecution of the '365 patent, the examiner rejected the claims based on Perkins, which was found to teach a computer program that "receiv[es] the current network protocol address of a process coupled to the network" and "receiv[es] a query" for that address. Heinrich Reply Decl., Ex. I (6/17/02 Office action) at SKYPE-N2P00291891. In response, Net2Phone argued that "[a]lthough Perkins may disclose some of the functionality of claims 21-23 when *multiple* devices are considered, claims 21-23 require this functionality to be present in the *same* device

or system. Specifically, the functionality of claim 21 must be performed by a 'server' . . . ." *Id.*, Ex. J (7/17/02 Request for Reconsideration) at SKYPE-N2P00291897. Net2Phone then discussed with the examiner the "differences between *the present invention* and the combination of Perkins and Higgins, including . . . the *lack of disclosure in Perkins of a central server* that receives [IP] addresses . . . and receives queries of the stored [IP] addresses." Heinrich Decl. (Docket No. 98), Ex. I ('365 history, applicants' agenda) at SKYPE-N2P00291907.

Net2Phone's present argument – that it distinguished Perkins on other grounds (Net2Phone Response at 11) – is inconsistent with the prosecution history. In any event, "there is no principle of patent law that the scope of a surrender of subject matter during prosecution is limited to what is absolutely necessary to avoid a prior art reference." *Norian Corp. v. Stryker Corp.*, 432 F.3d 1356, 1361 (Fed. Cir. 2005). The public is entitled to rely on Net2Phone's representation – regardless of its motives – that "the present invention" has a "central server."

Net2Phone misunderstands the law in arguing that "the Patent Examiner [would have] insist[ed] on . . . 'central server' language in the claims" if the invention required a central server. Net2Phone Response at 13. By definition, argument-based prosecution disclaimer is *not* reflected in the claim language. *See, e.g., Ormco Corp. v. Align Tech., Inc.*, – F.3d –, 2007 WL 2404723, at *7 (Fed. Cir. Aug. 24, 2007) (prosecution history limited claim to "automatic control" even

though "claim language [did] not expressly recite automatic control").

4. *Verizon*'s Construction Of "Server" Does Not Control Here

Again ignoring its own invention, Net2Phone argues that the construction of "server" in someone else's invention, as discussed in the *Verizon* case, "settles" the meaning of "server" here. Net2Phone Response at 2-3, 15. *Verizon*, however, involved an unrelated patent with a different intrinsic record. "[T]he manner in which the term is used in the patent may dictate a definition that differs from the definition that would be given to the same term in a different patent with a different specification or prosecution history." *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1318 (Fed. Cir. 2005) (rejecting construction based on interpretation of same term in different patent in prior case). *Verizon* considered whether the "server" in Verizon's patents must perform an "enhanced name translation service." *Verizon*, 2007 WL 2781869, at *4. It did not address whether the server was dedicated and central nor, obviously, the construction of Net2Phone's claims. *See id.* at *6.

Also, *Verizon* defined "server" based on a dictionary published seven years *after* the filing date of Net2Phone's patents. *Id.* In contrast, the IEEE dictionary from 1995, specifically for computer networking such as the technology at issue here, defines a server as "dedicated." Skype Opening at 17. Technical dictionaries *from the relevant time* are favored in construing claim terms. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 1318 (Fed. Cir. 2005). In any event, the dictionary in

Verizon actually supports Skype's construction. It states that a client/server system has "two distinct components: a 'front-end' client and a 'back-end' server. . . . [T]he server portion . . . [has] the centralized, multiuser functionality." Heinrich Reply Decl., Ex. K at 102 (emphasis added). In contrast, in defining a peer-to-peer system, it provides that "[u]nlike a client/server architecture, a dedicated file server is not required." *Id.* at 397 (emphasis added). Net2Phone, of course, told the PTO that its invention utilizes a client/server architecture. *Id.*, Ex. C.

B. The "List" Stored in "Memory" is a Centralized Database

Making the same errors as it does with "server," Net2Phone contends that the "list" or "database" stored in the server's "memory" does not refer to a centralized database retained in the server's dedicated storage medium. Net2Phone Response at 16-19. Net2Phone contends that the claims do "not specify how or where that list is maintained." *Id.* at 16. For all of the reasons discussed above, Net2Phone again attempts to construe the claims in a vacuum, ignoring the intrinsic record.

The specification discloses a dedicated server that "includes . . . a memory such as a database," and all users "automatically transmit" their IP addresses to that server, which "then stores the[] addresses in the database." '704 patent, 3:18-25, 5:25-30. Thus, the database maintained by the server is centralized; the same database has the entire list of all the clients currently connected to the network.

Selectively quoting the prosecution history, Net2Phone argues that "in

summarizing the invention Net2Phone stated that the server 'maintains a compilation or list of entries,'" but did not limit "how or where the 'list' is to be stored." Net2Phone Response at 18-19. Net2Phone's complete statement to the PTO belies its own argument. Net2Phone told the PTO: "The dedicated address directory server maintains a compilation or list of entries." Heinrich Decl. (Docket No. 98), Ex. F ('704 history, 3/1/99 amendment) at SKYPE-N2P00290653. As Net2Phone itself recognizes, this statement was a summary of its *invention*. Net2Phone cannot erase in litigation the record it created during prosecution.

In a further retreat from the intrinsic record, Net2Phone refers to claim 32 of the '704 patent as a "server-less" claim. Net2Phone Response at 19. However, the record is clear that a dedicated server must perform the claimed step of "maintaining an Internet accessible list." Indeed, during prosecution of the '704 patent, the examiner found that claim 32 (application claim 54), along with the other asserted claims of the patent, is "drawn to a system, apparatus, and method for querying a *database server*." Heinrich Reply Decl., Ex. L ('704 history, 8/3/98 office action) at N2P-100-00000292. Net2Phone then ratified the examiner's classification. *Id.*, Ex. M ('704 history, 8/14/98 Response) at N2P-100-00000291.

Net2Phone repeatedly charges that Skype is "trying to limit the claims to the preferred embodiment." *See, e.g.*, Net2Phone Response at 19. This is not true. Just as *Phillips* provides, Skype's constructions track the "actual invention" as described

in the intrinsic record. *See, e.g., Ormco Corp.*, 2007 WL 2404723 at *7 ("We are mindful of the precaution that we must not incorporate into the claims limitations only found in the specification. We are not doing so here . . . . We are interpreting the claims in light of the specification. The situation here involves specifications that in all respects tell us what the claims mean, buttressed by statements made during prosecution in order to overcome a rejection over prior art.").

C. The Caller Receives The Callee's Network Address Only If The Callee Is Currently Connected To The Network

Claim 1 of the '704 patent includes the limitation, "program code for receiving a network protocol address of the second process from the server, when the second process is connected to the computer network." First, "is connected" refers to the present tense: the callee is *currently* connected. Net2Phone recognized as much in its Opening Brief. Summarizing the invention, Net2Phone explained that "[if] Alice . . . wishes to call Bob, . . . Alice's computer contacts the server, which checks to see whether Bob *is on-line* and to determine which IP address is *currently assigned* to Bob's computer." Net2Phone Opening at 4.

In its Response Brief, however, Net2Phone changes positions. Net2Phone now argues that "is connected" means "*relatively* currently connected." Net2Phone Response at 25. This makes no sense. Alice only cares if Bob *is* connected, so that she can communicate with him. If Bob is *not* currently connected, Alice doesn't care if Bob was last on-line minutes ago or weeks ago. Net2Phone's construction

would also render the claim indefinite. How "*relatively* currently connected" must the callee be – is it a matter of minutes, or hours, or weeks? And "relative" to what? The patent provides no objective standard of any degree of "relative" connection, and Net2Phone suggests none. *See, e.g.*, *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005) ("Some objective standard must be provided in order to allow the public to determine the scope of the claimed invention.").

Net2Phone also contradicts the specification, which states that the server "determine[s] whether the callee is logged-in by finding any stored information . . . indicating that the callee is active and on-line." '704 patent, 5:55-60 (emphasis added); *see also* Skype Opening at 19. Net2Phone grasps at the phrase "relatively current" in the specification. Net2Phone Response at 25 (citing '704 patent, 5:42-43). That passage, however, refers to information in the server's *database* being relatively current. The claim language, in contrast, is directed to the callee's actual *status*, i.e., whether or not the callee is currently connected to the network.

Second, in several claims, the server provides the caller with the callee's address "*when* the [callee] is connected to the computer network." *See, e.g.*, '704 patent, claim 1. Net2Phone contends that "when" does not mean "only if." But under Net2Phone's interpretation, the caller could receive an IP address even when the callee is *not* connected. This would render the "when" clause meaningless. This is also not what Net2Phone invented. The specification states, "*[i]f* the callee

is active and on-line, . . . the IP address of the callee is retrieved from the database and sent to the first processing unit. . . [But] [i]f the callee is not on-line . . . the connection server sends an OFF-LINE signal or message." '704 patent, 5:60-6:4.

D. Program Code is a Means-Plus-Function Claim

Net2Phone has failed to identify sufficiently definite structure for "program code" to avoid treating it as a means-plus-function term under 35 U.S.C. § 112/6. Net2Phone's contention that "program code" refers to "computer instructions and data definitions" *highlights* the lack of sufficient structure. "Instructions" are synonymous with "commands," which the Federal Circuit has held is "so broad as to give little indication of the particular structure used," and hence subject to § 112/6. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1376 (Fed. Cir. 2003).

E. User Interface Claims

Net2Phone argues that the "first communication line" is not a simulated telephone line and can be used to establish calls in the same way as a "SND" button. Net2Phone Response at 27-28. But the claim itself makes clear that merely selecting a "first communication line" does not suffice to establish a call. Instead, a user must "associate" the communication line with an icon representing the callee. '704 patent, cl. 10. The specification also clearly distinguishes communication lines from call initiation buttons such as "SND." *See* Skype Opening at 27-29.

As for the term "associating," Net2Phone's interpretation as "clicking,

dragging *or* dropping" is nonsensical and unsupported. Any computer user knows that it is impossible to drag without first clicking. More importantly, the patents explicitly define "associated" as "dragged and dropped." *See* '469 patent, 28:1. Net2Phone admits as much, but it then attempts to recharacterize its definition as "one possible reading," pointing to the phrase "double clicking" at '704 patent, 9:26-32. Net2Phone Response at 30. But the phrase "double clicking" refers to "double clicking on an entry in a directory." '704 patent, 9:26-32. It has nothing to do with associating a communication line with a callee, which is done by "dragging [an] icon [representing a callee] to any one of line icons L1-L4." *Id.* at 9:37-42.

III. Conclusion

Claim constructions must stay true to what the inventors actually invented and described in the intrinsic record. Otherwise, "a zone of uncertainty" is created, stifling lawful competition. Net2Phone, like all patentees, must be held to the indelible public record it created in its efforts to secure the Asserted Patents. Skype respectfully requests that its proposed constructions (Appendix 1) be adopted.

Dated: October 19, 2007

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Exhibit W

Net2Phone Reply Brief on Claim Construction

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UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

NET2PHONE, INC., **Plaintiff,** **vs.** **EBAY, INC., SKYPE TECHNOLOGIES SA, SKYPE, INC. and JOHN DOES 1-10,** **Defendants.** **AND RELATED COUNTERCLAIM.**	**Civil Action No. 06-2469-KSH-PS** **PLAINTIFF NET2PHONE, INC.'S REPLY BRIEF ON CLAIM CONSTRUCTION**

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

INDEX OF EXHIBITS

Exhibit No.	Description
1	F. Stroud, *Consummate Winsock Apps*, Boardwatch (Feb. 1996)
2	U.S. Patent No. 6,108,704 (the "'704 patent")
3	Amendment ('704 prosecution) (Dec. 2, 1997)
4	Amendment ('704 prosecution) (Mar. 1, 1999)
5	U.S. Patent No. 6,513,066 (the "'066 patent")
6	U.S. Patent No. 6,701,365 (the "'365 patent")
7	U.S. Patent No. 6,131,121 (the "'121 patent")
8	U.S. Patent No. 6,009,469 (the "'469 patent")
9	Amendment ('469 prosecution) (Oct. 20, 1998)
10	Amendment ('121 prosecution) (Sept. 7, 1999)
11	A. Bruce Carlson, *Communication Systems: An Introduction to Signals and Noise in Electrical Communication* (3d ed. 1986) (excerpt)
12	Proposed Agenda for Examiner Interview ('365 prosecution) (Sept. 20, 2002)
13	Robert M. Blissmer, *Introducing Computers: Concepts, Systems and Applications* (1994) (excerpt)
14	Preliminary Amendment (Pros. of U.S. Patent No. 6,226,678) (May 14, 1999)
15	Appeal Brief (Pros. of U.S. Patent No. 6,829,645) (Apr. 16, 2004)
16	*Dictionary of Computer Words: An A to Z Guide of Today's Computers* (Houghton Mifflin 1995) (excerpt)
17	Amendment ('469 prosecution) (Mar. 3, 1999)
18	Letter from A. Heinrich to N. Boyle (Jul. 2, 2007)
19	Excerpts of the Deposition of Shane Mattaway (Sept. 10, 2007)

20	Excerpts of the Deposition of Glenn Hutton (Aug. 24, 2007)
21	Excerpts of the Deposition of Craig Strickland (Sept. 19, 2007)
22	Skype Guide for Network Administrators
23	Amendment ('365 prosecution) (Apr. 19, 2002)
24	U.S. Patent No. 5,159,592 to Perkins
25	U.S. Patent No. 5,953,350 to Higgins
26	Office Action ('365 prosecution) (Jun. 20, 2002)
27	Amendment ('365 prosecution) (Oct. 8, 2002)
28	Excerpts of the American Heritage Dictionary of the English Language (Houghton Mifflin 4th ed. 2000)
29	Excerpts of Webster's Unabridged Dictionary (Random House 2d ed. 2001)
30*	Memorandum by Glenn Hutton (Feb. 22, 1995)
31*	Office Action ('469 prosecution) (Apr. 20, 1998)
32*	Excerpts of Harry Max & Taylor Ray, *Skype: The Definitive Guide* (2006)
33*	Additional Excerpts of the Deposition of Craig Strickland (Sept. 19, 2007)

N.B. An asterisk denotes a new exhibit. New Net2Phone exhibits cited herein are attached to the accompanying Third Declaration of Kevin Hardy, and the preexisting exhibit numbers correspond to the Declaration of Kevin Hardy, filed with Net2Phone's Opening Claim Construction Brief, and the Second Declaration of Kevin Hardy, filed with Net2Phone's Response Brief on Claim Construction.

INTRODUCTION

Through their continuing reliance on carefully chosen extrinsic evidence and snippets from the prosecution history, and their treatment of the claim language and specifications as mere afterthoughts in the claim construction analysis, defendants are attempting to lead the Court down a road to legal error. Defendants would have the Court limit the term "server" to a single computer, even though the Federal Circuit has just held that the ordinary meaning of the very same term in very similar patents is "a computer system, such as one *or more* computers and/or devices, that provides services to other computer systems over a network." *Verizon Servs. Corp. v. Vonage Holdings Corp.*, No. 07-1240, --- F.3d ---, 2007 WL 2781869, at *6 (Fed. Cir. Sept. 26, 2007) (emphasis added). That construction is strikingly similar to the one proposed by Net2Phone in its opening brief (filed a month before the *Vonage* decision): "a computer system, or collection of coordinated computer systems, running software that fulfills requests from, or provides a service to, other processes." Net2Phone's Open. Br. at 21-22. And it is perfectly consistent with the specifications of the patents-in-suit, which expressly describe the "server" functionality as being provided by one *or more* computers. *See* '704 patent, col. 4, ll. 33-43 (describing use "of either shared or dedicated hardware" and of a "plurality" of processors) (Ex. 2); '121 patent, col. 21, l. 57 ("more than one global server may be utilized") (Ex. 7).

Notwithstanding the ordinary meaning of "server," the clarity of the claim language, and the plain language of the specifications, defendants argue that Net2Phone limited the term "server" to a single computer during prosecution of the patents. Of course, it is not until page 13 of their response brief that defendants actually mention the heavy burden they face in making such an argument. In the words of the Federal Circuit, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is *less useful* for

claim construction purposes." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc) (emphasis added). As a result, a very high standard must be met before the prosecution history can be controlling as to the meaning of a claim term—any alleged statement of disavowal must "be both clear and unmistakable." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). Given that standard and the tenor of defendants' briefs, one might think that Net2Phone repeatedly told the Patent Office that the server referenced in its patents could only be implemented using a single computer. But despite 60 pages of briefing and hundreds of pages of prosecution history, defendants cannot point to a single instance in which Net2Phone *ever* made such a statement. Indeed, Net2Phone never said anything during prosecution about the hardware used to implement the server referenced in its claims. There is no basis for the Court to construe "server" as having anything other than its plain and ordinary meaning.

As Net2Phone explained to the Patent Office during prosecution of the patents, its invention "solve[d] a fundamental problem associated with the Internet," namely "How can a global network user be located if he/she has no permanent network address?" Amend. at 14 ('704 pros.) (Mar. 1, 1999) (Ex. 4). Net2Phone discovered an elegant and ingenious solution to that problem and applied for patents. The two pieces of alleged prior art cited by defendants in their response brief—products known as PowWow and Internet Phone—do nothing to undermine the patentability of Net2Phone's invention. PowWow is not prior art at all; it post-dates Net2Phone's invention, which was made in February 1995. *See* Ex. 30 (memorandum corroborating the invention). And Internet Phone was specifically considered by the Patent Office during prosecution of the patents, and the PTO agreed that Net2Phone's inventions were patentable notwithstanding it. *See Impax Labs., Inc. v. Aventis Pharm. Inc.*, 468 F.3d 1366, 1378 (Fed. Cir. 2006) ("When the prior art was before the examiner during prosecution of the

application, there is a particularly heavy burden in establishing invalidity."); *see also* Office Action ('469 pros.) (Apr. 20, 1998) (Ex. 31) (citing Internet Phone); Amend. ('469 pros.) (Oct. 20, 1998) (Ex. 9) (responding to same). Defendants' characterization of Net2Phone as a "follower" and not a "pioneer" is belied by the record. The Patent Office awarded Net2Phone the five patents-in-suit, and the claims of those patents plainly cover defendants' VoIP system. The only way defendants can avoid infringement is to convince this Court to betray the claim construction principles articulated by the en banc Federal Circuit in *Phillips* and essentially rewrite the claims. The Court should decline defendants' invitation to do so.

ARGUMENT

I. The Term "Server" Is Not Limited to a Single Computer.

Although defendants claim that theirs is a server-less system, that is not so. Defendants' system relies on servers—known as supernodes—without which its system would not function. As explained in a book endorsed by the then-CEO of Skype, "[s]upernodes act as temporary directory index servers," and they maintain a "decentralized directory search index." Harry Max & Taylor Ray, *Skype: The Definitive Guide* 199-201 (2006) (Ex. 32). The issue is not whether defendants' system has servers; it clearly does. The issue is whether the claims cover the *type* of servers that defendants' use. That is why defendants go to such lengths to try to limit the term server to a single computer providing a centralized directory service. Their response brief tries to justify that construction in three ways: (1) with reference to isolated statements made by Net2Phone in the prosecution history; (2) with reference to hand-picked extrinsic evidence, such as a declaration from their consultant; and (3) by relying on the preferred embodiment described in the '704 patent. None of defendants' theories supports the claim construction they seek.

1. Defendants' response brief rehashes the same prosecution disclaimer arguments that filled their opening brief. Defendants' theory is that Net2Phone clearly and unmistakably

limited the term "server" to a single computer when it used the terms "dedicated" and "central" to describe the server used in its invention. (Of course, Net2Phone also repeatedly used the term "global" to describe the server, but defendants never mention that. *See* Amend. at 8 ('469 pros.) (Mar. 3, 1999) (Ex. 17).) The fundamental flaw in defendants' theory is that Net2Phone *never once* during prosecution of the patents stated that the server could only be embodied in a single computer. As Net2Phone explained in its response brief (at 10-16), Net2Phone's references to a "dedicated server," or a "global server," or on the one occasion, a "central server," said nothing about how the server could or should be implemented (whether using one computer or many).

Indeed, defendants never explain in their briefs why the terms "dedicated server," "global server," or "central server" necessarily mean that the server must be contained within a single computer. Yet that is defendants' burden. "There is no 'clear and unmistakable' disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term." *SanDisk Corp. v. Memorex Prods., Inc.* 415 F.3d 1278, 1287 (Fed. Cir. 2005). And that is plainly true here. Net2Phone has explained in detail how the statements on which defendants rely, at a minimum, are subject to more than one interpretation and how, in context, it is clear that they say nothing to limit the term "server" to a single computer. *See* Net2Phone Resp. Br. at 10-16.

The patents-in-suit describe, among other things, a connection server—comprising a single computer or a coordinated group of computers—that receives IP addresses which have been assigned to client processes, and also receives queries for those addresses from other processes. During prosecution of the patents, Net2Phone used the terms "dedicated," "central," and "global" to describe the server, meaning that it is both dependable and common, *i.e.*, it is a point (or points) from which all callers in the system can obtain the requested information about

any prospective callee. Those terms do not clearly and unmistakably define how that server is to be configured, let alone unambiguously state that the server can only be implemented using a single computer. *See* Exs. 28, 29 (providing standard dictionary definitions of "dedicated," "central" and "global"). Indeed, the prior art patent (Perkins) that Net2Phone was addressing when it used the term "central" specifically states that its key server—the "global gateway"—could be implemented using "[a] single global gateway" or "several global gateways." U.S. Patent No. 5,159,592, col. 8, ll. 47-56 (Ex. 24). Thus, there was no reason at all for Net2Phone to distinguish *its* invention by limiting it to a single computer. As explained in Net2Phone's response brief (at 11-13), Net2Phone distinguished the Perkins gateway with reference to two features (the assignment of IP addresses, which is not done by Net2Phone's server, and the receipt of queries for those addresses, which is done by Net2Phone's server) that had nothing to do with how the server is implemented. There was no disclaimer.

2. Apparently recognizing that the phrase "dedicated server" does not indicate anything about whether the server comprises one computer or more, defendants switch gears in their response brief (*see* pp. 8-9) and argue that it was actually Net2Phone's use of the phrase "client/server system," and not "dedicated server," that demonstrates that Net2Phone limited the server in its claims to a single computer. Once again, however, defendants cannot point to any actual statement by Net2Phone limiting "server" to a single computer. Instead, they point to *extrinsic* evidence in the form of a dictionary definition and the opinion of their consultant to cobble together an argument that Net2Phone's reference to a "client/server system" clearly, unmistakably and unambiguously limited "server" to a single computer. Defendants are wrong.

Defendants' expert, David Johnson, an associate professor of computer science, opines in his declaration that "a person of ordinary skill in the art in 1995 would have understood

'client/server system' to refer to a network architecture where one dedicated, high-powered computer located at a static network address, called a server, provides a centralized service, such as a common database service, for many less powerful computers connected to it, called clients." Johnson Decl. ¶ 16. In support of that statement, Professor Johnson cites nothing—not a treatise, textbook, dictionary definition, or publication he authored—to substantiate his claim. Nor, significantly, does Professor Johnson indicate whether others in his field might construe the phrase "client/server system" differently. (Even if Professor Johnson might disagree, if more than one interpretation is possible, there was no disclaimer.) Professor Johnson then goes on—in direct contravention of the law of claim construction—to rely on the preferred embodiment described in the '704 patent to justify his decision to adopt defendants' construction.

As explained in the accompanying Declaration of Professor Larry L. Peterson, Chair of Computer Science and Professor at Princeton University, Professor Johnson's opinions are incorrect. The terms "server," "client/server," "dedicated server," or "central server" do not dictate the *type* of computer, or computers, that comprise the server. Peterson Decl. ¶¶ 15-19, 23, 39-42. There could be one computer, or many, and the computer could be very powerful, or no more powerful than a typical personal computer. *Id.* ¶¶ 16-30. The defining feature of a "server" is the fact that it provides a service to clients; the type or number of computers that are involved is immaterial. *Id.* ¶ 16. That is how the term "server" is understood today, and even more importantly, that is how it was understood in the mid-1990s, when the patents-in-suit were being applied for and prosecuted, as reflected in a leading text, *Computer Networks*, co-authored by Professor Peterson at that time. *Id.* ¶¶ 15-16. By that time, persons of skill in the art of computer networking had shifted away from an understanding of "server," such as that reflected in the dictionary definition cited by defendants (Resp. Br. at 8), which tied the concept of server

functionality with a specific type of hardware. *Id.* ¶ 16. By the mid-1990s, the mere fact that a system had clients and servers did not tell a person of ordinary skill in the art what hardware would necessarily be used to implement that system, as Professor Johnson contends. *Id.* ¶¶ 19, 22-23. A server in a "client/server system" can be implemented in any number of ways, from one to multiple computers, in one location or many, and from a single large computer acting as the server to a network of personal computers. *Id.* ¶¶ 15-43.

3. Professor Peterson's understanding of "server" as referring to one or more computers running software that provides a service to clients (without reference to any specific hardware implementation) is reflected in the patents themselves. The '704 patent specifically explains that the "illustrative embodiment of the disclosed point-to-point Internet protocol and system is presented as having individual functional blocks, which may include functional blocks labeled as 'processor' and 'processing unit.'" '704 patent, col. 4, ll. 33-37 (Ex. 2). The "connection server" is another "functional block" described in the '704 patent. *See id.*, Fig. 1. The patent then specifically explains that the "functions represented by these blocks may be provided through the use of either *shared or dedicated hardware*." *Id.*, col. 4, ll. 37-39 (emphasis added). The entire point of that paragraph is to underscore that it is the *functionality* of the "blocks" that is significant, not the hardware used to provide that functionality. Thus, to limit the claims of the patents to the "illustrative embodiment," in which the server is embodied in a single machine, would not only be contrary to the Federal Circuit's admonitions not to limit the claims to the preferred embodiment, *see, e.g.*, *Phillips*, 415 F.3d at 1323, but also would be inconsistent with the plain language of the specification itself.

Further confirming the fact that the "server" described in Net2Phone's patents can be implemented in a variety of different ways, the '121 patent specifically describes and illustrates a

"global server," which can be configured "as a single server apparatus" or utilizing "more than one global server." '121 patent, col. 21, ll. 45, 56-58 & Fig. 15C (Ex. 7). Recognizing that the language in the '121 patent is irreconcilably inconsistent with its proposed construction of "server" as limited to a single computer, defendants attempt to minimize the significance of the '121 patent. But the description of a multi-server embodiment of the server in the '121 patent is not new; it is simply another way of illustrating the same point that is made in the '704 patent regarding "shared or dedicated hardware." Thus, while defendants suggest that the '121 patent is somehow broader than the '704 patent with respect to the "server," that is wrong. To be sure, there is additional language in the '121 patent, but as far as the server is concerned, the '121 patent simply amplifies the concepts that are clearly and expressly laid out in the '704 patent itself. The patents *all* describe and claim the same "server." Thus, the term "server" means the same thing in the '704 patent as it does in the '121 patent (even defendants are not proposing that the same term be defined differently in the two related patents)—a computer system, or collection of coordinated computer systems, running software that fulfills requests from, or provides a service to, other processes. (While defendants suggest that this proposed construction is vague, it is virtually identical to the construction endorsed by the Federal Circuit in *Vonage*.) The reason that defendants are so troubled by the '121 patent is not because it adds something new to the concept of the server, but because it highlights in no uncertain terms—indeed, it graphically illustrates a server implementation using multiple computers (Fig. 15C)—that defendants' construction of "server" as limited to a single computer cannot be correct.

In summary, the patents' claims require only a "server," not any particular type of server. And as both the Federal Circuit and Professor Peterson have explained, the ordinary meaning of "server" to persons of skill in the art is not limited to any particular server implementation; the

term encompasses any computer, or group of computers, running software that provides a service to other processes. Indeed, that is exactly how the server is described in the specifications of the patents-in-suit. The only possible way then for "server" to be limited to a single computer is if Net2Phone clearly and unmistakably, using language that is only amenable to a single interpretation, told the Patent Office that its claims were so limited. It never did. The most Net2Phone said about its server was that it was "dedicated," "global," or "central," terms that say nothing about whether the server is configured using one computer or multiple computers, but rather speak to the role that the server plays in Net2Phone's invention. Accordingly, consistent with the strong presumption reflected in the law of claim construction, the term "server" should be accorded its plain and ordinary meaning, as Net2Phone has proposed.

II. Additional Claim Construction Issues

While space does not permit us to address every claim term in dispute in this reply brief, a handful of terms merit mention here.

A. The "Database" and "List" Claims Are Not Limited to a "A Dedicated Storage Medium for Retaining a Centralized Database."

Defendants would have the Court construe the claims that recite a "database," "directory database," "Internet accessible list," or "compilation of entries" as limited to "maintaining, on a *dedicated* storage medium, an Internet accessible *centralized database*." Once again relying on the preferred embodiment described in the '704 patent, defendants claim that Net2Phone only described a "single, precise manner for storing network address information" and that the claims are necessarily limited to that method. Defs. Resp. Br. at 18 (quotation omitted). But that, of course, is no basis for limiting the claims. *Phillips*, 415 F.3d at 1323. And Net2Phone never clearly and unmistakably told the Patent Office that the "database," "list" or "compilation of entries" had to be maintained in a "centralized database" or a "dedicated storage medium."

These claims do not specify where or how the "database," "list" or "compilation of entries" is to be stored, and defendants' efforts to read such additional limitations into the claims should be rejected. *See SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351, 1357-59 (Fed. Cir. 2006) (rejecting attempt to read a limitation into a claim because the Court was "powerless to rewrite the claims and must construe the language of the claim at issue based on the words used").

B. The "Identifier" Must Be a Distinguishing Identifier.

Defendants acknowledge in their brief that the identifier referenced in the claims must allow the system to distinguish among the on-line entities, and they then criticize Net2Phone's construction (a "distinguishing name") on the ground that it does not include, for example, an e-mail address, number, symbol, etc. Defendants misunderstood Net2Phone's proposed construction. Net2Phone did not attempt to limit the type of identifier to a proper name—any name, number, symbol, or the like would suffice, provided that it distinguishes among entities.

C. The Court Should Construe the "Computer Data Signal" Claims.

Defendants agree with Net2Phone's proposed construction of this phrase, but argue that the claims are invalid in light of a recent Federal Circuit decision, *In re Nuijten*, No. 06-1371, 2007 WL 2728397 (Fed. Cir. Sept. 20, 2007). Even assuming the applicability of that decision to these claims, Net2Phone respectfully disagrees with the divided panel opinion in that case, and we understand that papers will be filed seeking panel rehearing and/or rehearing en banc. To avoid the prospect of briefing these claim construction issues again, Net2Phone respectfully submits that the Court should construe the claims at this time (particularly because the parties do not disagree) and address any validity issues if and when the *Nuijten* decision becomes final.

D. "Computer Usable Medium" Requires a Tangible Medium.

Upon reflection, and in light of defendants' response brief, Net2Phone agrees that "computer usable medium" requires a tangible medium for storing computer data.

E. Defendants' Proposed Construction of "Point to Point" Is Inconsistent with the Intrinsic Record.

It is ironic, to say the least, that defendants take issue with Net2Phone's proposed construction of "point to point," which comes almost verbatim from a submission that Net2Phone made to the Patent Office. After devoting the bulk of their briefs to the question of prosecution disclaimer, defendants ignore the one time that Net2Phone clearly did tell the Patent Office exactly what it meant by a claim term. During an appeal in the Patent Office, Net2Phone stated that "point to point" means communications between two processes "without the need to consult any other intermediary (e.g., gateways or nameservers) in order to ascertain the address of the first processing unit." Appeal Br. at 3 (Apr. 16, 2004) (Ex. 15). Net2Phone specifically distinguished a prior art patent which disclosed a "system in which communication is enabled by intermediary servers and gateways which route data to mobile units," and which converts non-IP communications into IP-based communications, as *not* point to point communications over a computer network. *Id.* at 13. Net2Phone's construction of "point to point" tracks the language it used in the Patent Office—it means communications between two processes over a computer network that are not intermediated by a connection server, gateway or similar device.

The term does not mean, as defendants suggest (Resp. Br. at 24), a "direct" communication link between two processes, at least in the way defendants are using the term "direct." As explained in Net2Phone's opening brief (at p. 29), aside from the fact that it is not intermediated by a connection server, gateway or similar device, the patents do not specify the path of the communication through the network, since such communications are almost always channeled through multiple relays, routers, and other devices. As co-inventor Craig Strickland explained, a "point to point" communication goes through the Internet and may "go through multiple hops from one router to another, up to a backbone, from one ISP through to another,

down the chain of their equipment . . . ." Strickland Dep. at 209:11-14 (Ex. 33). In other words, as long as the communication is not routed through a connection server, gateway or similar device, the communication is "point to point," irrespective of how it is routed over the Internet.

CONCLUSION

For the reasons set forth herein, as well as those previously stated, Net2Phone respectfully submits that Net2Phone's proposed claim constructions should be adopted.

Respectfully submitted,

Dated: October 19, 2007

/s/ Joseph P. LaSala

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	Shane D. Mattaway
Filer:	Edwin Taylor/Carrie Boccaccini
Attorney Docket Number:	03801.G184

Filed as Large Entity

ex parte reexam Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Request for ex parte reexamination	1812	1	2520	2520
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
		Total in USD ($)		**2520**

Electronic Acknowledgement Receipt

EFS ID:	4843068
Application Number:	90010422
International Application Number:	
Confirmation Number:	6565
Title of Invention:	Graphic User Interface For Internet Telephony Application
First Named Inventor/Applicant Name:	Shane D. Mattaway
Customer Number:	08791
Filer:	Edwin Taylor/Carrie Boccaccini
Filer Authorized By:	Edwin Taylor
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