Appeal No. 2011-1403

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

01 COMMUNIQUE LABORATORY, INC.

Plaintiff-Appellant,

v.

LOGMEIN, INC.

Defendant-Appellee,

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA IN CASE NO. 1:10-CV-01007, SENIOR JUDGE CLAUDE M. HILTON

BRIEF OF PLAINTIFF-APPELLANT 01 COMMUNIQUE LABORATORY, INC.

Thomas H. Shunk
Thomas D. Warren
Christina J. Moser
BAKER HOSTETLER LLP
PNC Building, Suite 3200
1900 E. 9th Street
Cleveland, OH 44114

Kenneth J. Sheehan
William C. Bergmann
A. Neal Seth
BAKER HOSTETLER LLP
Washington Square, Suite 1100
1050 Connecticut Avenue, NW
Washington, DC 20036

CERTIFICATE OF INTEREST

Counsel for appellant 01 Communique Laboratory, Inc. certifies the following:

1. The full name of every party or amicus represented by me is:

01 Communique Laboratory, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

01 Communique Laboratory, Inc.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Baker Hostetler LLP: Thomas H. Shunk, Thomas D. Warren, Christina J. Moser, Kenneth J. Sheehan, William C. Bergmann, A. Neal Seth, Katherine L. McKnight, Bukola T. Aina, Adam J. Smith, Elizabeth A. Scully, Annette K. Kwok (no longer with firm).

7/25/2011

Thomas H. Shunk /ANS

Signature of counsel

Thomas H. Shunk

Printed name of counsel

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

CASES

STATUTES

OTHER AUTHORITIES

STATEMENT OF RELATED CASES

Within the meaning of Federal Circuit Rule 47.5, counsel identifies *01 Communique Laboratory, Inc., v. Citrix Systems, Inc., and Citrix Online, LLC*, Case No. 1:06-CV-0253 (Lioi, J.), which is pending in U.S. District Court for the Northern District of Ohio (the "Ohio Litigation").

JURISDICTIONAL STATEMENT

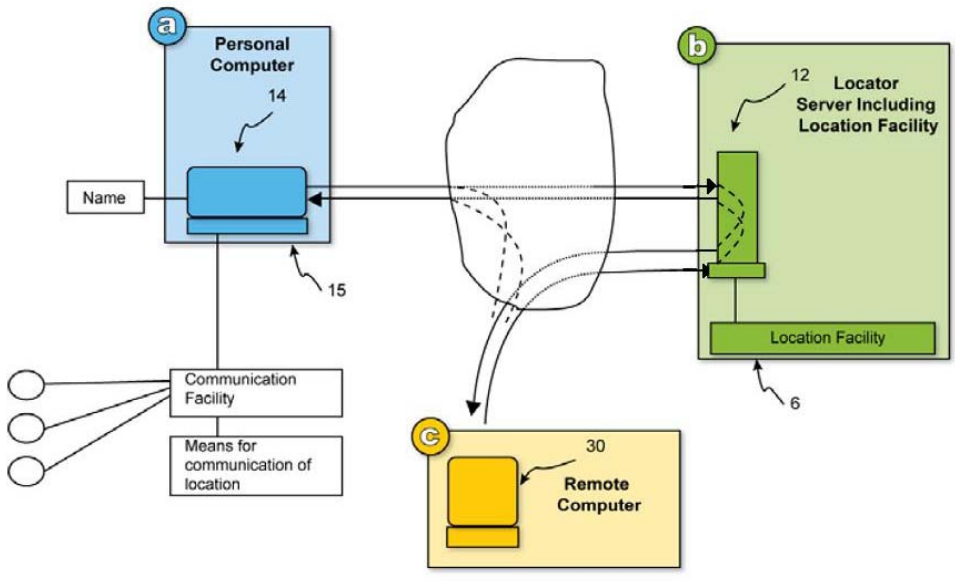
The district court had subject matter jurisdiction under 28 U.S.C. § 1338(a). The district court entered final judgment as to summary judgment and claim construction on May 4, 2011. (A2001-2018; A3001). 01 Communique Laboratory, Inc., ("01 Communique") timely filed a notice of appeal on May 13, 2011. (A27001-03). This Court has jurisdiction under 28 U.S.C. § 1295(a).

PRELIMINARY STATEMENT

On September 8, 2010, 01 Communique filed suit against defendant LogMeIn, Inc. ("LogMeIn"), for infringement of U.S. Patent No. 6,928,479 ("the '479 Patent"), which relates to technology that enables one computer to remotely access another computer over the Internet. On May 4, 2011, based on its claim construction, the district court found no infringement and granted summary judgment to LogMeIn. 01 Communique appeals the claim construction and grant of summary judgment.

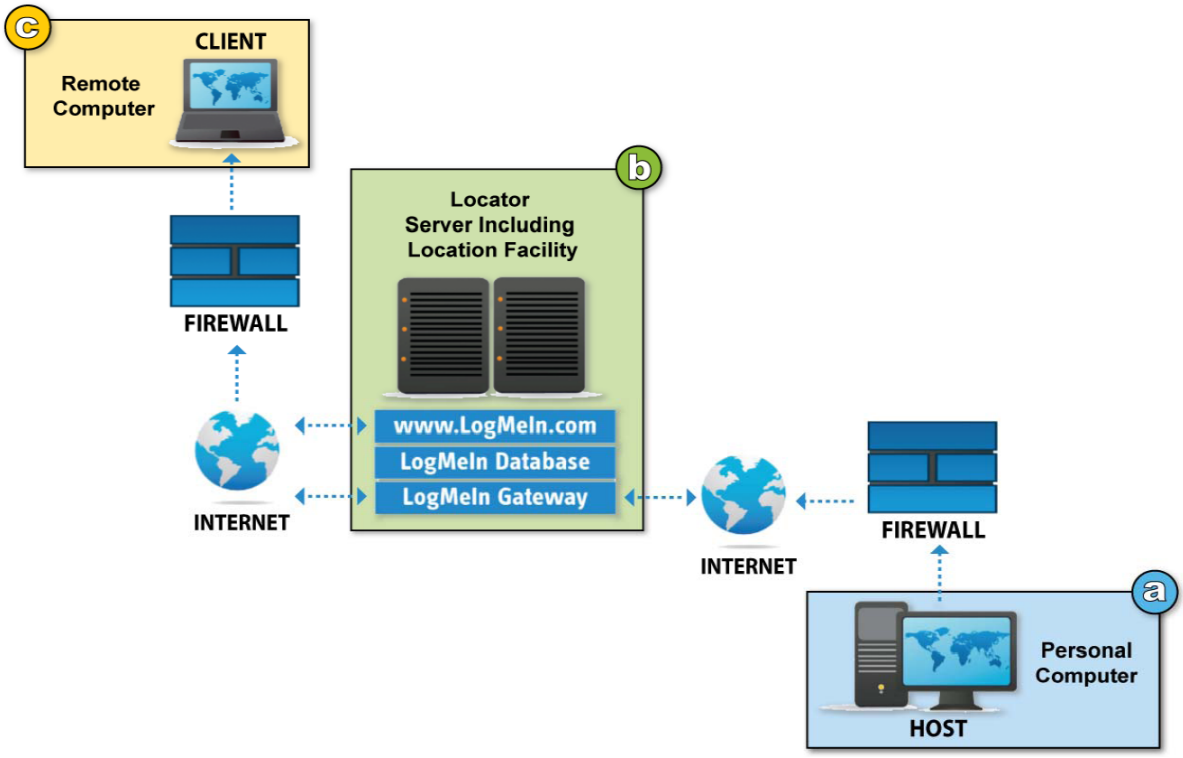
The ‘479 Patent describes, among other things, a system consisting of three components: (a) a personal or host computer, (b) a locator server, and (c) a remote or client computer. The “location facility,” the software running on the locator server computer, creates a communication channel between the personal and remote computers, thereby permitting a user at the remote computer to access the personal computer by using the locator server as an intermediary. (A4019 at col. 11, lines 1-15).

Figure 1 from the ‘479 Patent illustrates the manner in which the location facility software running on the locator server computer creates a communication channel between the remote and host computers (colored boxes, letters and descriptions added to identify the three components):



The patent specification explicitly teaches that the locator server may "comprise one or more computers," (A4016 at col. 5, lines 24-25) and the "location facility" software running on the locator server "can be sub-divided into separate facilities." (A4018 at col. 10, lines 11-16).

LogMeIn's system has the same structure as the system claimed by the '479 Patent, as the following drawing from LogMeIn's own technical documents reveals (A9006-07) (colored boxes with identifying letters and descriptions added):



Nevertheless, the district court found that there was no infringement. In construing the claim term "location facility," the court held that "[d]uring the re-examination of the '479 Patent, 01[Communique] clearly and [un]ambiguously *disclaimed* having more than one device perform the functions of the location

facility." (A2009) (emphasis in original). The court expressed this "disclaimer" in its definition of "location facility" by construing "location facility" as "a component of a locator server computer that *itself*. . . creates communication sessions. . . ." (A2008) (emphasis added). The court held that LogMeIn distributes different pieces of the "location facility" software over several servers, and that "by distributing the functions of the 'location facility' among different devices," it did not infringe the '479 Patent. (A2012-13).

The district court clearly erred. The '479 Patent explicitly teaches that the functionality of the location facility software may be spread over several pieces of software, and that this software may run on multiple computers. Indeed, were it otherwise, circumvention of the patent would be as easy as splitting a computer program into two, and parking each piece on a different server.

In the reexamination of the '479 Patent, 01 Communique's expert explained that its patent was distinguishable from the prior art because the location facility "itself" creates the communication channel, as opposed to the prior art, in which the communication channel was created by software on one of the other two claimed components, the personal computer and remote computer. Based on the nature of the invention—the locator server software's ability to create the communication channel instead of the personal computer or the remote computer—the validity of the patent's claims were upheld.

The district court, in its claim construction, read the reexamination declaration of 01's expert to mean that "one *device* [had to] perform the functions of the location facility." (A2009) (emphasis added). But nothing in the prosecution history suggests this construction. To the contrary, the location facility is software, and the specification expressly teaches that the locator server may be distributed over multiple computers, and the location facility software running on it may be broken up into multiple parts on those computers.

The district court's claim construction was in error and its grant of summary judgment must be reversed. Indeed, given proper construction of this claim term, it is readily apparent that LogMeIn's system infringes on the '479 Patent, and this Court would be within its authority to grant summary judgment to 01 Communique that LogMeIn's system practices the claimed "location facility." At a minimum, there are issues of fact with respect to infringement, and the district court's decision should be reversed and remanded for trial.

ISSUES PRESENTED

1. Did the district court err in granting summary judgment to LogMeIn based on a construction of the term "location facility" that was inconsistent with the teachings of the specification, given that the reexamination history of the '479 Patent did not require or suggest that construction?

2. Did the district court err in granting summary judgment to LogMeIn in light of expert testimony on 01 Communique's behalf that the accused system infringed the claims of the patent even accepting, *arguendo*, the district court's construction of the term "location facility"?

STATEMENT OF THE CASE

On February 1, 2006, 01 Communique filed suit in the Northern District of Ohio against Citrix Systems, Inc. and Citrix Online LLC (collectively "Citrix"). That case proceeded through the close of discovery and claim construction. In that case, the court construed "location facility"—the term at issue in the present appeal—to mean "computer software associated with the locator server." On December 7, 2007, Citrix filed a request for *inter partes* reexamination.

On July 6, 2010, the Patent Office confirmed the patentability of all of the '479 Patent's claims. Citrix appealed that confirmation to the Board of Patent Appeals and Interferences, and the appeal remains pending.

On September 8, 2010, 01 Communique filed the present case in the Eastern District of Virginia against LogMeIn and Dell. 01 Communique and Dell settled, but litigation with LogMeIn continued.

On January 31, 2011, LogMeIn filed the motion for claim construction and summary judgment that is the subject of the present appeal. The district court granted LogMeIn's motion from the bench and, on May 4, 2011, issued its written

order and memorandum opinion. On May 13, 2011, 01 Communique timely filed a notice of appeal.

STATEMENT OF FACTS

A. The ‘479 Patent

The ‘479 Patent was developed to solve the need of regular computer users to access information on a home or office personal computer while traveling in situations where their computer was not directly accessible from the Internet. (A7002). Many office and most home users of the Internet are assigned a transitory address (a “dynamic IP address”) by their local area network or internet service provider, i.e., an IP address that the assigning entity may change from time to time. (A7002). The nature of dynamic IP addresses, along with security “firewalls” and Network Address Translation (“NAT”) devices—commonplace features on home computers with access to the Internet today but only emerging at the time of the invention of the ‘479 Patent—presented significant difficulties for those wishing to access their home or office computers while on the road. (A7002).

These difficulties included the need to locate a computer on the Internet with a dynamic IP address and configure highly technical features of a NAT and firewall to allow access to the computer. (A7002). The capability to configure such an arrangement was, and still is, well beyond the skills of the average

computer user. (A9007). Moreover, making such configuration changes made the home or office computer vulnerable to unauthorized access by third parties. (A9004-05). Small businesses lacking a large computer network system also needed new ways for their employees to access their work computers while traveling. (A7002).

The solution developed by 01 Communique included having the home or office personal computer send an outgoing communication to a server computer with a known location on the Internet. (A7002-03). As a result, the locator server could open a communication channel to the home or office computer unimpeded by firewalls, routers and other network devices. (A7002-03). A user is typically unable to directly access a home or office computer while on the road because firewalls, routers, and other network devices often block access. By using the invention of the ‘479 patent, however, a user can access the locator server and thereby request that it create a communication channel between the home or office computer and the remote computer being used by the user while traveling. (A7002-03).

The invention described in the ‘479 Patent brought remote computer access to the average user without the need to hire a network administrator or information technology professional to create the access, and without compromising the

security of the personal computer by, e.g., opening a port in the firewall. (A7002-03).

01 Communique filed a patent application covering this technology in Canada in May 2000, and then in the United States in June 2000. (A4001; A7003). 01 Communique was the first to market with a service based on this technology in November 2000, and has been continuously providing this service, called I'm InTouch, since that time. (A7003). The '479 Patent was granted in 2005. (A4001).

For purposes of this appeal, representative Claim 1 of the '479 patent describes the three-component system of (a) personal computer, (b) locator server computer, and (c) remote computer. The locator server computer acts as the "intermediary between the personal computer and the remote computer" (A4019 at col. 11, lines 1-3) through its location facility software:

> 1. A system for providing access to a personal computer having a location on the Internet defined by a dynamic IP address from a remote computer, the system comprising:
>
> (a) a *personal computer* linked to the Internet, its location on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the personal computer being further linked to a data communication facility, the data communication facility being adapted to create and send a communication that includes a then current dynamic public IP address (publicly addressable) or dynamic LAN IP address (publicly un-addressable) of the personal computer;

(b) a *locator server* computer linked to the Internet, its location on the Internet being defined by a static IP address, and including a location facility for locating the personal computer; and

(c) a *remote computer* linked to the Internet, the remote computer including a communication facility, the communication facility being operable to create a request for communication with the personal computer, and send the request for communication to the locator server computer;

wherein the data communication facility includes data corresponding to the static IP address of the locator server computer, thereby enabling the data communication facility to create and send on an intermittent basis one or more communications to the locator server computer that include the then current dynamic public IP address or dynamic LAN IP address of the personal computer; and

wherein the locator server computer is operable to act as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of the request for communication with the personal computer from the remote computer, by determining the then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly (with a publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with a publicly un-addressable dynamic LAN IP address).

(A4018-19) (emphasis added).

The ‘479 Patent uses the term “locator server” to identify one hardware component of a three-component remote access system: (a) the “personal computer,” i.e., the computer to be accessed, (b) the “locator server computer” or “server computer,” and (c) the “remote computer,” i.e., the computer being used to

access the "personal computer." (A4018 at col. 10, lines 41-60). Though the preferred embodiment refers to each of these as a single "computer," the specification teaches that the locator server computer could be spread over several interconnected computers and still be within the scope of the claimed invention. (*See* A4016 at col. 5, lines 24-25 (locator server computer "may comprise one or more computers"); A4014 at col. 2, lines 40-42 ("More than one interconnected computer or process may co-operate to provide a single [communication] portal.")).

Claim 1 of the '479 Patent further describes how software—called "facilities" in the specification—running on the three hardware components operates to achieve the claimed system for remote computer access. Claim 1 matches each claimed hardware component to a corresponding software "facility." Thus, the personal computer component has software running on it that is called the "data communication facility," the locator server component has software running on it that is called the "location facility," and the remote computer component has software running on it called the "communication facility." (A4018 at col. 10, lines 41-60). Just as with the hardware components, the specification teaches that the software program "facilities" can be "sub-divided into separate facilities" and still be within the scope of the claimed invention. (A4018 at col. 10, lines 11-16).

B. The Reexamination History Of The '479 Patent Does Not Support The Alleged Disclaimer Found By The District Court

Following Citrix's request for *inter partes* reexamination of the '479 Patent, the Patent Office initially rejected all of the claims except claim 7. (A6009). After 01 Communique filed two declarations of its expert, Dr. Gregory Ganger, the Patent Office removed its claim rejections and confirmed the patentability of all of the '479 Patent claims. (A20001).

Dr. Ganger explained that what distinguishes the '479 Patent from the prior art is that the software on the locator server computer creates the communication channel, as opposed to it being created by the personal or remote computer. As Dr. Ganger explained, "[e]ach of the independent '479 Patent claims includes the requirements of 'communication sessions being *created by* the location facility. . . by. . . *creating* a communication channel between the remote computer and the personal computer' and 'the location facility being operable *to create* such a communication channel.'" (A18002). "One of ordinary skill in the art would not view this language, and particularly its repeated use of forms of 'create,'" Dr. Ganger further explained, "to be satisfied by an alleged location facility that is simply used by some other component that creates the communication channel—rather, one of ordinary skill in the art would understand it to require that the location facility, itself, create the communication channel." (A18002).

Dr. Ganger further explained that in the prior art, the communication channel had been created not by software on a locator server, but by software running on either the remote or personal computer. "[T]he NetMeeting software running on the connecting computer creates the communication channel . . . certainly not the ILS server." (A18009). With respect to another example of prior art, Dr. Ganger explained that "[a]s explicitly stated in both NAT P2P references, it is the peer computers (i.e., the alleged remote and personal computers) that create communication channels between one another, not any alleged location facility of a locator server[.]" (A18015). 01 Communique explained that the asserted locator servers in those systems "only provide[] information to the personal and/or remote computer so that the personal and remote computers can create a communication channel with each other." (A19007).

01 Communique also explained in its response how the '479 Patent was distinguished from the prior art because the location facility, not software on the remote or personal computer, creates the communication channel:

> Thus, as required by the language of claim 1, it is the location facility of the locator server computer that creates the communication channel between the personal computer and the remote computer. Each of the independent claims of the '479 Patent include the same requirement. '479 Patent, col. 2, lines 34-37 and 53-58; col. 13, lines 12-14, 26-32, and 64-65; col. 14, lines 3-8, 35-37, and 44-49; see also Second Ganger Decl. ¶¶ 5 & 6. As explained in the sections below addressing each of the individual references, several of the applied references describe systems in which the personal and/or remote computers, not

> a locator server computer, create the communication channel between the personal and remote computers.

(A19006).

Through this evidence, 01 Communique successfully demonstrated to the Patent Office that the claimed invention was distinct from the prior art for at least the reason that the communication channel is created by the location facility running on the locator server, not by software on either the personal computer or remote computer. The Examiner concluded in the Right to Appeal Notice:

> Regarding to ILS and NetMeeting references, the declarant particularly points out that ILS and NetMeeting references do not teach the claimed limitation "the location facility creates a communication channel between the remote computer and the personal computer," which is required by the claims of the '479 Patent. The Examiner agrees because the communication channel is created by the application software NetMeeting after the personal computer has been located by the internet locator server (i.e., ILS).

(A20007). The Examiner made similar statements with respect to other prior art references as well. (A20007).

Thus, the reexamination arguments centered on whether the prior art software that creates the communication channel is analogous to a "location facility" found on a locator server, or whether prior art communication channels were created by software facilities residing on prior art components analogous to the personal and/or remote computers. The number of devices that make up the locator server computer, or over which the location facility can be distributed, was

not relevant to the issue addressed in the statement relied on by the district court as a disclaimer.

Accordingly, there was no clear, unmistakable, and unambiguous disclaimer of the teachings of the specification that the "facilities can be sub-divided into separate facilities" and that the locator server "may comprise one or more computers, as is well known." (A4018 at col. 10, lines 15-16; A4016 at col. 5, lines 24-25).

C. The District Court Erroneously Construed Location Facility As A Single Component That Cannot Be Distributed Over Different Devices

In the Ohio Litigation, the district court construed "location facility" to mean "computer software associated with the locator server." (A8007). 01 Communique agreed that this was an appropriate claim construction and proposed it to the district court below, along with an alternate construction addressing the parties' dispute in the present action regarding whether the location facility can reside on multiple computers, *viz.*, "computer software associated with the locator server, which may comprise one or more computers." (A15006; A15027).

Nevertheless, the district court adopted the definition proposed by LogMeIn:

> [A] component of a locator server computer that itself: 1) creates communication sessions between a remote computer and personal computer; 2) receives a request for communication with the personal computer from the remote computer; 3) locates the personal computer (and "determines the then [current] location of the personal

> computer"); and 4) creates a communication channel between a remote computer and the personal computer.

(A2008).

The district court held that under this definition, LogMeIn's system did not infringe the '479 Patent because its locator server and location facility software were spread out over multiple devices. Accordingly, the district court concluded, no one "component of a locator server computer"—no one "device"—"itself" created the communication channel. (A2008l; A2013). In granting LogMeIn's motion for summary judgment, the district court found that "there is no *device* in LogMeIn's accused products" that performs all of the four functions enumerated in the claim construction. (A2013) (emphasis added).

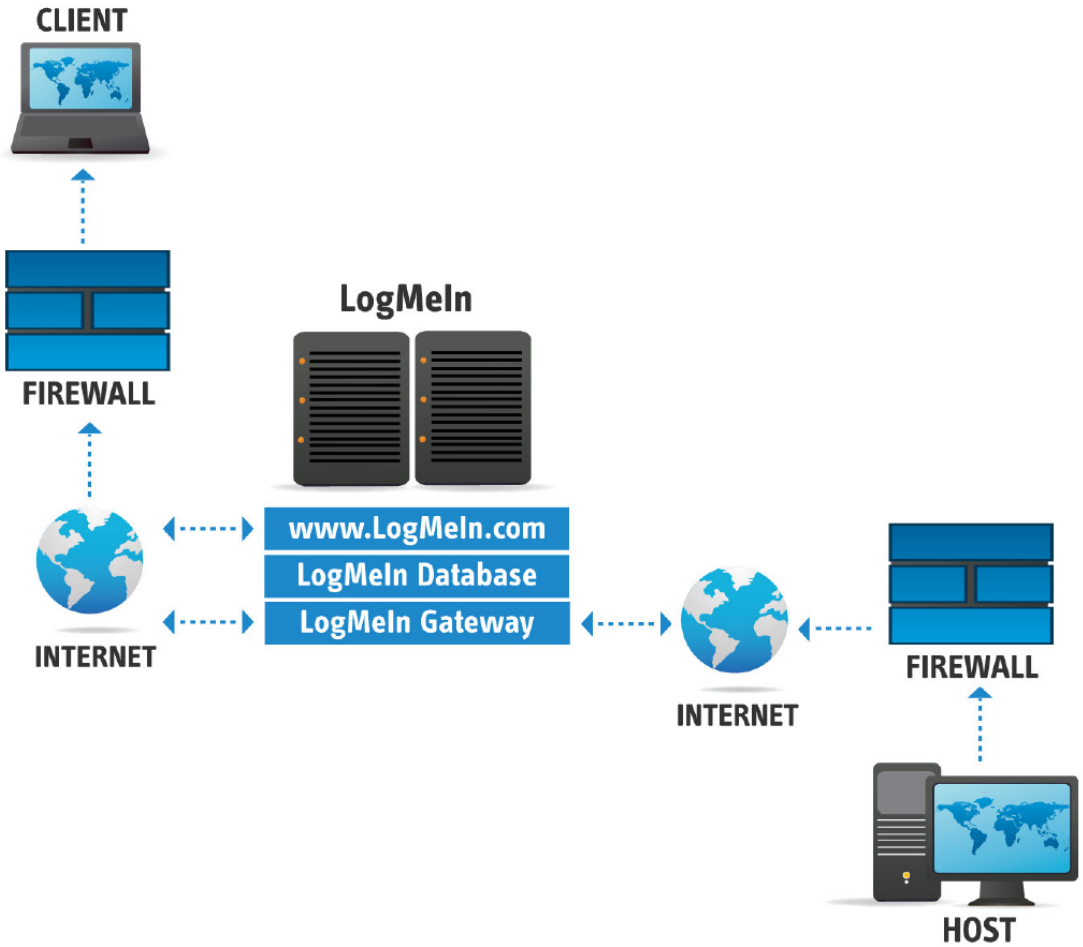
The district court's claim construction, and its grant of summary judgment, were in error. The district court erred in finding that (a) the location facility is a "component of a locator server computer" or a "device," the functionality of which cannot be distributed over several physical computers, and (b) that the location facility must "itself" perform the four functions set out in the court's definition.

In fact, the location facility is not a physical "component of a locator server computer"—it is not a "device" at all. Rather it is the *software running on the locator server*. The patent so provides, and nothing in the reexamination changes that fact. Moreover, the specification teaches, and the reexamination affirms, that

the location facility and the locator server may be distributed over multiple computers.

D. The Accused LogMeIn System

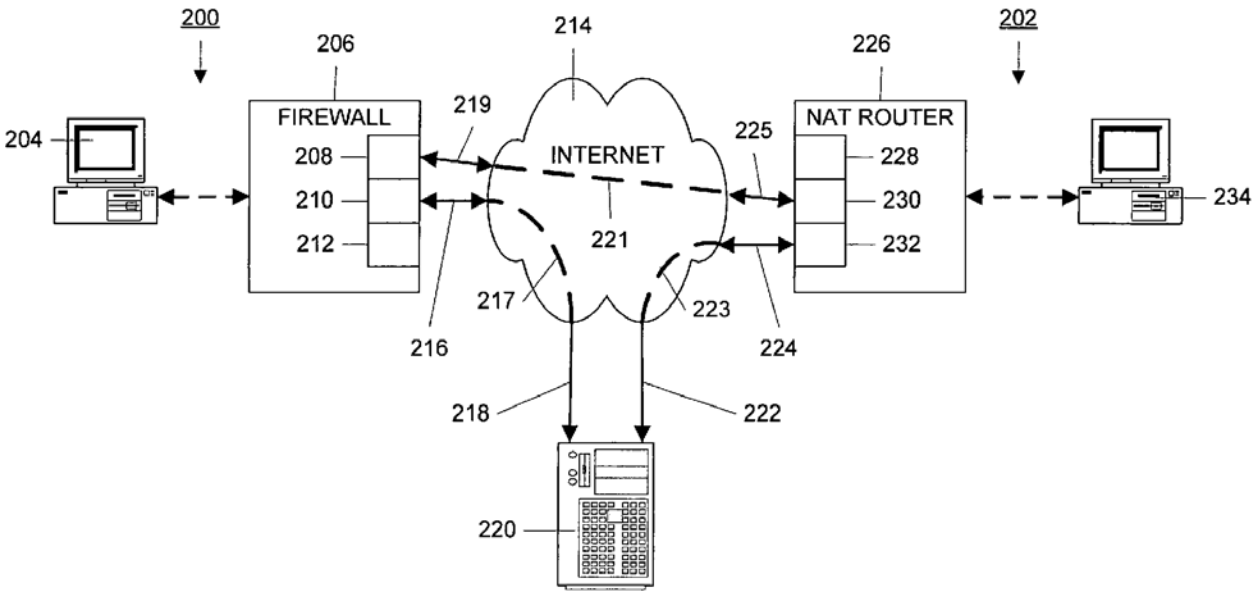
In deposition, LogMeIn's founder and Chief Technology Officer, Mr. Marton Anka, confirmed that the accused LogMeIn system is accurately represented in the following system overview diagram included in the 2009 version of the LogMeIn Security White Paper (A9006), and LogMeIn relied on this same drawing in its own briefing to the district court (A26003):



The LogMeIn system overview shows a remote laptop "client" seeking to access a personal computer "host" via an intermediary depicted as two server computers under which three functions are distributed—"www.LogMeIn.com," "LogMeIn Database," and "LogMeIn Gateway." (A23004). The function of the Web Servers corresponding to www.LogMeIn.com is to manage the remote client computer's request for access to the personal computer and display a user interface. (A23004). The function of the Database Servers is to track and manage individual users' personal account information. (A23004-05). The function of the Gateway Servers is to manage the connection between the remote client and the personal computer host (A23004). In reality, though LogMeIn depicts two computers in its diagram, it uses many computer servers at locations spanning the globe to perform the three listed functions. (A26003-04).

A patent application filed by LogMeIn in December 2004, well after the filing of the application that led to the '479 Patent, further illustrates LogMeIn's infringing product. LogMeIn filed this application for a patent on the same system at issue in this litigation, claiming an improvement on the way in which the system handled delay and bandwidth issues. (A10007 at col. 2, lines 34-48). In Figure 2 shown below, LogMeIn's patent, U.S. Patent No. 7,558,862 (the "'862 patent"), depicts a single server computer—indicated by reference numeral 220—facilitating remote access between the remote computer indicated by reference numeral 204,

and the personal computer indicated by reference numeral 234. (A10003). LogMeIn describes the server computer as a "gateway" that performs all of the functions associated with the three subcomponents of the central locator server computers in LogMeIn's system overview above. (A10009 at col. 5, line 55 – col. 6, line 17; A10011 at col. 9, lines 51-57).



LogMeIn has depicted the intermediary component that it operates—its "locator server" on which it runs its "location facility"—in several ways: (1) in its patent as a unitary "component" that performs the functions of the location facility of the '479 Patent; (2) in its system overview as being divided into three "sub-components" seemingly running on two hardware computers that participate with each other to perform the functions of the location facility of the '479 Patent; and, (3) in litigation as being divided into a large number of sub-components that participate together to perform the functions of the location facility of the '479

Patent (as well as other functions not relevant here). Regardless of these variations in description, the LogMeIn system has all the required elements of the claims of the ‘479 Patent.

SUMMARY OF THE ARGUMENT

The district court improperly granted summary judgment, relying upon an erroneous construction of, and application of the facts to, the claim term “location facility.” This Court can enter judgment for 01 Communique, but at the very least, the judgment should be reversed, and the issue of infringement remanded for trial, for three reasons:

The claim construction on which summary judgment was based erroneously required that the “location facility” must reside on a single device and that its functionality cannot be distributed over more than one server computer. The patent specification, however, explicitly teaches that the functionality of the location facility may be distributed over several physical computers, and no statement made by 01 Communique or its expert during reexamination contradicted this teaching.

The claim construction on which summary judgment was based erroneously required that the “location facility” perform four enumerated functions “itself,” even though the alleged reexamination disclaimer only related to one of those four functions. Further, nothing in the alleged reexamination disclaimer supports the

concept that all four enumerated functions must be performed on a single device "itself."

The district court erroneously concluded that there was no genuine issue of material fact, when, even accepting its flawed construction of "location facility" *arguendo*, substantial expert testimony supported a finding that the accused products contained all the limitations of the claims at issue.

ARGUMENT

I. Standard Of Review

This Court reviews the district court's claim construction *de novo*. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-55 (Fed. Cir. 1998) (en banc). Whether prosecution history disclaimer applies is also a legal question this Court reviews *de novo*. *Id.* at 1456. The district court's grant of summary judgment is reviewed without deference. *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1323 (Fed. Cir. 2009). In this Court's *de novo* review, it reapplies the standard applicable in the district court. *Rothe Dev. Corp. v. Dep't of Def.*, 545 F.3d 1023, 1035 (Fed. Cir. 2008).

II. The Claim Construction On Which Summary Judgment Was Based Erroneously Required That The "Location Facility" Must Reside On A Single Device And That Its Functionality Cannot Be Distributed Over More Than One Server Computer

The district court defined the term "location facility" as a "component of the locator server computer that itself" creates a communication channel (among other

things). In so construing the claim, the district court limited the scope of the '479 Patent to situations in which the location facility is resident on a single "device." Because LogMeIn distributes the software of its location facility over a number of physical computers, the district court found no infringement and granted summary judgment to LogMeIn.

The '479 Patent, however, teaches that the "location facility" is software that, as easily recognized by one of ordinary skill in the art, may be subdivided into several pieces of software, may be distributed over several physical computers, and nevertheless be within the scope of the claimed invention:

- The locator server computer (on which the "location facility" resides) "may comprise one or more computers, as is well known." (A4016 at col. 5, lines 24-25).
- "More than one interconnected computer or process may co-operate to provide a single [communication] 'portal'." (A4014 at col. 2, lines 40-42).
- "[A] number of computer program facilities are described in this invention as separate facilities for the sake of describing the invention. However, it should be understood that such facilities can be combined with other facilities comprising the present invention, or such facilities

can be sub-divided into separate facilities." (A4018 at col. 10, lines 11-16).

One exemplary embodiment provided in the specification discloses sub-facilities of a "location facility" distributed over two computers comprising a locator server computer:

> Also, by "portal" what is meant is generally understood as a means for facilitating communications from point A to B. More than one interconnected computer or process may co-operate to provide a single "portal". For example, a first computer or process comprising the "portal" may provide means for locating B at least once. Thereafter, communication between A and B may be facilitated through a second computer or process independent of the first computer or process.

(A4014 at col. 2, lines 39-46).

The specification of the '479 Patent is, in this way, explicit that the invention is meant to cover exactly the situation that the district court's claim construction rules out. The claimed "creating a communication channel" is one way of "facilitating communications." This Court has clearly established the primacy of the specification in construing patent claims. "Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc). Should the prosecution history conflict with the specification as to the proper meaning of a claim term, the specification trumps the prosecution history in assessing meaning. *Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1139 (Fed. Cir. 2003).

The district court, however, adopted a construction for "location facility" completely at odds with these teachings from the patent for the reason that 01 Communique's expert had declared, during reexamination, that the claimed invention differed from the prior art because the "location facility itself creates the communication channel," rather than "us[ing] some other component" to do so. (A2003). The district court held, based on Dr. Ganger's testimony, that "[d]uring re-examination of the '479 Patent, 01 [Communique] clearly and [un]ambiguously *disclaimed* having more than one device perform the functions of the location facility." (A2009) (emphasis in original).

But far from being a clear disclaimer of scope, Dr. Ganger's comments merely explained that the location facility running on the locator server—as distinct from software facilities running on one of the other components of the system, namely the personal computer or the remote computer—creates the communication channel. Dr. Ganger's comments did not say or suggest that the locator server must be limited to one physical computer.

When evaluating the prosecution history for any disclaimer, this Court has emphasized its requirement of a "clear" disclaimer by "declin[ing] to apply the doctrine of prosecution disclaimer where the alleged disavowal of claim scope is ambiguous." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003); *see also*, *Vanguard Prods. Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370,

1372 (Fed. Cir. 2000) (refusing to narrow the asserted claim based on prosecution disclaimer because "the prosecution history does not support [the infringer]'s argument that the Vanguard inventors 'expressly disclaimed' claim scope beyond products made by co-extrusion."); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1347 (Fed. Cir. 2001) (refusing to limit the ordinary meaning of the claim because the alleged disclaimer in the file wrapper was at best "inconclusive.").

The district court's construction of "location facility" as something incapable of being distributed over more than one locator server computer is contradicted by all intrinsic evidence. The patent specification expressly provides that the functionality of the location facility software can be sub-divided into several pieces of software and that the locator server on which the location facility runs can comprise several physical computers.

Additionally, during the course of this litigation, Dr. Ganger and 01 Communique's other expert, Dr. Andrew Grimshaw, explained that one of ordinary skill in the art understood the functionality of the locator server and the associated location facility claimed in the '479 Patent as capable of being distributed over a number of computers. (A16002-03; A17002-03). And LogMeIn's technical expert, Dr. Samrat Bhattacharjee, admitted at his deposition that it is possible to use multiple computers to act together as a single computer.

> Q: [C]ould you use multiple computers doing different operations to act as a single server in terms of what the client [computer] sees?

> A: It's possible for the client to seemingly interact with a single address whereas the actions are undertaken by more than one physical computer.

(A25004-05).

For any disclaimer to apply, 01 Communique must have made a clear and unambiguous statement as to that disclaimer consistent with the totality of the prosecution history. *Omega*, 334 F.3d at 1325-26 ("[W]e have thus consistently rejected prosecution statements too vague or ambiguous to qualify as a disavowal of claim scope. . . . Consequently, for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.").

Indeed, even if the district court believed that its own interpretation of Dr. Ganger's comments in his declaration were reasonable, 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 the proffered meaning of the disputed term. *See SanDisk Corp. v. Memorex Prods., Inc*., 415 F.3d 1278 (Fed. Cir. 2005); *Golight, Inc. v. Wal-Mart Stores, Inc*., 355 F.3d 1327, 1332 (Fed. Cir. 2004); *Cordis Corp. v. Medtronic AVE, Inc*., 339 F.3d 1352, 1359 (Fed. Cir. 2003). More pointedly, when the prosecution history appears in conflict with the specification, any ambiguity is resolved in favor of the specification. *Biogen*, 318

F.3d at 1139. Here, the prosecution history was clear that, to one of ordinary skill in the art, the location facility could be distributed over more than one computer.

In construing the claims at issue, the district court relied on an incorrect understanding of the prosecution history, a source that this Court has recognized is limited in usefulness in any case. *Phillips*, 415 F3d. at 1317 ("[B]ecause 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."); *Netcraft Corp. v. eBay, Inc*., 549 F.3d 1394, 1401-02 (Fed. Cir. 2008) ("We have considered the cited prosecution history and conclude that it lacks the clarity of the specification regarding the meaning of the claim terms at issue here, thus rendering it less useful for claim construction purposes.").

Because the district court erroneously construed "location facility," and because under the proper construction of that term LogMeIn infringed upon the '479 Patent, not only was summary judgment in LogMeIn's favor improper, but this Court can grant summary judgment in 01 Communique's favor that LogMeIn's system practices the claimed "location facility." *UMC Elecs. Co. v. United States*, 816 F.2d 647, 657 (Fed. Cir. 1987) (when the remaining issue is solely one of law, the appellate court need not remand but may itself resolve the issue); 28 U.S.C. § 2106 ("The Supreme Court or any other court of appellate

jurisdiction may . . . direct the entry of such appropriate judgment, decree, or order, or require such further proceedings to be had as may be just under the circumstances.")

III. The Claim Construction On Which Summary Judgment Was Based Erroneously Required That The "Location Facility" Perform Four Enumerated Functions "Itself"

The district court further construed "location facility" to require that the location facility "itself" performs the functions of (1) creating communication sessions, (2) receiving requests for communication, (3) locating a personal computer, and, (4) creating a communication channel. (A2008). Exemplary Claim 1 of the '479 Patent specifically requires that the locator server computer is "operable to act as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility[.]" (A4019 at col. 11, lines 1-5). It further states that this process occurs "in response to receipt of the request for communication with the personal computer from the remote computer, by determining the then current location of the personal computer and creating a communication channel between the remote computer and the personal computer[.]" (A4019 at col. 11, lines 6-10). Thus, at a minimum, the court's statement in its definition of four functions that relate to the location

facility is redundant and unnecessary, as those limitations are explicitly set out elsewhere in the claim.

Moreover, it is improper to add limitations to a claim absent a requirement from the specification of the patent or a clear, unmistakable and unambiguous disclaimer made during prosecution. *See, e.g.*, *Cybor*, 138 F.3d at 1458 (refusing to limit scope of claim language where prosecution history did not clearly call for a narrower definition); *Omega,* 334 F.3d at 1323-24 (vacating finding of non-infringement because the district court erred in claim construction where nothing in the specification or prosecution history showed a clear disavowal of claim scope).

The district court's analysis of Dr. Ganger's statements made during the reexamination could apply at most to function four, "creating a communication channel," as that function was the only one he stated the location facility must "itself" perform. It was error for the District Court to conclude that 01 Communique, through Dr. Ganger, had "clearly and unambiguously" disclaimed anything regarding the remaining three functions. Nor did 01 Communique or Dr. Ganger make any statement that supports the concept that all four enumerated functions must be performed on a single device. Thus, there was no basis for the district court to include such limitations in its construction of "location facility." *See, e.g.*, *Cybor,* 138 F.3d, at 1458 (refusing to limit scope of claim language where prosecution history did not clearly call for a narrower definition).

Accordingly, this Court should construe "location facility" as: "computer software associated with the locator server, which may comprise one or more computers." A construction of "locator facility" that merely repeats the limitations set out explicitly elsewhere in the claim is improper.

IV. Summary Judgment Was Improper Even Under The District Court's Flawed Construction Of "Location Facility," Because Substantial Expert Testimony Supported A Finding That The Accused Products Contained All Limitations Of The Claims At Issue

The district court did not resolve or even address significant material disputed facts in the case, including expert testimony regarding what it means for a software facility to "itself" perform certain stated functions. Even if the district court's claim construction were accepted, it would still be inappropriate to grant summary judgment in light of the material disputed facts.

Summary judgment is appropriate only when it has been shown "that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986). The burden of showing the absence of a genuine issue of material fact rests with the moving party. *Id.* A fact is material if its resolution will affect the outcome of the case. *Anderson v. Liberty Lobby*, 477 U.S. 242, 248 (1986). Moreover, the court must afford all reasonable inferences and construe the evidence in the light most favorable to the non-moving party. Summary judgment

is improper when the record contains "evidence on which the jury could reasonably find for the [non-moving party]." *Id.* at 252.

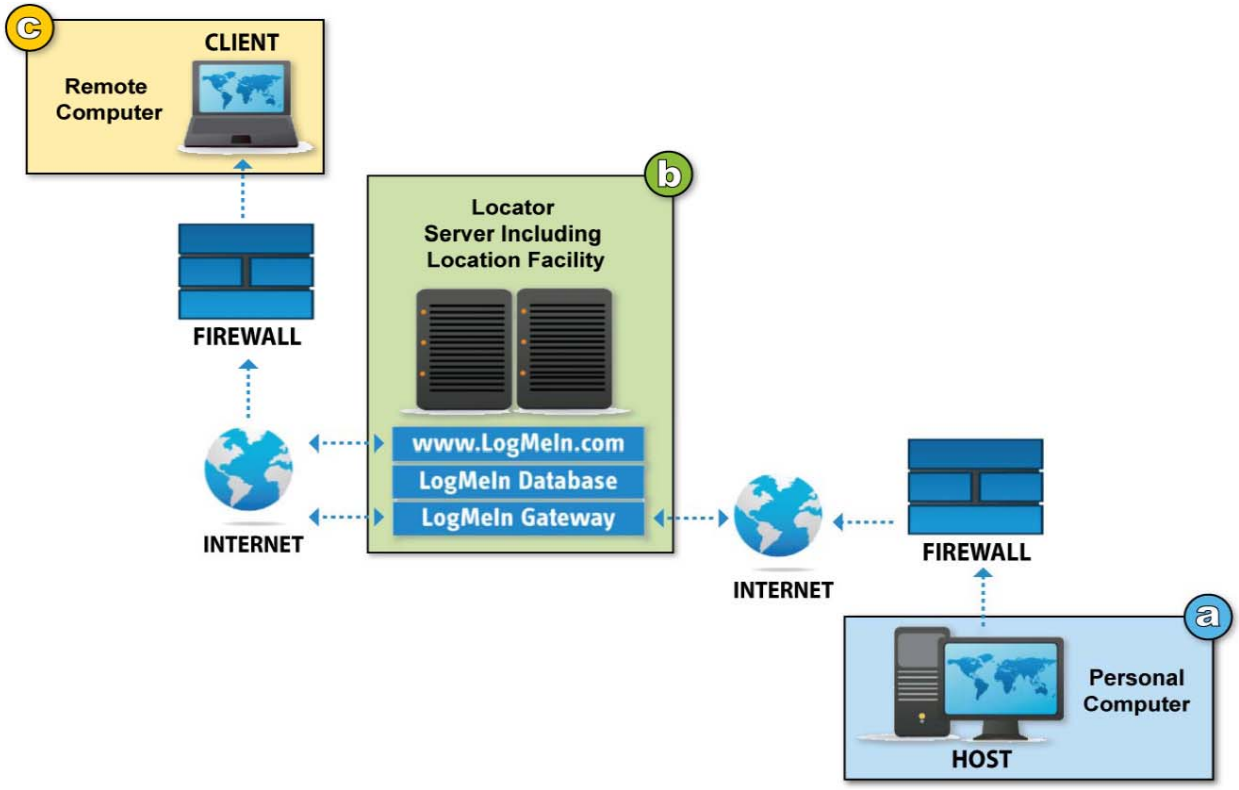
This Court will vacate a district court's grant of summary judgment where the district court disregarded or otherwise failed to consider and analyze the expert testimony of the non-moving party. *See, e.g.*, *Slip Track Sys. Inc. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1266 (Fed. Cir. 2002) ("[T]he district court should not have rejected the uncontroverted expert testimony and replaced it with its own view.").

A. 01 Communique Presented Substantial Evidence That All Elements Of Claim 1 Of The '479 Patent Are Present Within LogMeIn's Accused System

In granting summary judgment, the district court did not address, let alone resolve, the affidavit testimony of 01 Communique's expert Dr. Grimshaw. (A2001-18). Dr. Grimshaw explained how LogMeIn's accused products and services practice all of the elements of Claim 1 of the '479 Patent even under the district court's claim construction. (A24002-08).

Focusing on the element of the claim that the district court found to be absent in LogMeIn's system—a "location facility" that "itself" performed each of the four functions required in the district court's claim construction—
Dr. Grimshaw concluded that LogMeIn's own depiction of its system in its System Overview shows that its locator server is composed of three sub-components that

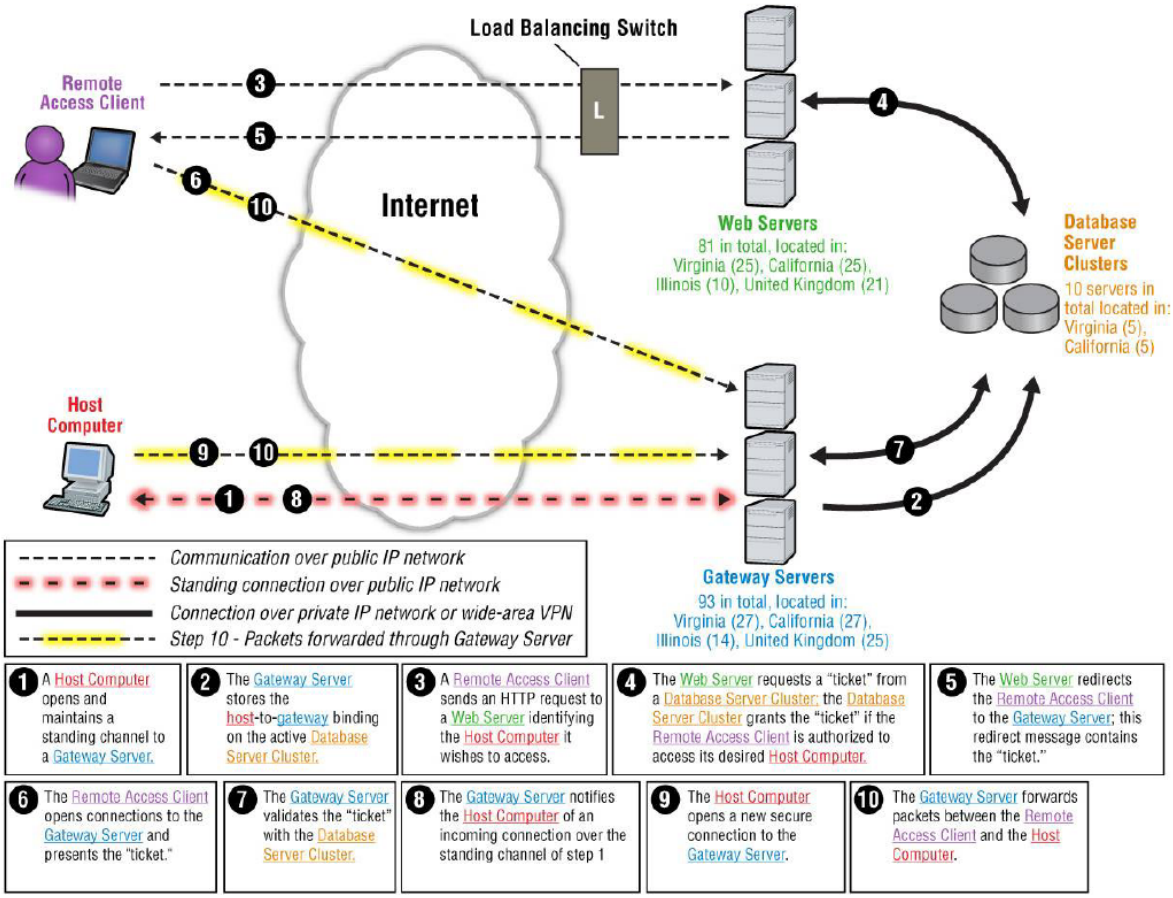
perform all four enumerated functions (colored blocks and designations added to point out the limitations):



When the "www.LogMeIn.com," "LogMeIn Database" and "LogMeIn Gateway" blocks are properly viewed as subcomponents of the location facility, the location facility is, indeed, "itself" creating the communication channel, and is not simply being used by one of the other two components, *i.e.*, the personal computer or the remote computer, to create the communication channel. (A24003-06).

LogMeIn's own depiction of its system, created for purposes of arguing the summary judgment motion, shows the claimed "location facility" functionality in

the three sub-components labeled the "Web Servers," "Data Server Clusters," and "Gateway Servers." (A26005).



The district court found that the number of physical computers on which LogMeIn runs its locations facility, and their geographic distribution, demonstrated that that the location facility did not "itself" perform the functions required by the claim construction. But Dr. Grimshaw testified that neither the number of physical computers (A24005), nor their geographic distribution, would negate LogMeIn's infringement. (A24005). To one of ordinary skill in the art, physical distance separating distributed components is irrelevant for the purpose of determining

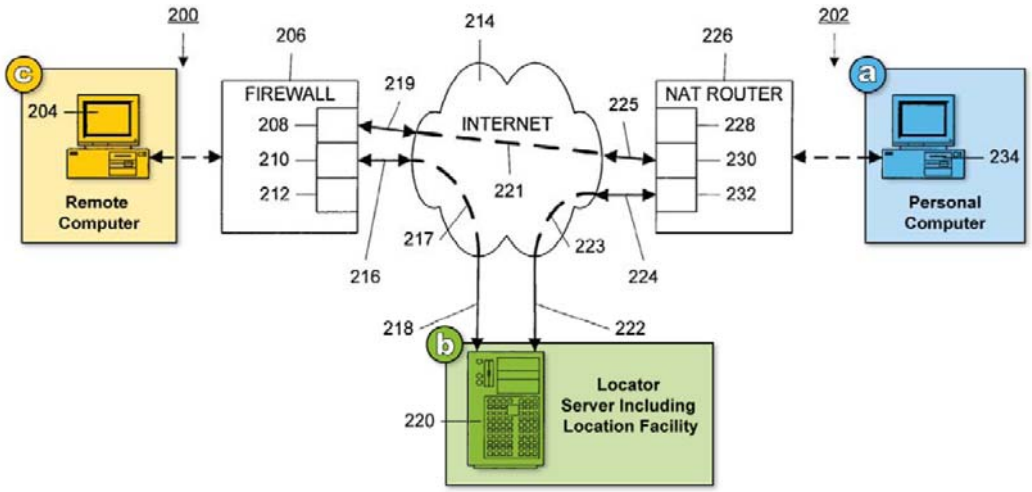
infringement. (A24005). The components are all connected, such as by the Internet in this case, to perform function(s) that are unrelated to and not dependant upon the actual physical or geographical location of the individual components themselves. Dr. Grimshaw explained that "[w]hen a system is distributed, the geographical space between them is generally functionally unimportant." (A24005). He explained further that if three computers with separate functionality are working together to solve a problem, "that problem is solved in the same way regardless of whether the three computers are all sitting networked on a desk next to each other, or whether the three computers are in three different countries communicating with each other over the Internet." (A24005).

Similarly, other circumstances cited by the district court, such as hardware having unique IP addresses and software written in different languages (A2013), are also irrelevant for the purpose of determining infringement. (A24004-08).

B. The Record Includes Substantial Evidence That LogMeIn Represented To The Patent Office That Its System Operates In The Same Way As The Claims Of The '479 Patent

The accused products and services are the commercial embodiment of LogMeIn's U.S. Patent No. 7,558,862. (A23007). Figure 2 of the LogMeIn patent is reproduced below with the components that correspond to the elements of the '479 Patent highlighted and labeled. Only a single server computer (indicated by reference numeral 220) is depicted as providing the remote access service between

the personal and remote computers. Dr. Grimshaw testified that one of ordinary skill in the art would understand LogMeIn's patent application as describing a server computer performing all of the functions associated with the sub-components of the locator server computer in LogMeIn's System Overview. (A10007 at col. 2, lines 3-22; A10009 at col. 5, line 52 – col. 6, line 12).



Thus, there was substantial evidence presented that LogMeIn admitted that the service it provides functions as if it were one large computer running software that, "itself," receives a request for connection, locates the host, and creates the communication channel and sessions between the host and the remote computer, as set forth in the District Court's claim construction. (A24002-08). In fact, in its patent, LogMeIn described the following functionality for the computer labeled as numeral 220:

establishing and maintaining a connection to the host computer;

> in response to a user at the client computer attempting to connect to the host computer, attempting to establish a connection to the client computer;
>
> upon establishing a communication path between the host computer and the client computer through the gateway, transferring commands and data through the communication path to initiate a remote access operation with respect to the host computer . . . .

(A10012 at col. 12, lines 16-67). This functionality covers all four of the functions required by the district court's claim construction of "location facility." (A2008). But the district court failed to consider Dr. Grimshaw's testimony on this issue, and failed to comment on the evidence of LogMeIn's admissions in its order.

Accordingly, even applying the District Court's claim construction, summary judgment of noninfringement was improper. A jury could properly find infringement pursuant to the district court's claim construction by understanding the words "component" and "itself" to mean that the "location facility" refers to pieces of software that run on the locator server's computers and perform the claimed functions.

CONCLUSION

For the foregoing reasons, the district court's grant of summary judgment of non-infringement should be vacated, the claim term "location facility" should be construed as "computer software associated with the locator server, which may comprise one or more computers," and this Court should either grant summary

judgment in 01 Communique's favor that LogMeIn's system practices the claimed "location facility," or alternatively this case should be remanded for trial.

Date: July 25, 2011

Respectfully submitted,

Thomas H. Shunk /ANS

BAKER HOSTETLER LLP

Thomas H. Shunk
Thomas D. Warren
PNC Building, Suite 3200
1900 E. 9th Street
Cleveland, Ohio 44114
(216) 861-7592

Kenneth J. Sheehan
William C. Bergmann
A. Neal Seth
Washington Square, Suite 1100
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5304
(202) 861-1500

CERTIFICATE OF SERVICE

I hereby certify that on July 25, 2011 two (2) copies of the foregoing Brief of Plaintiffs-Appellants 01 Communique Laboratory, Inc. were served by the means indicated to the person at the addresses listed:

Via First Class Mail:

Wayne L. Stoner
WilmerHale
60 State Street
Boston, MA 02109

Thomas H. Shunk /ANS

BAKER HOSTETLER LLP
Counsel for Plaintiffs-Appellants

CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B). This brief contains 7383 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii). This brief complies with the typeface requirements of the Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of appellate Procedure 32(a)(6). This brief has been prepared in a proportionally spaced typeface using Microsoft Office Word in 14-point Times New Roman font.

July 25, 2011

Thomas H. Shunk /ANS

BAKER & HOSTETLER LLP
Counsel for Plaintiffs-Appellants

ADDENDUM

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA

Alexandria Division

01 COMMUNIQUE LABORATORY, INC., Plaintiff,	)	
V.	)	Civil Action No. 1:10cv1007
LOGMEIN, INC., AND DELL, INC., Defendants.	)	

MEMORANDUM OPINION

This matter comes before the Court on Defendant LogMeIn, Inc.'s Motion for Claim Construction and Summary Judgment of Noninfringement.

Plaintiff 01 Communiqué Laboratory, Inc. ("01") is a Canadian company and the holder of U.S. Patent No. 6,928,479 ("the '479 Patent").

LogMeIn is a Delaware corporation headquartered in Massachusetts. Introducing its products beginning in 2004, LogMeIn has become a supplier of computer remote access products, having about an 18% market share.

The '479 Patent is directed to a system, method, or program for providing access to a personal computer from a remote computer over the internet. 01 has accused LogMeIn of infringing twenty claims

of the '479 Patent.

All of the asserted '479 claims require that the system, method, or program have a "locator server computer" that "includes a location facility."

The claims of the '479 Patent identify which functions the "location facility" is required to perform. The claims require that the location facility create communication sessions between the remote computer and personal computer. That location facility must receive the request for communication with the personal computer from the remote computer and must locate the personal computer and determine the then current location of the personal computer. The location facility also must create a communication channel between the remote computer and the personal computer.

In 2007, a third party (Citrix) requested re-examination of the '479 Patent. The PTO granted the re-examination and rejected all of the claims of the '479 Patent as unpatentable in light of the prior art. The PTO maintained this rejection despite 01's initial arguments, leaving 01 one final opportunity to overcome the rejection before the patent was held invalid.

To overcome this rejection, 01 submitted materials to the PTO, including sworn declarations of its expert, Dr. Gregory R. Ganger. In these sworn declarations, 01 and Dr. Ganger represented to the PTO that the '479 claims did not cover certain subject matter and

had a certain, limited meaning to persons skilled in the art. The purpose of these representations was to demonstrate to the PTO that the claims were different from the prior art and thus overcome rejection of the claims.

Specifically, 01 represented that the language of the claims requires that the location facility itself creates the communication channel and that one of ordinary skill in the art would not view this language to be satisfied by an alleged location facility that is simply used by some other component that creates the communication channel.

01 further represented to the PTO that one of ordinary skill in the art would not view these requirements of the '479 Patent claims to be satisfied if the location facility is only used by some other component that itself creates the communication channel. One of ordinary skill in the art would also not view these requirements to be satisfied if the location facility only enables or facilitates some other component that creates the communication channel. Assisting some other component that creates the communication channel is not the same as creating the communication channel. The '479 Patent claims require the location facility to do the latter. Thus, 01 asserted to the PTO that the location facility that must locate the personal computer must also itself create the communication channel between the remote computer and personal

computer and cannot merely "assist" some other component that does so.

01 represented this distinction to the PTO in an analogy to a telephone book. A telephone book that lists a number does not create a telephone call to the number, nor does an information service that gives a person a number to call create the call unless the operator himself or herself makes the connection.

01 used these representations about the limited scope of its claims to overcome the rejection of its claims by the PTO in light of the prior art.

To overcome rejections based on the "ILS" and "NetMeeting" prior art references, 01 represented to the PTO that all '479 Patent claims require that the location facility create a communication channel between the remote computer and the personal computer. It is not enough for the location facility to assist, enable, or be used by some other component (e.g., the remote computer) that creates the communication channel. The location facility must create it. And in the systems described in the ILS and NetMeeting references, there is no location facility that creates the required communication channel.

To overcome rejections based on the "NAT P2P references, 01 represented that in the systems described in the NAT P2P references, there is no location facility that creates a communication channel

between a remote computer and a personal computer, as required by all '479 Patent claims. Much like with the ILS and WINS servers discussed in earlier sections, this address/well-known server provides Internet Protocol ("IP") address information to peers, which then creates communication channels themselves, as needed—the address/well-known server does not create a communication channel, as required by all '479 Patent claims.

Based on these representations by 01, the PTO withdrew its rejections of the claims of the '479 Patent. The PTO in withdrawing the objection specifically found that regarding the ILS and NetMeeting references, the declarant particularly pointed out that the references do not teach the claim limitation "the location facility creates a communication channel between the remote computer and the personal computer," which is required by the claims of the '479 Patent. The Examiner agreed because the communication channel is created by the application software NetMeeting after the personal computer has been located by the internet locator server. The PTO deemed patentable the claims because the prior art did not teach or suggest that the location facility determines the then current location of the personal computer and creates a communication channel between the remote computer and the personal computer.

Claim construction is a matter of law for the Court. Markman v. Westview Instruments, Inc., 517 U.S. 370, 371-73 (1996). Claim

terms are generally given their "ordinary and customary meaning," defined as "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). Determining the ordinary and customary meaning of claim language requires that the Court look first to the intrinsic evidence—that is, the claim language itself, the specification, and the prosecution history as to how the patents came to be. Id. at 1314-17. Other evidence constitutes "extrinsic evidence." Id. at 1317.

"[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms." Id. at 1314. The language of the claims is of "*paramount importance* to claim construction." E-Pass Techs., Inc. v. 3Com Corp., 473 F.3d 1213, 1220 (Fed. Cir. 2007) (emphasis added). Although claim construction begins with the words of the claims, the claims do not stand alone, but rather are part of "a fully integrated written instrument." Phillips, 415 F.3d at 1315 (quoting Markman, 52 F.3d at 978). Accordingly, the "best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history." Id. Extrinsic evidence is "less significant" but nevertheless "useful" if used properly. Id. at 1317-19.

A patent's prosecution history, which includes re-examination proceedings, is important intrinsic evidence. See Proctor & Gamble

Co. v. Kraft Foods Global, Inc., 549 F.3d 842, 848 (Fed. Cir. 2008) (noting that the district court can "monitor the [re-examination] proceedings . . . to ascertain whether [the court's] construction of any of the claims has been impacted."). The prosecution history provides evidence of how the PTO and the inventor understood the patent and whether the inventor has limited the claimed invention during prosecution. Phillips, 415 F.3d at 1317.

"The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576 (Fed. Cir. 1995). In these instances, a narrower interpretation of claim scope can be imposed if a patentee "clearly and unambiguously" disclaims claim scope during prosecution. Voda v. Cordis Corp., 536 F.3d 1311, 1321 (Fed. Cir. 2008).

This doctrine "promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." Elbex Video, Ltd. v. Sensormatic Elec. Corp., 508 F.3d 1366, 1371 (Fed. Cir. 2007). The public notice function trumps any attempts by a patentee to broaden claims to recapture scope that was given to the public. See, e.g., SanDisk Corp. v. Memorex Prod., Inc., 415 F.3d 1278, 1286 (Fed. Cir. 2005) (noting that the doctrine "precludes patentees from recapturing through claim interpretation specific meanings disclaimed during

prosecution.").

This is especially true when these disclaimers obtain patents over the prior art that initially invalidated them. See, e.g., Bell Atlantic Network Servs., Inc. v. Covad Commc'ns Group, Inc., 262 F.3d 1258, 1273-74 (Fed. Cir. 2001). Patent monopolies may not be secured over information that was already known or obvious to the public. See, e.g., 35 U.S.C. §§ 102-103; KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 427-28 (2007). "Accordingly, where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution history disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender." Chimie, 402 F.3d at 1384 (quoting Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003)).

The proper construction of the term "location" facility is a component of a locator server computer that itself: 1) creates communication sessions between a remote computer and personal computer; 2) receives a request for communication with the personal computer from the remote computer; 3) locates the personal computer (and "determines the then location of the personal computer"); and 4) creates a communication channel between a remote computer and the personal computer.

This construction is consistent with the claim language, the specification, and the prosecution history.

The claims specify that the location facility itself performs multiple functions, including creating "communication sessions", "receiving the request for communication with the personal computer from the remote computer", "locating the personal computer", "determining the then current location of the personal computer", "and creating a communication channel between the remote computer and the personal computer".

This construction is consistent with the specification. For example, Figures 1-3 of the patent each show the "Location Facility" (numbered "6") as a single box, and Column 1, lines 50-53 say that the Location Facility is "for providing remote access to said Private Server 14 . . . ."

During the re-examination of the '479 Patent, 01 clearly and ambiguously *disclaimed* having more than one device perform the functions of the location facility. "[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution history disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender." Chimie, 402 F.3d at 1384.

Also, this construction is consistent with the prosecution history. It is exactly and narrowly what 01 told the PTO the location facility was, in an effort to avoid rejection based on the prior art:

- "[O]ne of ordinary skill in the art would understand it [the claim language] to require

> that the location facility, itself, creates the communication channel."
>
> • "One of ordinary skill in the art would not view this language . . . to be satisfied by an alleged location facility that is simply used by some other component that creates the communication channel."
>
> • "One of ordinary skill in the art would not view the 'create' requirements of the '479 Patent claims to be satisfied if the location facility is only 'used' by some other component that itself creates communication channel . . . ."
>
> • "One of ordinary skill in the art would also not view these 'create' requirements to be satisfied if the location facility only 'enables' or 'facilitates' some other component that creates the communication channel . . . ."
>
> • "Assisting some other component that creates the communication channel is not the same as creating the communication channel—the '479 Patent claims require the location facility to do the latter."

Summary judgment should enter when "there is no genuine issue as to any material fact and . . . the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). In a patent infringement suit, summary judgment of noninfringement should be granted where, under the proper claim construction, the accused products do not meet every limitation of the patent claims. See, e.g., Board of Regents of the Univ. of Texas Sys. v. BENQ America Corp., 533 F.3d 1362, 1373 (Fed. Cir. 2008) ("We conclude that the district court correctly granted summary judgment of non-infringement because we perceive no

substantive dispute regarding the relevant issues of fact."); Flex-Rest, LLC v. Steelcase, Inc., 455 F.3d 1351, 1361-62 (Fed. Cir. 2006) ("Because there is no dispute that the accused devices do not meet the 'sidewall' limitation under this construction, summary judgment of non-infringement of the '231 patent was appropriate."); Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1380-81 (Fed. Cir. 2001) ("In the absence of dispute as to the structure of the Cleveland clubs, summary judgment that there was not literal infringement was properly granted, for all of the claimed limitations are not embodied on the Cleveland clubs.").

The LogMeIn products that 01 has accused of infringing the '479 Patent are LogMeIn Free, LogMeIn Pro, LogMeIn Ignition, Join.Me, and IT Reach ("accused LogMeIn products").

The accused LogMeIn products do not have any "location facility" that locates a personal computer and "itself" creates a communication channel between a remote computer and the personal computer.

01 made a clear and unambiguous disclaimer at the PTO during the re-examination of the patent-in-suit. Specifically, in order to save its '479 Patent from a determination of invalidity based on the prior art, 01 made categorical representations to the PTO regarding what the '479 Patent claims do not cover.

01 represented to the PTO that all asserted claims of the '479

patent require a "locator server computer" with a "location facility" that, "itself," performs multiple functions. Specifically, 01 represented that the location facility—not "some other component"—must "create[]" "communication sessions" by (1) "recei[ving] the request for communication with the personal computer from the remote computer," (2) "locating the personal computer," and (3) "creating a communication channel between the remote computer and personal computer"):

> One of ordinary skill in the art would not view this language, and particular its repeated use of forms of "create," to be satisfied by an alleged location facility that is simply used by some other component that creates the communication channel - rather, one of ordinary skill in the art would understand it to require that the location facility, itself, create the communication channel.
>
> One of ordinary skill in the art would not view the "create" requirements of the '479 Patent claims to be satisfied if the location facility is only "used" by some other component that itself creates the communication channel …. One of ordinary skill in the art would also not view these "create" requirements to be satisfied if the location facility only "enables" or "facilitates" some other component that creates the communication channel …. These words ("uses", "enables", "facilitates") would have different meanings to one of ordinary skill in the art than "create". Assisting some other component that creates the communication channel is not the same as creating the communication channel - the '479 Patent claims require the location facility to do the latter.

In briefing the Motion for Preliminary Injunction, 01 admitted that LogMeIn's products function in precisely the manner that 01 told the PTO the '479 Patent does not cover—that is, by distributing the

functions of the "location facility" among different devices: "it is apparent that in LogMeIn's system the functionality of the locator server computer are distributed among two or more different devices . . . ." As a matter of undisputed fact, there is no device in LogMeIn's accused products that itself creates communication sessions by receiving the request for communication with the personal computer from the remote computer, locating the personal computer, and also itself creating the communication channel, as 01's patent claims all require.

The LogMeIn system does not contain any component that itself performs all the four functions required of the location facility under the Court's construction of the term. LogMeIn's remote access system uses separate and distinct components—having different IP addresses, different software code, and different physical locations in multiple data centers across two continents—to allow its users to remotely access host computers. LogMeIn maintains roughly eighty Web Servers, thirty Database Servers, and ninety Gateway Servers in four data centers located in Virginia, Illinois, California, and England. A single remote access session using LogMeIn's system may, and often does, utilize servers from multiple, geographically distinct data centers. For example, a user may contact a Web Server in London, which will contact a Database Server in Ashburn, Virginia,

and then may be directed to a Gateway Server in Chicago. In addition, two of LogMeIn's four data centers—located in England and Illinois—are "satellite" data centers. They contain only Web Servers and Gateway Servers and do not contain Database Servers. Therefore, by necessity, the England and Illinois "satellite" data centers must utilize a Database Server in either Virginia or California to perform remote access.

Each of the individual Web Servers and Gateway Servers has its unique location on the Internet defined by a separate and different IP address. The Database Servers do not have a location on the Internet at all, as their IP addresses are private and non-routable, and they cannot be contacted directly.

The LogMeIn Web Servers, Gateway Servers, and Database Servers each run on separate and different software. The Gateway Server is a wholly proprietary application written in the C++ language, the Database Server is built using a commercial database platform using T/SQL, and the Web Server uses primarily JavaScript and C# in Active Server Pages.

The LogMeIn Web Servers, Gateway Servers, and Database Servers each perform separate and different functions that are not replicated by any of the other servers. The use of independent and distinct server types is necessary for scaling LogMeIn's system to support

millions of users.

The LogMeIn Web Servers are the component in the LogMeIn system that authenticates users and provides front end web pages for managing user data. The LogMeIn Web Server does not (1) create communication sessions between a remote computer and a personal computer; (2) locate the personal computer and determine the then current location of the personal computer; and (3) create a communication channel between a remote computer and the personal computer. The LogMeIn Web Server cannot be the "location facility" because it does not itself perform three of the four required functions of the "location facility" under this Court's construction of that term.

LogMeIn's Database Servers are the component in the LogMeIn system that executes logic for identifying and managing the hosts and clients involved in the remote access services provided by LogMeIn. The LogMeIn Database Server does not (1) create communication sessions between a remote computer and a personal computer; (2) receive a request for communication with the person or computer from the remote computer; or (3) create a communication channel between a remote computer and the personal computer. The LogMeIn Database Server cannot be the "location facility," as that term has been construed by the Court, because it does not itself

perform three of the four functions of that component.

The LogMeIn Gateway Servers are the component in the LogMeIn system that maintains static connections to LogMeIn hosts and forwards traffic between the host and the client. The Gateway Server does not (1) receive a request for communication with the person or computer from the remote computer; or (2) locate the personal computer and determine the then current location of the personal computer. The LogMeIn Gateway Server cannot be the "location facility" because it does not itself perform two of the four functions of that component.

Based upon the undisputed evidence and 01's own admission in its Motion for Preliminary Injunction, nothing in LogMeIn's accused products is a location facility as required by all of 01's asserted claims: a device that itself receives a request for communication with a personal computer, locates the personal computer, and creates a communication channel between a remote computer and a personal computer.

Moreover, as a matter of law, 01 is not entitled to an infringement claim under the "doctrine of equivalents." Although 01 has not properly articulated such a claim in this case, it also is estopped from doing so by its arguments to the PTO in re-examination. 01 cannot now assert that a locator server that merely assists some

other component to create a communication channel is "equivalent" to a location facility that "itself" does so, given 01's categorical representations to the PTO that the two are different, in order to distinguish the prior art. See, e.g., Felix v. American Honda Motor Co., 562 F.3d 1167, 1185 n.6 (Fed. Cir. 2009) ("[W]e conclude that the district court properly granted summary judgment of no infringement under the doctrine of equivalents as a result of prosecution history estoppel . . . ."); PODS, Inc. v. Porta Stor, Inc., 484 F.3d 1359, 1367 (Fed. Cir. 2007) (arguments made during prosecution bar patentees from asserting infringement by equivalents); SciMed Life Sys. v. Advanced Cardiovascular Sys., 242 F.3d 1337, 1347 (Fed. Cir. 2001) ("[I]f a patent states that the claimed device must be 'nonmetallic,' the patentee cannot assert the patent against a metallic device on the ground that a metallic device is equivalent to a non-metallic device.").

LogMeIn cannot infringe the '479 Patent as a matter of law, and summary judgment should be entered at this time. See, e.g., Forest Labs, Inc. v. Abbott Labs., 239 F.3d 1305, 1310 (Fed. Cir. 2001) (finding no infringement absent "proof that the accused product meets each and every claim limitation").

For the foregoing reasons, Defendant LogMeIn Inc.'s Motion for Claim Construction and Summary Judgment of Noninfringement should

be granted. The Plaintiff's Motion for Summary Judgment on Defendant's Affirmative Defenses should be denied as moot.

An appropriate Order shall issue.

/s/
Claude M. Hilton
United States District Judge

Alexandria, Virginia
May 4, 2011

US006928479B1

(12) **United States Patent**
Meyer et al.

(10) **Patent No.: US 6,928,479 B1**
(45) **Date of Patent: Aug. 9, 2005**

(54) **SYSTEM COMPUTER PRODUCT AND METHOD FOR PROVIDING A PRIVATE COMMUNICATION PORTAL**

(75) Inventors: **Steven P. Meyer**, Thornhill (CA); **Pedro P. Nascimento**, Mississauga (CA); **Andrew Cheung**, Mississauga (CA)

(73) Assignee: **01 Communique Laboratory Inc.**, Ontario (CA)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 665 days.

(21) Appl. No.: **09/595,533**

(22) Filed: **Jun. 16, 2000**

(51) **Int. Cl.**[7] **G06F 15/16**
(52) **U.S. Cl.** **709/227**; 709/217; 709/218; 709/219
(58) **Field of Search** 769/100; 309/223, 309/224, 226, 227; 370/232, 490, 323, 242, 370/352, 102, 103, 104, 338, 342; 709/220, 709/221, 223, 224, 226, 230, 238, 217, 218, 709/227; 718/100; 713/201, 200

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,708,655	A *	1/1998	Toth et al.	370/313
5,790,548	A	8/1998	Sistanizadeh et al.	
5,812,819	A *	9/1998	Rodwin et al.	703/23
6,052,725	A *	4/2000	McCann et al.	709/223
6,128,129	A *	10/2000	Yoneyama	359/383
6,349,289	B1 *	2/2002	Peterson et al.	705/34
6,381,650	B1 *	4/2002	Peacock	709/245
6,396,849	B1 *	5/2002	Sarkissian et al.	370/490
6,397,254	B1 *	5/2002	Northrup	709/227
6,466,981	B1 *	10/2002	Levy	709/227
6,469,998	B1 *	10/2002	Burgaleta Salinas et al.	370/338
6,538,996	B1 *	3/2003	West et al.	370/238
6,614,774	B1 *	9/2003	Wang	370/338
6,654,891	B1 *	11/2003	Borsato et al.	713/201
6,665,715	B1 *	12/2003	Houri	709/223

FOREIGN PATENT DOCUMENTS

EP 0 836 301 A1 9/1997

OTHER PUBLICATIONS

George Lawton, "Dawn of the Internet Appliance", pp. 16 & 18, Los Alamitos, CA, U.S.A.
Mary Jander, "One-for-All Mail Call", pp. 78-88.
Klaus Haberstroh, "Kleingerate im Internet", pp. 38-40.

* cited by examiner

Primary Examiner—Majid Banankhah
(74) *Attorney, Agent, or Firm*—Eugene J. A. Gierczak; Miller Thomson LLP

(57) **ABSTRACT**

A system, computer product and method for providing a private communication portal at a first computer connected to a network of computers includes a communication facility resident at the first computer, and a second computer including a locating facility for locating the current location of the first computer on the network, where the second computer facilitates communication between the first computer and a third computer by authenticating the third computer for communication with the first computer and providing the location of the first computer for communication with the third computer.

46 Claims, 12 Drawing Sheets

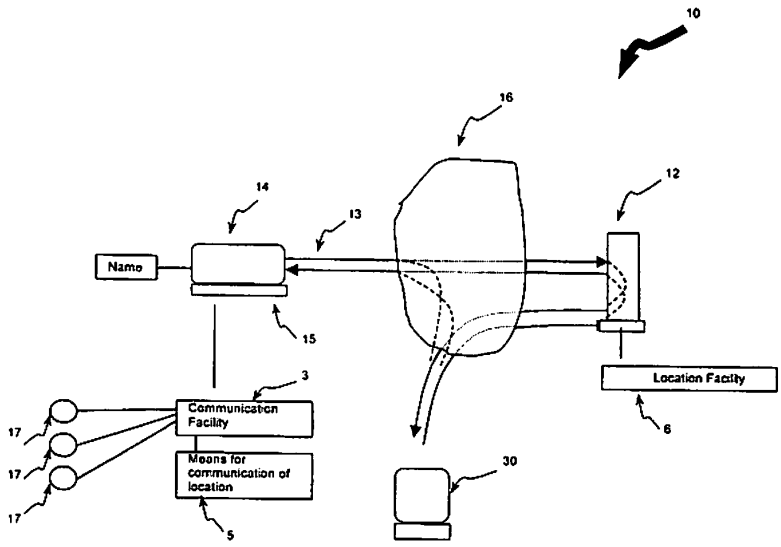


Figure 1

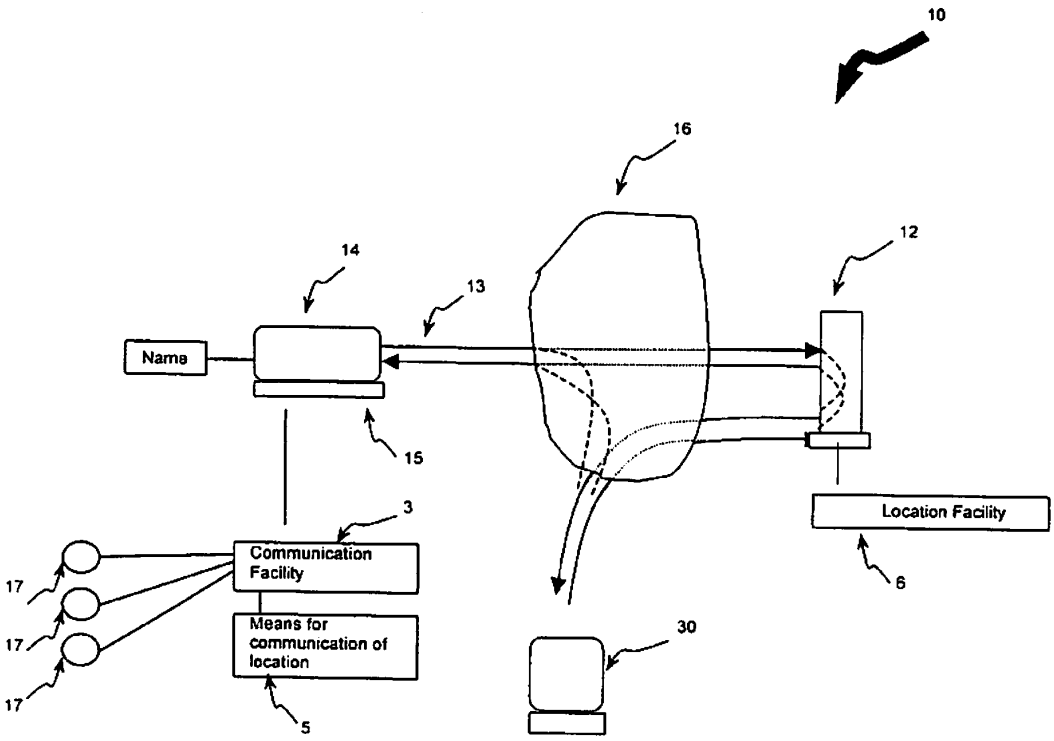

10
16
14
13
12
Name
15
3
Communication Facility
Location Facility
6
17
17
17
Means for communication of location
5
30

Figure 2

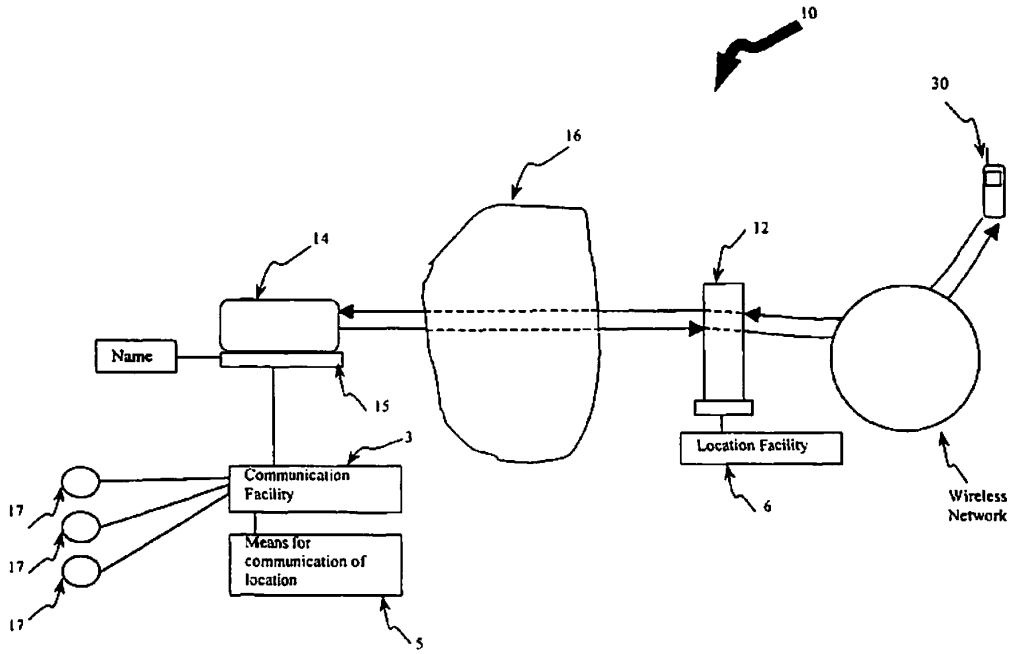

10
30
16
14
12
Name
15
3
Communication Facility
Means for communication of location
5
17
17
17
Location Facility
6
Wireless Network

Figure 3

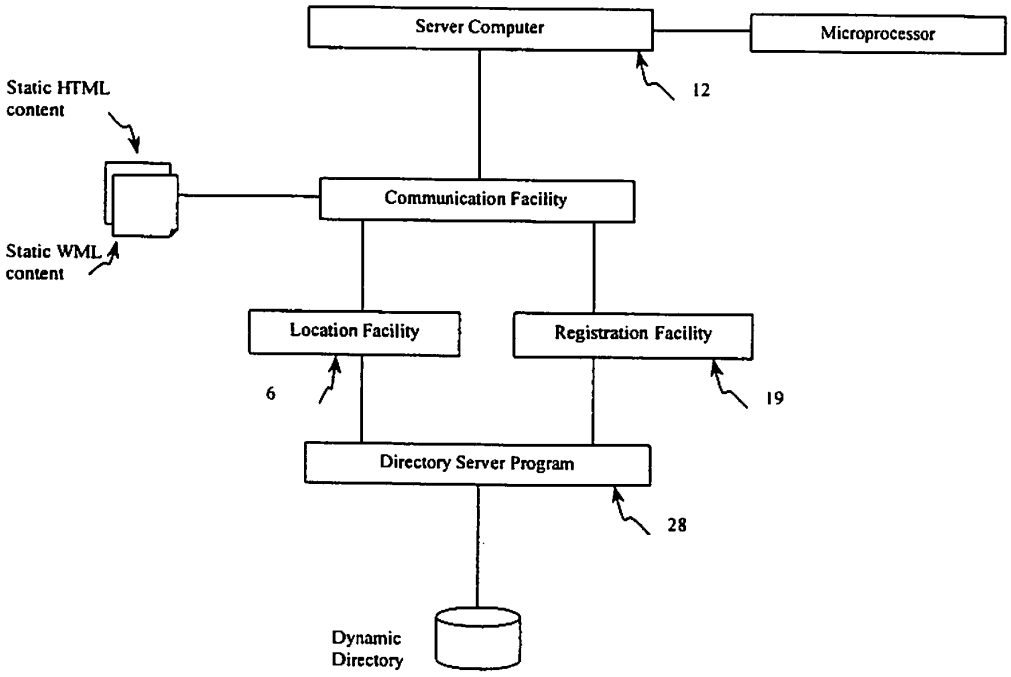

Server Computer
Microprocessor
12
Static HTML content
Communication Facility
Static WML content
Location Facility
Registration Facility
6
19
Directory Server Program
28
Dynamic Directory

Figure 4

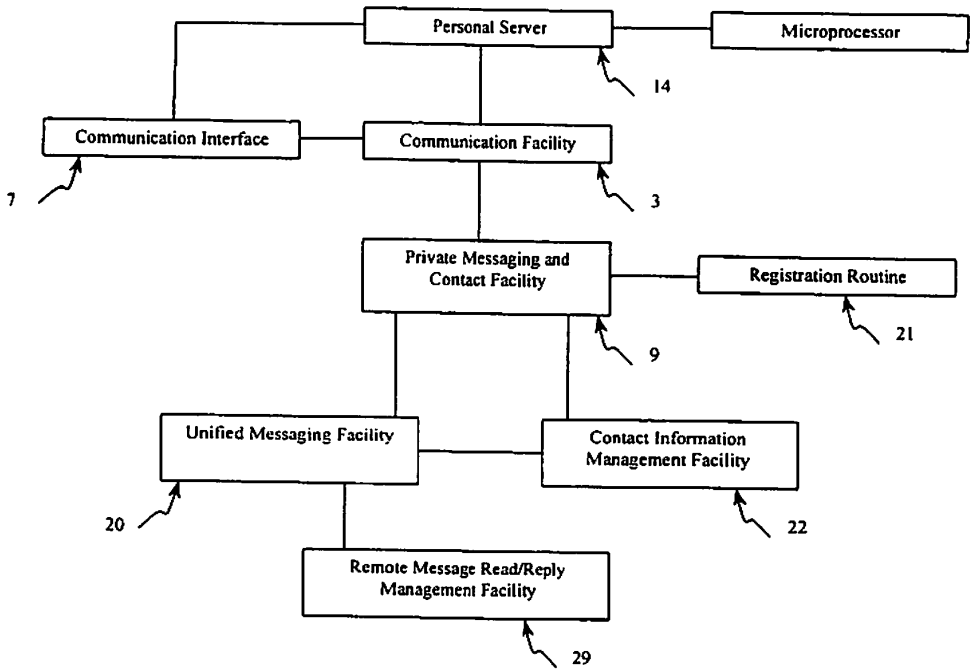

Personal Server
Microprocessor
14
Communication Interface
Communication Facility
7
3
Private Messaging and Contact Facility
Registration Routine
21
9
Unified Messaging Facility
Contact Information Management Facility
20
22
Remote Message Read/Reply Management Facility
29

Figure 5

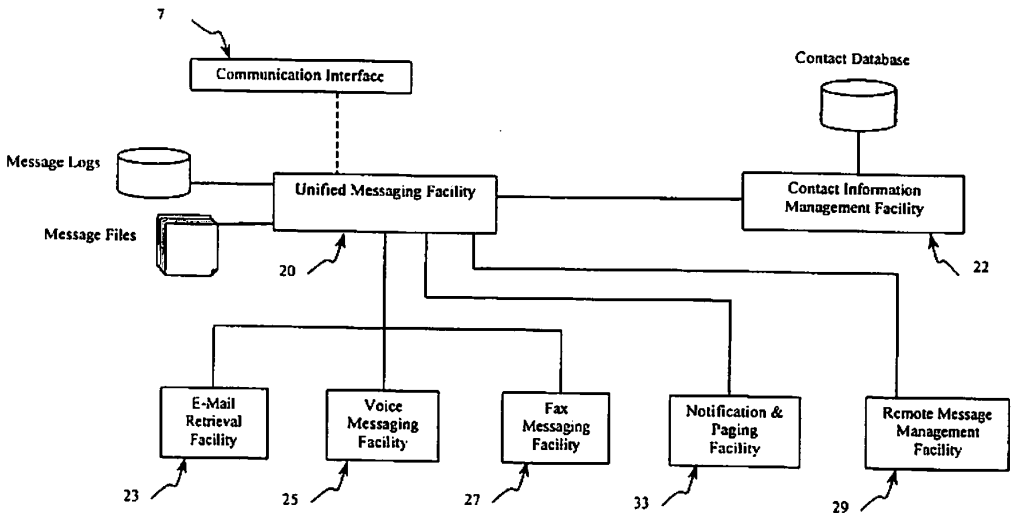

7
Communication Interface
Contact Database
Message Logs
Unified Messaging Facility
Contact Information Management Facility
Message Files
20
22
E-Mail Retrieval Facility
Voice Messaging Facility
Fax Messaging Facility
Notification & Paging Facility
Remote Message Management Facility
23
25
27
33
29

Figure 6

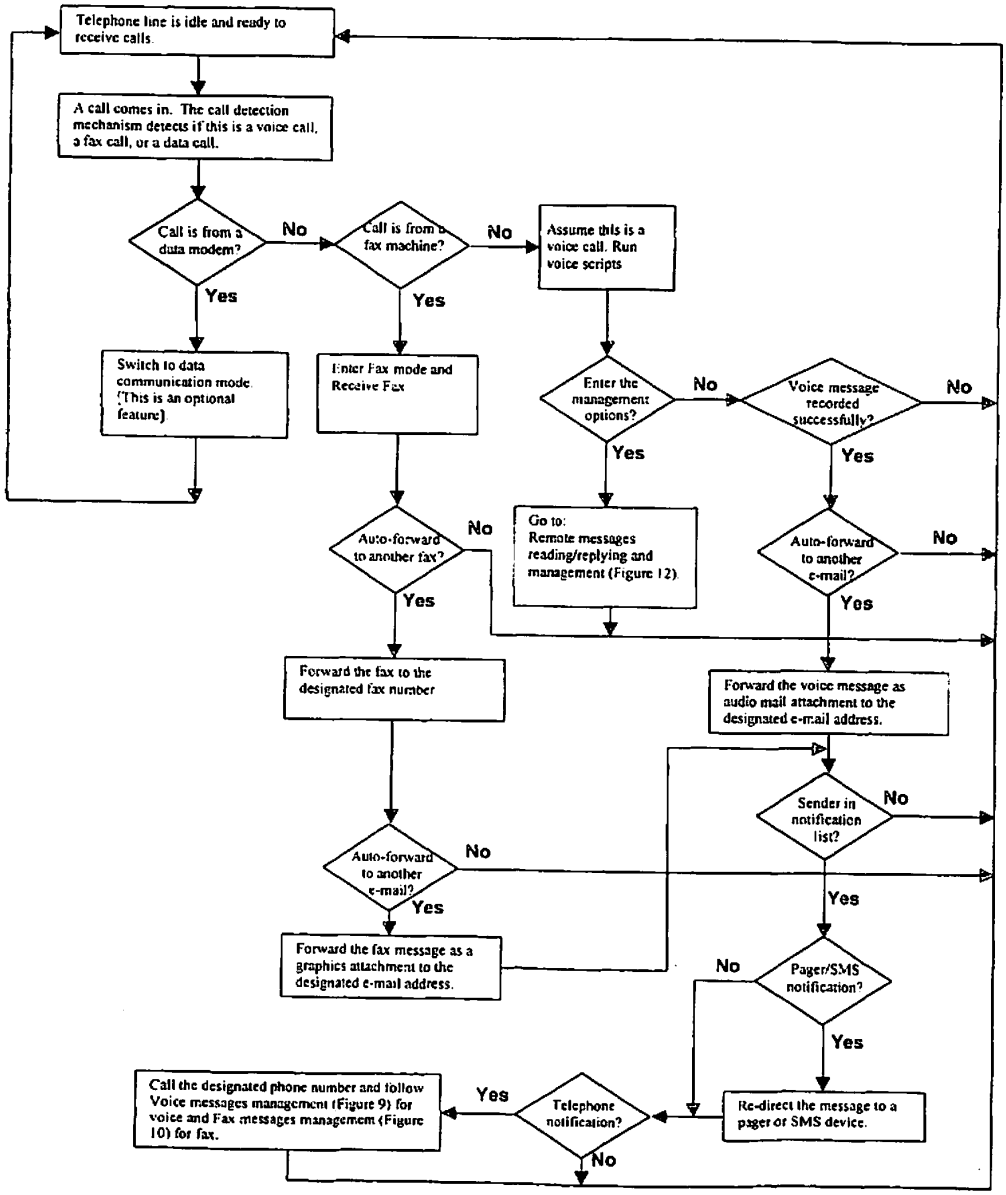

Telephone line is idle and ready to receive calls.
A call comes in. The call detection mechanism detects if this is a voice call, a fax call, or a data call.
Call is from a data modem?
No
Call is from a fax machine?
No
Assume this is a voice call. Run voice scripts
Yes
Yes
Switch to data communication mode (This is an optional feature)
Enter Fax mode and Receive Fax
Enter the management options?
No
Voice message recorded successfully?
No
Yes
Yes
Auto-forward to another fax?
No
Go to: Remote messages reading/replying and management (Figure 12).
Auto-forward to another e-mail?
No
Yes
Yes
Forward the fax to the designated fax number
Forward the voice message as audio mail attachment to the designated e-mail address.
Sender in notification list?
No
Auto-forward to another e-mail?
No
Yes
Yes
Forward the fax message as a graphics attachment to the designated e-mail address.
Pager/SMS notification?
No
Yes
Call the designated phone number and follow Voice messages management (Figure 9) for voice and Fax messages management (Figure 10) for fax.
Yes
Telephone notification?
Re-direct the message to a pager or SMS device.
No

Figure 7

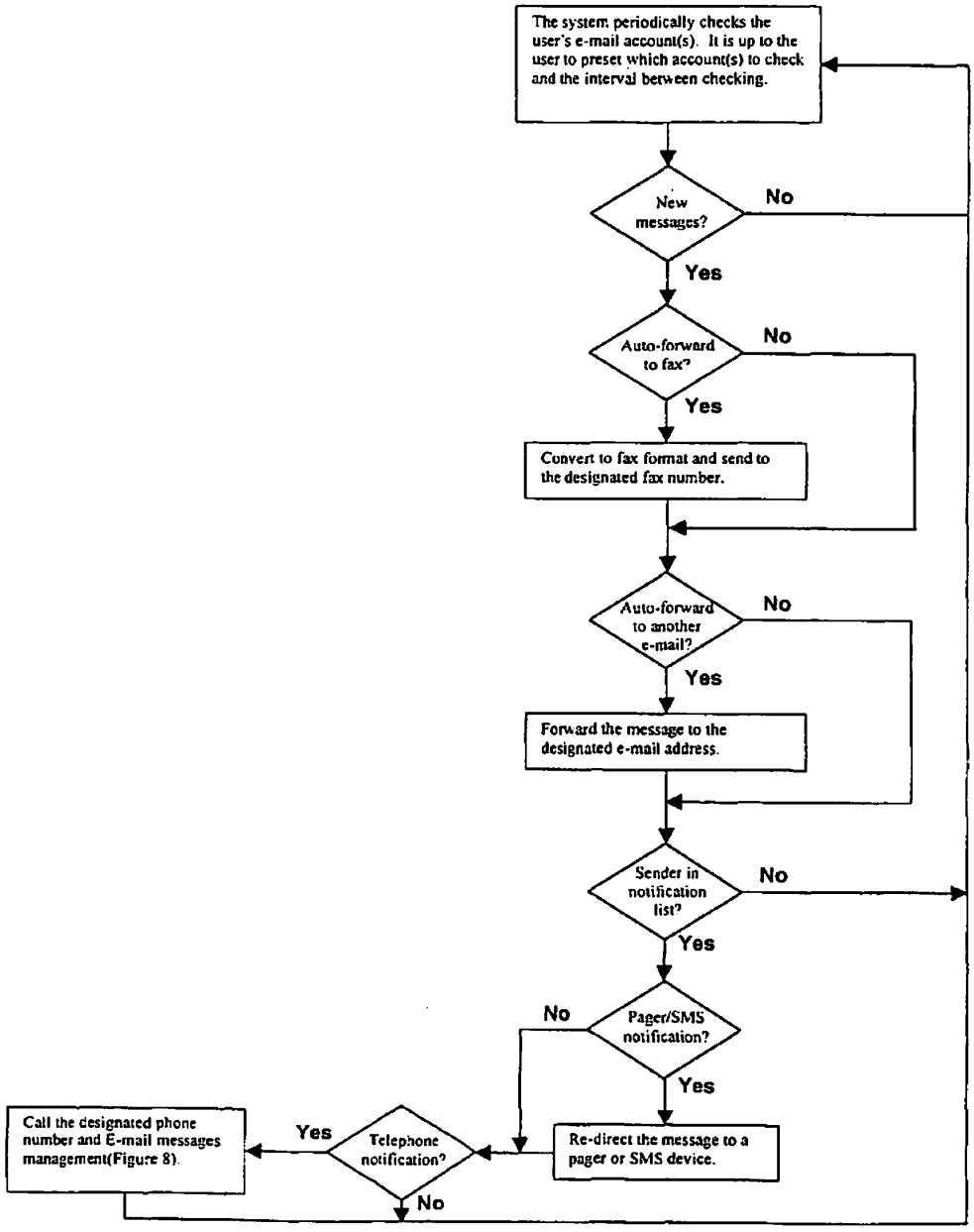

The system periodically checks the user's e-mail account(s). It is up to the user to preset which account(s) to check and the interval between checking.
New messages?
No
Yes
Auto-forward to fax?
No
Yes
Convert to fax format and send to the designated fax number.
Auto-forward to another e-mail?
No
Yes
Forward the message to the designated e-mail address.
Sender in notification list?
No
Yes
Pager/SMS notification?
No
Yes
Re-direct the message to a pager or SMS device.
Telephone notification?
Yes
No
Call the designated phone number and E-mail messages management(Figure 8).

Figure 8

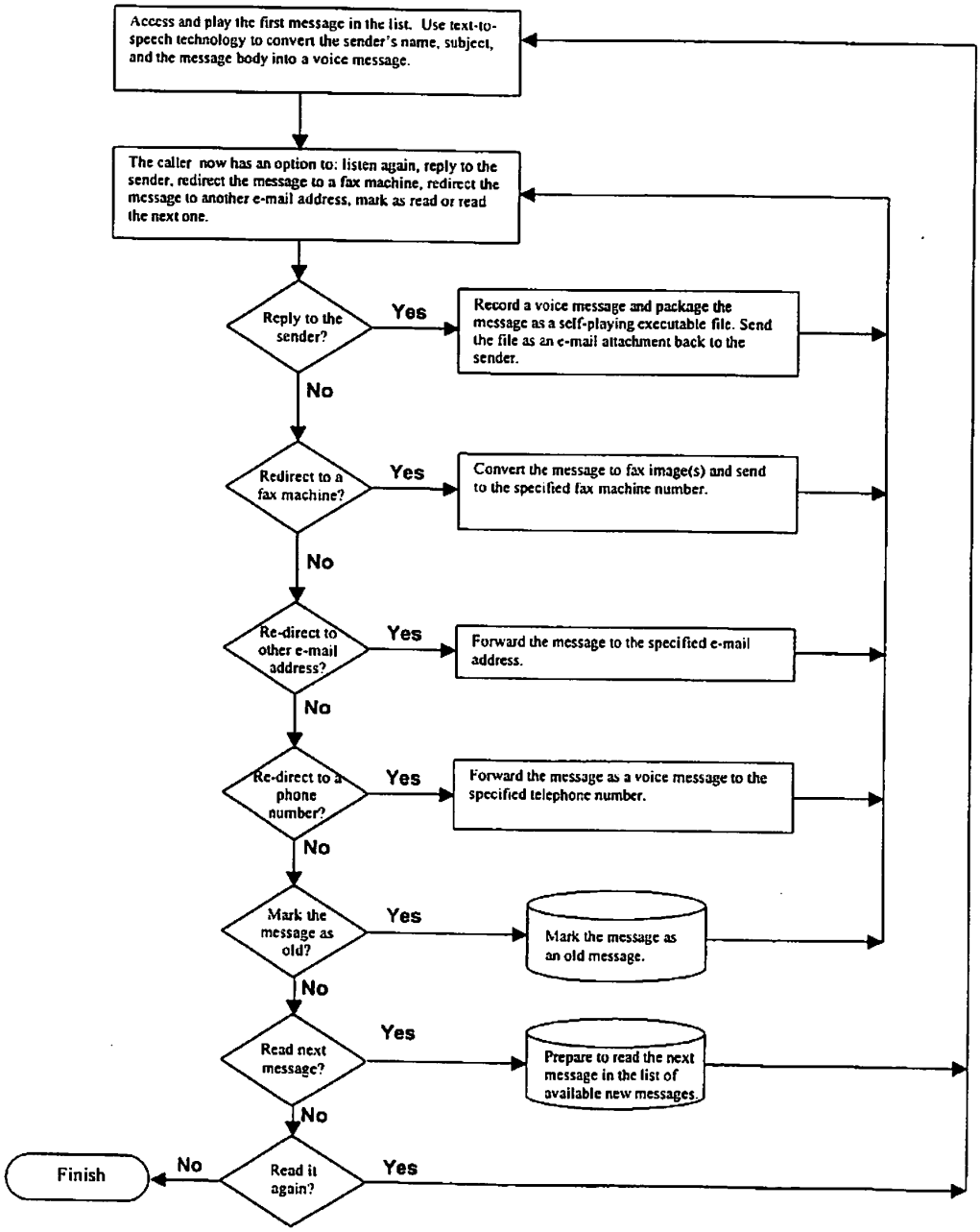

Access and play the first message in the list. Use text-to-speech technology to convert the sender's name, subject, and the message body into a voice message.
The caller now has an option to: listen again, reply to the sender, redirect the message to a fax machine, redirect the message to another e-mail address, mark as read or read the next one.
Reply to the sender?
Yes
Record a voice message and package the message as a self-playing executable file. Send the file as an e-mail attachment back to the sender.
No
Redirect to a fax machine?
Yes
Convert the message to fax image(s) and send to the specified fax machine number.
No
Re-direct to other e-mail address?
Yes
Forward the message to the specified e-mail address.
No
Re-direct to a phone number?
Yes
Forward the message as a voice message to the specified telephone number.
No
Mark the message as old?
Yes
Mark the message as an old message.
No
Read next message?
Yes
Prepare to read the next message in the list of available new messages.
No
Read it again?
Yes
No
Finish

Figure 9

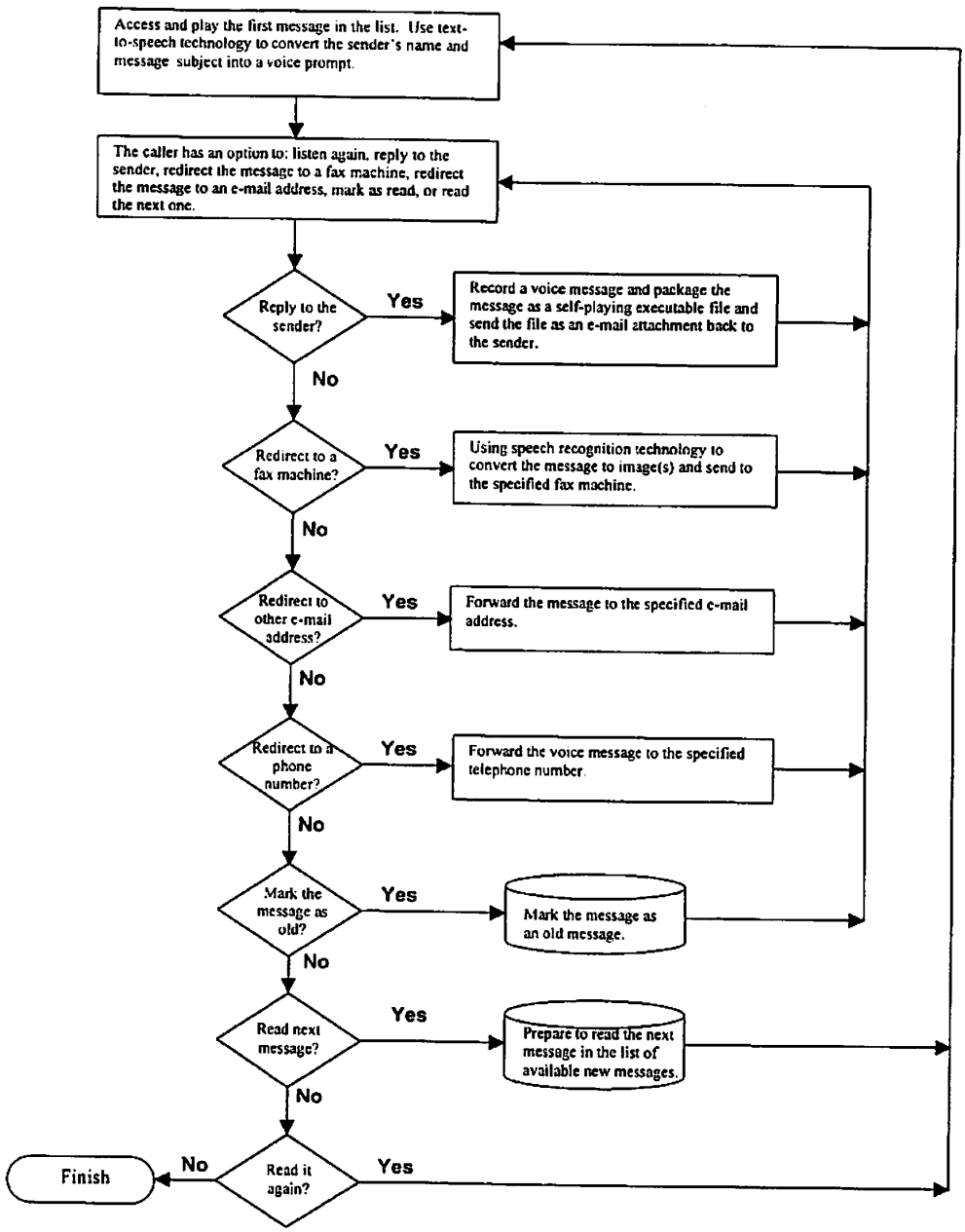

Access and play the first message in the list. Use text-to-speech technology to convert the sender's name and message subject into a voice prompt.
The caller has an option to: listen again, reply to the sender, redirect the message to a fax machine, redirect the message to an e-mail address, mark as read, or read the next one.
Reply to the sender?
Yes
Record a voice message and package the message as a self-playing executable file and send the file as an e-mail attachment back to the sender.
No
Redirect to a fax machine?
Yes
Using speech recognition technology to convert the message to image(s) and send to the specified fax machine.
No
Redirect to other e-mail address?
Yes
Forward the message to the specified e-mail address.
No
Redirect to a phone number?
Yes
Forward the voice message to the specified telephone number.
No
Mark the message as old?
Yes
Mark the message as an old message.
No
Read next message?
Yes
Prepare to read the next message in the list of available new messages.
No
Read it again?
Yes
No
Finish

Figure 10

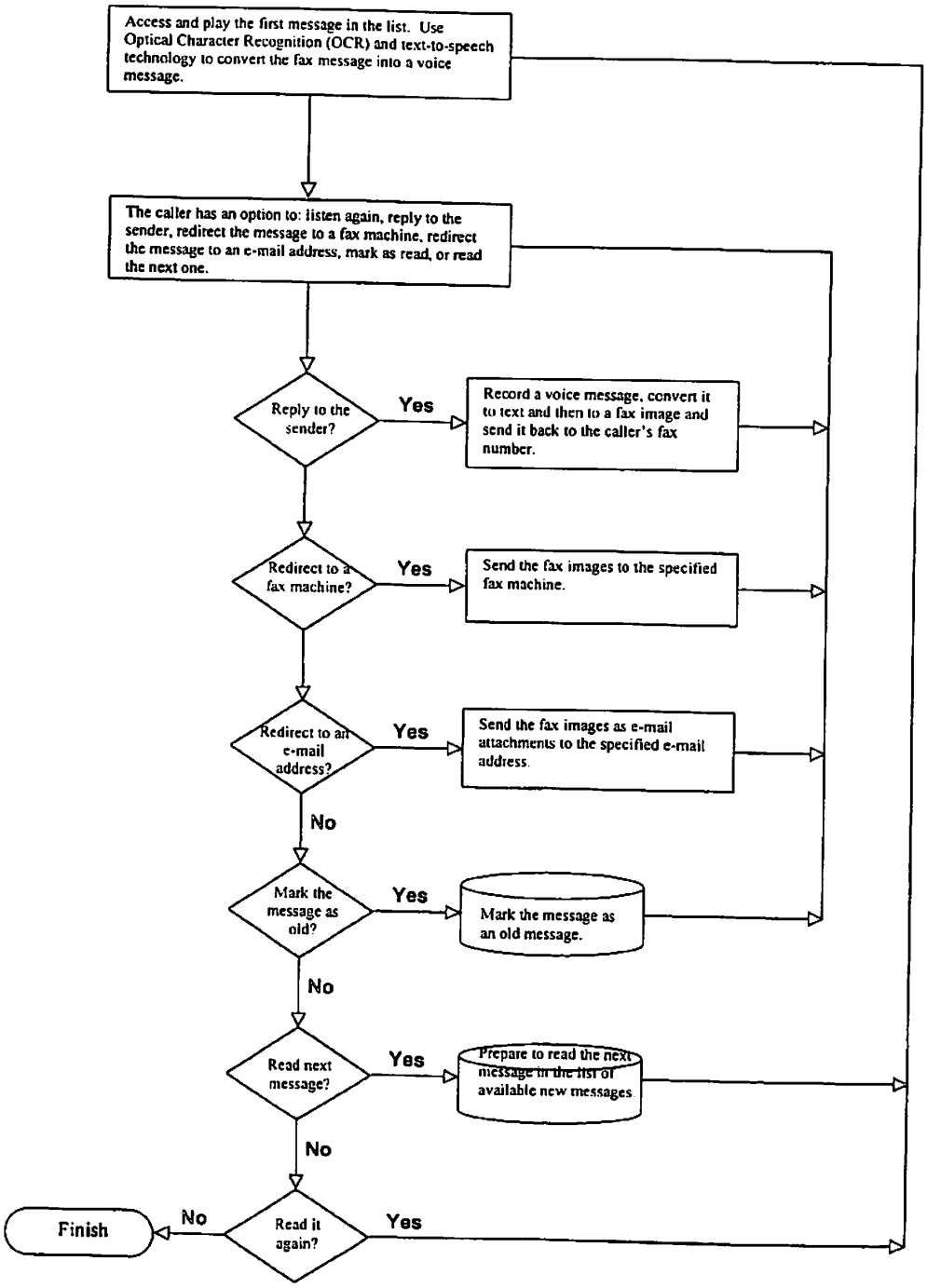

Access and play the first message in the list. Use Optical Character Recognition (OCR) and text-to-speech technology to convert the fax message into a voice message.
The caller has an option to: listen again, reply to the sender, redirect the message to a fax machine, redirect the message to an e-mail address, mark as read, or read the next one.
Reply to the sender?
Yes
Record a voice message, convert it to text and then to a fax image and send it back to the caller's fax number.
Redirect to a fax machine?
Yes
Send the fax images to the specified fax machine.
Redirect to an e-mail address?
Yes
Send the fax images as e-mail attachments to the specified e-mail address.
No
Mark the message as old?
Yes
Mark the message as an old message.
No
Read next message?
Yes
Prepare to read the next message in the list of available new messages.
No
Read it again?
Yes
No
Finish

Figure 11

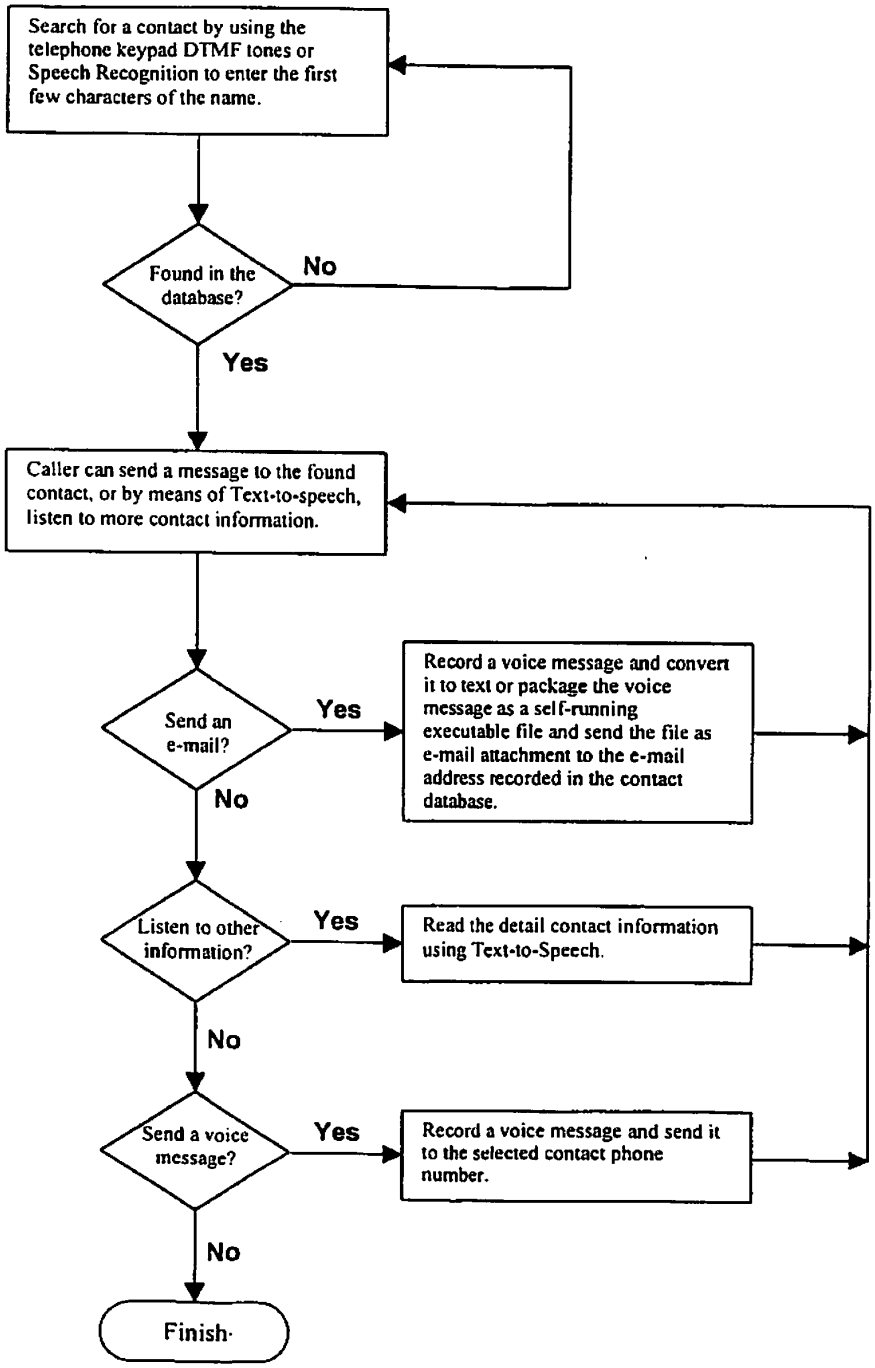
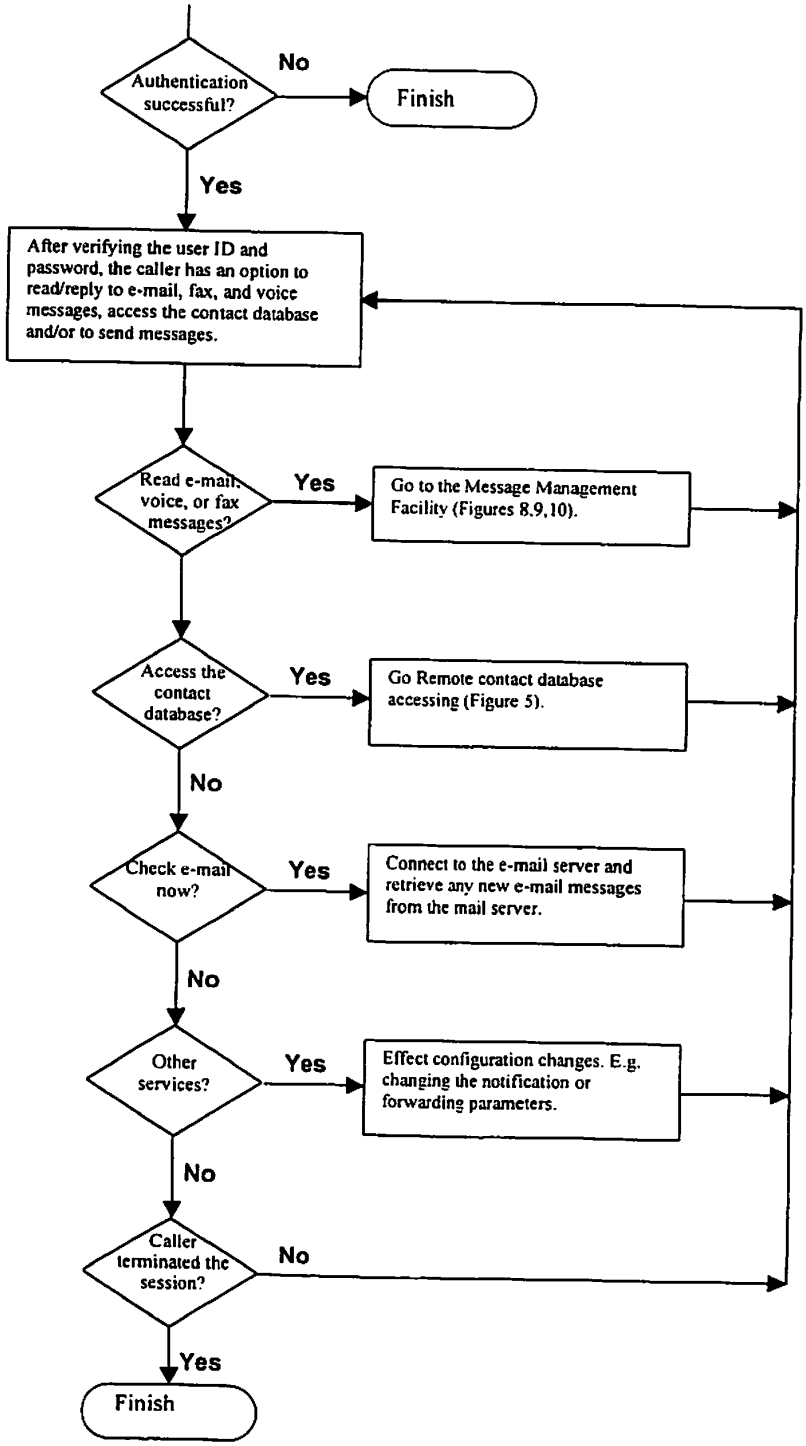

Search for a contact by using the telephone keypad DTMF tones or Speech Recognition to enter the first few characters of the name.
Found in the database?
No
Yes
Caller can send a message to the found contact, or by means of Text-to-speech, listen to more contact information.
Send an e-mail?
Yes
Record a voice message and convert it to text or package the voice message as a self-running executable file and send the file as e-mail attachment to the e-mail address recorded in the contact database.
No
Listen to other information?
Yes
Read the detail contact information using Text-to-Speech.
No
Send a voice message?
Yes
Record a voice message and send it to the selected contact phone number.
No
Finish

Figure 12


Authentication successful?
No
Finish
Yes
After verifying the user ID and password, the caller has an option to read/reply to e-mail, fax, and voice messages, access the contact database and/or to send messages.
Read e-mail, voice, or fax messages?
Yes
Go to the Message Management Facility (Figures 8,9,10).
Access the contact database?
Yes
Go Remote contact database accessing (Figure 5).
No
Check e-mail now?
Yes
Connect to the e-mail server and retrieve any new e-mail messages from the mail server.
No
Other services?
Yes
Effect configuration changes. E.g. changing the notification or forwarding parameters.
No
Caller terminated the session?
No
Yes
Finish

SYSTEM COMPUTER PRODUCT AND METHOD FOR PROVIDING A PRIVATE COMMUNICATION PORTAL

FIELD OF THE INVENTION

This invention relates in general to a system, computer product and method for remotely accessing data at a private server using a remote wired or wireless web browser. This invention also relates to a system, computer product and method for remotely accessing and managing different types of messages at a private server using a remote wired or wireless web browser.

BACKGROUND OF THE INVENTION

Individuals and businesses today communicate through a variety of messages including electronic mail (including e-mails with video or voice attachments or AOL™ "instant messages"), pager messages, facsimile (fax) and electronic voice mail.

In many cases these messages are managed by more than one computer program. Such multi-program solutions are cumbersome as they generally require significant familiarity with more than one program and further require accessing each program to manage the receipt and dispatch of different types of messages. This results in loss of time and overly complex means for achieving user objectives.

Single programs for managing such variety of messages are known, but such known programs do not provide full remote access via the Internet to management of messages and contact information. The use of the Internet is desirable for numerous reasons, including the common use of the Internet Protocol as a communication standard, the general availability of electronic devices that are web-enabled and the cost savings of using the Internet. Full Internet access is desirable because message and contact management users may want to access their message and contact management system from a plurality of locations and/or plurality of communication devices (e.g. lap top, cellular phone or WAP-enabled hand held computer etc.). Full remote access permits the receipt of messages at any location on any type of communication device, with remote access to functions of the message management system such as address books, security settings, rules (e.g. automated response), text-to-speech functionality etc.

Prior art messaging systems and programs such as SYMANTEC's™ TALK WORKS PRO™, SIEMENS'™ XPRESSIONS470™ NOKIA/TELEKOL's™ INTEGRAX™, INTERSIS'™ VOIXX™, KONTACT's™ VEMA2.0™ and BLUEJADE.COM's™ TECS™ do not provide full Internet access as described above, and further particularized below.

Another disadvantage of such prior art systems (with the exception of TALKWORKS™) is that such systems and computer products require the use of a multi-user server. In other words, the "unified" capability of managing the variety of messages described is owned and managed by a 3rd party service provider who acts as an intermediary between the user and entities with whom the user communicates.

It should be understood that by a "multi-user server", a server is meant that is configured for use by more than one "user".

There are numerous disadvantages to such prior art systems requiring such 3rd party intermediaries. First, such prior art systems generally require payment of significant user fees, payable so long as the system is used. Second, such 3rd party intermediary systems do not generally provide the full flexibility, customization, security and access to personal data, that can be provided by a private user system and computer product. Third, engaging the flexibility, customization, security and access features of such 3rd party intermediary system is cumbersome. Fourth, data associated with such 3rd party intermediary systems such as contact data needs be replicated from the user's personal server to the 3rd party systems. In most prior art systems there are security risks to such replication, as the necessary data transfers generally do not occur on a secure basis, or if security provisions are made, such security provisions may be difficult to guarantee. Fifth, use of such 3rd party intermediary systems implies providing access codes to such 3rd party. Using such access codes, a rogue would have access to the personal data of the user and could, for example, send a damaging e-mail to the contacts of the user. While such 3rd party intermediaries will generally have procedures in place to reduce the likelihood of such an occurrence, such occurrences are possible nonetheless.

Therefore, a system for providing a private communication portal is required that is easy to use and relatively inexpensive. By "private" what is meant is that the communication portal is dedicated to a user rather than multiple users as is the case with 3rd part intermediary systems described above.

It should also be understood from the outset that in referring to "private communication portal", the word "communication" is used in accordance with its broad technical definition. In particular, "communication" for the purpose of this document means exchange or accessing of any information, including information formats, using predefined protocols understood by communicating entities. It should be understood that for "communication" to occur, there is no requirement for a human user. "Communication" can in this way be contrasted from "messaging" which is generally understood to relate to communication between more than one human user.

Also, by "portal" what is generally understood is a means for facilitating communication from point A to B. More than one interconnected computer or process may co-operate to provide a single "portal". For example, a first computer or process comprising the "portal" may provide means for locating B at least once. Thereafter, communication between A and B may be facilitated through a second computer or process independent of the first computer or process.

In operation, the present invention provides a private communication portal for remotely managing and accessing messages, as described herein. However, it should be understood that messages are only one form of data that can be communicated in co-operation of the present invention. The invention provided herein provides means for operating private server as a communication server for a variety of purposes, including security monitoring. For example, the communication portal provided for herein could be associated with known security systems that generate data in the form of images of a physical location associated with such security system. The private communication portal described herein provides means for accessing and managing such data remotely, for example, by forwarding images detecting an intruder to an alarm response force.

Providing such a private communication portal system and computer product presents a number of problems. First, the computer on which the private communication portal resides is required to be located on the Internet using a Web browser or WAP device. Second, a system is required that provides a secure Internet connection to said computer of the

user. Third, but on a related point, the system needs to authenticate the user and reject unauthorized access. Fourth, messages need be transferred securely between the remote user and said computer.

Thus a system, computer product and method for providing full Internet access to message and contact management functions is desirable, by means of a private communication portal. It is further desirable to provide a system and computer product for providing message and contact management without a 3rd party intermediary, by means of a private communication portal.

It should also be noted that 3rd party service providers such as Internet Service Providers do not generally allow their users to establish their own dedicated Internet servers, or if they do so it is at a cost that is generally significant. This is because the user's Internet Protocol address generally changes from time to time for system resource management reasons. A dedicated Internet Protocol address can be obtained, but generally only at a premium.

Thus, there is also need for a system, computer product and method for accessing and managing data remotely, even when the Internet Protocol address of a user's computer changes from time to time.

SUMMARY OF THE INVENTION

In accordance with one aspect of the present invention, a system, computer product and method for a private communication portal is provided.

In accordance with another aspect of the present invention, a system, computer product and method for providing full Internet access to and management of data resident on a computer is provided.

In accordance with yet another aspect of the present invention, a system, computer product and method for providing remote access and management of messages and contact information is provided.

In accordance with yet another aspect of the present invention, a system, computer product and method for providing a user with a private server for remote access to data resident on user's computer is provided despite 3rd party service provider restrictions that prevent a user from establishing their own Internet server.

The present invention has numerous advantages such as convenient remote access to data such as messages and contact information via any number of electronic devices such as a lap top, cellular phone or WAP-enabled hand held computer etc. In particular, the present invention not only allows messages of all types to be read, but also replied to remotely. The present invention has the added benefit of reducing toll charges generally associated with remote message access.

Another significant benefit of the present invention is the ability to use current e-mail addresses, fax numbers or phone numbers rather than obtain a new one as is generally required by 3rd party service providers described above. Transition to a new e-mail address, for example, generally requires the various ordinary recipients of e-mail from a user to update their contact information. This generally results in loss of time in managing the transition (changing contact information, creating pointer from old e-mail addresses) and can potentially result in loss or delay of communications.

In the present invention, the user determines security and access. This provides greater flexibility and greater control of data by allowing, for example, remote forwarding of messages.

Also, in a multi-user system, depending on the number of users accessing the 3rd party system at any given time, the performance of the multi-user messaging system can be negatively affected. The invention described herein provides means for ensuring optimal performance of the user's messaging system.

It should also be understood that said 3rd party systems generally, for system resource management reasons, set limits to the amount of disk space allocated to each individual user for the purpose of storing data such as messages and contact information. This poses a problem in providing adequate means for archiving such data. Data archiving is either not provided by such 3rd party system, in which case such data needs be exported (if permitted by the 3rd party system) to the user's system or some other system. This may result in inconvenience and/or time loss. Alternatively, data archiving may be offered by such 3rd party system intermediary, but generally at a premium.

More generally, as is readily understood to those skilled in the art, the present invention permits a user's computer to act as a "private server" which can be configured in accordance with the user's requirements.

BRIEF DESCRIPTION OF THE DRAWINGS

A detailed description of the preferred embodiment(s) is(are) provided herein below by way of example only and with reference to the following drawings, in which:

FIG. **1** is a system resource flowchart, in accordance with a preferred embodiment of the present invention;

FIG. **2** is a system resource flow chart of the preferred embodiment of the present invention, but illustrating the connection of the system to a wireless network.

FIG. **3** is a system resource flow chart illustrating the resources of the Server Computer of the present invention.

FIG. **4** is a system resource flow chart illustrating the resources of the Private Server of the present invention.

FIG. **5** is a program resource flow chart illustrating the resources of the computer product of the present invention resident on the Private Server.

FIG. **6** is a program function chart illustrating the operation of the Fax/Voice/Data Communication Interface of the present invention.

FIG. **7** is a program function chart illustrating the operation of the E-Mail Communication Interface of the present invention.

FIG. **8** is a program function chart illustrating the operation of the E-Mail Message Facility of the present invention, in association with the Remote Message Management Facility.

FIG. **9** is a program function chart illustrating the operation of Voice Message Facility of the present invention, in association with the Remote Message Management Facility.

FIG. **10** is a program function chart illustrating the operation of Fax Message Facility of the present invention, in association with the Remote Message Management Facility.

FIG. **11** is a program function chart illustrating the operation of the Contact Information Facility of the present invention.

FIG. **12** is a program function chart illustrating the operation of the Remote Message Management Facility of the present invention.

In the drawings, preferred embodiments of the invention are illustrated by way of example. It is to be expressly understood that the description and drawings are only for the

purpose of illustration and as an aid to understanding, and are not intended as a definition of the limits of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, there is illustrated in a system resource flowchart the preferred embodiment of the present invention illustrated herein. In particular, FIG. 1 illustrates the resources that comprise the private communication portal or "PCP" **10** of the present invention. PCP **10** comprises a dual computer architecture further comprising a first computer or Private Server **14** and server computer or second locator Server Computer **12** It should be understood that Private Server **14** may comprise a network station, personal computer terminal or server, provided that such Private Server **14** is devoted to a private user who may be a business or individual. Said Private Server **14** also comprises a message server **15**, as best illustrated in FIG. **1** and a name that identifies the particular private server, as is well known.

Server Computer **12** is connected with unrestricted access to an interconnected network of computers such as the Internet **16**. Server Computer **12** may comprise one or more computers, as is well known.

It is desirable to also provide Private Server **14** with a permanent Internet connection **13** provided, for example, by a coaxial cable connection or high speed xDSL telephone connections or the like, also as shown in FIG. **1**.

Private Server **14** is provided with a computer program product of the present invention dedicated to Private Server **14** In a first preferred embodiment of the present invention, best illustrated in FIG. **1**, this computer product provides a data communication facility **3** and means for communication **5** of the location of Private Server **14** on a computer network such as the Internet to Server Computer **12**, as further described below. Said data communication facility **3** can be provided with interfaces with a number of facilities **17** that generate data, in a manner well known to those skilled in the art, such as voice message reception, fax reception, e-mail retrieval, alarm monitoring facilities, child monitoring facilities and the like. As is explained below, te computer program product of the present invention presents means for remotely accessing said data.

In another aspect of the computer program product of the present invention, said Server Computer **12** is provided with a server computer program that communicates with said computer program dedicated to Private Server **14**. Said server computer program, illustrated in FIG. **1**, provides a Location Facility **6** or means responsive to said means for communication **5** of the location of Private Server **14** for providing remote access to said Private Server **14**, as explained below.

Private Messaging and Contact Facility

In a second preferred embodiment of the present invention illustrated in FIG. **4**, said data communication facility **3** further comprises a communication interface **7** and communication software program **9** or Private Messaging and Contact Facility which are operably associated. Said Private Messaging and Contact Facility **9** comprises two principal elements, namely a Unified Messaging Facility **20** and Contact Information Facility **22**.

As best illustrated in FIG. **5**, the principal functions of Unified Messaging Facility **20** are to receive and process messages of all types and content, including e-mail, facsimiles, electronic voice mail, images, video data, executable program code, audio data, formatted data or raw binary data. Unified Messaging Facility **20** is operably associated with communication interface **7**. The functions of communication interface **7** are illustrated in FIG. **6** for Fax/Voice/Data messages, and in FIG. **7** for e-mail.

Unified Messaging Facility **20** further comprises E-Mail Message Facility **23**, Voice Message Facility **25** and Fax Message Facility **27**, illustrated in FIGS. **8**, **9** and **10** respectively in operation in conjunction with Remote Message Management Facility **28**, the functions of which are explained below.

In the present invention, Unified Messaging Facility **20** further comprises Notification Facility **33**. This facility is only initiated when a message is received at Private Server **14**, in the manner described below in greater detail, from a valid message originator. The hard disk of Private Server **14** will store a copy of a "Notification List" in co-operation with Notification Facility **33**. The "Notification List" contains the e-mail addresses, fax identifiers and/or caller identifiers of valid message originators.

The principal functions of Contact Information Facility **22** are entering and retrieving contact information such as names, telephone numbers, e-mail addresses, company information, personal information (such as addresses, birthdays and the like), contact history and the like. The principal functions of the Contact Information Facility **22** are illustrated in FIG. **11**. These functions, in co-operation with the system of the present invention, are accessible remotely as illustrated in FIG. **11**.

In addition, the Unified Messaging Facility **20** and Contact Information Facility **22**, in co-operation with the system of the present invention, also provide the Remote Message Management Facility **29**, as best illustrated in FIG. **5**. The particular functions of the Remote Message Management Facility **29** are best illustrated in FIG. **12**.

Internet Registration and Location

Said Server Computer **12** is configured, in a manner that is well-known, to be connected to the a network of interconnected computers such as the Internet, and particularly in a manner that accepts Internet requests and translates these requests into a connection between said Server Computer **12** and Private Server **14**.

As best shown in FIG. **3**, the system described herein further comprises a directory service program **28**. In the particular embodiment illustrated herein, said directory service program **28** is operably associated with Server Computer **12**. For the sake of clarity, said directory service program **28** can be either resident on said Server Computer **12** or remote from said Server Computer **12** but accessible therefrom. Directory service program **28** comprises a dynamic directory provided using a protocol such as LDAP (Lightweight Directory Access Protocol) Version 3, with capability for dynamically modifying the directory content of the directory service program **28**. It is desirable that only users of the present invention be given access to directory service program **28** by means that are known, such as an authentication routine provided in association with registration facility **19**, for example.

Private Messaging and Contact Facility **8** comprises a "REGISTRATION ROUTINE" **21** for indicating that Private Server **14** is available to accept communications such as messages from Server Computer **12**. It is desirable for such "REGISTRATION ROUTINE" **21** to be engaged periodically to update the directory service program **28**, to address possible changes to the private server's **14** internet protocol address or its communication session with the second computer (the location facility) for a number of reasons. First, it is desirable to verity that the Internet or server connection of

Private Server **14** is active Second, when the Private Server **14** is configured to provide the functions of this invention, registration with the Server Computer **12** is obviously required. Third, the "REGISTRATION ROUTINE" **21** is required to be engaged periodically to update the directory service program **28** to address possible changes to Private Server's Internet Protocol address. Fourth, from a system resource management point of view it may be desirable to restrict access to the Server Computer **12** to only active users, in which case users who according to pre-set parameters are determined to be inactive would be automatically de-registered after a period of time. Fifth, some users may wish to change their access codes from time to time. Sixth, some users may want to de-register temporarily with Server Computer **12** in order to interrupt receipt of communications from Server Computer **12**, for example, during operation of a back-up routine at Private Computer **14**. Seventh, "REGISTRATION ROUTINE" may be required to change security settings provided at Server Computer **12**, in a manner that is well-known.

It should be understood that the present invention allows the parameters of the operation of the "REGISTRATION ROUTINE" to be set, in a manner well-known to those skilled in the art, by either the user or the system operator of Server Computer **12**, as may be required.

The availability to accept communications such as messages of Private Server **14** is communicated by "REGISTRATION ROUTINE" by registering a name string or digit string with the directory service program **28** that must not conflict with any other similar name in the dynamic directory associated with directory service program **28**. This communication includes the current Internet Protocol address of Private Server **14** that as indicated above may change from time to time. The Internet Protocol address of Server Computer **12**, however, is fixed and known to the system described herein.

In the manner described above, the current Internet Protocol address of Private Server **14** is provided from time to time and dynamically stored in directory service program **28**.

When a remote computer or Requesting Device **30** including a remote computer data communication program or facility, such as the Web browser illustrated in FIG. **1**, or the Mobile browser illustrated in FIG. **2**, requests a connection to Private Server **14**, Requesting Device **30** first connects to Server Computer **12** in a manner that is well-known and indicates the name of the Private Server **14** to which Requesting Device **30** wishes to connect.

In particular, in the preferred embodiment of the invention illustrated herein, a request is made by Requesting Device **30** to Server Computer **12** to locate Private Server **12** by means of an entry in a Web Page field or by an HTTP request that already contains the name of Private Server **14**.

Server Computer **12** will validate the request to connect to Private Server **14** and initiate a search in the directory associated with the directory service program **28** to obtain the current Internet Protocol address of Private Server **14** and port number of message server **15** of Private Server **14** or the current communication session. Server Computer **12** is thereby engaged to allow a connection to be set up between Requesting Device **30** and Private Server **14**.

In the embodiment of the present invention illustrated herein, three connection methods are specifically provided for sake of illustration, as between the Requesting Device **30** and Private Server **14**. First a Direct Connection can be provided using a secure web protocol such as "https", in a manner that is well known. In this method, once Server Computer **12** has validated the connection request provided by Requesting Device **30**, the Requesting Device **30** is simply forwarded to the Private Server **14**, in a manner that is well-known. Thereafter, all interactions will take place directly between the Requesting Device **30** and the Private Server **14** during the communication session.

Second, where the Server Computer **12** has network access to Private Server **14** but Private Server **14** is not accessible from the Internet **16**, and may have a network address that is only valid within the network, a Proxy Server (not shown) is used to provide the connection between the Requesting Device **30** and Private Server **14**, in a manner that is also well known.

Third, where the Private Server is not accessible from the Internet **16** using the web protocol but from some different protocol such as "H323", the Video Conferencing protocol, protocol conversion is utilized, in a manner that is well known.

The above-described connections provide the means for transferring three kinds of data. First, static page data, namely menus for navigation, which are provided in a manner that is well known to those skilled in the art. Second, lists of information such as message lists which are also provided in a manner that is well known. Third, streamed data, namely message content data such as voice, fax, text and video data which can be displayed in "Real Time" while it is being received. As is well known to those skilled in the art, providing the functions of the Private Messaging and Contact Facility **18** illustrated in FIGS. **5–12** in particular requires access to both kinds of data.

Security

The connection provided by Server Computer **12** between Requesting Device **30** and Private Server **14** can be described as "secure" in accordance with the following security features. First the name of the Private Server **14** is used as the key for locating Private Server on Internet **16**. In order to minimize the likelihood of the security of the system of the present invention being compromised, this name should not be derivable from a user of Private Server **14**. Second, it is desirable to use a secure communication protocol as between the Requesting Device **30** and Private Server **14**, such as the secure "https" web protocol. Third, once a secure connection is established between Requesting Device **30** and Private Server **14**, it is desirable to require a further authentication routine without intermediaries. It should be understood that the use of other means of providing secured communication between electronic devices in association with the system described herein are specifically contemplated by the present invention.

Where Requesting Device **30** is a WAP device, it should be understood that authentication and connection to Private Server **14** can happen "automatically". This is because a unique identifier is generally allocated to each WAP device by the manufacturer. As part of the "REGISTRATION ROUTINE" **21** described above, this unique identifier can be associated with the current location of Private Server **14** thus forwarding the WAP device to Private Server **14** automatically.

Full Internet Access

The system provided in this invention allows "full" Internet access to the functions of the Private Messaging and Contact Facility **9** in particular, by operation of the Contact Information Facility **22** and Remote Message Management Facility **29** of the present invention, described above.

This "full" Internet access to data associated with Private Server **14**, such as message and contact related data is best understood by illustration of examples in operation.

The user is able to access the list of messages stored on Private Server **14** in association with the computer product of the present invention, and to command Private Server **14** to initiate a connection to receive messages from external message stores (e.g. an Internet Service Provider managing a specific e-mail account).

More importantly, the invention provided herein allows such user to access said list of messages (of any type) stored on Private Server **14** via a Web browser program running on another computer attached to the Internet and command Private Server **14** to initiate a connection to receive messages from external message stores.

The present invention also allows a user to access said list of messages via a telephone call to Server Computer **12** by means of suitable telephony hardware and to command Private Server **14** to initiate a connection to receive messages from said external message stores.

Similarly, the present invention will allow the user to access said list of messages and to command Private Server **14** to initiate a connection for user to receive messages from external message stores via a Mobile Wireless (WAP) device.

On command from the user, the present invention allows individual voice messages to be played; individual e-mail messages, facsimile messages, video and other images to be displayed on a computer, cellular phone (depending on hardware resources) or WAP-enabled hand-held computer; and individual executable message content to be executed on Private Server **14** (for example execution of a sound file and transmission of audio stream to the user).

The present invention also allows the user to reply to a message by means of voice message that is sent as an e-mail attachment when the connection to Private Server **14** is a voice connection. The present invention further allows the user to reply to a message by means of a text message.

By means of Notification Facility **33** in particular, the present invention is able to notify the user of new received messages by means of a telephone call to a Wireless paging service specified by the user. Private Server **14** is also able to notify the user of new received messages by means of a telephone call to a telephone number specified by the user and the subsequent playing of a voice message as a voice data stream. Private Server **14** is further able to notify the user of new received messages by means of a message sent over the Internet to a Wireless paging service specified by the user. Private Server **14** is still further able to provide means for remotely adding, modifying and deleting entries to the Notification List provided by Notification Facility **33** via a Web browser program running on another computer attached to the Internet, voice telephone call to the telephone line attached to Private Server **14** by means of a modem, or Mobile wireless (WAP) device.

As is illustrated in the Figures, and in particular FIGS. **8**, **9** and **10**, the computer product of the present invention incorporates text-to-speech technology to provide the full Internet access described herein to a user having a telephone line. This text-to-speech can comprise a variety of commercially available technologies, implemented in a manner that is well known.

The Contact Information Facility **22** of the present invention contributes to providing full Internet access to message and contact management. By means of such facility, the present invention allows the user to access data contained in the contact database on the local computer associated with the Contact Information Facility **22**, as illustrated in FIG. **11**). More importantly, the present invention also allows the user to access said data on a local computer via a Web browser program running on another computer attached to the Internet and to command Private Server **14** in association with the computer product of the present invention to initiate a connection to receive messages from an external message address. In addition, the present invention allows a user to access said data on a local computer via a telephone call to the telephone line attached to Server Computer **12** by means of a suitable telephony hardware device, or via a Mobile wireless (WAP) device.

Other variations and modifications of the invention are possible. In particular a number of computer program facilities are described in this invention as separate facilities for the sake of describing the invention. However, it should be understood that such facilities can be combined with other facilities comprising the present invention, or such facilities can be sub-divided into separate facilities. It should also be understood that various other features or functions can be added to the present invention without departing from the scope of the present invention such as additional means accessing and managing messages and contact information remotely. In addition, it should be understood that the private communication portal can be associated with any means for generating useful data and managing such data where it is desirable to provide remote access to such data. In addition, it is contemplated that various means for restricting access to the private communication portal of the present invention other than to authorized users be utilized. It should also be understood that the Private Server of the present invention may comprise more than one copy of the computer product of the present invention. Various means for creating network connections are illustrated herein, however, other means for creating such connections used in conjunction with the invention described are also within the scope of the present invention. All such modifications or variations are believed to be within the sphere and scope of the invention as defined by the claims appended hereto.

We claim:

1. A system for providing access to a personal computer having a location on the Internet defined by a dynamic IP address from a remote computer, the system comprising:

(a) a personal computer linked to the Internet, its location on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the personal computer being further linked to a data communication facility, the data communication facility being adapted to create and send a communication that includes a then current dynamic public IP address (publicly addressable) or dynamic LAN IP address (publicly un-addressable) of the personal computer;

(b) a locator server computer linked to the Internet, its location on the Internet being defined by a static IP address, and including a location facility for locating the personal computer; and

(c) a remote computer linked to the Internet, the remote computer including a communication facility, the communication facility being operable to create a request for communication with the personal computer, and send the request for communication to the locator server computer;

wherein the data communication facility includes data corresponding to the static IP address of the locator server computer, thereby enabling the data communication facility to create and send on an intermittent basis one or more communications to the locator server computer that include the then current dynamic public IP address or dynamic LAN IP address of the personal computer; and

wherein the locator server computer is operable to act as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of the request for communication with the personal computer from the remote computer, by determining the then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly (with a publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with a publicly un-addressable dynamic LAN IP address).

2. The system as claimed in claim 1, wherein the first computer is linked to the Internet directly or via an Internet gateway/proxy.

3. A system as claimed in claim 1, wherein the personal computer is linked to a database, and said system provides means for remotely accessing said database from the remote computer.

4. A system as claimed in claim 3, wherein said system enables communication settings associated with the data communication facility to be set remotely for the personal computer from the remote computer.

5. A system as claimed in claim 1, wherein said location facility enables the current location of the personal computer to be known to the locator server computer.

6. A system as claimed in claim 5, wherein the location facility includes a dynamic location directory, wherein said dynamic location directory is responsive to the communication from the personal computer, including data for locating and/or communicating with the personal computer, to dynamically store such data to a server database linked to the locator server computer.

7. A system as claimed in claim 6, wherein the location facility is responsive to the request from the remote computer for communication with the personal computer to retrieve the current location and port number or the current communication session associated with the personal computer from the dynamic location directory, and provide said current location and port number, or the current communication session, to the personal computer.

8. A system as claimed in claim 6, wherein said data communication facility creates and sends the communication including the current location or the current communication session of the personal computer to the locator server computer periodically.

9. A system as claimed in claim 8, wherein said system further includes a security facility for restricting access to the locator server computer to one or more authorized users only.

10. A system as claimed claim 9, wherein said data communication facility further includes a communication interface for sending and receiving data communications.

11. A system as claimed in claim 1, wherein said data communication facility interfaces with data generating facilities linked to the database and the personal computer, so as to provide remote access to data created by the data generating facilities from the remote computer.

12. A system as claimed in claim 1, wherein said data communication facility further includes a private messaging and contact facility linked to the database for processing and managing messages and contact data in co-operation with said communication interface.

13. A system as claimed in claim 12, wherein said private messaging and contact facility includes a unified messaging facility and a contact information facility, each being linked to the database.

14. A system as claimed in claim 13, wherein said unified messaging facility enables the remote management of messages linked to the database and the personal computer from the remote computer.

15. A system as claimed in claim 14, wherein said unified messaging facility enables reading, replying and managing said messages linked to the personal computer remotely from the remote computer.

16. A system as claimed in claim 15, wherein said messages include e-mails, facsimiles and/or voice mails.

17. A system as claimed in claim 16, wherein said unified messaging facility includes an e-mail message facility.

18. A system as claimed in claim 17, wherein said unified messaging facility further includes a fax message management facility.

19. A system as claimed in claim 18, wherein said unified messaging facility further includes a voice message facility.

20. A system for providing access to a personal computer from a remote computer, the personal computer being linked to the Internet, the location of the personal computer on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the personal computer being further linked to a data communication facility, the data communication facility being adapted to create and send a communication that includes a then current dynamic public IP address (publicly addressable) or dynamic LAN IP address (publicly un-addressable) of the personal computer, the system comprising:

(a) a locator server computer linked to the Internet, its location on the Internet being defined by a static IP address, and including a location facility for locating the personal computer;

wherein the remote computer is also linked to the Internet, the remote computer including a communication facility, the communication facility being adapted to create a request for communication with the personal computer, and send the request for communication to the locator server computer;

wherein, the data communication facility is operable to access data corresponding to the static IP address of the locator server computer, thereby enabling the data communication facility to create and send on an intermittent basis one or more communications to the locator server computer that include the then current dynamic public IP address or dynamic LAN IP address of the personal computer; and

wherein the locator server computer is operable to act as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of the request for communication with the personal computer from the remote computer, by determining the then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly with a (publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with a publicly un-addressable dynamic LAN IP address).

21. A method of providing access to a personal from a remote computer, the personal computer being linked to the

Internet, its location on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the method comprising the steps of:

(a) providing a data communication facility on the personal computer, the data communication facility being adapted to create and send a communication that includes a then current dynamic public IP address (publicly addressable) or dynamic LAN IP address (publicly un-addressable) of the personal computer;

(b) by operation of the data communication facility:

(i) obtaining the static IP address for a locator server computer, that includes a location facility for locating the personal computer;

(ii) sending the communication that includes the then current dynamic public IP address (publicly addressable) or dynamic LAN IP address (publicly un-addressable) of the personal computer to the locator server computer;

(c) receiving a request from the remote computer at the locator server computer to communicate with the personal computer;

(d) in response to the request, the locator server computer acting as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of the request for communication with the personal computer from the remote computer, by determining the then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly with a (publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with a publicly un-addressable dynamic LAN IP address).

22. The method claimed in claim 21, further comprising the step of the locator server computer storing the current location of the personal computer into a directory linked to the location facility, the current location being obtained from a communication sent by the personal computer to the locator server computer.

23. A computer readable memory having recorded thereon statements and instructions for execution by a computer to carry out the method of claim 21.

24. A computer program product for use on a server computer linked to the Internet and having a static IP address, for providing access to a personal computer from a remote computer, the personal computer being linked to the Internet, its location on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the computer program product comprising:

(a) a computer usable medium;

(b) computer readable program code recorded or storable in the computer useable medium, the computer readable program code defining a server computer program on the server computer wherein:

(i) the server computer program is operable to enable a connection between the remote computer and the server computer; and

(ii) the server computer program includes a location facility and is responsive to a request from the remote computer to communicate with the personal computer to act as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of the request for communication with the personal computer from the remote computer, by determining a then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly (with a publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with % publicly un-addressable dynamic LAN IP address).

25. The computer program product claimed in claim 24, wherein the location facility is responsive to a communication from the personal computer including its current location to store the current location to a storage medium linked to the server computer.

26. A computer program product for use on a personal computer for providing access to the personal computer from a remote computer, the personal computer being linked to the Internet, its location on the Internet being defined by either (i) a dynamic public IP address (publicly addressable), or (ii) a dynamic LAN IP address (publicly un-addressable), the computer program product comprising:

(a) a computer usable medium;

(b) computer readable program code recorded or storable in the computer useable medium, the computer readable program code defining a data communication program on the personal computer wherein:

(i) the data communication program is operable to send a communication to a locator server computer, wherein the locator server computer is linked to a location facility and includes data for locating the personal computer; and

(ii) the data communication program is operable to communicate with the remote computer, the locator server computer acting as an intermediary between the personal computer and the remote computer by creating one or more communication sessions there between, said one or more communication sessions being created by the location facility, in response to receipt of a request for communication with the personal computer from the remote computer, by determining a then current location of the personal computer and creating a communication channel between the remote computer and the personal computer, the location facility being operable to create such communication channel whether the personal computer is linked to the Internet directly (with a publicly addressable) dynamic IP address or indirectly via an Internet gateway/proxy (with a publicly un-addressable dynamic LAN IP address).

27. The computer program product as claimed in claim 26, wherein the personal computer is linked to the Internet directly or indirectly via an Internet gateway/proxy.

28. A computer program product as claimed in claim 27, wherein the personal computer is linked to a database linked to the data communication program, and said system provides means for remotely accessing said database linked to the personal computer from the remote computer.

29. A computer program product as claimed in claim 28, wherein said data communication program enables commu-

nication settings associated with the data communication program to be set remotely from the remote computer for the personal computer.

30. A computer program product as claimed in claim 29, wherein said data communication program enables the current location of the personal computer to be known to the locator server computer.

31. A computer program product as claimed in claim 30, wherein said data communication program creates and sends the communication including the current location or the current communication session of the personal computer to the locator server computer periodically.

32. A computer program product as claimed claim 31, wherein said data communication program further includes, or is linked to, a communication interface for sending and receiving data communications.

33. A computer program product as claimed in claim 32, wherein said data communication program interfaces with data generating facilities linked to the database, so as to provide remote access to data created by the data generating facilities linked to the personal computer from the remote computer.

34. A computer program product as claimed in claim 33, wherein said data communication program further includes a private messaging and contact facility linked to the database for processing and managing messages and contact data in co-operation with said communication interface.

35. A computer program product as claimed in claim 34, wherein said private messaging and contact facility includes a unified messaging facility and a contact information facility, each being linked to the database.

36. A computer program product as claimed in claim 35, wherein said data communication program further includes, or is linked to, a remote message management facility linked to the database.

37. A computer program product as claimed in claim 36, wherein said unified messaging facility enables reading, replying and managing said messages linked to the personal computer remotely from the remote computer.

38. A computer program product as claimed in claim 37, wherein said messages include e-mails, facsimiles and/or voice mails.

39. A computer program product as claimed in claim 38, wherein said unified messaging facility includes an e-mail message facility.

40. A computer program product as claimed in claim 39, wherein said unified messaging facility further includes a fax message management facility.

41. A computer program product as claimed in claim 40, wherein said unified messaging facility further includes a voice message facility.

42. The system claimed in claim 1, wherein once the communication channel is created between the remote computer and the personal computer, the personal computer is operable to receive and act on commands from the remote computer for remote control and/or remote access of the personal computer from the remote computer.

43. The system as claimed in claim 20, wherein once the communication channel is created between the remote computer and the personal computer, the personal computer is operable to receive and act on commands from the remote computer for remote control and/or remote access of the personal computer from the remote computer.

44. The method claimed in claim 21, further comprising the step of the personal computer receiving and acting on commands from the remote computer for remote control and/or remote access of the personal computer from the remote computer.

45. The computer program product claimed in claim 24, wherein by operation of the location facility the personal computer is operable to receive and act on commands from the remote computer for remote control and/or remote access of the personal computer from the remote computer.

46. The computer program product claimed in claim 45, wherein by operation of the location facility the personal computer is operable to receive commands from the remote computer for remote control and/or remote access of the personal computer from the remote computer.

* * * * *