

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA, INC.
Petitioners,

v.

MULLEN INDUSTRIES LLC,
Patent Owner.

Case No. IPR2025-00124
Patent No. 8,374,575

DECLARATION OF DAVID H. WILLIAMS

Google Exhibit 1003 Google v Mullen IPR2025-00124

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I, David H. Williams, declare:

[0001] I have been retained by Wolf, Greenfield & Sacks, P.C., counsel for Petitioner Google LLC, to assess claims 1-46 (the “challenged claims”) of U.S. Patent No. 8,374,575 (“the ’575 patent”) (EX1001). I am being compensated for my time at my standard rate of \$485.00 per hour, plus actual expenses. My compensation is not dependent in any way upon any outcome in the *inter partes* review of the ’575 patent.

I. PERSONAL AND PROFESSIONAL BACKGROUND

[0002] I have over thirty years of industry experience in the field of location-based services (LBS), including experience designing, implementing, and managing numerous LBS applications for mobile social networking, family tracking, local search, and mobile research management. I have extensive expertise in all aspects of LBS delivery across the wireless location ecosystem, including enabling network, map data, geospatial platform, chipset, data management, device, and location determination infrastructure and integration providers.

[0003] I have summarized in this section my educational background, work experience, and some of my other relevant qualifications. My curriculum vitae, which I understand has been designated EX1004, further describes my background and experience.

[0004] I earned a Bachelor of Science in Electrical Engineering degree (BSEE), with an emphasis on digital system design, from Purdue University in 1983. In 1987, I earned a Master of Business Administration degree (MBA), with a focus on information systems management, from The University of Texas at Austin.

[0005] From 1983 to 1985, I worked at Hughes Aircraft Company as an electrical engineer, where I focused on microcomputer and digital system design on the F-15 fighter radar system, including interfacing with systems for fighter location determination (absolute and relative to ground and sea locations), as well as fighter target identification, acquisition, and targeting.

[0006] After completing my MBA, I worked for Deloitte Consulting (originally Touche Ross) as a Senior Manager from 1987 to 1991. At Deloitte, I provided consulting services for technology-intensive companies in developing and implementing business and product strategies.

[0007] From 1991 to 1993, I worked as a Senior Associate in the Information Technology Practice of Booz Allen & Hamilton, providing consulting services for communications industry and information technology-intensive companies.

[0008] From 1993 to 2002, I worked at Accenture as an Associate Partner in the Communications and High-Technology Strategy and Information

and Technology Strategy groups. At Accenture, I led the development of business, technology, and product strategies for numerous communications and technology-centric companies looking to enter new markets. I specialized in new product design, development, and implementation, as well as network infrastructure design needs to support next generation, high bandwidth-consuming digital media content and associated infrastructure.

[0009] As an example of my work with Accenture, as an Associate Partner in their Communications and High-Technology Strategy group, from 1998 to 2000 I led the development of Nextel's (now part of Sprint/T-Mobile) Location-Based Services (LBS) product strategy, identifying future location-based products and specifying their requirements for Nextel's entry into the LBS market. This effort also included leading the development of the Information Technology and Network architectures that would be needed to support the LBS Product Strategy. Many of these LBS products were multi-user products that required the sharing of location information among multiple users.

[0010] In 2002, I founded E911-LBS Consulting, which was later renamed E911-LBS Forensics Engineering ("E911-LBS"), of which I am President. Services provided by E911-LBS span the entire wireless value chain, particularly with respect to technology and business strategic planning and product design, development, implementation, and ongoing management and operations.

In the name “E911-LBS,” “E911” refers to “enhanced 911,” which is a system for emergency dialing in which the caller’s location is automatically determined and provided to the emergency dispatcher. “LBS” refers to location-based services.

[0011] I have worked on a wide variety of matters as a consultant through E911-LBS. For example, in the mid-2000s I led the development of the site map and primary content for the NAVTEQ (now HERE) Network for Developers (N4D) LBS web ecosystem. Specifically, I was responsible for designing and managing the site map and overall content, identifying key contributors and materials, and utilizing a variety of fragmented information to develop broad and deep technical, digital media and business content to assist various expertise levels of application developers and business management to become intimately familiar with map data, Geographical Information System (GIS) platforms, and LBS applications and underlying technologies and to provide the information and guidance to successfully develop and launch their LBS applications, including tools enabling multi-user applications involving sharing of location information. Also, in the mid-2000s I provided E911 consulting expertise in support of new spectrum regulatory approval and technical implementation issues for a startup carrier, and managed the design, collection, and analysis of E911 infrastructure deployment of the western region of a major wireless carrier.

[0012] Additionally, from 2007 to 2010 I worked for AT&T Mobility, first in a consulting role as a Consumer LBS Product Realization Manager, then as a Senior Product Manager – Enterprise LBS. At AT&T Mobility, my work included design, troubleshooting, and implementation of AT&T location-related network, application, user interface, digital media and content delivery, and privacy infrastructure and associated issues such as accuracy and privacy. I also managed products including telematics, fleet/vehicle management, asset/freight management, and mobile resource management GPS/LBS apps on a variety of platforms such as Telenav, and played a key role in design of company-wide location services product and implementation roadmap. Many of these applications involved the sharing of location information among multiple users, such as the AT&T FamilyMap application enabling location sharing among family members.

[0013] I have written a number of books on wireless location including: The Definitive Guide to IoT Sensors and IoT Use Cases (In Development), The Definitive Guide to GPS, RFID, Wi-Fi, and Other Wireless Location-Based Services (2005/2009 versions, new version in development), The Definitive Guide to Wireless E911 (2004 and 2005 versions), and (co-authored) The Definitive Guide to Mobile Positioning and Location Management.

[0014] I am the inventor or a co-inventor of ten issued U.S. patents and numerous pending applications. These include:

[0015] “Method and apparatus for providing mobile social networking privacy.” (U.S. Patent Number 8,613,109, Issued December 17, 2013).

[0016] “Systems and methods of using wireless location, context, and/or one or more communication networks for monitoring for, preempting, and/or mitigating pre-identified behavior.” (U.S. Patent Number 10,477,342, Issued November 12, 2019).

[0017] “Systems and methods for monitoring for and preempting pre-identified restriction violation-related behavior(s) of persons under restriction.” (U.S. Patent Number 10,497,242, Issued December 3, 2019).

[0018] “Systems and methods for providing location-based security and/or privacy for restricting user access.” (U.S. Patent Number 10,555,112, Issued February 4, 2020).

[0019] “Systems and methods for developing, monitoring, and enforcing agreements, understandings, and/or contracts.” (U.S. Patent Number 10,853,897, Issued December 1, 2020).

[0020] “Systems and methods for monitoring for and preempting pre-identified restriction violation-related behavior(s) of persons under restriction.” (U.S. Patent Number 10,861,307, Issued December 8, 2020).

[0021] “Systems and methods for monitoring for and lowering the risk of addiction-related or restriction violation-related behavior(s).” (U.S. Patent Number 11,388,546, Issued July 12, 2022).

[0022] “Systems and methods for monitoring for and preempting the risk of a future occurrence of a quarantine violation.” (U.S. Patent Number 11,412,353, Issued August 9, 2022).

[0023] “Dynamic and adaptive systems and methods for rewarding and/or disincentivizing behaviors” (U.S. Patent Number 11,636,941, Issued April 25, 2023).

[0024] “Systems and Methods for Conducting/Defending Digital Warfare or Conflict” (U.S. Patent Number 12,096,308, Issued September 17, 2024).

[0025] As demonstrated above and (discussed further below), I have at least two years of experience with wireless networks and devices, such as cell phones and personal digital assistants (“PDAs”), as well as wireless positioning technologies, such as GPS or triangulation. In fact, as demonstrated by the examples below, as of 2002, I had over eight years of industry experience with wireless networks and devices, such as cell phones and PDAs, as well as wireless positioning technologies, such as GPS or triangulation. I have a further 22 years of industry experience with wireless networks and devices, such as cell phones and

PDA's, as well as wireless positioning technologies, such as GPS or triangulation, from 2002 to the present. For example:

[0026] 1983-1985 – Designed the analog-to-digital converter as part of the digitalization of the F-15 radar. Design included interfacing to location determination and navigation systems associated with navigating the F-15 fighter, providing absolute and relative location using triangulation and other technologies using wireless networks to ground, air, and sea-based entities and associated systems and device, as well as provide the F-15 with the ability to identify (and locate), acquire (and track), and target weapon systems at hostile targets.

[0027] 1993-1998 – Worked extensively with communications carriers such as (then) Bell Atlantic, AT&T, and GTE to develop new communications strategies, products and services and underlying Information Technology and networking requirements. Efforts included forecasting and specifying strategies and requirements for the transition of communications networks from predominately wireline to wireless, and its implications on end-user devices including cell phones and PDA's.

[0028] 1995-2001 – Was responsible for the development of Accenture's wireless location practice to capitalize on opportunities from The 1996 Telecommunications Act. I led development of business, technology, and product strategies for numerous communications and technology-centric companies

looking to enter new markets. I specialized in new wireless and wireline product design, development, and implementation as well as Information Technology and wireless network design for various established and start-up companies, including specifying requirements for end user devices such as cell phones and PDAs.

[0029] 1998-2000 – For example, I led the development of Nextel’s (now part of Sprint/T-Mobile) Location-Based Services (LBS) product strategy, identifying future location-based products and specifying their requirements for Nextel’s entry into the LBS market. This effort also included leading the development of the Information Technology and wireless network architectures that would be needed to support the LBS Product Strategy, as well as specifying wireless device/cell phone design requirements to support the LBS product strategy.

[0030] 2003-2004 – As President of E911-LBS, I led the development of part of AT&T Wireless’s E911 infrastructure, including the development of systems, processes, and reporting infrastructure to manage and track the deployment of time difference of arrival-based location determination technologies. I managed the testing and Federal Communications Commission reporting of network location inaccuracies, with a particular focus on detecting and troubleshooting out-of-norm technology deployment and inaccurate location conditions.

[0031] 2004-2006 - Worked with NAVTEQ (now called HERE)—the leading provider of map data and services essential to creating LBS applications—to develop the company’s web developer website content and tools. Specifically, I designed and managed the site map and overall content, including the development of comprehensive technical and business web content for all NAVTEQ map product and service lines. Through the developer site, application developers and business managers became intimately familiar with map data, Geographical Information System (GIS) platforms, and location-based services to successfully develop and launch their LBS applications.

[0032] 2007-2010 – Led design finalization and implementation of several of AT&T’s first generation of location-based services, as well as design of underlying location enabler network. Became the only non-employee inventor on U.S. Patent Number 8,613,109, Method and Apparatus for Mobile Social Networking Privacy (issued December 17, 2013).

[0033] 2010-Present – Worked on patent and related cases involving over 200 patents involving wireless networks, wireless positioning technologies such as GPS and triangulation, and end user devices such as cell phones, PDAs, and other mobile devices.

[0034] 2015-Present – Worked on over 50 criminal and civil forensics cases involving wireless networks, wireless positioning technologies such as GPS

and triangulation, and end user devices such as cell phones, PDAs, and other mobile devices.

[0035] The above-summarized experience is also set forth in my curriculum vitae, a copy of which is provided as EX1004 and which further describes my detailed qualifications and professional experience.

II. MATERIALS REVIEWED AND CONSIDERED

[0036] My findings, as explained below, are based on my years of education, research, experience, and background in the field of wireless networks and devices, such as cell phones and personal digital assistants (“PDAs”), as well as wireless positioning technologies, such as GPS or triangulation, as well as my investigation and study of relevant materials for this declaration. When developing the opinions set forth in this declaration, I assumed the perspective of a person having ordinary skill in the art (“POSA”), as set forth in Section IV below. In forming my opinions, I have studied and considered the materials identified in the list below.

Exhibit	Description
1001	U.S. Patent No. 8,374,575 (“the ’575 patent”)
1002	Prosecution History of U.S. Patent No. 8,374,575
1005	U.S. Patent No. 7,333,820 (“Sheha”)
1006	U.S. Provisional Patent Application No. 60/305,975 (“Sheha-Prov.”)
1007	U.S. Patent Application Publication No. 2004/0024846 (“Randall”)

Exhibit	Description
1008	International Patent Application Publication No. WO 02/17075 (“Randall-WIPO”)
1013	U.S. Patent No. 6,968,179 (“De-Vries”)
1014	U.S. Patent No. 6,920,328 (“Wollrab”)
1015	U.S. Patent No. 6,714,791 (“Friedman”)
1017	U.S. Patent No. 6,885,874 (“Grube”)
1018	U.S. Patent No. 6,716,101 (“Meadows”)
1019	U.S. Patent No. 7,366,522 (“Thomas”)
1022	International Patent Application Publication No. WO 01/91486 (“Darling”)
1024	U.S. Patent No. 6,714,793 (“Carey”)
1025	U.S. Patent No. 6,415,224 (“Wako”)
1029	U.S. Patent No. 6,456,854 (“Chern”)
1030	U.S. Patent No. 6,754,665 (“Futagami”)
1035	International Patent Application Publication No. WO 00/22860 (“Degnbol”)
1041	U.S. Patent Application Publication No. 2003/0074209 (“Tobin”)
1044	U.S. Patent No. 6,269,369 (“Robertson”)
1045	U.S. Patent Application Publication No. 2002/0169539 (“Menard”)
1046	U.S. Patent No. 7,681,034 (“Lee”)
1051	U.S. Patent No. 6,674,849 (“Froeberg”)
1052	U.S. Patent No. 5,839,088 (“Hancock”)
1053	U.S. Patent No. 5,583,776 (“Levi”)
1054	U.S. Patent No. 6,867,733 (“Sandhu”)
1055	U.S. Patent No. 6,532,418 (“Chun”)
1056	U.S. Patent No. 6,049,718 (“Stewart”)
1057	U.S. Patent No. 6,609,005 (“Chern-005”)
1058	U.S. Patent No. 6,701,251 (“Stefan”)

Exhibit	Description
1059	U.S. Patent No. 7,796,998 (“Zellner”)
1060	U.S. Patent No. 7,284,033 (“Jhanji”)
1061	U.S. Patent No. 6,757,740 (“Parekh”)
1062	International Patent Application Publication No. WO 01/57696 (“McElligott”)
1063	U.S. Patent No. 6,684,250 (“Anderson”)
1064	U.S. Patent No. 7,296,088 (“Padmanabhan”)
1065	U.S. Patent No. 6,115,611 (“Kimoto”)
1066	U.S. Patent No. 6,823,260 (“Turcotte”)
1067	U.S. Patent No. 6,127,945 (“Mura-Smith”)
1068	U.S. Patent No. 6,633,813 (“Deworetzki”)

III. MY UNDERSTANDING OF PATENT LAW

[0037] In developing my opinions, I discussed various relevant legal principles with Petitioner Google’s attorneys. Though I do not purport to have prior knowledge of such principles, I understood them when they were explained to me and have relied upon such legal principles, as explained to me, in the course of forming the opinions set forth in this declaration. My understanding in this respect is as follows:

[0038] I understand that “*inter partes* review” (IPR) is a proceeding before the United States Patent & Trademark Office for evaluating the patentability of an issued patent’s claims based on prior-art patents and printed publications.

[0039] I understand that, in an IPR proceeding, including in this proceeding, the petitioner has the burden of proving that the challenged claims of

the challenged patent are unpatentable by a preponderance of the evidence. I understand that “preponderance of the evidence” means that a fact or conclusion is more likely true than not true.

[0040] I understand that, in IPR proceedings, claim terms in a patent are given their ordinary and customary meaning as understood by a person of ordinary skill in the art (“POSA”) in the context of the entire patent and the prosecution history pertaining to the patent. If the specification provides a special definition for a claim term that differs from the meaning the term would otherwise possess, the specification’s special definition controls. If a claim element is expressed as a “means” for performing a specified function, I understand that it covers the corresponding structure described in the specification and equivalents of the described structure. I have applied these standards in preparing the opinions in this declaration.

[0041] I understand that determining whether a particular patent or printed publication constitutes prior art to a challenged patent claim can require determining the effective filing date (also known as the priority date) to which the challenged claim is entitled. I understand that for a patent claim to be entitled to the benefit of the filing date of an earlier application to which the patent claims priority, the earlier application must have described the claimed invention in sufficient detail to convey with reasonable clarity to the POSA that the inventor

had possession of the claimed invention as of the earlier application's filing date. I understand that a disclosure that merely renders the claimed invention obvious is not sufficient written description for the claim to be entitled to the benefit of the filing date of the application containing that disclosure.

[0042] I understand that for an invention claimed in a patent to be patentable, it must be, among other things, new (novel—*i.e.*, not anticipated) and not obvious from the prior art. My understanding of these two legal standards is set forth below.

A. Anticipation

[0043] I understand that, for a patent claim to be “anticipated” by the prior art (and therefore not novel), each and every limitation of the claim must be found, expressly or inherently, in a single prior-art reference. I understand that a claim limitation is disclosed for the purpose of anticipation if a POSA would have understood the reference to disclose the limitation based on inferences that a POSA would reasonably be expected to draw from the explicit teachings in the reference when read in light of the POSA's knowledge and experience.

[0044] I understand that a claim limitation is inherent in a prior art reference if that limitation is necessarily present when practicing the teachings of the reference, regardless of whether a person of ordinary skill recognized the presence of that limitation in the prior art.

B. Obviousness

[0045] I understand that a patent claim may be unpatentable if it would have been obvious in view of a single prior-art reference (e.g., in combination with the POSA's background knowledge) or a combination of prior-art references.

[0046] I understand that a patent claim is obvious if the differences between the subject matter of the claim and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the relevant field at the time the invention was made. Specifically, I understand that the obviousness question involves a consideration of:

- the scope and content of the prior art;
- the differences between the prior art and the claims at issue;
- the knowledge of a person of ordinary skill in the pertinent art; and
- if present, objective factors indicative of non-obviousness, sometimes referred to as "secondary considerations." To my knowledge, the Patent Owner has not asserted any such secondary considerations with respect to the patent challenged in this proceeding.

[0047] I understand that in order for a claimed invention to be considered obvious, a POSA must have had a reason for combining teachings from

multiple prior-art references (or for altering a single prior-art reference, in the case of obviousness in view of a single reference) in the fashion proposed.

[0048] I further understand that in determining whether a prior-art reference's teachings would have been combined with teachings from other prior art or with other information within the knowledge of a POSA, the following are examples of approaches and rationales that may be considered:

- combining prior-art elements according to known methods to yield predictable results;
- simple substitution of one known element for another to obtain predictable results;
- use of a known technique to improve similar devices in the same way;
- applying a known technique to a known device ready for improvement to yield predictable results;
- applying a technique or approach that would have been "obvious to try," *i.e.*, choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based

on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

- some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior-art reference or to combine prior-art reference teachings to arrive at the claimed invention. I understand that this teaching, suggestion or motivation may come from a prior-art reference or from the knowledge or common sense of one of ordinary skill in the art.

[0049] I understand that for a single reference or a combination of references to render the claimed invention obvious, a POSA must have had a reasonable expectation of success in arriving at the claimed invention (e.g., by altering or combining the teachings of the applied references).

IV. PERSON OF ORDINARY SKILL IN THE ART (“POSA”)

[0050] I have been informed and understand that for purposes of assessing whether a prior-art reference discloses every element of a patent claim (thus “anticipating” the claim) and/or whether prior-art references would have rendered the claim obvious, the patent and the prior-art references must be assessed from the perspective of a person having ordinary skill in the art (“POSA”) to which

the patent is related, based on the understanding of that person at the time of the patent claim's priority date. I have been informed and understand that a POSA is presumed to be aware of all pertinent prior art and the conventional wisdom in the art, and is a person of ordinary creativity. I have applied this standard throughout my declaration.

[0051] The '575 patent involves technology in the field of location-based services—including specifically “systems and methods for determining a device's location” and “[m]ore particularly,...systems and methods for remotely determining a device's location.” EX1001, 1:17-20. I have been asked to provide my opinions as to the state of the art in this field by March 2002. I use this timeframe because the face of the '575 patent indicates an earliest claimed priority date of March 25, 2002. Whenever I offer an opinion in this declaration about the knowledge of a POSA, the manner in which a POSA would have understood the claims of the '575 patent or its description, the manner in which a POSA would have understood the prior art, or what a POSA would have been led to do based on the prior art, I am referencing the early-2002 timeframe, even if I do not say so specifically in each case.

[0052] I understand that the Patent Owner may attempt to prove that the alleged invention recited in the challenged claims was conceived at some time prior to the earliest claimed priority date on the face of the patent. At the time of

this declaration, I am unaware of the Patent Owner having alleged any earlier conception date or produced any evidence to establish any earlier conception date.

[0053] In my opinion, a person of ordinary skill in the art in the early-2002 timeframe (“POSA”) would have had a bachelor’s degree in computer science, computer engineering, electrical engineering, or a similar degree, with one or two years of experience with wireless networks and devices, such as cellphones and personal digital assistants (“PDAs”), as well as wireless positioning technologies, such as GPS or triangulation. More education could compensate for less practical experience, and vice versa. This person would have been capable of understanding and applying the teachings of the challenged patent and the prior-art references discussed in this declaration.

[0054] By 2002, I held a Bachelor of Science in Electrical Engineering, and I had well more than two years of experience with wireless networks and devices, including cellphones and PDAs, as well as with wireless positioning technologies, including GPS and triangulation. Therefore, I was a person of more than ordinary skill in the art during the relevant timeframe. However, I worked with many people who fit the characteristics of the POSA, and I am familiar with their level of skill. When developing the opinions set forth in this declaration, I assumed the perspective of a person having ordinary skill in the art, as set forth above.

V. THE '575 PATENT

[0055] The '575 patent is titled “Systems and Methods for Locating Cellular Phones and Security Measures for the Same.” Its Abstract says it provides “[m]ore particularly, systems and methods for providing the location of a requested user’s cellular phone from a requesting user’s device (e.g., a second cellular phone) based on access rights defined by the requested user.”

A. Specification Embodiments

[0056] Generally, the '575 patent discusses techniques for determining a device’s location, such as via the Global Positioning System (“GPS”). EX1001, 1:18-28. The patent alleges that “GPS systems have been integrated into cellular phones” but “only minimally utilized,” so the patent purports to provide functionality to allow one cellphone user to “locate the position of” another user’s cellphone. EX1001, 1:28-43.

[0057] Cellphones in the '575 patent can share their locations with a remote system, from which other users can obtain them. EX1001, 5:7-29. A user can also restrict access to their location by identifying authorized users or groups, thus specifying which other users may obtain their location information. EX1001, 3:22-30.

[0058] FIG. 2's example method to obtain another user's location (below) includes receiving a location request, determining whether the requesting user is authorized, and, if so, providing the location to the requestor.

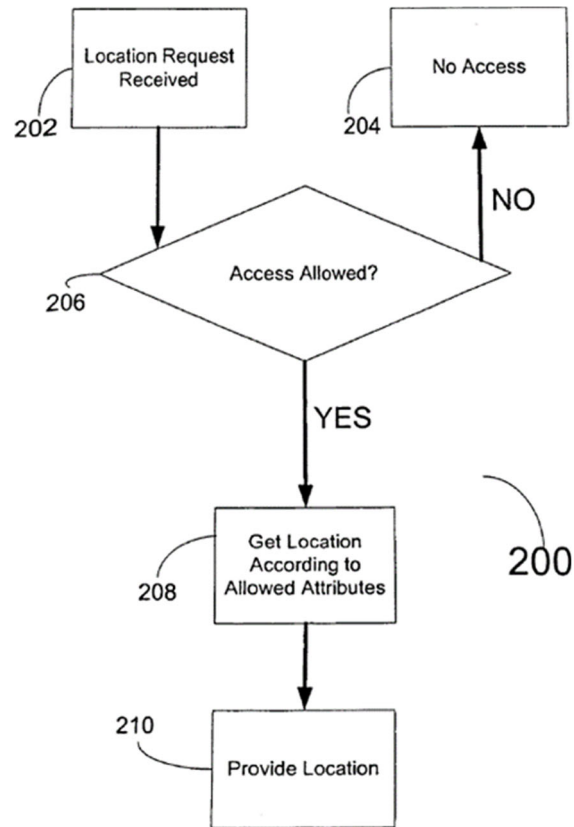
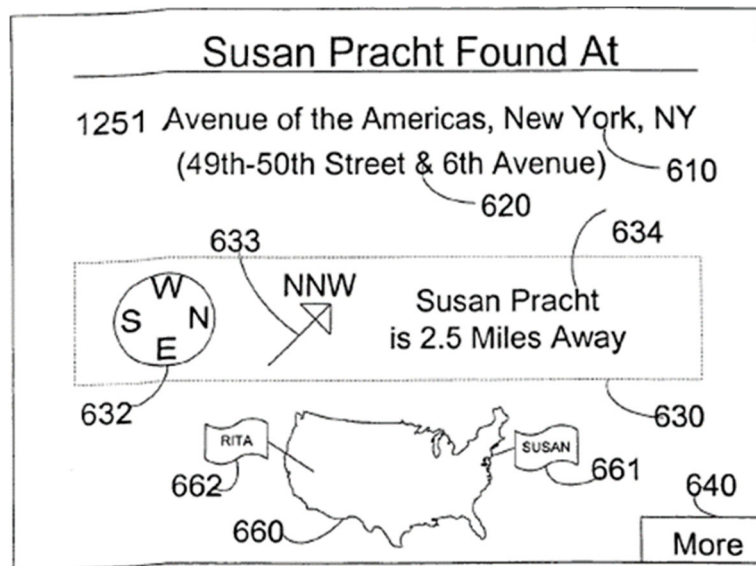


FIG. 2

EX1001, FIG. 2

[0059] Some embodiments require a user to enter a login and password, to identify the user before the user's profile is updated with their current location and before the user requests other users' locations. EX1001, 2:57-3:7, 3:26-30, 9:39-10:6.

[0060] Received location information may be displayed on a display screen, as shown in Figure 6's example below. EX1001, 7:21-29. The display can include directional information, such as compass information and an arrow showing which way the target user's location is relative to the requesting user. EX1001, 7:41-50.



EX1001, FIG. 6

B. Prosecution History of the '575 Patent

[0061] The '575 patent's application was rejected seven times before being allowed. Eventually, an Examiner's amendment added "determining a second location associated with one of said plurality of wireless telephones" and "providing directional information...representative of directions between said location and said second location" to pending independent claim 3, and similar

limitations to other pending independent claims. EX1002, 371-77. The claim that issued as claim 14 was also rewritten in independent form from a previously dependent claim. EX1002, 374-75. No reasons for allowance were provided.

C. The Challenged Claims

[0062] The '575 patent's six independent claims (1, 13-15, 30 and 38) each recite a method comprising obtaining/determining a first wireless telephone's location, and changing a list of users that are allowed to access that location. Claims 1, 13, 15, 30, and 38 each further recite providing directional information representative of directions between the first wireless telephone's location and another wireless telephone's location, while claim 14 instead recites receiving manual input for a second location associated with a second user and transmitting the first wireless telephone's location to the second user's device.

[0063] As I discuss further below in §VIII, each of the dependent claims recites further functionality that was routine and conventional before the '575 patent.

VI. CLAIM INTERPRETATION

[0064] In accordance with the standards for interpreting patent claim terms that I discussed above in Section III, I have interpreted the terms in the claims in accordance with their ordinary and customary meaning as understood by

a POSA in the context of the patent (including the descriptions in the specification) and its prosecution history.

VII. PRIOR-ART REFERENCES

[0065] I briefly introduce in this Section below various prior-art references discussed in this declaration.

A. Background on Motivation to Combine and Reasonable Expectation of Success in Combining Prior Art

[0066] The '575 patent purports to have provided a variety of innovations, such as “locat[ing] the position of a different user's cellular phone (e.g., a requested user) based upon requestor-assigned access rights[,]” EX1001, 1:38-42, and more broadly, “provid[ing] systems and methods which better utilize the information about a device's location.” EX1001, 1:31-33.

[0067] It is my opinion that not only were the purported inventions known to POSAs prior to 2002, the 1990s federal mandate to update wireless devices and carrier network location-based technologies and services spurred innovation in this field years before the patents were filed.

[0068] It is my understanding, and was the understanding of a POSA, that the 1996 Telecommunications Act, and in particular FCC orders (the “911 Mandate”) that came from it dramatically changed the telecommunications industry in the United States, particularly for the wireless industry in general and even more so the development and deployment of wireless location technologies

and associated location-based services (“LBS”). The Act and 911 Mandate required action on every part of the wireless ecosystem: devices, carriers, end users, application providers, equipment makers and service providers, providing much of the groundwork for subsequent location-related services in the United States, including transportation/transit applications.

[0069] The 911 Mandate was rooted in part in the inability of 911 dispatchers to locate mobile phone callers, which set off a subsequent FCC order process that resulted in a mandate by the FCC requiring wireless carriers to be able to locate cell phones for 911 emergency purposes. Federal Communications Commission. “Third Report and Order.” October 6, 1999. <https://transition.fcc.gov/Bureaus/Wireless/Orders/1999/fcc99245.pdf> (last checked 09-030-2024). The original mandate had a target of 5 years for completion (by December 2001, later revised to the end of 2005), with a variety of interim milestone targets to be met. The mandate required that carriers be able to determine and deliver to Public Safety Answering Points (PSAPs, e.g., 911 dispatchers) the location of a cell phone within a specific range of accuracy.¹

¹ For handset-based solutions: 50 meters for 67 percent of calls, 150 meters for 95 percent of calls; For network-based solutions: 100 meters for 67 percent of calls, 300 meters for 95 percent of calls. See https://transition.fcc.gov/pshs/services/911-services/enhanced911/archives/factsheet_requirements_012001.pdf at p.3 (last checked 09-30-2024).

[0070] Thus, well before Mr. Mullen purportedly invented the ideas described in the challenged patents, the U.S. E911 mandate requiring the locating devices and sharing that location with other systems (and in turn other users) had been in existence for several years and much of the wireless industry (particularly wireless carriers and their suppliers) had been actively working for years to meet the original mandate milestones, to avoid multi-million dollar fines, and to enable applications that could monetize the extensive (many millions of dollars) infrastructure investments that the mandate necessitated.

[0071] Further, a variety of location information sharing innovations were occurring by that time, stimulated by the coming ubiquity of cell phone location capabilities and further buoyed by the elimination in May 2000 of the GPS system's "Selective Availability," which had deliberately distorted GPS signals so they would be inaccurate up to 100 meters.² As the White House's press release said at the time:³

GPS IS A CRITICAL TECHNOLOGY FOR INDIVIDUALS AND BUSINESSES AROUND THE GLOBE. GPS is a dual-use system, providing highly accurate positioning and timing data for both military and civilian users. **There are more than 4 million GPS users world wide, and the market for GPS applications is expected to double in the next three years, from \$8**

² Specifically, up to 100 meters vertically, and up to 50 meters horizontally.

³ That Selective Availability would likely be discontinued was known as early as the 1996 Telecommunications Act.

See <https://ieeexplore.ieee.org/document/838346> (last checked 09-30-2024).

billion to over \$16 billion. Some of these applications include: air, road, rail, and marine navigation, precision agriculture and mining, oil exploration, environmental research and management, telecommunications, electronic data transfer, construction, recreation and emergency response.

https://clintonwhitehouse4.archives.gov/WH/New/html/20000501_2.html.⁴

[0072] These new applications and enhancement of existing applications looked to capitalize on the additional capabilities and associated benefits that having location as part of the data set/app functionality would provide. These include improving efficiencies and costs of mobile resources deployment and utilization, new revenue potential from new and more tailored apps, personalizing/customizing functionality based on location, improved convenience, improved privacy and security, providing real-time status based on/including current location, collecting historical location for after-the-fact analysis and forward-looking projections of location-related resources, in enabling more custom data presentation based on/utilizing a user's (device) location, enabling new use cases, and enhancing particular use case(s) and overall application customer experience.

⁴ I have added all emphasis in this declaration unless I have specified otherwise.

[0073] For example, a Google Patent search for “location services” and “sharing” prior to March 25, 2002 yields over 136,000 results.⁵ Over 129,000 of those results⁶ appear for between May 1, 2000 and March 25, 2002, indicating at least in part the widespread recognition of the benefits from the improved accuracy resulting from removal of Selective Availability, the utility/benefits of sharing location information, and more generally the growing awareness of the potential for location-based services around the turn of the century. Further, over 95,000 results remain when further filtered by adding “cost reduction” or “improved efficiencies.”⁷ Similarly, a search for “location services” and “sharing” and “new revenue” yielded over 15,000 results.⁸ Replacing the search of “new revenue” with “improved user interface” yielded over 84,000 results,⁹ and “navigation” instead of

⁵ <https://patents.google.com/?q=location+services&q=sharing&before=priority:20020325> (last checked 9/17/2024).

⁶ <https://patents.google.com/?q=location+services&q=sharing&q=cost+reduction,improve+efficiencies&before=priority:20020325&after=priority:20000501> (last checked 9/17/2024).

⁷ <https://patents.google.com/?q=location+services&q=sharing&q=cost+reduction,improve+efficiencies&before=priority:20020325&after=priority:20000501> (last checked 9/17/2024).

⁸ <https://patents.google.com/?q=location+services&q=sharing&q=new+revenue&before=priority:20020325&after=priority:20000501> (last checked 9/17/2024).

⁹ <https://patents.google.com/?q=location+services&q=sharing&q=improved+user+interface&before=priority:20020325&after=priority:20000501> (last checked 9/17/2024).

“new revenue” yielded over 25,000 results.¹⁰ Thus, by the time of the patent priority date, the potential benefits of location services involving the sharing of information like location were well known, including services involving navigation and better user interface capabilities. In addition, a POSA would also recognize the multitude of technology capabilities and varied user interface challenges associated with location-related technology and data, and seek out ways to improve a user’s ability to utilize and interact with such (often large amounts of) location data via meaningful and efficient mechanisms.

[0074] It is my opinion, and was the understanding of a POSA, that the LBS field rapidly grew in the late 1990s and early 2000s as the wireless industry strived to satisfy the U.S. E911 mandate and innovators recognized the potential of LBS, particularly with Selective Availability removed. Further, it is my opinion that the general advances in the LBS field would have motivated a POSA to combine the asserted references as I describe in more detail below.

B. Sheha (EX1005)

[0075] Sheha is titled “System and Method for Providing Routing, Mapping, and Relative Position Information to Users of a Communication Network.” Sheha “is directed to a system and method for providing real-time

¹⁰ <https://patents.google.com/?q=location+services&q=sharing&q=navigation&before=priority:20020325&after=priority:20000501> (last checked 9/17/2024).

position information of one party to another party” such that “a party may locate the position of another party” and “retrieve routing instructions or maps for traveling to or from each other.” Sheha, Abstract.

[0076] According to the face of the document, Sheha (EX1005) is a United States patent issued on February 19, 2008 as Patent No. 7,333,820 from an application filed on July 11, 2002 as Application No. 10/194,518. That application claimed priority to a provisional application filed on July 17, 2001 as Provisional Application No. 60/305,975. I have been informed that EX1006 is a copy of the Sheha provisional application as available from the website of the United States Patent and Trademark Office.

[0077] By comparing EX1005 to EX1006, I have observed that the written description and figures of Sheha (the non-provisional publication) (EX1005) are substantively identical to those of the Sheha provisional application (EX1006).

[0078] Based on comparing claim 1 of Sheha (EX1005) to the written description in the Sheha provisional application (EX1006), it is also my opinion that the Sheha provisional application provides written description support for claim 1 of Sheha, as shown in the table below:

**Table 1: Claim Chart comparing Claim 1 of Sheha (EX1005)
to Sheha’s Provisional Application (EX1006)**

Sheha (EX1005) Claim 1 Limitation	Sheha’s Provisional Application Support in EX1006
1. A method of providing position information of a caller using a telecommunication network, said method comprising the steps of:	“It is another object of the present invention to provide a method for...the purpose of determining position information associated with the telephone number by searching a networked database.” 4:6-10.¹¹ <i>See also</i> 4:11-18; 4:21-25 (“the position information to a caller is displayed”); 11:3-27 (caller uses a “telephone network,” which is “<i>a telecommunication network</i>”); 12:30-32 (supported telecommunication networks include “CDMA, TDMA, or GSM”).
receiving caller information, said caller information being associated with a telecommunication event that is initiated by the caller, said caller information including at least one of a caller identification information and the phone number information of the caller;	“The act of dialing the telephone number to another remote landline telephone [<i>‘a telecommunication event’</i>], such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices.” 6:13-17. “In one embodiment the display unit on the destination telephone 8 [<i>i.e.</i>, the device receiving the caller information] can display the caller’s name [<i>‘caller identification information’</i>],

¹¹ Citations are to the native page numbering of the provisional application’s specification within EX1006, rather than to the PDF page numbers of EX1006. For example, 4:6-10 occurs at lines 6-10 of native page 4 of the specification, which is on page 8 of the PDF of EX1006.

	telephone number, address, and can provide a map illustration of varying resolutions configured by the user through the telephone network 2.” 11:28-31. “The ODAS 3 is preferably notified that a telephone call is being established by the telephone network 2 [<i>‘a telecommunication event that is initiated by the caller’</i>]. Included in this notification is the telephone number and user identification information for both the originating and destination telephone numbers.” 13:9-13. “After the system has verified that the destination telephone number user is signed-on, the ODAS 3 sends a notification to the device 6 that the user is signed-on.” 13:29-31. “In this embodiment, the notification appears on the user’s display device 6 just prior or during the ringing or notification that the telephone has an incoming telephone call. In one embodiment, the display 24 of the user’s device shows that he or she is signed-on and can have numerous miscellaneous window(s) 25 open at the time the Map Caller-ID notification is activated. The Map Caller-ID notification window 26 typically contains only the originating user identification and telephone number, but may also contain map information of varying resolution.” 14:6-13.
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accessing caller privacy information, said caller privacy information identifying a caller user group consisting of a plurality of group members pre-defined by said caller, each group member of the caller user group being a user of the telecommunication network;	“In this case, users who are initiating or receiving the telephone calls [<i>‘users of the telecommunication network’</i>] have their local telephone numbers stored into a database that resides on a secure network.” 6:21-23. “In another embodiment, the destination remote mobile device receiving the telephone call obtains the position information from the calling local mobile device, based on permission settings of the calling local mobile device [<i>‘caller privacy information’</i>], for the performance of various operations, such as mapping and calculating driving directions.” 7:19-23. “In another embodiment, each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information [<i>‘caller privacy information’</i>].” 8:14-16. “In another embodiment, users can define a group of specific users that have access to this information [<i>‘identifying a caller user group consisting of a plurality of group members pre-defined by said caller’</i>]. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information [<i>‘identifying a caller user group consisting of a plurality of group members pre-defined by said caller’</i>].” 18:30-19:1.
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receiving receiver information, said receiver information being associated with said telecommunication event initiated by the caller, said receiver information including a unique identification information of the receiver;	“This invention relates to location and navigational systems and to the determination of local and remote position information in ad-hoc landline and wireless systems, including the utilization of unique identification addresses, such as telephone numbers or Internet Protocol (IP) addresses [<i>‘unique identification information’</i>], for such purposes as providing real-time location information, maps, routing, and direction finding.” 1:6-11. “It is yet another object of the present invention to provide a method for entering a unique identification token [<i>‘unique identification information’</i>], such as an e-mail address, that can be used on a networked server system utilizing authentication and authorization procedures, in order to determine position information and to pass that information between a plurality of unique users or applications on various devices.” 4:11-16. “The act of dialing the telephone number to another remote landline telephone [<i>‘a telecommunication event’</i>], such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices.” 6:13-17. “In order to determine the position information of a remote landline or wireless device in order to obtain
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	driving directions to that device or other related information about that device, in one embodiment, a user can initiate a position request by entering a unique identification token, such as an e-mail address.” 8:1-5. “Therefore, in this embodiment, when a telephone 8 dials a destination standard telephone 5 [<i>said telecommunication event initiated by the caller</i>], the destination telephone number is sent over the dedicated landline connection 9b to the telephone network 2 [<i>unique identification information</i>]. The ODAS 3 is sent both the originating and destination telephone numbers via the telephone network connection 10. In another embodiment, accompanying information, such as user identification information associated with each telephone number is also sent to the ODAS 3.” 13:1-7. “The ODAS 3 receives both the originating and destination telephone numbers, users’ account information, and position information for both mobile devices 18b and 18c [<i>receiving receiver information, said receiver information being associated with said telecommunication event initiated by the caller, said receiver information including a unique identification information of the receiver</i>]” 17:29-31.
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verifying whether the receiver is a member of the caller user group;	“A mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call. For a landline-to-landline position request, the specified telephone number is correlated to its position information using telephone information from a known database or sets of databases. In one embodiment, the online database that contains this information only includes users that do not have unlisted telephone numbers. In another embodiment, users can define a group of specific users that have access to this information. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information. When a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device. In another embodiment, using the authorization and authentication protocols a user can request the position of a mobile device, similarly to requesting the position of a landline device.” 18:23-19:6.
retrieving a caller position information, said caller position information indicating a location of the caller; and	“It is another object of the present invention to provide a method for...the purpose of determining position information associated with the telephone number [<i>retrieving a call position information ... indicating a location of the caller</i>] by searching a networked database.” 4:6-10.

	“It is yet another object of the invention to provide an alternative form of Caller-ID (Map Caller-ID) to a local computing telephone device for display of the caller’s position information This position information transfer is done utilizing authentication and authorization procedures or telephone-to-position information correlation procedures for caller identification.” 4:19-28. <i>See also</i> 5:5-11 (“acquire local or remote position information through the methods described above”); 6:13-17 (“The act of dialing the telephone number to another remote landline telephone, such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices.”); 7:19-23 (“In another embodiment, the destination remote mobile device receiving the telephone call obtains the position information from the calling local mobile device [<i>retrieving a call position information ... indicating a location of the caller</i>’], based on permission settings of the calling local mobile device, for the performance of various operations, such as mapping and calculating driving directions.”); 11:21-24 (“Map Caller-ID includes additional position information fields of various formats, and can include map information at varying resolutions of both the originating and destination telephone
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	number's locations.”); 14:21-25 (“In one embodiment, this new information window 30 is a detailed Map Caller-ID information window of varying resolution displaying the originating position information, such as a map location 33 of the caller, and the user's location position information, such as a map location 34 of the destination telephone number.”); 18:15-22 (“The mobile devices 18b and 18c continually send their updated position information to the ODAS 3, when the position information has changed significantly as compared to the positioning error probability and as determined by the positioning technology or network configuration. The ODAS 3 periodically updates each mobile device with the other's position information, thus providing real-time driving directions and route information. In another embodiment, the position information transfer can be sent in a peer-to-peer configuration, thus circumventing the ODAS 3.”)
transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group,	“The mobile devices 18b and 18c continually send their updated position information to the ODAS 3, when the position information has changed significantly as compared to the positioning error probability and as determined by the positioning technology or network configuration. The ODAS 3 periodically updates each mobile device with the other's position information [<i>“transmitting to the receiver the caller position information”</i>], thus providing real-time driving directions and route

	information. In another embodiment, the position information transfer can be sent in a peer-to-peer configuration, thus circumventing the ODAS 3.” 18:15-22. “A mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call. For a landline-to-landline position request, the specified telephone number is correlated to its position information using telephone information from a known database or sets of databases. In one embodiment, the online database that contains this information only includes users that do not have unlisted telephone numbers. In another embodiment, users can define a group of specific users that have access to this information [<i>‘receiver is verified to be a member of the caller user group’</i>]. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information [<i>‘receiver is verified to be a member of the caller user group’</i>]. When a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device [<i>“transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group”</i>]. In another
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	embodiment, using the authorization and authentication protocols a user can request the position of a mobile device, similarly to requesting the position of a landline device.” 18:23-19:6.
wherein the transmission of the caller position information is associated with the telecommunication event and occurs after the telecommunication event is initiated.	“The act of dialing the telephone number to another remote landline telephone [<i>‘a telecommunication event’</i>], such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices [<i>i.e., ‘the transmission of the caller position information is associated with the telecommunication event and occurs after the telecommunication event is initiated’</i> because the transfer is triggered by the telecommunication event].” 6:13-17. “In another embodiment, users can define a group of specific users that have access to this information. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information. When a mobile device’s position information is requested [<i>i.e., ‘after the telecommunication event is initiated’</i>], the system, based on privacy settings, responds with the appropriate position information to the requesting user's device [<i>‘transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group’</i>]. In another embodiment,

	using the authorization and authentication protocols a user can request the position of a mobile device, similarly to requesting the position of a landline device.” 18:30-19:6.
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[0079] Because Sheha’s disclosure is substantively identical to that of its provisional application, and because the provisional application’s disclosure provides written-description support for at least one of Sheha’s claims (e.g., Sheha’s claim 1 as I demonstrated above), I have been informed by counsel that Sheha qualifies as prior art to the ’575 patent based on the filing date of Sheha’s provisional application.

[0080] As discussed in Sections VIII.A-B below, in my opinion a POSA would have understood that Sheha, in combination with other references, renders obvious all claims of the ’575 patent. *See also infra* §VIII.A.1 (additional discussion of Sheha).

C. Randall (EX1007)

[0081] Randall is titled “Method of Enabling a Wireless Information Device to Access Data Services.” Randall relates to “enabling a wireless information device to access data from several data services providers...using an extensible framework which handles data passing to and from several applications resident on the device, the framework being shared by each of the applications resident on the device and also being shared by each of the data services

providers.” Randall, Abstract. “As an example,...a user might choose to subscribe to a service which allowed others to track his or her location” and “show the position of the user” on “digital maps.” Randall, [0021].

[0082] According to the face of the document, Randall (EX1007) is a published U.S. patent application, published on February 5, 2004 as Publication No. 2004/0024846 from an international patent application that was filed on August 22, 2001 as PCT (WIPO) Application No. PCT/GB01/03788 and entered the U.S. national stage as U.S. Application No. 10/362,109. I have been informed by counsel that Randall qualifies as prior art to the ’575 patent based on Randall’s international filing date. I have also compared the WIPO publication of Randall (EX1008) to the U.S. publication of Randall (EX1007) and I have observed that they are substantively identical. In Table 2 below, I have listed the paragraphs in the U.S. publication of Randall that appear on each page of the WIPO publication of Randall. Thus, although in this declaration I cite to the U.S. publication of Randall (EX1007) for ease of reference, each citation to the U.S. publication has a substantively identical citation in the WIPO publication of Randall at the corresponding page shown in the following table:

**Table 2: Comparison of PCT Application No. PCT/GB01/03788 (EX1008)
and U.S. Publication No. 2004/0024846 (EX1007)**

Randall PCT	Randall US		
Pg. 1	[0001 - 0004]	Pg. 43	[0303 - 0312]
Pg. 2	[0005 - 0007]	Pg. 44	[0313 - 0336]
Pg. 3	[0008 - 0009]	Pg. 45	[0337 - 0354]
Pg. 4	[0009 - 0012]	Pg. 46	[0354 - 0354]
Pg. 5	[0012 - 0015]	Pg. 47	[0355 - 0362]
Pg. 6	[0015 - 0020]	Pg. 48	[0362 - 0367]
Pg. 7	[0020 - 0022]	Pg. 49	[0368 - 0377]
Pg. 8	[0022 - 0026]	Pg. 50	[0377 - 0384]
Pg. 9	[0027 - 0032]	Pg. 51	[0385 - 0394]
Pg. 10	[0033 - 0046]	Pg. 52	[0395 - 0400]
Pg. 11	[0046 - 0050]	Pg. 53	[0401 - 0409]
Pg. 12	[0051 - 0054]	Pg. 54	[0409 - 0417]
Pg. 13	[0055 - 0059]	Pg. 55	[0418 - 0420]
Pg. 14	[0060 - 0063]	Pg. 56	[0420 - 0426]
Pg. 15	[0063 - 0067]	Pg. 57	[0427 - 0434]
Pg. 16	[0067 - 0069]	Pg. 58	[0435 - 0443]
Pg. 17	[0069 - 0073]	Pg. 59	[0443 - 0450]
Pg. 18	[0073 - 0074]	Pg. 60	[0451 - 0457]
Pg. 19	[0075 - 0081]	Pg. 61	[0458 - 0468]
Pg. 20	[0081 - 0086]	Pg. 62	[0468 - 0472]
Pg. 21	[0087 - 0097]	Pg. 63	[0473 - 0481]
Pg. 22	[0098 - 0107]	Pg. 64	[0482 - 0486]
Pg. 23	[0108 - 0115]	Pg. 65	[0487 - 0495]
Pg. 24	[0116 - 0127]	Pg. 66	[0495 - 0499]
Pg. 25	[0127 - 0130]	Pg. 67	[0499 - 0500]
Pg. 26	[0130 - 0139]	Pg. 68	[0501 - Table 1]
Pg. 27	[0140 - 0147]	Pg. 69	[Table 1 - 506]
Pg. 28	[0147 - 0153]	Pg. 70	[0507 - 0509]
Pg. 29	[0153 - 0162]	Pg. 71	[0510 - Table 2]
Pg. 30	[0163 - 0171]	Pg. 72	[0512 - 0514]
Pg. 31	[0172 - 0181]	Pg. 73	[0515 -Table 4]
Pg. 32	[0181 - 0190]	Pg. 74	[Table 4]
Pg. 33	[0191 - 0196]	Pg. 75	[Table 4]
Pg. 34	[0197 - 0209]	Pg. 76	[Table 4]
Pg. 35	[0210 - 0224]	Pg. 77	[Table 4]
Pg. 36	[0225 - 0239]	Pg. 78	[Table 4]
Pg. 37	[0240 - 0249]	Pg. 79	[Table 4]
Pg. 38	[0250 - 0257]	Pg. 80	[Table 4]
Pg. 39	[0257 - 0261]	Pg. 81	Appendix 1
Pg. 40	[0262 - 0279]	Pg. 82	Appendix 1
Pg. 41	[0280 - 0292]	Pg. 83	Appendix 1
Pg. 42	[0293 - 0303]	Pg. 84	Appendix 1
		Pg. 85	Appendix 1
		Pg. 86	Appendix 1

[0083] As discussed in Sections VIII.C-D below, in my opinion a POSA would have understood that Randall, alone or in combination with other references, renders obvious all claims of the '575 patent. *See also infra* §VIII.E.1 (additional discussion of Randall).

D. Tanaka (EX1011)

[0084] Tanaka is titled “Method for providing matching and introduction services to proximate mobile users and service providers” and relates to “enabling mobile wireless users to obtain information on other proximate users both fixed and wireless.” Tanaka, Abstract. According to the face of the document, Tanaka is a United States patent issued on November 16, 2004 as Patent No. 6,819,919 from an application filed on October 18, 2000 as Application No. 09/691,322. I have been informed by counsel that Tanaka qualifies as prior art to the '575 patent based on Tanaka’s filing date. *See also infra* §VIII.C.1 (additional discussion of Tanaka).

E. Froeberg (EX1051)

[0085] Froeberg is titled “Telephone providing directions to a location.” Froeberg relates to “providing a map and driving directions to a user of a user telephone for a remote location associated with a remote telephone number.” Froeberg, Abstract. Froeberg discloses a system with a “server” that can “reverse geocode[]” location data “to a local street network address segment” to “create[] a

route and driving directions” that are displayed “to the user of the user telephone.”

Froeberg, 4:4-26. According to the face of the document, Froeberg is a United States patent issued on January 6, 2004 as Patent No. 6,674,849 from an application filed on July 28, 2000 as Application No. 09/627,547. I have been informed by counsel that Froeberg qualifies as prior art to the ’575 patent based on Froeberg’s issuance date.

VIII. THE CHALLENGED CLAIMS ARE UNPATENTABLE IN LIGHT OF THE PRIOR ART

[0086] I have been asked to provide my opinion concerning whether claims 1-46 of the ’575 patent would have been obvious to a POSA in light of the prior-art references discussed below. For the reasons explained below, it is my opinion that each of claims 1-46 would have been obvious to a POSA. The following table summarizes the Grounds I discuss in the sections below:

Ground Number and Reference(s)		Claims	Basis
1	Sheha (EX1005), Froeberg (EX1051)	1-9, 11-12, 30-37	Obviousness
2	Sheha, Froeberg, Randall (EX1007-EX1008)	10	Obviousness
3	Sheha, Froeberg, Tanaka (EX1011)	12-29, 38-45	Obviousness
4	Sheha, Froeberg, Tanaka, Randall	46	Obviousness
5	Randall, Froeberg	1-46	Obviousness

A. Ground 1: Claims 1-9, 11-12, and 30-37 are Unpatentable Over Sheha, With or Without Froeberg

[0087] As explained in this section below, in my opinion claims 1-9, 11-12, and 30-37 of the '575 patent are unpatentable over Sheha (EX1005) (with or without Froeberg (EX1051)).

1. Discussion of Sheha (EX1005)

[0088] Generally, Sheha teaches systems and methods to provide real-time location information (e.g., GPS co-ordinates, routing, maps) of a target user's device (e.g., landline, cell phone, PDA, etc.) to an authorized requesting user via conventional telecommunications systems (e.g., telephone network, mobile communications network, computer network, GPS, etc.). Sheha, Abstract, 1:35-45, 2:60-64, 10:66-11:9. Location information can be exchanged in response to a telephone call being made, but location information can also be shared without a call. Sheha, 11:55-58.

[0089] Sheha describes telephone devices – both landline and mobile devices, such as cellphones or PDAs – that share location information with other authorized landline and mobile devices to enable functionality such as mapping, routing, and direction finding. Sheha, 2:60-4:18, 10:66-11:9, 11:55-65. Sheha discloses that the mobile devices may determine their positions, such as by using an integrated GPS receiver or network-assisted position information, and may

provide their positions to an online database and application server (“ODAS”) which stores the positions remotely. Sheha, 10:5-16, 10:66-11:51, 7:19-23.

[0090] Sheha further discloses that a first user (that I refer to as a “target user”) may authorize other users and groups of users to receive the location of the first user’s device. Sheha, 11:51-12:7. For example, the mobile devices may specify groups of authorized users to the ODAS identifying who may obtain their respective location information. Sheha, 11:55-12:1.

[0091] Sheha describes that the remote server (ODAS) periodically updates the requesting user with the target user’s device location information based on the target user’s associated privacy settings and what Sheha describes as authorization and authentication protocols. Sheha, 11:49-12:7. Sheha describes that the location information may include a map illustrating the location of one or both of the target and requesting users’ mobile devices, route information, driving directions, and heading information that may be displayed to the requesting user. Sheha, 9:23-39.

[0092] For example, using Sheha’s system, a mobile device may request the location of a target mobile device through a phone call (“call embodiment”) or “without having to initiate a telephone call” (“no-call embodiment”) by “only specifying a telephone number.” Sheha, 11:10-54, 11:55-58; *see also id.*, 12:1-7. If authorized, the requesting device receives the position

from the ODAS, including displaying a map illustrating the location of one or both mobile devices and navigational information. Sheha, 9:23-39. Figure 3 (annotated below) illustrates an exemplary mobile-to-mobile system, showing connections between two mobile devices 18b-18c, such as cell phones or PDAs, and the ODAS, via a wireless network 22. Sheha, 10:66-11:35, FIG. 3.

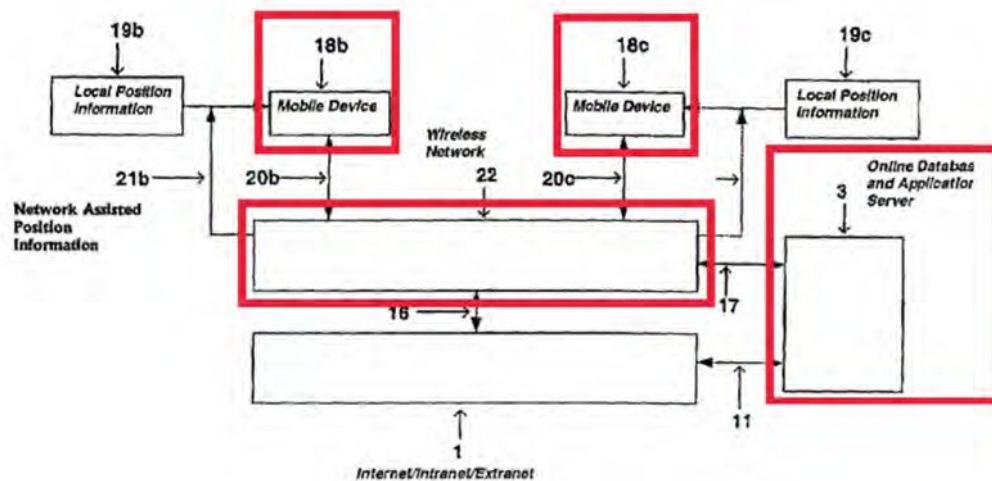


FIG. 3

Sheha, FIG. 3 (annotated)

[0093] FIG. 5 (below) illustrates a map displaying directions between the user's current location 34 and the target user's location 33, which can be displayed on mobile devices. Sheha, 4:52-58, 9:23-39.

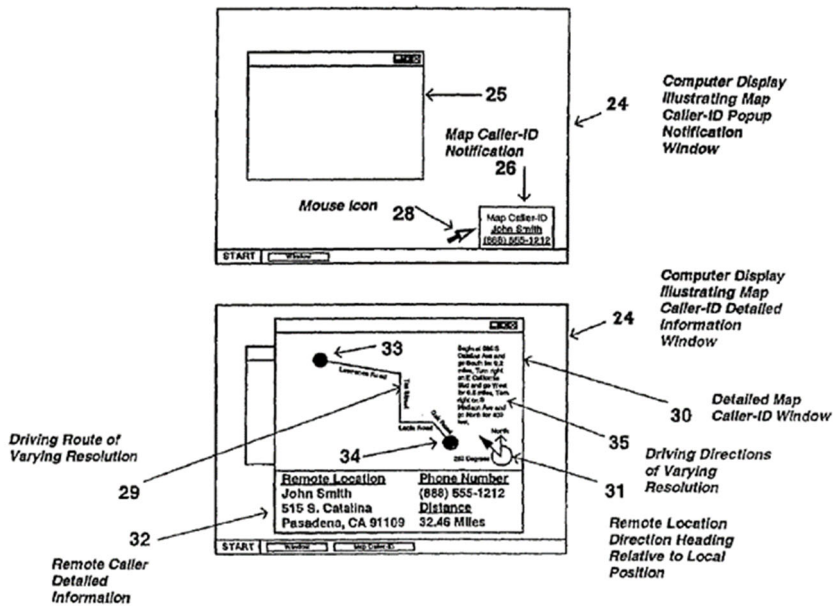


FIG. 5

Sheha, FIG. 5

2. Mapping of Sheha (Alone and With Froeberg) to Claims 1-9, 11-12, and 30-37

[0094] As explained in the section below, in my opinion a POSA would have understood that Sheha meets (with or without Froeberg) all limitations of claims 1-9, 11-12, and 30-37 of the '575 patent.

a. Claim 1

[0095] As explained in this section below, in my opinion a POSA would have understood that Sheha discloses or renders obvious (with or without Froeberg) all limitations of claim 1 of the '575 patent.

i. Preamble [1PRE]: A method comprising:

[0096] Claim 1’s preamble recites “A method comprising.” I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a “*method*” for “providing real-time position information of one party to another party by utilizing...a mobile telecommunications network.” Sheha, Abstract. Sheha further discloses methods that enable a user of a telephone device, whether landline or wireless, to provide access information, such as a username and password, to determine and share their own location with other telephone devices, and to request and obtain location information for other users’ mobile devices. Sheha, Abstract; *see also* §VIII.A.1 (discussing Sheha). As I will discuss below, it is my opinion that Sheha meets all limitations of claim 1.

ii. Element [1A]: obtaining a location of a first wireless telephone;

[0097] Sheha’s system can “determine either or both of the local and remote devices’ position information.” Sheha, 4:13-18. A mobile-to-mobile configuration is illustrated in Figure 3 (annotated below), where both mobile devices 18b-18c *wirelessly* communicate (20b-20c) with the wireless network 22. Sheha, 10:66-11:35.

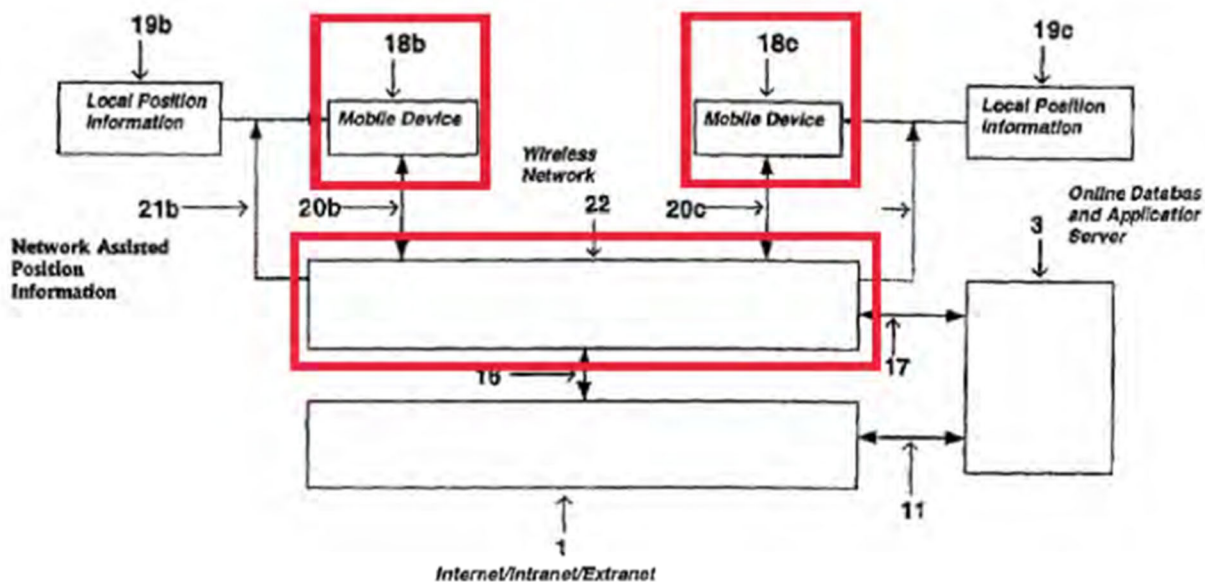


FIG. 3

Sheha, FIG. 3 (annotated)

[0098] Mobile devices 18b-18c can be cellular (wireless) *telephones*.

Sheha, 10:66-11:3. Each mobile device can determine its own position and supply it to Sheha's online database and application server ("ODAS") 3, where it is stored.

Sheha, 10:5-16, 11:3-20, 11:44-51, FIG. 3. Thus, Sheha *obtains a location of a first wireless telephone*.

[0099] Thus, it is my opinion that Sheha meets Element [1A].

iii. Element [1B]: transmitting said location from said first wireless telephone to a remote server;

[0100] In Sheha, each mobile device “forwards its current position information back to the ODAS” (“online database and application *server*”), which is a *remote server*. Sheha, 11:36-37, 7:21-23, 11:3-37, FIG. 3 (showing ODAS 3 remote from mobile devices 18b-18c communicating remotely, e.g., over a wireless network).

[0101] Thus, it is my opinion that Sheha meets Element [1B].

iv. Element [1C]: changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

[0102] Sheha discloses that each device may have privacy settings, including privacy configuration specifications stored at the server and changed at the direction of the *first wireless telephone*, that “allow the device to prevent or limit other calling devices from obtaining position information.” Sheha, 5:38-46, 11:63-12:7. Via these privacy settings—also called “permission settings” (Sheha, 5:3-20)—the *first wireless telephone* can specify “*allowance* of position information transfers...only with the device owner’s permission.” Sheha, 5:21-46, 4:59-66, 10:17-26. The *first wireless telephone*’s privacy/permissions settings information can include “a group database and authorization and authentication

protocols” by which the device’s user “can define a group of specific users that have access to” the device’s location information. Sheha, 11:55-12:7, 4:59-5:20; *see also id.*, Sheha, 13:65-14:2 (“accessing caller privacy information” for “a caller user group” limitation from Sheha’s claim 1), 14:54-61 (dependent claim that shows claim 1’s method can be performed in an embodiment where the caller device is a telephone (a “wireless communication device”) in a mobile embodiment), 19:9-13. The ODAS uses this privacy information to determine whether the *first wireless telephone* has authorized a particular user to obtain its location information. Sheha, 3:22-28, 5:21-46, 8:42-53; *see also* Sheha, 3:4-14, 4:8-18, 9:59-10:4.

[0103] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha’s privacy settings are not access rights but only privacy filters that a target mobile device has implemented for incoming position requests and that are indiscriminate as to the identity of any requesting mobile device or user, and that the privacy settings are not stored on a remote server. I understand that Mullen did not make those arguments about the permissions specified in Sheha’s group database, but instead argued that the group database is only used for landline-to-landline position requests and is not used in a mobile device embodiment or no-call embodiment, which Mullen treats as disparate embodiments. It is my opinion that Mullen was incorrect.

[0104] Sheha does not describe the device-local privacy filters and requester-specific group database of permissions as features of mutually exclusive embodiments, but rather as complementary privacy/permission specification options available in any embodiment. For example, Sheha describes “utilizing a group database and authorization and authentication protocols to identify users that are permitted to access” position information in the context of having just discussed a “landline-to-landline position request” (Sheha, 11:55-12:1), and then expressly teaches another (mobile) embodiment in which “using the authorization and authentication protocols a user can request the position of a mobile device, similarly to requesting the position of the landline device” (Sheha, 12:4-7), as well as using “privacy settings” (Sheha, 12:1-4). POSAs would have understood, therefore, that complementary privacy/permission specification options all can coexist within an embodiment¹². This is further corroborated by Sheha’s claims, in which independent claim 47 recites “determining whether the first user is a

¹² Sheha variously and interchangeably refers to privacy/permission specification options as “privacy settings,” “permission settings,” “privacy configuration,” “position transfer permissions,” etc. Sheha, 4:35-42, 4:59-5:46 (discussing “privacy settings” interchangeably with “permission settings” as applicable to mobile or landline, call or no-call embodiments), 10:17-26, 10:44-11:9.

member of the authorized user *group*” as part of “accessing *privacy* information” for the location of a “communication device,” while in dependent claim 53 the communication device can be a “mobile telephone.” Sheha, 18:65-19:46 (*see* 19:9-15, 19:44-45).

[0105] Sheha thus discloses and at minimum renders obvious that a mobile-to-mobile no-call embodiment may employ both device-local privacy filters and a remote group database specifying which users are authorized for access. Sheha, 4:59-5:20, 11:55-12:7. When both are employed, POSAs would have understood that a requesting user is only given access to a *first wireless telephone*’s location if the requesting user has permission in the *first wireless telephone*’s group database and to the extent the *first wireless telephone*’s local privacy settings allow location sharing. Sheha, 4:59-5:20, 11:55-12:7.

[0106] Sheha thus discloses that the mobile-to-mobile no-call embodiment can use the same “privacy settings” and “authorization and authentication protocols...similarly to” the landline embodiments. Sheha, 12:4-7, 4:59-5:20. I have been informed by counsel that Mullen argued that this statement in Sheha about authorization and authentication protocols merely indicates using a login and password. In my opinion, Mullen was incorrect. Although “authentication” uses a login and password, “authorization” involves more—e.g., determining whether the authenticated user is *authorized* to access the information

being requested, such as in a permissions database. Sheha, 8:42-53 (“ODAS 3 us[es] authentication and authorization protocols” to “verify the level of authority each user is granted.”).

[0107] Alternatively, even if Sheha did not explicitly disclose using the group database permissions in mobile-to-mobile embodiments, doing so would have been an obvious variation because allowing a mobile user to specify a group of other mobile users who have permission to access the user’s location (or to provide access permission on an individual-user basis) was well-known as a beneficial option with reasonable expectation of success in a system like Sheha’s. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0108] For example, Sandhu (EX1054) describes “[a] method and system whereby two mobile units can locate each other.” Sandhu, Abstract. A user who registers with Sandhu’s system “can access the location of all other users who are registered with the system.” Sandhu, 5:35-37. A user can also “limit the data exchange to a sub-group of users, such as friends, coworkers, and family” by “defining a distribution group in the user profile.” Sandhu, 5:37-50. Sandhu therefore corroborates that it was within a POSA’s background knowledge to use a group database in a mobile-to-mobile embodiment and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0109] Sandhu also discloses sending an “announcement to all the users in the distribution group,” where the “announcement[] sent can contain a location stamp indicating the current location of the sender.” Sandhu, 7:23-41. Transmitting Sandhu’s announcements does not require initiating a phone call with any of the intended recipients. Thus, Sandhu also corroborates that it was within a POSA’s background knowledge to exchange location information between mobile devices without initiating a phone call and that a POSA would have had a reasonable expectation of success doing so in in a system like Sheha’s.

[0110] By way of another example, Randall (EX1007) describes a user of a mobile device that can track the location of other mobile devices. Randall, Table 4, p. 24 (“People tracking” application, “New buddy finder” application, “Old buddy finder” application). Randall’s system allows a user to assign access rights to individuals or groups. Randall, [0070] (“Access rights can be associated with individual entities, and can also be associated with groups of entities.”). Randall describes using a database for storage of such access rights. Randall, [0052] (“In ADS, a user can also specify the remote database access rights given to different people or groups: an arbitrary group of entities may be stored as an attribute which gives access permissions to data in the database.”); see also Randall, [0136], [0144]-[0148]. Further, Randall describes that users sharing their location can occur outside of a phone call. Randall, Table 4, p. 24 (“People

tracking” application in which a user tracks the location of a user by polling a server). Randall therefore also corroborates that it was within a POSA’s background knowledge to use a group database in a mobile embodiment and to exchange location information between mobile devices without initiating a phone call and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0111] Thus, in Sheha, the *first wireless telephone’s* “user[] can define a group of specific users...that are permitted to access” the *first wireless telephone’s* “position information” (Sheha, 11:63-12:7)—i.e., *a list of users that are allowed to access said location*. Each identified user in the group (*list*) can be *representative of one of a plurality of wireless telephones*, because Sheha references controlling access to position information by “users” and “calling devices” interchangeably, and because Sheha describes “defin[ing] a group of specific users that have access to [position] information” in the context of “[a] *mobile* or landline device...request[ing] position information of another mobile or landline device.” Sheha, 5:38-46, 11:55-12:7. Defining such a list where *each user is representative of one of a plurality of wireless telephones* was also obvious as a well-known beneficial option with reasonable expectation of success as discussed above, with corroboration from by Randall (Table 4, [0052], [0070], [0136], [0144]-[0148] and Sandhu (5:35-50, 7:23-41).

[0112] In the '575 patent, a “user profile” can be part of “a login feature,” in which the profile is an “identifier” that is “logged into” via a user’s “device[]” “[i]n order for [the] user[] to be identified.” EX1001, 9:39-46. Similarly, in Sheha’s system, “every telephone account user has a username and password for the ODAS” to identify “that a particular user is signed-on to the system on a particular device,” and the ODAS consults “users’ account information” when servicing position sharing requests. Sheha, 8:38-53, 11:10-35. POSAs would have understood these disclosures to teach that each user has *a profile associated with the user and their device (including the first wireless telephone)* that the ODAS consults in determining what settings the user has specified regarding location sharing.

[0113] Sheha teaches embodiments where the “authorization and authentication protocols” which involve the *list of users* in the “group database” (Sheha, 11:63-12:7) are implemented *on said remote server* (the ODAS). *See* Sheha, 3:4-13, 4:8-18, 7:22-23, 8:42-53 (“ODAS 3 us[es] authentication and authorization protocols” to “verify the level of authority each user is granted” (as specified in the group database)), 9:61-10:4. Because the *first wireless telephone’s* “user[] can define a group of specific users that have access to” that user’s device’s position information as part of that user’s specified location-sharing settings

(Sheha, 11:55-12:7), POSAs would have understood that this *list of users on said remote server is for the profile associated with said first wireless telephone*.

[0114] Alternatively, implementing the *first wireless telephone's* list of authorized users *on said remote server for a profile associated with said first wireless telephone* would have been an obvious variation because doing so was well-known as a beneficial option with reasonable expectation of success in a system like Sheha's. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0115] For example, Sandhu (EX1054) describes "[a] method and system whereby two mobile units can locate each other." Sandhu, Abstract. A user who registers with Sandhu's system "can access the location of all other users who are registered with the system." Sandhu, 5:35-51. Such a user can effectuate this location access by "set[ting] up [their] user profile with service provider 8 through data network 4" with the "[u]ser profile include[ing]...distribution groups." Sandhu, 5:9-34; *see also* Sandhu, 6:21-62 (describing updating a user profile in a "user profile database 42" in "service provider 8"). The "user 14-i can modify [their] user profile as [they] desire[]" such as by "limit[ing] the data exchange to a sub-group of users by defining a distribution group in the user profile." Sandhu, 5:35-51. Sandhu also provides an example in which "user 14-i" can modify their user profile such that user 14-i can specify a "list of users" is

blocked from accessing their current location. Sandhu, 5:52-65. Sandhu also describes setting up a distribution group to notify “user 14-i” “if any user in one of his distribution groups comes within a ten-mile radius.” Sandhu, 5:66-6:21. Accordingly, Sandhu teaches that a user can modify their “user profile” to include a “distribution group” of a “sub-group of users” that can access the location of the user (or block their access to the location of the user). Sandhu also describes that the “[s]ervice provider 8 may be a computer or a server linked to data network 4”. Sandhu, 6:22-24; Sandhu, 6:44-62 (“user profile database” may be stored in various formats). Sandhu therefore corroborates that it was within a POSA’s background knowledge to have a list of authorized users *on said remote server for a profile associated with said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0116] Randall (EX1007) describes interactions between mobile devices and a database at a server. Randall, [0029]-[0030] (“An application resident on the device queries and receives data from the remote, extensible database.”). Randall also describes that a database hosted by a server can be used for determining whether a requesting user has access rights. Randall, [0046] (“internet servers hosting extensible databases”), [0047] (“[t]he database can define which entities can read different fields; Alice can therefore give Bob rights to read only certain fields in her database.”), [0052] (“[t]he ADS system includes

additional access control mechanisms, such as checking the identity of the calling device at the server”). Randall describes an “ADS System [that] also includes an entire contacts database, referred to as a ‘Universe.’” Randall, [0511]-[0514]. “It is the list of all the entities known to an entity and to whom access to more private data is to be given.” Randall, [0511]. Randall shows a list of users (Randall, p. 22 Table 2) (“Alices Universe”) in the “Universe” of ADS System user Alice. Randall, [0511]-[0514]. Some of these users in the list can be authorized to access Alice’s location. Randall, p. 22 Table 1 (“GPS location”). The users in Alice’s Universe authorized to access Alice’s location are thereby in Alice’s i-data, which is a profile associated with Alice’s device. Randall, 24 “New buddy finder” (“[c]ompatible personal profiles stored on the I-server”). A POSA would understand that other users would have their own group database designated in their own “Universe” that is utilized from Randall’s i-Server. Randall therefore corroborates that it was within a POSA’s background knowledge to have a list of authorized users *on said remote server for a profile associated with said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0117] Friedman (EX1015) describes a server monitoring a location of a user. Friedman, 12:60-65. Friedman describes that “User A may also specify a subset of users who should receive positional data when User A transmits a

message.” Friedman, 13:1-3. Friedman also describes that a user can store their access right preferences on the server. Friedman, 13:3-21 (“User A’s preferences with respect to location tracking may be stored in User A’s configuration profile 1012 on the portal server 110...”). Friedman therefore also corroborates that it was within a POSA’s background knowledge to have a list of authorized users *on said remote server for a profile associated with said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0118] Darling (EX1022) describes “[e]ach user may specify that location information is available only to specified users or groups or categories of users or that the information is publicly available.” Darling, 3:3:5. Darling describes that these specifications by the user are stored at a server and that the server checks them prior to transmitting the user’s location to another user. Darling 3:1-3 (“Preferably, the server stores permission information indicating whether the location information for the first user is available to the second user and the method preferably includes checking the permission information prior to the transmitting step.”). Darling therefore also corroborates that it was within a POSA’s background knowledge to have a list of authorized users *on said remote server for a profile associated with said first wireless telephone* and that a POSA

would have had a reasonable expectation of success doing so in a system like Sheha's.

[0119] Because Sheha discloses that a wireless telephone user can “define” a list of users who are allowed to access their location and can “choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime,” POSAs would have understood that the list may also be changed *at the direction of said first wireless telephone*. Sheha, 5:9-20; 11:63-12:7.

Alternatively, it would have been obvious to provide functionality allowing for *changing* the list of users *at the direction of said first wireless telephone*, because doing so was well-known as a beneficial option with reasonable expectation of success in a system like Sheha's, and it would have been apparent to POSAs from Sheha's above teachings and POSAs' background knowledge that users commonly desire and expect the ability to change who has access to their location rather than being limited to the same list forever (e.g., because of meeting new people, people that they no longer wish to share their contact information with, etc.). My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0120] Randall (EX1007) describes allowing a user to control access to their location. Randall, [0509] (“[S]ensitive information is only available to people

in certain i-Groups; allowing Alice to control what data they see.”). Randall describes a “method[] of making contacts into members of a particular i-Group” in which, “whenever Alice wishes to, she can change the level of access of a current contact—perhaps promoting Bob from ‘business’ to ‘friend.’” Randall, [0509]. This means Alice is adding Bob to the list of users who have access to her location (e.g., if the “business” list of users does not have access and the “friends” list do have access, such that moving Bob from “business” to “friends” adds Bob to the list of users that have access to Alice’s location). Additionally, “Alice’s device will report this to the server,” which teaches that Alice’s change with respect to Bob’s promotion from “business” to “friends” is made at the direction of Alice’s telephone (i.e., *at the direction of a first wireless telephone*) to the i-server. Randall, [0509]; *see also* Randall, [0060] (“[I]f Alice updates her contact information on her device, that device informs Alice’s server”), [0495] (“Alice’s phone”). Randall therefore corroborates that it was within a POSA’s background knowledge to change a list of users who have access to a user’s location *at the direction of said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0121] Degnbol (EX1035) discloses a system for transmitting data between wireless communication units and determining “the position of one or more units” using conventional positioning techniques, “such as triangulation

methods, GPS,” etc. Degnbol, 5:7-11. Degnbol teaches that a user’s “location and/or movements” can be shared with other user(s) of the user’s “Buddy List.” Degnbol, 9:32-33. “The Buddy List may be altered by the user at will, adding or deleting buddies and setting various parameters. This can be done in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a call-center.” Degnbol, 9:34-10:3; *see also* 11:16-26 (describing a user John adding Jane to his Buddy List). Degnbol therefore corroborates that it was within a POSA’s background knowledge to change a list of users (add and/or delete users) who have access to a user’s location *at the direction of said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0122] Robertson (EX1044) describes a “network-computer-based personal contact manage system...wherein users of networked clients maintain and update a set of user information which is stored in a relational database on a networked server.” Robertson, Abstract. As shown in Robertson’s FIG. 9 (excerpted below), Robertson provides for a “pseudo GUI 600” that “allow[s] a first user” to “specif[y] a second user whom the first user would like to **add** to his personal address book” and “specify permissions” for the second user. Robertson, 8:11-16, 8:25-27. Robertson describes that the pseudo GUI 600 can be displayed on “computer 370” (Robertson, 6:45) or on a mobile device (“the client is a

personal information manager (PIM), such as the U.S. Robotics Palm Pilot”).

Robertson, 4:56-58. Robertson therefore corroborates that it was within a POSA’s background knowledge to change a list of users who have access to a user’s location *at the direction of said first wireless telephone* and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

PSEUDO PERMISSION FORM

600-2
Click on the boxes next to the Permission Levels that you would like to grant to your new contact

600-4
John Doe

600-7

Crossing Paths Notification Permission

600-9

Personal Information

600-10

Work Information

600-12

Birthday Notification

600-14

Friend of Friends Information

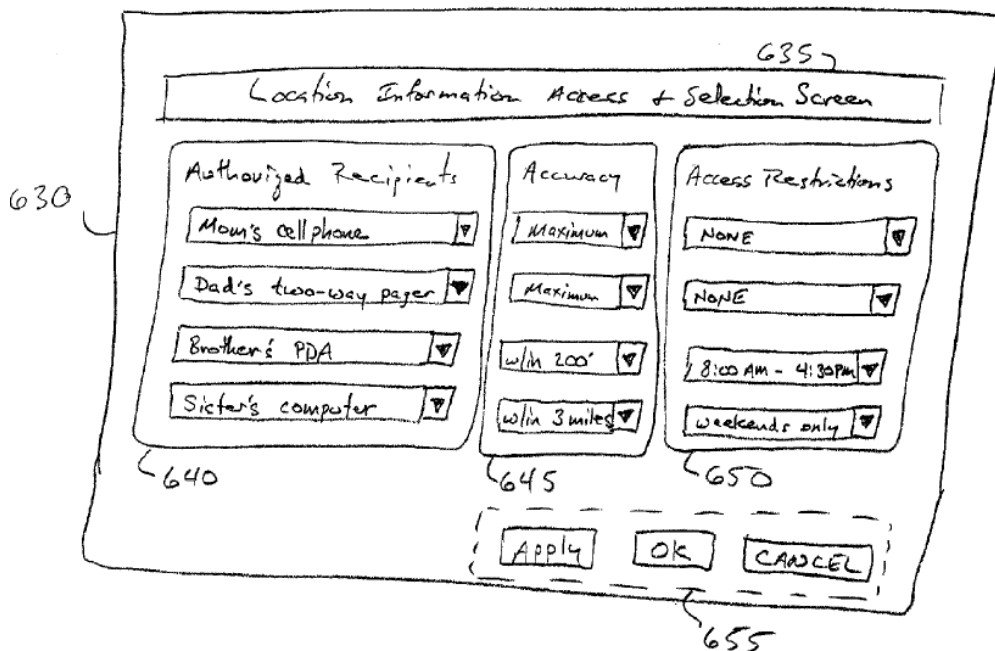
600-16

Submit

Robertson, FIG. 9 (excerpt)

[0123] Menard (EX1045) describes “[m]anagement of location information communicated using wireless devices and communication networks.” Menard, Abstract. Menard’s system includes “networked communications” between devices, which can be mobile devices. Menard, [0045] (“system 10 including...first device 100”), [0046] (“mobile device 100A”). Menard describes generating a screen using software executing on a computer in which “[f]ields

within portion 640 allow user selection of authorized recipients of the location information for the...mobile device” and “[f]ields within portion 650 allow...specify[ing] restrictions on access to the location information.” Menard, [0067]; *see also* Menard, [0068] (“[T]he location of mobile device 100 is only released with authorization of the user of mobile device 100. Authorization may be granted implicitly in a request or directly.”). Thus, Menard teaches adding or removing authorized persons (e.g., “Mom’s cell phone”, “Dad’s two-way pager”, “Brother’s PDA”, “Sister’s computer” as shown in FIG. 10 (excerpted below)) from accessing the user’s location information. Menard therefore corroborates that it was within a POSA’s background knowledge to change a list of users who have access to a user’s location *at the direction of* a device (i.e., *said first wireless telephone*) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.



Menard, FIG. 10 (excerpt)

[0124] Lee (EX1046) describes “[t]echniques for securing electronic data” (Lee, Abstract), which can be effectuated using “an exemplary graphic user interface (GUI) 275 that can be used to establish or create access rules.” Lee, 16:1-25, FIG. 2D (copied below). “In some cases, the access rules may be extensible by a user with appropriate access privilege” (Lee, 7:48-49) and the user may use a “[c]lient device, computer, or machine.” Lee, 7:50-52. Lee describes that the GUI 275 “include[s] users who may have the need to access the data in that designated place.” Lee, 16:8-12. “As shown in FIG. 2D, a selected group of users can be selected to **add** into an access list 276” (Lee, 16:13-15) and the “[a]ctions 277 can be set using the GUI 275. Lee, 16:16-17. Lee therefore corroborates that it was within a POSA’s background knowledge to change a list of users who have access

to data *at the direction of* a device (i.e., *said first wireless telephone*) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's.

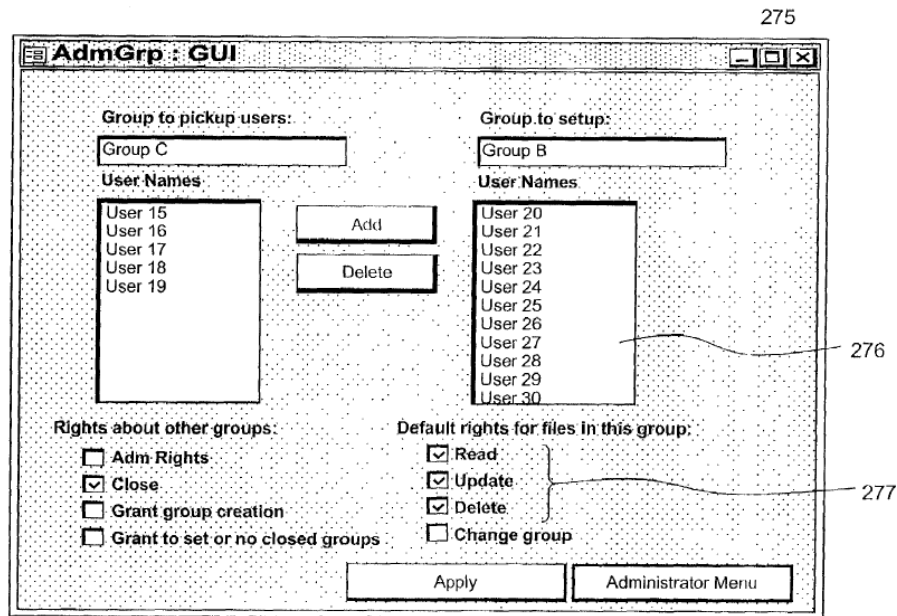


Fig. 2D

Lee, FIG. 2D

[0125] Darling (EX1022) discloses functionality for a mobile device where “[e]ach user may specify that location information is available only to specified users or groups or categories of users.” Darling, 3:3-5, 22:23-40 (“People who have access to My Personal Details’ List of individuals who have access to the Personal Details”), 23:3-13 (“Full list of Contacts who have access to other profiles”; ‘Add’ Button...will be added into the ‘People who have access to My Personal Details’”), 33:16-32 (“People who have access to My Personal Details’ List of individuals who have access to the Personal Details”), 33:4-34:3

(describing “Add” and “Remove” buttons to add/remove from the list of people who have access to the user’s location and a “Counter of the number of people...who have allowed you to access one or more of their profiles” and “People who have access to My Personal Details’ List of individuals who have access to the Personal Details”).

[0126] Thus, it is my opinion that Sheha meets Element [1C].

v. Element [1D]: transmitting said location from said remote server to at least one of said users of said list of users;

[0127] Sheha discloses that “[w]hen a mobile device’s position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user’s device.” Sheha, 12:1-7; *see also id.*, 4:59-5:46, 11:49-51 (“The ODAS 3 periodically updates each mobile device with the other’s position information”). Therefore, Sheha discloses *transmitting said location from said remote server* to the requesting device if that device’s user is among *said list of users* that are allowed to access the *first wireless telephone’s* location (as I discussed above with respect to Element [1C] (§VIII.A.2.a.iv)).

[0128] Thus, it is my opinion that Sheha meets Element [1D].

vi. Element [1E]: determining a second location associated with one of said plurality of wireless telephones; and

[0129] As I discussed above with respect to Element [1A]

(§VIII.A.2.a.ii), in Sheha’s system, two *wireless telephones* (e.g., mobile devices 18b-18c) can share their locations with each other via the ODAS. Sheha, 4:13-18, FIG. 3, 10:66-11:54; *see* 11:20-23 (“The ODAS 3 receives both...users’ account information, and position information for both mobile devices”), 11:49-50 (“The ODAS 3 periodically updates each mobile device with the other’s position information”). Thus, *a second location* (e.g., of wireless telephone device 18c) is determined in addition to the *location of a first wireless telephone* (e.g., wireless telephone device 18b). As I discussed above with respect to Element [1C] (§VIII.A.2.a.iv), where a *first wireless telephone’s* (e.g., 18b’s) user has “define[d] a group of specific users that have access to this information” (Sheha, 11:63-12:7), this two-way location sharing will occur only if device 18c’s user is one of the specified users in that group—i.e., 18c is *one of said plurality of wireless telephones*. Thus, Sheha’s method *determines a second location associated with one of said plurality of wireless telephones*.

[0130] Thus, it is my opinion that Sheha meets Element [1E].

vii. Element [1F]: providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.

[0131] Sheha discloses using a remote mobile device's location "to obtain driving *directions* to that device," such that if both wireless telephones grant access to their respective position information, this "can be used for real-time driving directions or collaboration purposes." Sheha, 5:21-34. "The ODAS 3 periodically updates each mobile device with the other's position information, thus *providing* real-time *driving* directions and route information." Sheha, 11:49-51. Sheha thus teaches *providing directional information that is representative of directions between the two devices' locations to said one of said plurality of wireless telephones.*

[0132] This functionality is illustrated in Sheha's FIG. 5 (annotated below), which shows a "Map Caller-ID" screen with *directional information representative of directions* ("driving route 29" and "driving directions 35") between *said location* (location 33 of the *first wireless telephone*) and *said second location* (location 34 of the device displaying the map). Sheha, 9:23-34.

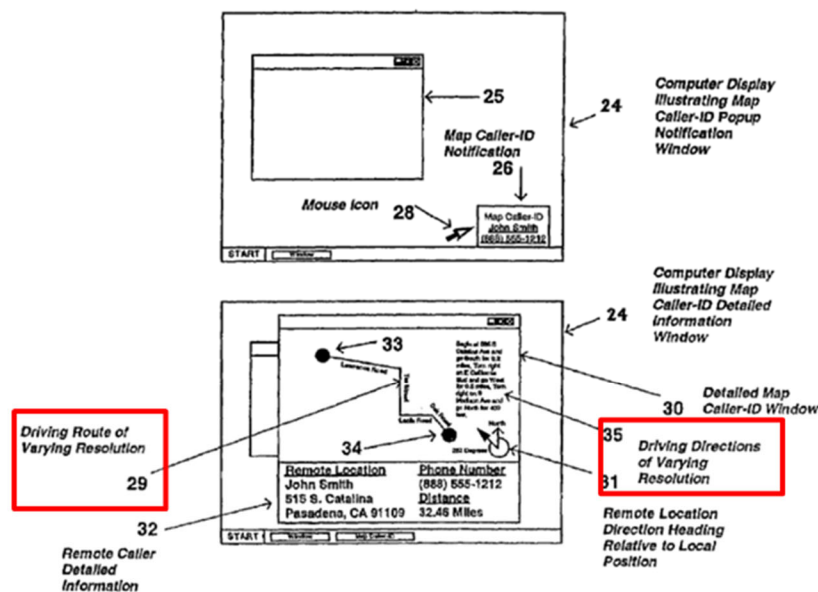


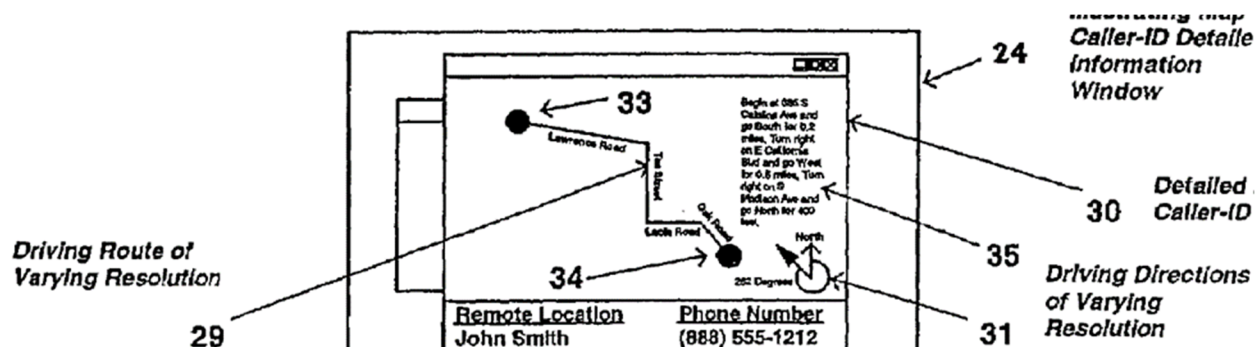
FIG. 5

Sheha's FIG. 5

[0133] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha's mobile device calculates the navigational information, not ODAS 3. Element [1F] recites "*providing directional information*" to the wireless telephone, not "calculating" a specific navigational route at the remote server. And Sheha's ODAS provides *directional information* by "periodically updat[ing] each mobile device with the other's position information, thus providing real-time driving directions and route information." Sheha, 11:20-51. A POSA would understand that "*directional information*" is a broad term, as the '575 patent makes clear by proposing many possible examples of "*directional information*," one of

which is “a map” of “the requested, the requesting user’s location or both,” and another of which is simply information allowing display of an “arrow...to indicate where the requested user’s location is relative to” the requesting user’s location. EX1001, 7:41-8:9. Thus, POSAs would have understood the position information Sheha’s ODAS provides to be *directional information*.

[0134] I understand that after institution of the prior proceeding involving the ’575 patent, Mullen proposed construing “directions” as instructions indicating how to navigate from one location to another location. In my opinion, Sheha’s “driving directions and route information” that “[t]he ODAS...provid[es]” (Sheha, 11:49-51, FIG. 5) meet Mullen’s construction.



Sheha, FIG. 5 (excerpt)

[0135] I understand that Mullen argued that Sheha’s ODAS does not generate driving directions and send them *to* the mobile devices, but only sends position information that the mobile devices use to generate directions. I disagree with Mullen’s argument because Element [1F] only requires “*providing directional information*” to the wireless telephone, not *sending directions* to the telephone.

Rather than reciting “providing directions” to the telephone, Element [1F] was deliberately phrased more broadly to only require providing “*directional information*” to the telephone. And rather than reciting that the provided “*directional information*” **is** directions or ***includes*** directions, again Element [1F] was deliberately phrased more broadly to only require the “*directional information*” be “***representative of directions.***” The ’575 patent’s specification never uses the phrase “*representative of,*” and thus sets forth no description limiting how provided “*directional information*” can be “***representative of directions.***” The ’575 patent’s specification also contains no limiting definition of the word “*providing,*” and never says that the only way something can be “*provid[ed]...to*” a device is by transmitting that thing to the device. Sheha explicitly teaches that by the ODAS updating “each mobile device with the other’s position information,” this is “thus ***providing*** real-time driving ***directions*** and route information.” Sheha, 11:49-51. POSAs would have understood that by providing position information to the wireless telephone for the express purpose of making it possible to generate directions to that position, Sheha’s ODAS is “*providing directional information...representative of directions.*”

[0136] Alternatively, generating the *directions* between the two mobile devices’ locations at the ODAS and transmitting the *directions* from the ODAS to one or both mobile devices would have been an obvious implementation of

Sheha's system to, e.g., reduce storage and/or processing requirements at the mobile device, in view of POSAs' background knowledge of the well-known design choice and reasonable expectation of success to do so.

[0137] Froeberg (EX1051), like Sheha, relates to “a cellular telephone providing a map and driving directions for a remote location associated with a remote telephone number.” Froeberg, 1:6-10; *see also* Froeberg, Abstract (similar), 1:40-65 (similar). Like Sheha's mobile devices, Froeberg's “user telephone 12 may include a geodetic location device 26, such as a global positioning system (GPS) receiver,” that “provides the local location as a geodetic location such as latitude and longitude.” Froeberg, 3:46-52; *see also* Froeberg, 3:30-4:3 (describing the server converting “the remote telephone number to an associated remote street address” and “geocod[ing] the remote street address to a remote street network segment.”). Froeberg teaches that in such a system (like Sheha's), “the server” can “reverse geocode[] the geodetic location to a local street network address segment,” “create[] a route and driving directions between the local street network segment” (i.e., the user telephone's location) “and the remote street network segment” (i.e., the remote telephone's location), and “transmit[] the driving directions...to the user telephone” to “display[] the driving directions to the user of the user telephone.” Froeberg, 4:4-26. POSAs would have been motivated to implement Sheha's ODAS to generate the claimed directions for transmission to

one or both mobile devices in view of, e.g., Froeberg's teachings that doing so allows storage and/or processing requirements for generating directions to be implemented server-side, thus reducing such requirements locally at the mobile device. Froeberg teaches to implement driving directions functionality via a server-side "reverse street segment geocoder" with "a database of geodetic coordinates and street network segments" and a server-side "route generator" (Froeberg, FIG. 5, 7:5-22), that then need not be implemented locally at the user telephone (Froeberg, FIG. 4, 4:27-6:20). Instead, the "user telephone" only needs to implement functionality to "decode[] the driving directions object [from the server] into driving directions" and "display[] the driving directions." Froeberg, 4:23-26. POSAs would have reasonably expected success because Froeberg teaches how this may be successfully implemented in a system like Sheha's with a server serving client wireless telephones.

[0138] Froeberg further discloses that the user telephone can be "a cellular telephone" with a display and an "object decoder." Froeberg, 5:6-19, FIG. 4. The object decoder "decodes a software object received...from the server," which "can be a map object [e.g., an HTML or WML document] having information for a map area about the remote location or a driving directions object having" "driving directions to the remote location." Froeberg, 5:19-27. The received documents "include map data and display semantics," for which the

“object decoder” includes program code for “rendering” the data. Froeberg, 5:28-39. The device can also receive a “Java class map object [that] includes both map data and program code” that “enables [the] user to interact with the map, for example to click on a street, zoom in, zoom out, and enable/disable display of various street classes, labels, and points of interest” and to “display[] the location of the user telephone [] on the map.” Froeberg, 5:40-54. The Java object decoder can also “cache[] enough map data to show location continuously as the user telephone [] moves on the map within a local area without further map data from the server.” Froeberg, 5:55-59. “In the case of a map object,” the telephone’s display provides “a visual presentation of the map area with an indication of the position of the remote location” and “[i]n the case of the driving directions the display []” provides “a list of instructions on the visual display or through the speaker or issues highlighted lines and directions on the visual display.” Froeberg, 6:15-20.

[0139] POSAs would have been motivated and reasonably expected success from these teachings to implement Sheha’s ODAS to generate the claimed directions for transmission to one or both mobile devices to, e.g., reduce storage and/or processing requirements at the mobile device. I refer to the resulting combination as Sheha-Froeberg.

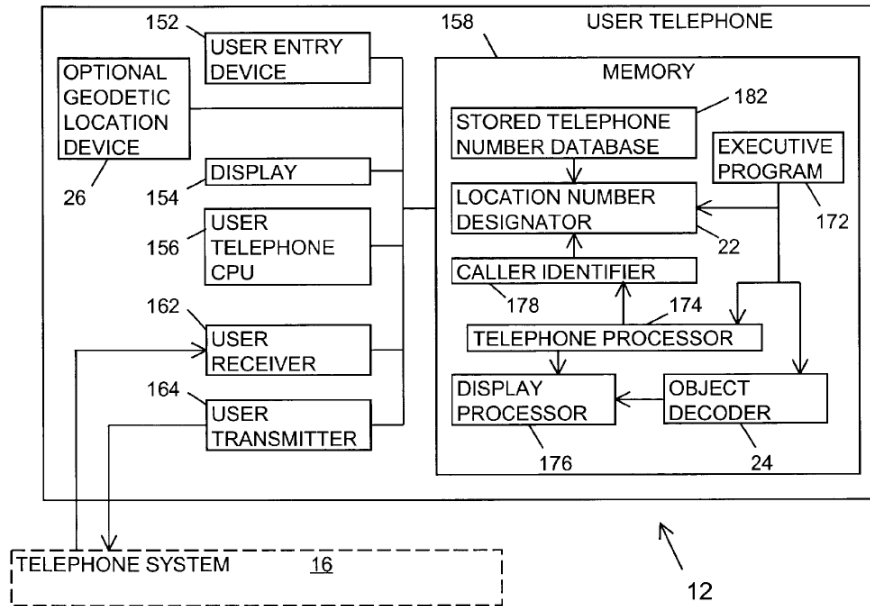


Fig. 4

Froeberg, FIG. 4

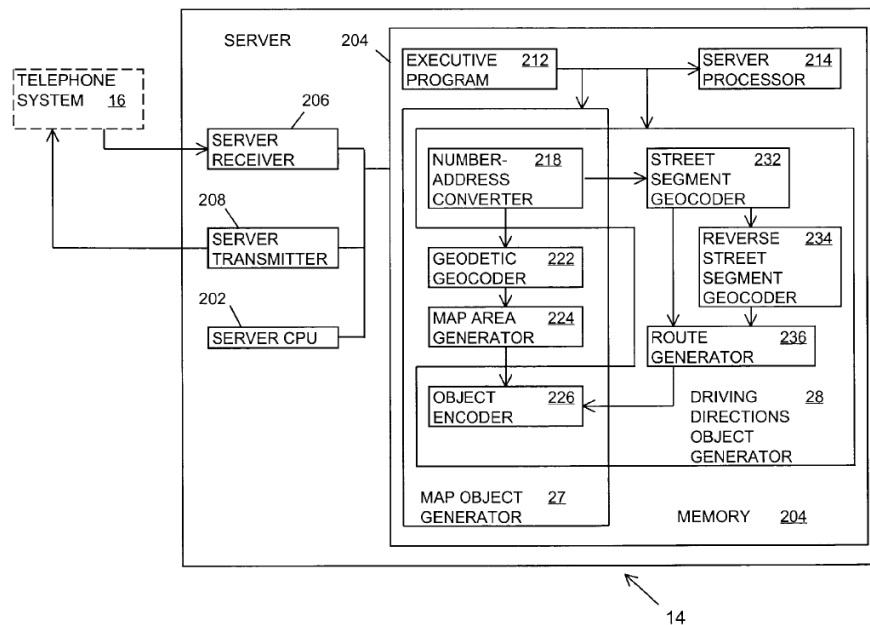


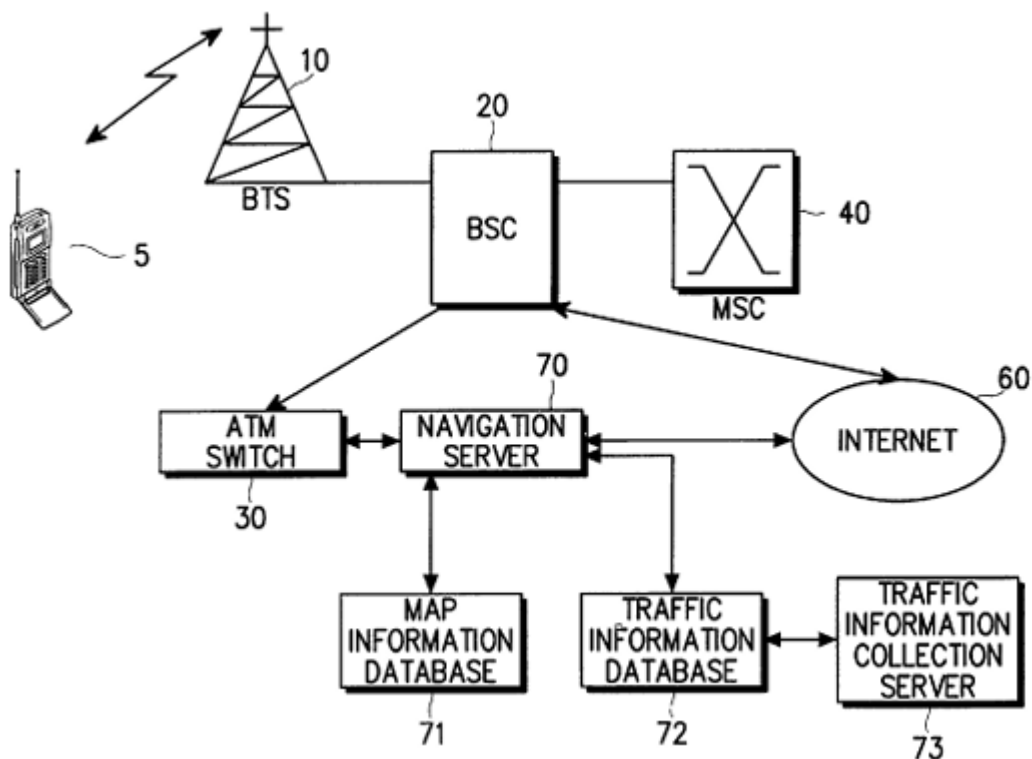
Fig. 5

Froeberg, FIG. 5

[0140] My testimony regarding POSAs' background knowledge of the well-known design choice and reasonable expectation of success in generating the *directions* between the two mobile devices' locations at the ODAS (server) and transmitting the *directions* from the ODAS to one or both mobile devices is further corroborated by several references, as discussed below.

[0141] Chun (EX1055) describes "a vehicle navigation system or network, and a vehicle navigation apparatus in a mobile telecommunication system, which provides accurate information about road conditions along a traveling route." Chun, 2:3-7. Chun describes "[w]hen the vehicle navigation service is requested from an [asynchronous transfer mode] switch, the navigation server receives information about the current location and destination of a vehicle, road condition information, [and] map information and transmits route information to the navigation apparatus." Chun, 2:28-34; *see also* 4:30-51 ("When a navigation service is requested by mobile phone 5...the navigation server 70 updates the route information and provides traffic information to mobile phone 5."), FIG. 4 (excerpted below). It would have been obvious to POSAs that a destination of a vehicle, which includes a user's mobile device, could be another mobile device at a different location from the vehicle. Chun further describes "[t]he navigation server 70 determines the shortest route based on information about the current vehicle location, the destination received from the user, the map

data and road condition data” and “the navigation server 70 transmits the route information together with the map data to the mobile terminal.” Chun, 7:40-8:4. Chun therefore corroborates that it was within a POSA’s background knowledge to generate *directions* between two mobile devices’ locations at a server and transmit the *directions* from the server to one or both mobile devices and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.



Chun, FIG. 4 (excerpt)

[0142] Stewart (EX1056) describes a “portable telephone” that includes a “position locator” to “determine the location of the portable telephone”. Stewart, Abstract. Stewart describes that the portable telephone forwards its

location to the “centralized base station 17” (Stewart, 7:43-52) and the centralized base station 17 can “use the location information and map database 24 to determine a street address.” Stewart, 8:20-23. The centralized base station can use “the geographic location of portable telephone 28 and the previously determined geographic location of calling first telephone 10...to calculate the distance between called portable telephone 28 and calling first telephone 10” and the distance can be “based on the shortest road route using map database 24.” Stewart, 8:12-32. “Any or all of these items of information can be forwarded...to the calling first telephone 10.” Stewart, 8:32-37. POSAS would have understood that “any or all of these items of information” would include location information, such as a street address and distance to or from the street address using a map database (i.e., *directions*). POSAs would have understood that the street address of a destination could be a location of another portable telephone. Stewart therefore corroborates that it was within a POSA’s background knowledge to generate *directions* between two mobile devices’ locations at a server and transmit the *directions* from the server to one or both mobile devices and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0143] Thus, it is my opinion that Sheha / Sheha-Froeberg meets Element [1F].

b. Claim 2: The method of claim 1, wherein said changing comprises adding an additional user to said list of users.

[0144] As I discussed above with respect to Element [1C] (§VIII.A.2.a.iv), Sheha meets said changing by teaching that a user “can *define* a group of specific users that have access to” the user’s location, and can “enable position transfer permissions at anytime.” Sheha, 11:63-12:7; 5:9-20. As I discussed above with respect to Element [1C] (§VIII.A.2.a.iv), it would have been immediately apparent to POSAs that “defin[ing] a group of specific users that have access to” the user’s location (Sheha, 11:63-12:7) includes adding users to the group list, and that one way to “enable position transfer permissions at anytime” (Sheha, 5:9-20) for another user is by *adding an additional user to said list of users* in the group who have access to the position information.

[0145] Alternatively, as I also discussed above with respect to Element [1C] (§VIII.A.2.a.iv), it would have been obvious in view of POSAs’ background knowledge to provide functionality allowing for *changing* the list of users. It would have been obvious to allow such *changing* to include *adding an additional user* because doing so was well-known as a beneficial option with reasonable expectation of success in a system like Sheha’s. My opinion in this regard is corroborated by the references I cited and discussed above for Element [1C] (§VIII.A.2.a.iv (citing, e.g., EX1007 (“Randall”), [0509] (describing how Alice

can add Bob to the list of users that have access to Alice’s location by “promoting Bob from ‘business’ to ‘friend’”); EX1035 (“Degnbol”), 9:34-10:3 (describing “adding” buddies), 11:16-26; EX1044 (“Robertson”), FIG. 9, 8:11-14 (discussing specifying “a second user whom the first user would like to add to his personal address book” and “specify permissions” for the second user); EX1046 (“Lee”), FIG. 2D, 16:1-25 (describing that “a selected group of users can be selected to **add** into an access list 276”); EX1022 (“Darling”), 3:3-5, 22:23-40, 23:3-13, 33:16-32, 33:4-34:3 (describing functionality for a mobile device to use an “Add” and “Remove” button to add/remove users to the list of user who have access to a user’s “Location Details”)).

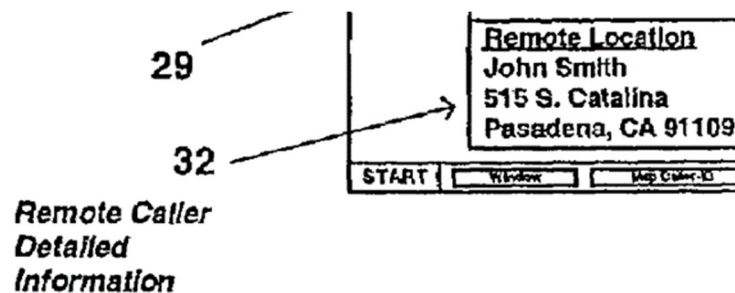
[0146] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim 2.

c. Claim 3: The method of claim 1, further comprising transmitting the address of said location to said at least one of said users of said list of users.

[0147] As I discussed above with respect to Element [1F] (§VIII.A.2.a.vii), Sheha discloses displaying a Map Caller-ID as in FIG. 5 (excerpted below), which includes directional information transmitted to a mobile device. The Map Caller-ID “may include local *address* position information.” Sheha, 7:27-31; *see also id.*, 2:43-48, 11:34-36, 14:42-46 (claim 7: “caller position information includes...address information”). Sheha discloses that Map Caller-ID

information is *transmitted* by the ODAS to each mobile device. Sheha, 11:44-51.

FIG. 5 illustrates *the address of said location* having been *transmitted to* and being displayed to *said at least one of said users of said list of users*.



Sheha, FIG. 5 (excerpt)

[0148] *Transmitting the address* of a mobile device’s location from the server to another mobile device was also obvious functionality to provide, because doing so was well-known as a beneficial option with reasonable expectation of success in a system like Sheha’s.

[0149] Froeberg (EX1051) describes “providing...driving directions to a user of a user telephone for a remote location associated with a remote telephone number.” Froeberg, Abstract; *see also* 1:40-65 (similar). Froeberg describes the user telephone can be a “cellular telephone” (Froeberg, 2:29-33) and that the “server 14 transmits the driving directions object through the telephone system 16 to the user telephone 12.” Froeberg, 4:21-26; *see also* Froeberg, 3:30-4:20, 7:5-46 (describing the server converting “location-determination information” from the user telephone 12 into driving directions that can be transmitted from the server to

the user telephone 12). Froeberg describes that the “user telephone 12 decodes the driving directions object into driving directions” and “displays the driving directions to the user of the user telephone 12.” Froeberg, 4:23-26. POSAs would have understood that the driving directions transmitted from the server to the user telephone would have included an address such that the user telephone can display driving directions to a destination (i.e., an address). Froeberg therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a mobile device’s location from a server to another mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0150] My testimony regarding POSAs’ background knowledge in this regard is further corroborated by several additional references, as discussed below.

[0151] Stewart (EX1056) describes a “portable telephone” that includes a “position locator” to “determine the location of the portable telephone”. Stewart, Abstract. Stewart describes that the portable telephone forwards its location to the “centralized base station 17” (Stewart, 7:43-52) and the centralized base station 17 can “use the location information and map database 24 to determine a street address.” Stewart, 8:20-23. The centralized base station can use “the geographic location of portable telephone 28 and the previously determined geographic location of calling first telephone 10...to calculate the distance between

called portable telephone 28 and calling first telephone 10” and the distance can be “based on the shortest road route using map database 24.” Stewart, 8:12-32. “Any or all of these items of information can be forwarded...to the calling first telephone 10.” Stewart, 8:32-37. POSAs would have understood that “any or all of these items of information” would include location information, such as a street address and distance to or from the street address using a map database (i.e., *directions*). POSAs would have understood that the street address of a destination could be a location of another portable telephone. Stewart therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a mobile device’s location from a server to another mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s / Sheha-Froeberg’s.

[0152] Sandhu (EX1054) describes a mobile unit (Sandhu, 4:18) that derives location data from GPS code sequences and “convert[s] the location data (e.g., latitude, longitude, and maybe altitude) into [a] street address.” Sandhu, 4:34-39. Sandhu describes “sending the location data [(i.e., a street address)] to service provider 8.” Sandhu, 4:40-5:8. Sandhu describes the service provider “retriev[ing] the current location of the target user from [a] location database and transmit[ting] it to the sender in a response package.” Sandhu, 7:42-67; *see also* Sandhu, 6:22-43. POSAs would have understood that the “current location of the

target user” could include an address of the target user since the mobile unit (i.e., the mobile unit of the target user) transmits location data, such as a street address, to the service provider and the service provider sends the location data it receives from the mobile unit to another mobile unit (i.e., the mobile unit of a requesting user). Sandhu therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a mobile device’s location from a server to another mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s / Sheha-Froeberg’s.

[0153] In another example, Chern-005 (EX1057) describes “a method for presenting the current street address of a wireless communications device on a display of the device.” Chern-005, 3:7-9. Chern-005 describes that “[t]he current latitude and longitude of the device is acquired and sent to a Web server. The Web server reverse geocodes the latitude and longitude to generate the street address of the device, and sends the street address from the server to the device for display.” Chern-005, 3:10-14. Chern-005 therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a mobile device’s location from a server to a mobile device (i.e., the mobile device that transmitted the address, a different mobile device) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s / Sheha-Froeberg’s.

[0154] In yet another example, Meadows (EX1018) describes “monitoring the geographical location of a subscriber’s mobile cellular telephone, and for providing the location information to an authorized user through the world wide web.” Meadows, Abstract. Meadows describes a “network-based location system” that translates a “code” into an “address, which may include information such as a street name, street intersection, county, or township.” Meadows, 4:61-5:12. Meadows can store this information in a table in a “graphical location database.” Meadows, 5:13-5:19, FIG. 3. This information (i.e., an address) can be displayed on a “graphical user interface using...a computer system having an Internet connection to the world wide web.” Meadows, 5:30-57 (“In this map, as can be seen, Deborah is located on P Street, Marcie is located on Howard Street, Brian is located on Philadelphia Avenue, and Adam is located on Q Street.”). Meadows therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a mobile device’s location from a server to a device (i.e., a computing system) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s / Sheha-Froeberg’s.

CODE	DEVICE NUMBER	USER NAME	LOC. ADDR.	LOCATION NAME	TIME	DIRECTION	SPEED
1582	(301) 663-9580	DEBORAH	1225 P STREET	SAFEWAY SUPERMARKET	2:30 PM	----	----
1983	(301) 982-9503	BRETT	I-95	-----	2:33 PM	NORTH	67 MPH
2092	(301) 666-9292	BETH	WALNUT ST.	RITE-AID PHARMACY	2:30 PM	----	----
1582	(410) 222-3344	MARCIA	HOWARD ST.	-----	2:32 PM	----	----
2933	(215) 947-5555	NANCY	I-66	-----	2:34 PM	EAST	55 MPH
1582	(301) 663-9301	BRIAN	PHILA AVE.	-----	2:32 PM	N.E.	64 MPH
2290	(301) 444-3926	ADAM	1333 N ST.	WALMART	2:35 PM	----	----
3955	(301) 999-9826	ALLISON	10 PHILA AVE.	MICRO GRAPHIC STORE	2:33 PM	----	----
1983	(410) 555-3355	ASLAN	I-94	-----	2:31	S.E.	72 MPH
1983	(301) 487-7265	DAVID	56 COVE ST.	SIMS BAR			
1582	(301) 494-5220	ADAM	Q ST.	BILLY'S BAR	2:32	----	----

FIG. 3

Meadows, FIG. 3

[0155] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim

3.

d. Claim 4: The method of claim 1, further comprising:

i. Element [4A]: obtaining the address of said location from a remote information provider; and

[0156] Sheha discloses that “[t]he ODAS [] determines the destination telephone’s 8 position information” of a landline phone “by performing a reverse telephone number lookup, thus retrieving both geographical and *address* information of the called telephone.” Sheha, 7:51-55. POSAs had motivation and reasonably expected success to include this capability in Sheha because it would also allow the ODAS to look up address information based on position information

provided by a mobile phone, such as latitude and longitude. Sheha, 10:5-16 (describing position information calculated by a mobile phone). Reverse geocoding a mobile phone's geo-coordinates to obtain the address of the location was a well-known technique with reasonable expectation of success.

[0157] Froeberg (EX1051) describes "the server 14 reverse geocod[ing] the geodetic location to a local street network address segment." Froeberg, 4:4-7, 7:5-46; *see also* Froeberg, 3:12-14 ("a remote geodetic location such as a latitude and a longitude"). Froeberg therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., a latitude and a longitude) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's.

[0158] My testimony regarding POSAs' background knowledge in this regard is further corroborated by several references, as discussed below.

[0159] Stewart (EX1056) describes that "[a] first location signal, corresponding to the geographical location of portable telephone 38 as determined by GPS location detector 40" (Stewart, 7:47-49) is received at base station 17. Stewart, 8:12-15. Stewart describes that base station 17 "can use the location information and map database 24 to determine a street address of a called portable telephone 28 from which a location signal has been received." Stewart, 8:12-23.

Stewart therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., geographical location) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's / Sheha-Froeberg's.

[0160] In another example, Sandhu (EX1054) describes "convert[ing] the location data (e.g., latitude, longitude, and maybe altitude) into [a] street address." Sandhu, 4:34-39; *see also* Sandhu, 4:40-5:8 ("Using...the GPS code sequences, processor 16-i of mobile unit 10-i derives the street addresses."). Sandhu therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., latitude, longitude, and maybe altitude) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's / Sheha-Froeberg's.

[0161] In yet another example, Chern-005 (EX1057) describes acquiring "[t]he current latitude and longitude of the device" and "reverse geocod[ing] the latitude and longitude to generate the street address of the device." Chern-005, 3:7-14. Chern-005 therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., current latitude and longitude) to obtain the address of the location and that a

POSA would have had a reasonable expectation of success doing so in a system like Sheha's / Sheha-Froeberg's.

[0162] A POSA would have been motivated to provide the aforementioned address retrieval functionality for mobile devices in Sheha's system to assist in navigation and routing between two mobile devices.

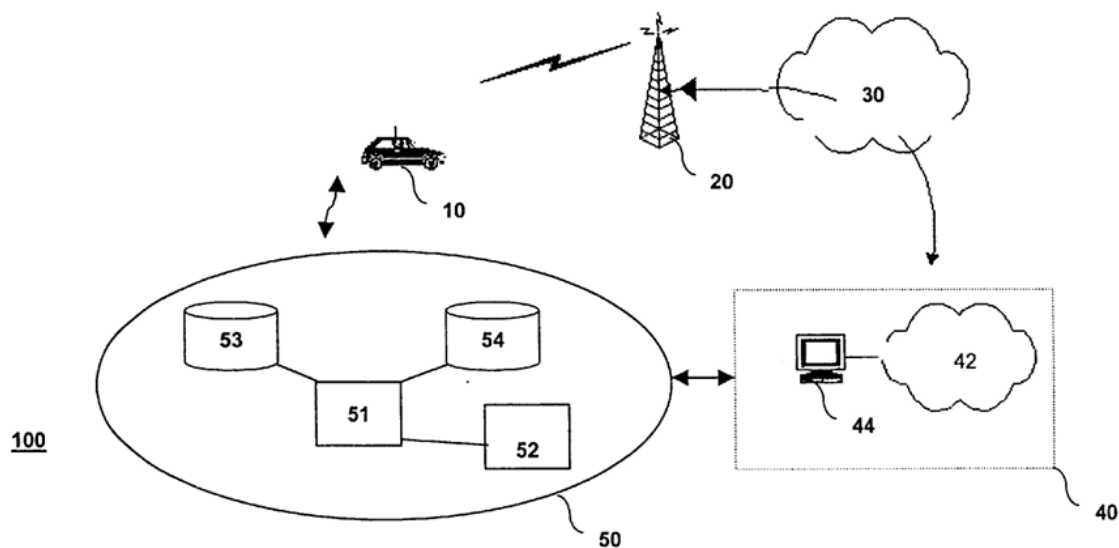
[0163] POSAs would have understood the database from which Sheha's ODAS (the server) *obtains* the reverse geocoded address to be *a remote information provider* from which the ODAS *obtains the address of said location*. It was also a known, obvious design option for an application server like Sheha's ODAS to forward a client mobile device's geo-coordinates to another server (*remote information provider*) to perform the reverse geocoding and return the address to the ODAS for transmission to an authorized user. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0164] Chern-005 (EX1057) describes "the Web *server* may send the latitude and longitude data to a *separate, independent reverse geocode server*...for processing." Chern-005, 11:2-6. Chern-005 also describes "[o]nce the Web server has the street address corresponding to the latitude and longitude data, it is sent to the handset that initiated the request." Chern-005, 11:7-10. Chern-005 therefore corroborates that it was within a POSA's background knowledge for an application

server to forward a client device's geo-coordinates to another server to perform the reverse geocoding and return the address to the application server for transmission to an authorized user and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's / Sheha-Froeberg's.

[0165] Stefan (EX1058) describes “a system for providing services to a vehicle” and the system includes “clients 10” and “service management subsystems 40,” which can “comprise one or more service management applications 42 and one or more service managers 44.” Stefan, 3:38-60, FIG. 1; *see also* Stefan, 4:66-5:10 (describing “system 200” including a “subscriber 210” and a “service management application 240” which provides access to various services), FIG. 2. Stefan also describes that the system can include “navigation subsystems 50...for generating routes to be delivered to vehicle client 10 and for receiving route information from vehicle client 10.” Stefan, 3:47-52. As shown in FIG. 1 (excerpted below), the service management subsystems 40 are in communication with the navigation subsystems 50. *See also* Stefan, 5:5-10 (“service management subsystem 240 is also in communication with a subsystem for processing route information shown at 251”), FIG. 2. Stefan further describes that generating routes may be performed “in any suitable manner” such as using “reverse geocoding.” “That is, the application 351, 352 determines a corresponding navigation address based on input latitude and longitude

coordinates” (i.e., the navigation server’s route generation applications perform reverse geocoding to determine an address based on input latitude and longitude coordinates). Stefan, 7:32-48. Stefan therefore corroborates that it was within a POSA’s background knowledge for an application server (i.e., a service management subsystem) to forward a client device’s geo-coordinates to another server (i.e., a navigation subsystem) to perform the reverse geocoding and return the address to the application server for transmission to an authorized user (i.e., a client) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s / Sheha-Froeberg’s.



Stefan, FIG. 1 (excerpt)

[0166] Thus, it is my opinion that Sheha / Sheha-Froeberg meets Element [4A].

ii. Element [4B]: transmitting the address of said location to said at least one of said users of said list of users.

[0167] Sheha, or an obvious implementation thereof, meets Element [4B] as I discussed above with respect to claim 3 (§VIII.A.2.c), which also recites “*transmitting the address of said location to said at least one of said users of said list of users.*”

[0168] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim 4.

e. Claim 5: The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones

[0169] As I discussed above with respect to Element [1F] (§VIII.A.2.a.vii), one of the wireless telephones in Sheha that the first wireless telephone’s user has authorized to access said location receives that location and displays it in a Map Caller-ID screen as in Figure 5. Sheha, 4:52-58 (“[A] map and address of the destination telephone number can be displayed on the mobile telephone.”).

[0170] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim 5.

f. Claim 6: The method of claim 1, further comprising determining a third location associated with one of said plurality of wireless telephones.

[0171] Sheha discloses determining the claimed *location* and *second location* as I discussed above with respect to Element [1A] (§VIII.A.2.a.ii) and Element [1E] (§VIII.A.2.a.vi). Sheha discloses *determining a third location* in multiple ways.

[0172] Sheha discloses that for two mobile devices in motion, each device continuously determines and sends its updated position to the ODAS and to the other device. Sheha, 11:37-51. After device 18b's initial *location* (*supra* §VIII.A.2.a.ii (Element [1A])) and device 18c's initial *second location* (*supra* §VIII.A.2.a.vi (Element [1E])) are determined, a subsequent position update with a new position for device 18c *determines a third location associated with one of said plurality of wireless telephones*.

[0173] Additionally, in Sheha, wireless device 18b's "user[]" can define a group of specific *users* that have access to" 18b's location (Sheha, 11:63-12:7), in which, for example, both wireless device 18c and another wireless device ("18d," perhaps) may be among *said plurality of wireless telephones* whose users (plural) are in the group. POSAs would have understood that Sheha's description of wireless devices 18b and 18c sharing their locations with each other (Sheha, 10:66-11:54) is just one representative example, and two-way location sharing can

also be performed between, e.g., device 18b and another user having device 18d. In this way as well, *a third location associated with* wireless telephone 18d is determined.

[0174] Thus, it is my opinion that Sheha meets claim 6.

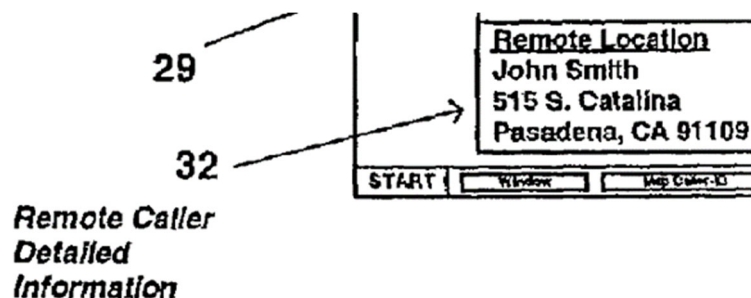
g. Claim 7: The method of claim 1, further comprising:

i. Element [7A]: receiving said location by at least one of said plurality of wireless telephones; and

[0175] Sheha / Sheha-Froeberg meets Element [7A] as I discussed above with respect to Element [1F] (§VIII.A.2.a.vii) and claim 5 (§VIII.A.2.e), by receiving and displaying the Map Caller-ID.

ii. Element [7B]: displaying the name of said location on said at least one of said plurality of wireless telephones.

[0176] Sheha discloses displaying in the Map Caller-ID screen “identification information 32” of the *first wireless telephone’s* location. Sheha, 9:23-36. In the example of FIG. 5 (excerpted below), the identification includes at least two *names* shown as representing the “Remote Location”—the name “John Smith,” and the city name “Pasadena, CA.” Sheha, FIG. 5; *see* EX1001, 8:2-6 (broadly referencing “area names”).



Sheha, FIG. 5 (excerpt)

[0177] Alternatively, it would have been obvious to *display the name of said location* to help the other device user understand where that location is, in view of POSAs’ background knowledge of the well-known design choice and reasonable expectation of success to do so when displaying the location of a mobile device. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0178] Zellner (EX1059) describes “determining the calling party’s location using a location system of the location-tracking network”, “returning...the calling party’s location to the...called party”, and “**displaying** the calling party’s location on the called party’s display unit.” Zellner, 4:4-18; *see also* 6:57-67 (“called party 102 could also be a wireless network user to which SCP 200 delivers location information.”). Zellner describes that “the calling party’s location” is recorded “in a way meaningful to the location delivery subscriber of the location information delivery service” and “could include street addresses, landmarks, or building names” or “use a mapping converter to translate the position

coordinates...into a street address or building name for *display* on the display unit.” Zellner, 4:19-32. Zellner therefore corroborates that it was within a POSA’s background knowledge to display the name of a location on a mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0179] In another example, Meadows (EX1018) describes “providing the location information [of a subscriber’s mobile cellular telephone] to an authorized user through the world wide web.” Meadows, Abstract. Meadows describes “present[ing] location information about [a] selected individual with greater detail” and provides the example of “Adam’s location on Q Street is ‘Billy’s Bar’”. Meadows, 6:1-6. Meadows also describes the location can be presented on a “graphical user interface using a... computer system having an Internet connection to the world wide web.” Meadows, 5:30-57 (“In this map, as can be seen, Deborah is located on P Street, Marcie is located on Howard Street, Brian is located on Philadelphia Avenue, and Adam is located on Q Street.”). Meadows therefore corroborates that it was within a POSA’s background knowledge to display the name of a location on a device (i.e., a computing system) and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

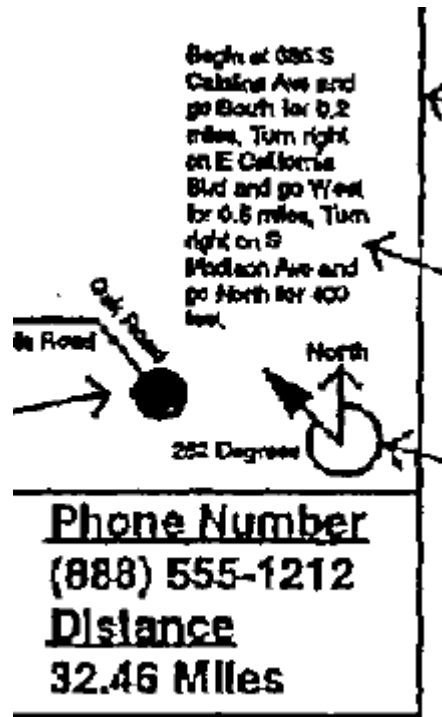
[0180] Jhanji (EX1060) describes electronic data privacy protection in connection with “the sharing of [] posted information.” Jhanji, 11:1-3. “In one embodiment, the location information (present and/or future) is entered by the user himself through the mobile Internet device, thereby giving him full control of whether to let the system (and thus anyone else) know his location information.” Jhanji, 11:3-7. More specifically, Jhanji describes that “location entry” “may take any form” such as by being “fully descriptive (e.g., ‘Restaurant Mikasa on Main Street’) to ensure understanding.” Jhanji, 11:12-19. Jhanji therefore corroborates that it was within a POSA’s background knowledge to display the name of a location (e.g., “Restaurant Mikasa on Main Street”) on a mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha’s.

[0181] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim 7.

h. Claim 8: The method of claim 1, further comprising: determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.

[0182] Sheha discloses “provid[ing]...line-of-sight (LOS) distance, and curved earth LOS distance measurements between the local and remote positions” of the two *wireless telephones*. Sheha, 3:29-34. These distances, and “[a]dditionally...driving direction *distance* information for the optimal route”

between the two *wireless telephones* can be determined for display in the Map Caller-ID. Sheha, 9:23-39, FIG. 5 (excerpted below).



Sheha, FIG. 5 (excerpt)

[0183] Thus, it is my opinion that Sheha / Sheha-Froeberg meets claim

8.

i. **Claim 9: The method of claim 1, further comprising:**

Element [9A]: receiving said location by at least one of said plurality of wireless telephones;

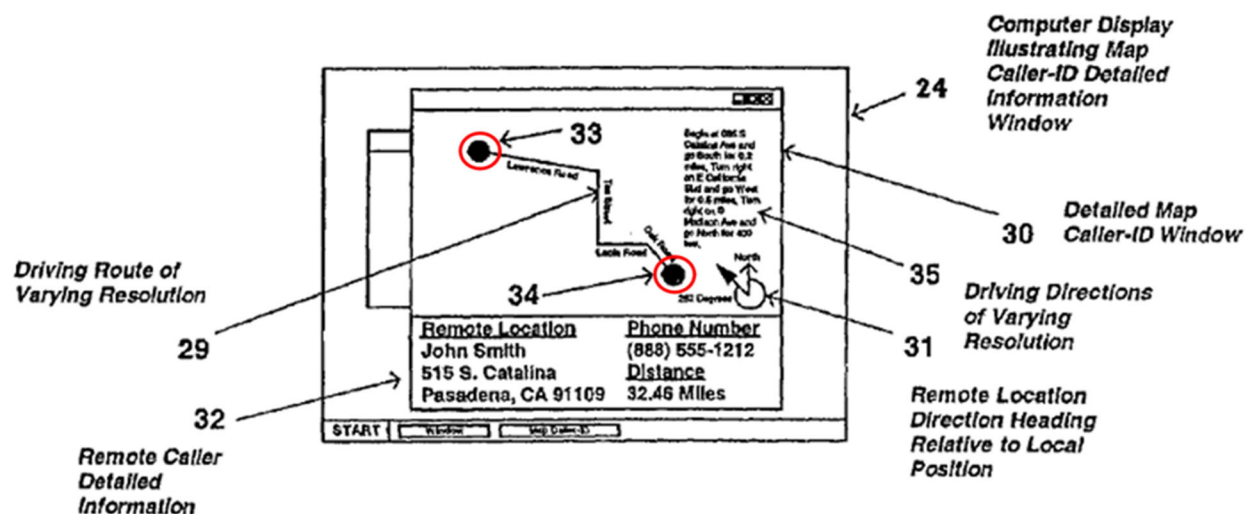
Element [9B]: displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location.

[0184] Sheha meets Element [9A] and Element [9B]'s *displaying a*

map on said at least one of said plurality of wireless telephones as I discussed

above with respect to Element [1F] (§VIII.A.2.a.vii), claim 5 (§VIII.A.2.e), and claim 7 (§VIII.A.2.g) by receiving and displaying the Map Caller-ID.

[0185] As FIG. 5 illustrates, the Map Caller-ID can include *a marker representative of said location of the first wireless telephone*. Sheha, 9:23-39 (map displays “map location 33 of the caller” and “map location 34 of the destination telephone number”), FIG. 5 (excerpted and annotated below, markers representing locations 33 and 34 of both devices).



Sheha, FIG. 5 (excerpt and annotated)

[0186] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha’s “map” displayed “on the mobile telephone” at 4:52-58 is not a graphical map like Sheha’s FIG. 5 and cannot be received without a phone call. It is my opinion that these assertions are wrong. FIG. 5 is the only type of “map and address” (Sheha, 4:52-58) display illustrated in Sheha, and nothing in Sheha suggests that the “map” discussed at 4:52-58 would be anything other than

graphical. While Sheha (12:8-41) explains that *some* embodiments use an “accompanying device” that “is better suited for navigational displays and computations” than a “typical mobile navigational device” which may be “not optimal for navigational purposes,” *other* embodiments can still display the “map...on the mobile telephone” as discussed at 4:52-58. And Sheha teaches that the no-call embodiment only differs from the phone-call embodiment in how the device “request[s] position information” (Sheha, 11:55-12:7), not in how that information is displayed.

[0187] Alternatively, even if Sheha did not itself expressly acknowledge it, Froeberg teaches that a cellular telephone can display such a map received from the server, without a call to/from the other telephone. Froeberg, 3:23-30, 5:6-59. Froeberg describes a server that “transmits a telephone message having [a] map object” to a “user telephone,” which “decodes the map object into map data th[at] can be used for a map display” on the telephone device. Froeberg, 3:23-30. Froeberg further discloses the user telephone can be “a cellular telephone” with a display and an “object decoder.” Froeberg, 5:6-19, FIG. 4. The object decoder “decodes a software object received...from the server,” which “can be a map object [e.g., an HTML or WML document] having information for a map area about the remote location or a driving directions object having” “driving directions to the remote location.” Froeberg, 5:19-27. The received documents

“include map data and display semantics,” which the “object decoder” for “rendering” the data. Froeberg, 5:28-39. The device can also receive a “Java class map object [that] includes both map data and program code” that “enables [the] user to interact with the map, for example to click on a street, zoom in, zoom out, and enable/disable display of various street classes, labels, and points of interest” and to “display[] the location of the user telephone [] on the map.” Froeberg, 5:40-54. The Java object decoder can also “cache[] enough map data to show location continuously as the user telephone [] moves on the map within a local area without further map data from the server.” Froeberg, 5:55-59.

[0188] Implementing Sheha to display the map on the requesting wireless device with a marker representative of the location of the target wireless device, in scenarios with or without a call, would have been an obvious variation in view of POSAs’ background knowledge of the convenient option and reasonable expectation of success in doing so.

[0189] My testimony regarding POSAs’ background knowledge in this regard is further corroborated by several references, as discussed below.

[0190] Randall (EX1007) describes an application in which a user’s friends or parents can track the user by “add[ing] a ‘map’ application to their own devices, which could show their position on digital maps and also, by using the

location attribute of the user's data object, it could also show the position of the user." Randall, [0021], p. 29.

[0191] Sandhu (EX1054) describes "provid[ing] user 14-i with a map showing the location of user 14-2 relative to the location of user 14-i." Sandhu, 6:22-50.

[0192] Wollrab (EX1014) describes "translat[ing] remote sensing location coordinates into a graphic map image, e.g. a .jpg or .gif file, depicting the relative locations of all members/PDA devices within a family." Wollrab, 3:28-31, 4:43-58 ("PDA device 14-1 through 14-5 can display a map image via display device 15-5 through 15-5 depicting the relative locations of all members/PDA devices within a family..."), FIGs. 1-4C.

[0193] Grube (EX1017) describes displaying, on mobile devices (Grube, 4:38-57, 5:13-17, FIG. 2), maps of tracked vehicles, and the maps displaying icons to represent the current locations of the tracked vehicles. Grube, 6:59-7:6, *see also* 6:14-27.

[0194] Meadows (EX1018) describes "monitoring the geographical location of a subscriber's mobile cellular telephone, and for providing the location information to an authorized user through the world wide web." Meadows, 2:2-7. The authorized user can access the location information through various media including a "wireless handheld device 20b". Meadows, 3:59-67. Meadows

describes the location information can be displayed on a map. Meadows, 5:48-57, FIG. 4B.

[0195] Thus, the above references corroborate by opinion that displaying a map on the requesting wireless device with a marker representative of the location of the target wireless device would have been an obvious variation in view of POSAs' background knowledge of the convenient option and reasonable expectation of success in doing so in a system like Sheha's.

[0196] Thus, it is my opinion that Sheha meets claim 9.

- j. **Claim 11: The method of claim 1, further comprising: determining a third location of a device based on the IP address of said device; and transmitting said location to said device.**

[0197] Sheha teaches that mobile devices can bidirectionally share locations not only with other mobile devices, but also with landline devices. Sheha, 4:43-58, 9:40-10:65, 11:55-58. Sheha's ODAS can therefore *transmit said location of the first wireless telephone* to a device that is non-mobile, and can transmit that landline *device's third location* to the *first wireless telephone*. To accommodate this functionality involving a non-mobile device that may often be without GPS capability, POSAs would have been motivated and have reasonable expectation of success to implement the ODAS with the capability to *determine the third location of that device based on the IP address of said device*. Sheha teaches that "stationary landline computing devices are not always associated with

telephone numbers, but rather *Internet Protocol (IP) addresses*,” and Sheha’s “invention relates to...the utilization of unique identification addresses, such as telephone numbers or *Internet Protocol (IP) addresses*, for...providing real-time location information.” Sheha, 2:11-14, 1:15-22.

[0198] It was further background knowledge for POSAs that a device’s IP address was conventional information to use to determine its geographic location in lieu of GPS. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0199] Parekh (EX1061) describes “determining a geographic location of an Internet user.” Parekh, Abstract. More specifically, Parekh describes “ascertain[ing] the geographic location of an IP address.” Parekh, 4:64-67.

[0200] McElligott (EX1062) describes “determin[ing] the...geographical location of [a] PC.” McElligott, Abstract. More specifically, McElligott describes “[t]he geographical location of an IP address can be deduced if the geographical location of an IP address that shares the same router is known.” McElligott, 7:8-12.

[0201] Anderson (EX1063) describes “associat[ing] a geographic location associated with a network address.” Anderson, Abstract; *see also* Anderson, 1:26-31 (“Geographic location may be utilized to infer demographic characteristics of a network user.”). More specifically, Anderson describes using

an IP address “to estimate a geographic location.” Anderson, 7:57-8:31 (“[M]ost network addresses (e.g., IP addresses) are associated with a particular geographic location.”).

[0202] Thus, the above references corroborate my opinion that a device’s IP address was conventional information to use to determine its geographic location in lieu of GPS in a system like Sheha’s.

[0203] Additionally, POSAs also would have had motivation and reasonable expectation of success to *determine a third location* of a mobile device *based on the IP address of said device*, as an alternative to GPS when the device had inadequate GPS reception, such as when the device was inside a building or blocked line-of-sight interfered with GPS reception. Padmanabhan (EX1064) elaborates such a motivation when describing that “GPS is ineffective indoors.” Padmanabhan, 2:28-29.

[0204] It was well-known background knowledge to determine a wireless device’s location based on its IP address, which indicates the nearest network access point that has a known geographical location. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0205] Kimoto (EX1065) describes “an IP address of a fixed terminal is detected as the position identification information if the mobile terminal 4 is

connected to the fixed terminal.” Kimoto, 37:47-57; *see also* Kimoto, 51:7-13 (“[I]f the mobile terminal 4 is connected to a fixed terminal such as a public telephone [or LAN (a Local Area Network)] to access to the information center 5, the user who will use a service transmits identification of the fixed terminal such as...an IP address automatically obtained upon connecting to the LAN[] and position information to the information center 5.”). Kimoto further describes “the position information detecting unit 41 of the mobile terminal 4 detects position identification information (... an IP address in the case of LAN or the like) of the fixed terminal 6 to which the mobile terminal 4 is connected...Therefore, the information center 5...can certainly provide information or a service relating to a position necessary to the mobile terminal 4.” Kimoto, 53:13-22.

[0206] Turcotte (EX1066) appreciates that “there are many different ways to determine the precise or approximate location of a mobile device on a globe. These methods include, among others, the use of...Internet IP address...to determine position information.” Turcotte, 10:54-67.

[0207] McElligott (EX1062) describes “determin[ing] the...geographical location of [a] PC.” McElligott, Abstract. More specifically, McElligott describes “[t]he geographical location of an IP address can be deduced if the geographical location of an IP address that shares the same router is known.” McElligott, 7:8-12.

[0208] Thus, the above references corroborate my opinion that it was well-known background knowledge to determine a wireless device's location based on its IP address, which indicates the nearest network access point that has a known geographical location and would have been an obvious variation in view of POSAs' background knowledge of the convenient option and reasonable expectation of success in doing so in a system like Sheha's.

[0209] Thus, it is my opinion that Sheha meets claim 11.

k. Claim 12: The method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location.

[0210] As I discussed above with respect to claim 6 (§VIII.A.2.f), Sheha discloses requesting a *third location* of a device, which may be *associated with a third user*, by *receiving manual input* of that device's telephone number (i.e., in Sheha's no-call location request). Sheha, 11:55-12:7.

[0211] Thus, it is my opinion that Sheha meets claim 12.

l. Claim 30

[0212] Claim 30 recites elements substantively identical to Elements [1PRE]-[1A], and [1C]-[1F], while omitting element [1B]. Therefore, it is my opinion that Sheha meets claim 30 for the reasons I discussed above with respect to claim 1 (§VIII.A.2.a).

m. Claims 31-37

[0213] The additional limitations recited in claims 31-37 are identical to those recited in claims 2-8, and it is my opinion that claims 31-37 are met for the reasons I discussed above with respect to claims 2-8 (§§VIII.A.2.b-h).

B. Ground 2: Claim 10 is Unpatentable Over Sheha in View of Randall Or Sheha in View of Froeberg and Randall

1. Claim 10: The method of claim 1, wherein the location is obtained by way of manual input that is received by way of a locate button provided on said first wireless telephone.

[0214] As I discussed above with respect to Element [1A] (§VIII.A.2.a.ii), Sheha discloses obtaining *the location* from *said first wireless telephone*.

[0215] In a system like Sheha's/Sheha-Froeberg's where users' wireless devices send their GPS locations to a server for sharing with other users, Randall (EX1007-EX1008; *see* Randall overview *infra* (§VIII.E.1)) teaches to equip the wireless device with a "Beacon **Button**," which provides "[a] function that lets you send a very quick burst of information to friends," whereby "***you can tell the phone to send your location to them*** in an instant, letting them see how far away you are." EX1007, p. 30; *see also* p. 24 ("People tracking"); *supra* §VIII.A.2.a.vii (Element [1F]: discussing Sheha-Froeberg). These teachings would have provided POSAs motivation and reasonable expectation of success to supplement Sheha or Sheha-Froeberg by implementing such a Beacon Button in

Sheha's/Sheha-Froeberg's mobile device, to provide a convenient way for users to trigger a location update to the server (e.g., as part of letting another user see how far away the device is).

[0216] The “Beacon Button” is *a locate button provided on said first wireless telephone*, and by the user pressing the “Beacon Button” to “tell the phone to send [its] location” (EX1007, p. 30), *the location is obtained by way of manual input that is received by way of the locate button*, meeting claim 10.

C. Ground 3: Claims 12-29, and 38-45 are Unpatentable Over Sheha in View of Tanaka Or Sheha in View of Froeberg and Tanaka

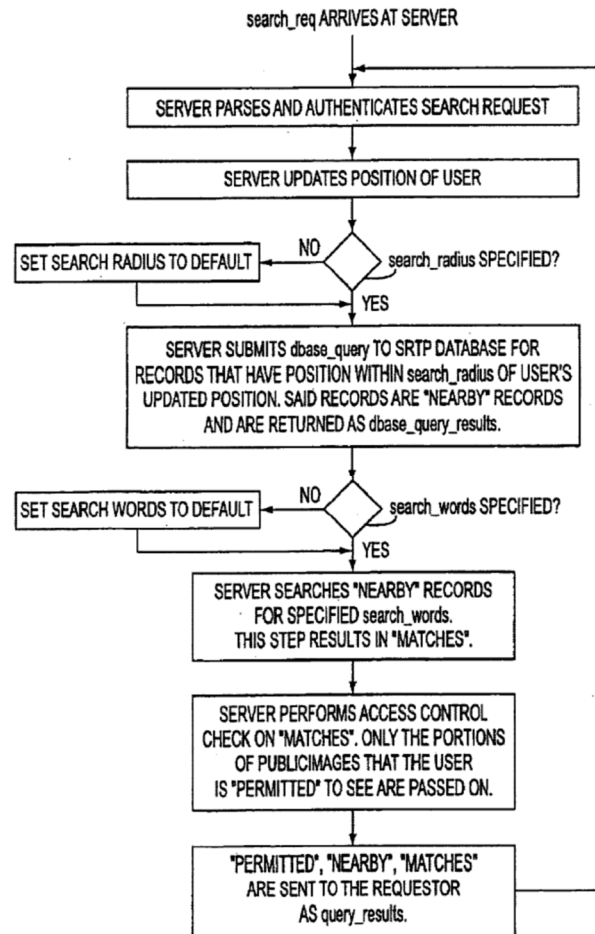
[0217] As I explain in this section below, in my opinion claims 12-29 and 38-45 of the '575 patent would have been obvious to a POSA in view of the combined teachings of Sheha (EX1005) and Tanaka (EX1011) or the combined teachings of Sheha, Froeberg (EX1051), and Tanaka.

[0218] Above, I provided a discussion of Sheha (§VIII.A.1) and Froeberg (§VII.G).

1. Discussion of Tanaka (EX1011)

[0219] Tanaka describes alerting wireless users to other wireless users who are nearby. Tanaka, Abstract, claim 20. Users may request searches including a search radius and user profile items of interest. Tanaka, 5:56-7:1. Tanaka's server alerts the user when another user with a matching profile comes

within the search radius. Tanaka, 6:60-7:5, claim 20, FIG. 4 (below). A user's location can be determined via their device's "integrated GPS," or "the user could manually enter his position into the mobile unit." Tanaka, 2:58-3:20.



Tanaka, FIG. 4

2. Discussion of Sheha-Tanaka/Sheha-Froeberg-Tanaka Combinations

[0220] A POSA would have been motivated to incorporate alert functionality into Sheha's system (without Froeberg or with Froeberg in the Sheha-Froeberg system discussed above §VIII.A.2.a.vii) in view of Tanaka's teachings, to

enhance Sheha's location services with notifications when another wireless user of interest is nearby, allowing users to obtain directions, locate nearby friends for a social visit, etc. A POSA would also have been motivated to incorporate user-interface functionality described in Tanaka to provide easy/intuitive ways for users to send location information, such as Tanaka's disclosure of manual input to send a location update. A POSA would have reasonably expected success because Tanaka concerns shared location services using the type of wireless-device location information available to authorized requestors in Sheha, and incorporating functionality taught by Tanaka into Sheha's similar system would have involved only ordinary software development efforts within POSAs' capabilities.

3. Mapping of Sheha-Tanaka Combination to Claims 12-29 and 38-45

[0221] As explained in this section below, in my opinion a POSA would have understood that the Sheha-Tanaka combination meets all limitations of claims 10, 12-29, and 38-46 of the '575 patent, and therefore renders those claims obvious.

a. Claim 12: The method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location.

[0222] Tanaka teaches providing an alternative to GPS, where "the user could manually enter his position into the mobile unit, either by typing on a

keypad or keyboard, or by using a stylus and *tapping* a map or location in a table,”

“similar to...where a computer mouse is used to ‘click’ on a computer icon.”

Tanaka, 2:58-3:20; *see also* 6:15-37, 7:49-52, 8:44-47, 10:11-14. The location on the map or table that the user tapped (*manually entered input*) is sent to the server.

Tanaka, 6:18-37. Thus, Tanaka teaches *receiving manual input* for a *location*.

Froeberg also teaches to allow the user to “enter...a local street address” as an alternative to GPS-provided location. Froeberg, 3:46-54. POSAs would have been motivated to provide such *manual input* alternatives so a user can update their location to the server, e.g., when GPS reception is unreliable or is determining an inaccurate location, and would have reasonably expected success as I discussed above with respect to the Sheha-Tanaka combination (§VIII.C.2).

[0223] POSAs also would have been motivated to provide this alternative for users concerned about “privacy” with GPS “track[ing] the user at every instant” or about GPS “power requirement[s],” who may prefer to sometimes share their location “by tapping on a map displayed on the screen” or a “dropdown list” while other times using “GPS” as “a substitute for or a supplement to the current location information entered by the user.” EX1060, 3:49-58, 9:66-10:2, 11:66-12:4. My testimony regarding POSAs’ background knowledge in this regard is corroborated by Jhanji (EX1060), as discussed below.

[0224] Jhanji (EX1060) describes “the need to furnish time-relevant location information for mobile Internet users...using location-finding technologies such as Global Positioning System (GPS).” Jhanji, 3:43-47. Jhanji describes “drawbacks to such a proposal” including “GPS tracking seriously threaten[ing] the privacy of the user of the GPS-enabled mobile Internet device since it renders it possible to track the user at every instant” which would be “simply an unwelcomed intrusion.” Jhanji, 3:48-54. Jhanji describes other drawbacks to include “additional power requirement, complex circuitries and costs, both for the mobile Internet devices and for the transmission networks that handle them.” Jhanji, 3:55-58. To enhance user privacy, Jhanji describes “users...make available and [] control sharing of...location (present or planned)” (Jhanji, 9:18-38) and “envision[s] that location entry may be made by tapping on a map displayed on the screen” or selecting from a “dropdown list” to “self-declare[]” the user’s current location. Jhanji, 9:66-10:15; *see also* 11:61-12:4 (“user entry for location information is one advantageous mode of operation”).

[0225] Thus, Jhanji corroborates by opinion that POSAs would have been motivated to provide this alternative for users concerned about “privacy” with GPS “track[ing] the user at every instant” or about GPS “power requirement[s],” who may prefer to sometimes share their location “by tapping on a map displayed

on the screen” or a “dropdown list” while other times using “GPS” as “a substitute for or a supplement to the current location information entered by the user.”

[0226] This *manual input* can be received from any user of the Sheha-Tanaka/Sheha-Froeberg-Tanaka system, including a *third user* manually inputting that user’s *third location*.

[0227] Thus, it is my opinion that the Sheha-Tanaka and Sheha-Froeberg-Tanaka combination meets claim 12.

b. Claim 13: The method one of said plurality of users.

i. Preamble [13PRE]: A method comprising:

[0228] Like claim 1, claim 13’s preamble only recites “*A method comprising.*” As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 13 recites a method with several elements that are essentially the same elements as recited in claim 1. Thus, Sheha meets [13PRE] for the same reasons I discussed in relation to [1PRE] (*see supra* §VIII.A.2.a.i). As explained in this section below, in my opinion a POSA would have understood that the Sheha-Tanaka combination and Sheha-Froeberg-Tanaka combination meet all limitations of claim 13 of the ’575 patent, and therefore meets claim 13.

ii. Element [13A]: determining a location of a first wireless telephone;

[0229] Element [13A] recites essentially the same functionality recited in Element [1A], which recites “*obtaining a location of a first wireless telephone*” and thus is *determining* that location. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [13A] for the same reasons Sheha meets Element [1A], as discussed above (§VIII.A.2.a.ii).

iii. Element [13B]: transmitting said location from said first wireless telephone to a remote server;

[0230] Element [13B] recites the same functionality recited in Element [1A], which also recites “*transmitting said location from said first wireless telephone to a remote server.*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [13B] for the same reasons Sheha meets Element [1B], as discussed above (§VIII.A.2.a.iii).

iv. Element [13C]: changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

[0231] Element [1C] recites “*changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless*

telephones.” Element [13C] recites essentially the same functionality except does not recite that the “*changing [off] a list of users*” is “*at the direction of said first wireless telephone....*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [13C] for the same reasons Sheha meets Element [1C], as discussed above (§VIII.A.2.a.iv).

v. Element [13D]: transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;

[0232] As I discussed above with respect to the Sheha-Tanaka and Sheha-Froeberg-Tanaka combinations (§VIII.C.2), Sheha-Tanaka and Sheha-Froeberg-Tanaka incorporate Tanaka’s teaching to alert a mobile device user (which in Sheha’s system is *a user of said list of users*—i.e., one of the *first wireless telephone* user’s contacts who is authorized to access the *first wireless telephone*’s location—as I discussed above with respect to Elements [1C]-[1D] (§§VIII.A.2.a.iv-v) when that user is geographically close to another mobile device user (e.g., to *said location* of the *first wireless telephone*). Tanaka, Abstract, 7:61-64, 8:56-59, 10:24-27. Tanaka teaches allowing the user to submit a search request for users of geographically close mobile devices matching specified search parameters in the search request, including a search radius specifying a *distance*. Tanaka, Abstract, 6:10-7:1. The server automatically notifies the user (i.e.,

transmits an alert message) when another user satisfying the search parameters is “within the search radius” (i.e., *within a certain distance*). Tanaka, 6:49-66, 7:28-30, 7:61-64, 8:56-59, 10:24-27. The notification *comprises information associated with said location* because it informs the user that the *location* of the *first wireless telephone* is near the user’s current location. Tanaka, 6:60-66. Additionally, including the *first wireless telephone’s location* in the proximity notification was a well-known, obvious design option with reasonable expectation of success. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0233] De-Vries (EX1013) describes an “information service 100 [that] can be used to locate people” (De-Vries, 10:61-62) and “provides notifications or alerts [] based on people and place.” De-Vries, 4:36-39. More specifically, De-Vries describes “the information service can provide information in addition to proximity or non-proximity, such as actually detailing the location of a person or persons on the user’s buddy list.” De-Vries, 10:64-67.

[0234] Degnbol (EX1035) describes “a method and a system for automatic notification of a user ‘A’ of the entry of pre-selected user ‘B’ into a pre-determined area (or proximity to a particular location).” Degnbol, 1:7-10. More specifically, Degnbol describes that such notification could be a “message” (Degnbol, 4:5-11) that “comprise[s] text, e.g. information about the distance

between user ‘A’ and user ‘B’, graphics, such as an image or an icon, a map or diagram with a pointer showing the location of the user.” Degnbol, 5:16-18.

[0235] Thus, the above references corroborate my opinion that including the *first wireless telephone’s location* in the proximity notification was a well-known, obvious design option with reasonable expectation of success in a system like the Sheha-Tanaka / Sheha-Froeberg-Tanaka combinations.

[0236] I have been informed by counsel that Mullen argued in a prior proceeding that Tanaka’s “search request is not directed to, nor is capable of, targeting a specific pre-identified user, like the ‘first wireless telephone’” because Tanaka allegedly identifies only “unknown users.” It is my opinion that Mullen was incorrect. Tanaka teaches that “[i]f Person B is not a member of any access control group previously defined by Person A, Person B accesses” a “limited” version of “Person A’s PublicImage.” Tanaka, 4:27-31. This immediately teaches and would have rendered obvious to POSAs that the user at the device being alerted can alternatively be a member of an “access control group previously defined by” the other device’s user—that is, a friend/contact of the *first wireless telephone* user who has already given the user being alerted permission to access the *first wireless telephone* user’s location and profile by including that friend/contact *in said list of users*. *Id.* POSAs would have understood from background knowledge that providing alerts for geographic proximity of a

specified pre-identified known contact was desirable with reasonable expectation of success. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0237] Randall (EX1007) describes an “Old buddy finder” service alerts an ADS system user (e.g., Bob) of geographic proximity to a known contact (e.g., Alice). Randall, p. 24 (“Old buddy finder”) (“Wireless information device alerts Bob when a contact happens to be within a defined proximity (e.g. Bob and Alice are both in the same foreign city and didn’t know it).”).

[0238] De-Vries (EX1013) describes “[a]n information service [that] provides search and notifications to inform when certain people (e.g., friends, family, business contacts, etc.) are nearby.” De-Vries, Abstract. De-Vries describes that the information service can provide such notifications by “set[ting] a proximity threshold within which people...are to be considered proximate to the user” and the “proximity parameter can have the form of a geographic distance threshold.” De-Vries, 9:1-18. In addition to geographic proximity to a user, De-Vries describes whether another user’s profile matches the user’s search parameters (e.g., is it a “family member[]” vs. a “co-worker” vs. a “a person they see frequently” vs. “a close friend”). De-Vries, 9:18-31. Thus, De-Vries’s server is looking not just for whether the other user is one of the user’s listed contacts and is geographically nearby, but also for whether the other user’s profile matches the

user's search parameters (e.g., is it a "family member[]" vs a "co-worker" vs "a person they see frequently" vs "a close friend"), which shows that it was known that matching users' profiles to search parameters (as in Tanaka) was useful when the users are known contacts (and not just for finding new people a user did not know before).

[0239] Darling (EX022) discloses a display screen for functionality in a mobile device that identifies for the device's user when "Friends [are] nearby" and "[s]electing any of the friends...will send back their exact location [a]s if you had used the 'Search for a friend' functionality." Darling, 38:6-12.

[0240] Thus, the above references corroborate my opinion that POSAs would have understood from background knowledge that providing alerts for geographic proximity of known contacts was desirable with reasonable expectation of success in a system like the systems in the Sheha-Tanaka and Sheha-Froeberg-Tanaka combinations.

[0241] Thus, it is my opinion that the Sheha-Tanaka combination and Sheha-Froeberg-Tanaka combination meet Element [13D].

vi. Element [13E]: determining a second location associated with said wireless telephone associated with said one user; and

[0242] Element [13E] recites essentially the same functionality as Element [1E], which recites "*determining a second location associated with one of*

said plurality of wireless telephones.” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [13E] for the same reasons Sheha meets Element [1E], as discussed above (§VIII.A.2.a.vi).

vii. Element [13F]: providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location.

[0243] Element [13F] recites essentially the same functionality as Element [1F], which recites “*providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.*”

Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [13F] for the same reasons Sheha/Sheha-Froeberg meets Element [1F], as discussed above (§VIII.A.2.a.vii).

c. Claim 14

i. Preamble [14PRE]: A method comprising:

[0244] Like claim 1, claim 14’s preamble only recites “*A method comprising.*” As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 14 recites a method with several elements that are essentially the same elements as recited in claim 1. Thus, Sheha meets

[14PRE] for the same reasons I discussed in relation to [1PRE] (*see supra* §VIII.A.2.a.i). As explained in this section below, in my opinion a POSA would have understood that the Sheha-Tanaka combination and Sheha-Froeberg-Tanaka combination meet all limitations of claim 14 of the '575 patent, and therefore render claim 14 obvious.

ii. Element [14A]: obtaining a location of a first wireless telephone;

[0245] Element [14A] recites the same functionality recited in Element [1A], which also recites “*obtaining a location of a first wireless telephone.*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14A] for the same reasons Sheha/Sheha-Froeberg meets Element [1A], as discussed above (§VIII.A.2.a.ii).

iii. Element [14B]: transmitting said location from said first wireless telephone to a remote server;

[0246] Element [14B] recites the same functionality recited in Element [1B], which also recites “*transmitting said location from said first wireless telephone to a remote server.*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14B] for the same reasons Sheha/Sheha-Froeberg meets Element [1B], as discussed above (§VIII.A.2.a.iii).

- iv. Element [14C]: changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and**

[0247] Element [14C] recites the same functionality recited in Element [1C], which also recites “*changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones.*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14C] for the same reasons Sheha/Sheha-Froeberg meets Element [1C], as discussed above (§VIII.A.2.a.iv).

- v. Element [14D]: transmitting said location from said remote server to at least one of said users of said list of users;**

[0248] Element [14D] recites the same functionality recited in Element [1D], which also recites “*transmitting said location from said remote server to at least one of said users of said list of users.*” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14D] for the same reasons Sheha/Sheha-Froeberg meets Element [1D], as discussed above (§VIII.A.2.a.v).

vi. Element [14E]: receiving manual input for a second location;

[0249] Claim 12 recites “[t]he method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location” and claim 10 recites “[t]he method of claim 1, wherein the location is obtained by way of manual input that is received by way of a locate button provided on said first wireless telephone.” Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14E] for the same reasons Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claim 12 (where the “third location” for the “third user” is instead for “a second location”) and Sheha/Sheha-Froeberg meets claim 10 (where the “location [that] is obtained by way of a manual input” is “for a second location”), as I discussed above (§VIII.B.1 (claim 10), §VIII.C.3.a (claim 12)).

vii. Element [14F]: determining an identity of a second user for a device by way of a login; and

[0250] Sheha teaches “entering a unique identification token...that can be used on a networked server system utilizing authentication and authorization procedures.” Sheha, 3:4-10. “[E]very telephone account user has a username [login] and password for the ODAS 3,” and the “ODAS 3 correlates...users’ identifications to verify if the user is signed-on to the ODAS 3 using authentication and authorization protocols” to “establish that a user is genuine” and “that a

particular user is signed-on to the system on a *particular device*.” Sheha, 8:40-53.

Thus, Sheha discloses *determining an identity of a second user for a device by way of a login*.

[0251] Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14F].

viii. Element [14G]: transmitting said location to said device

[0252] Sheha discloses that the “authentication and authorization protocols” use the username and password to “verify the level of authority [that particular] user is granted, such as for differentiating services provided by the ODAS.” Sheha, 8:40-50. This includes the ODAS determining whether that user has permission to obtain the location of a requested device. Sheha, 5:21-46, 11:63-12:7. Thus, if the *first wireless telephone* user has authorized the *second user* as I discussed above with respect to Element [14F] (§VIII.C.3.c.vii) to access the *first wireless telephone’s* location, the ODAS *transmits said location to said device* in the manner I discussed above with respect to Element [1D] (§VIII.A.2.a.v).

[0253] Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14G].

ix. Element [14H]: wherein said second user is associated with said manually input second location.

[0254] Claim 12 recites “[t]he method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location.” As I discussed above for Element [14E] (§VIII.C.3.c.vi), Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14E] for essentially the same reasons Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claim 12, where the “third location” for the “third user” is instead for “a second location.” Similarly, Sheha-Tanaka and Sheha-Froeberg-Tanaka meet Element [14H] for essentially the same reason discussed above that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claim 12 (§VIII.C.3.a), where the “second user is associated with said manually input second location” rather than the “third user....”

d. Claim 15

[0255] Claim 15 is identical to claim 13 except that Element [15A] recites “obtaining a location of said first wireless telephone” where Element [13A] recites “determining a location of a first wireless telephone.” Therefore, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claim 15 for the same reasons as claim 13, as I discussed above with respect to claim 13 (§VIII.C.3.b) and claim 1 (§VIII.A.2.a).

e. Claim 38

[0256] Claim 38 recites elements substantively identical to Elements [15PRE]-[15A], and Elements [15C]-[15F], while omitting Element [15B].

Therefore, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claim 38 for the reasons I discussed above with respect to claim 15 (§VIII.C.3.d), claim 13 (§VIII.C.3.b), and claim 1 (§VIII.A.2.a).

f. Claims 16-29 and 39-45

i. Claims 16, 23, and 39

[0257] Claims 16, 23, and 39 add to claims 15, 13, and 38, respectively, the limitation of “*wherein said changing comprises adding an additional user to said list of users,*” which is the same limitation that claim 2 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 16, 23, and 39 for the same reasons Sheha/Sheha-Froeberg meets claim 2, as discussed above (§VIII.A.2.b).

ii. Claims 17, 24, and 40

[0258] Claims 17, 24, and 40 add to claims 15, 13, and 38, respectively, the limitation of “*further comprising transmitting the address of said location to said at least one of said users of said list of users,*” which is the same limitation that claim 3 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 17, 24, and 40 for the same reasons Sheha/Sheha-Froeberg meets claim 3, as discussed above (§VIII.A.2.c).

iii. Claims 18, 25, and 41

[0259] Claims 18, 25, and 41 add to claims 15, 13, and 38, respectively, the limitation of “*obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users,*” which is the same limitation that claim 4 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 18, 25, and 41 for the same reasons Sheha/Sheha-Froeberg meets claim 4, as discussed above (§VIII.A.2.d).

iv. Claims 19, 26, and 42

[0260] Claims 19, 26, and 42 add to claims 15, 13, and 38, respectively, the same limitation of “*further comprising determining a third location associated with said wireless telephone associated with said user,*” which is essentially the same limitation of “*further comprising determining a third location associated with one of said plurality of wireless telephones*” that claim 6 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 19, 26, and 42 for the same reasons Sheha/Sheha-Froeberg meets claim 6, as discussed above (§VIII.A.2.f).

v. Claims 20, 27, and 43

[0261] Claims 20, 27, and 43 add to claims 15, 13, and 38, respectively, the same limitation of “*receiving said location by said wireless*

telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user,” which is essentially the same limitation of “*receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones*” that claim 7 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 20, 27, and 43 for the same reasons Sheha/Sheha-Froeberg meets claim 7, as discussed above (§VIII.A.2.g).

vi. Claims 21, 28, and 44

[0262] Claims 21, 28, and 44 add to claims 15, 13, and 38, respectively, the same limitation of “*further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user,*” which is essentially the same limitation of “*further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones*” that claim 8 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 21, 28, and 44 for the same reasons Sheha/Sheha-Froeberg meets claim 8, as discussed above (§VIII.A.2.h).

vii. Claims 22, 29, and 45

[0263] Claims 22, 29, and 45 add to claims 15, 13, and 38, respectively, the same limitation of “*receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location,*” which is essentially the same limitation of “*receiving said location by at least one of said plurality of wireless telephones; and displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location*” that claim 9 adds to claim 1. Thus, it is my opinion that Sheha-Tanaka and Sheha-Froeberg-Tanaka meet claims 22, 29, and 45 for the same reasons Sheha/Sheha-Froeberg meets claim 9, as discussed above (§VIII.A.2.i).

D. Ground 4: Claim 46 is Unpatentable Over Sheha in View of Tanaka and Randall Or Sheha in View of Froeberg, Tanaka, and Randall

- 1. Claim 46: The method of claim 38, wherein location is obtained by way of manual input manual input that is received by way of a locate button provided on said first wireless telephone.**

[0264] Claim 46 adds to claim 38 the limitation of “*wherein location is obtained by way of manual input manual input that is received by way of a locate button provided on said first wireless telephone,*” which is essentially the same limitation that claim 10 adds to claim 1. It would have been obvious to incorporate

into Sheha-Tanaka/Sheha-Froeberg-Tanaka a Beacon Button as taught by Randall, for the reasons that I discussed above for claim 10 (§VIII.B) that it would have been obvious to incorporate a Beacon Button into Sheha/Sheha-Froeberg with a reasonable expectation of success. Thus, it is my opinion that Sheha-Tanaka in view of Randall (Sheha-Tanaka-Randall) and Sheha-Froeberg-Tanaka in view of Randall (Sheha-Froeberg-Tanaka-Randall) meet claim 46 for the same reasons Sheha-Randall/Sheha-Froeberg-Randall meet claim 10, as discussed above (§VIII.B.1).

E. Ground 5: Claims 1-46 are Unpatentable Over Randall, With or Without Froeberg

[0265] As I explain in this section below, in my opinion claims 1-46 of the '575 patent are unpatentable in view of Randall (with or without Froeberg). Above, I provided a discussion of Froeberg (§VII.G).

1. Discussion of Randall (EX1007-EX1008)

[0266] Randall is an international (PCT) application filed August 22, 2001, and published in the international stage as EX1008 (in English, designating the United States) and then in the U.S. national stage as EX1007. I understand that Randall is therefore prior art to the '575 patent. Citations herein are to the U.S. publication (EX1007) paragraph numbers for convenience; however, the identical description is present in the international publication (EX1008), as I demonstrated

above in §VII.C. Thus, everything I cite to in EX1007 is identically disclosed in EX1008.

[0267] Randall relates to “enabling a wireless information device to access data services,” using “an extensible framework which handles data passing to and from several applications resident on the device, the framework being shared by each of the applications.” Randall, [0002], [0006]. The wireless devices can be “radio telephones, smart phones,” etc., which “can access information on” “internet servers hosting extensible databases.” Randall, [0002], [0029]. Examples of applications on a wireless device that can all access the same server-based database framework and coordinate to provide services include “a directory application (which contains a user’s contacts list...)” and “a location application (which gives a user’s location and includes digital maps).” Randall, [0009], [0012], [0025], [0028] (“applications...share information”), [0080]-[0081], [0086], [0085]-[0115].

[0268] Randall’s framework is a “‘framework of frameworks’ such that services are tightly integrated in a way that the traditional browser model does not allow.” Randall, [0080]. Specifically, Randall provides a framework that allows for different services to be available from a “centralised location” (Randall, [0080]) such that different applications on the wireless device can work together to

provide a service using the same data from the centralized location. Randall, [0025], [0081].

[0269] For example, Randall provides an example of a “Yellow Pages™ data services plug-in” in which different applications on a wireless device can all access data from a “Yellow Pages remote server” to work together to provide a service. Randall, [0009], see also Randall, [0089]-[0093] (Randall describing a “Yellow Pages” service provided by a Directory framework application and a Radar framework). Thus, different applications on the wireless device can be “grouped together” to provide a service using the same Yellow Pages remote server data. Randall, [0025]. In the “Yellow Pages” example, “a search request performed in the directory application (e.g. search: ‘cameras’) could be routed to a Yellow Pages remote server, which responds with the required data, including detailed maps in the location application; special shopping offers are [] pushed into the shopping application; nearby shops/services are shown in the location application.” Randall, [0009]. Accordingly, the Yellow Pages data services plug-in in this example can provide data from the same source to the different applications on the wireless device that work together to provide a service.

[0270] Randall provides another example in which “data sent from a commercial data service provider can automatically populate one or more

applications (such as PIM applications) on the wireless information device.”

Randall, [0012]. In this example, “sporting fixtures and entertainment listings could be transmitted from a data service provider placed straight into a user’s calendar application” and “[n]ews headlines and weather could be sent straight into a user’s calendar application.” Randall, [0012]. That various data can automatically be provided to different applications on the user’s wireless device “where it is likely to be looked at and found useful” to provide a service. Randall, [0012].

[0271] Regarding location, “[a]s an example,...a user might choose to subscribe to a service which allowed others to track his or her location—location could be a new attribute” stored in the “database” as “information relating to [the] individual.” Randall, [0021]. “The user’s friends or parents etc who wish to track the user[’]s location...could add a ‘map’ application to their own devices, which could show their position on digital maps and also, by using the location attribute of the user’s data object, it could also show the position of the user.” Randall, [0021]. In this example, the “personal information...and location based information” is “handled by contacts...and map type applications” coordinating together to provide the service. Randall, [0021]-[0022], [0025].

[0272] Randall’s system further provides “[a]ccess control...which allows a user to define which entities have read/write access to any given field in a

database of information relevant to that entity.” Randall, [0066]. One such field in a user’s database is their device’s “GPS location.” Randall, [0505], Table 1.

When a wireless user Bob requests access to such data belonging to a user Alice, “the server recognis[es] Bob’s device” via “ID number” and “PIN” or other password, “and determin[es] the database access rights which Alice has given him.” Randall, [0067]. “Once authenticated, the server passes to Bob’s device the information it requests.” Randall, [0067].

[0273] Thus, Randall discloses that various applications in a wireless device can all work together to provide a service using the same server data to support the various functionalities supported by Randall’s service.

2. Mapping of Randall (With or Without Froeberg) to Claims 1-46

a. Claim 1

[0274] As explained in this section below, in my opinion a POSA would have understood that Randall (with or without Froeberg) meets all limitations of claim 1 of the ’575 patent.

i. Preamble [1PRE]: A method comprising:

[0275] Randall teaches a “*method* of enabling a wireless information device to access data.” Randall, Abstract, [0002], [0006]. As I discussed above with respect to my discussion of Randall (§VIII.E.1), the method provides access control for a wireless device user to track the location of another wireless device

user. As demonstrated in the sections below, Randall’s method (with and without Froeberg) meets all elements of claim 1.

ii. Element [1A]: obtaining a location of a first wireless telephone;

[0276] Randall’s system includes “*wireless* information device[s],” which can be “radio *telephones*, smart *phones*,” etc. Randall, [0002]. Randall discusses some examples involving Alice and Bob, who are both users of wireless information devices. Randall, [0053], [0491] (“Bob’s...mobile phone”), [0505] (“Alice’s mobile device”). Alice’s device is an exemplary *first wireless telephone* (as is Bob’s, because POSAs would have understood that Randall presents Alice and Bob as arbitrary examples illustrating functionality that is equally available to any wireless information device in Randall’s system). *See, e.g.*, Randall, [0053] (“Consider Alice...and Bob”—language introducing Alice and Bob as generic examples), [0510] (“Bob’s details” are downloaded to “Alice’s...device” just as “Alice’s contact” is provided to “Bob’s device[.]”), [0144] (“The user” (generic to Alice or Bob) “must be able to switch location information on for a person or group of people”). Even if Randall had not explicitly taught this, it would have been an obvious implementation option to allow any wireless device users to subscribe to the same functionality (including contacts functionality and location functionality) in Randall’s system.

[0277] “[R]esident on the wireless information device” is a “location application (which gives a user’s location and includes digital maps).” Randall, [0009], [0021]. “That *location data can be obtained* via a GPS wireless information device” that provides “the location of the GPS wireless information device.” Randall, p. 24 (Table 4, “People Tracking”), p. 29 (“Route Finder:” “the phone knows where you are” using “[a] system similar to GPS tracking in cars, but for mobile phones”). Thus, Randall teaches *obtaining a location of (Alice’s) first wireless telephone*.

[0278] Thus, it is my opinion that Randall meets Element [1A].

iii. Element [1B]: transmitting said location from said first wireless telephone to a remote server;

[0279] Alice’s “location data can be obtained via a GPS wireless information device, which *transmits location information to [an] i-server*, enabling authorised people to track the location of the GPS wireless information device by polling the server.” Randall, p. 24 (Table 4, “People tracking”). The i-server is an “internet server[.]”—a “server on the Internet”—which POSAs would have known is a *remote server*. Randall, [0029], [0053], [0030] (“application resident on the device queries and receives data from the *remote*, extensible database”), FIG. 4 (showing the system’s servers located remotely from the wireless devices).

[0280] For example, “Alice stores her data on a *server* on the Internet.”

Randall, [0053]. As shown in Table 1, one of the fields in Alice’s “i-Data” (“Identity”) database on the i-server is her device’s “GPS *location*.” Randall, [0503]-[0512], [0116]-[0136] (“Identity” used for sharing “Location information”).

TABLE 1

<u>Alice’s iData</u>			
Field/Attribute	Category	Details	i-Groups
First name	personal	Alice	all
Family name	personal	Edwards	all
Title	work	European Marketing Manager	all

TABLE 1-continued

Alice's iData			
Field/Attribute	Category	Details	i-Groups
Company Name	work	Wireless Information Device gets R Us	all
Company Address	work	1 Science Park Rd, London, N1	all
Company E-mail	work	alice.edwards@Wireless Information Device getsrus.com	business 1
Company switchboard	work	0207 200 2000	all
Company Direct	work	0207 200 2012	business 1
Mobile Phone	work	0840 1234 567	business 1, friends
Home Phone 1	work	0208 341 1234	friends, family
Home Address	work	25 The Gables, Hampstead, London, NW3	family
My photo	photos		friends
Childhood photo	photos		family
Home note	notice	Sorry about dinner ☹	partner
Work note	notice	In a meeting with Tim till 7pm	work 1
My mood now	mood	Very tired	all
Tel Call Subject		"Dinner Tonight"	
Bluetooth	location	Bluetooth pods 1000–1020 . . . Sentinel room 2 . . .	
GPS	location	London W1, Seymour St.	partner
Hobby	preferences	Photography, travel	friends
Book	preferences	Maverick	friends
AlbumOfTheWeek	InstaPoll		friends

Randall, Table 1 (annotated)

[0281] Thus, Alice's *location* is *transmitted* from Alice's *first wireless telephone* to the i-server (*remote server*).

[0282] Thus, it is my opinion that Randall meets Element [1B].

- iv. **Element [1C]: changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;**

[0283] In the '575 patent, an example of a “user profile” can be part of “a login feature,” in which the profile is an “identifier” that is “logged into” via a user’s “device[]” “[i]n order for [the] user[] to be identified.” EX1001, 9:39-46. Similarly, in Randall’s system, each user is “authenticat[ed]...when they access their data” using their “WID and password/passphrase.” Randall, [0380]. Alice’s data (“Alice’s i-Data”) is in a “database” on the “i-server” which she can access via her “mobile device to allow her to manage her data.” Randall, [0502]-[0505]. Alice thus has *a profile associated with her first wireless telephone* in Randall’s i-server database.

[0284] Randall’s “server recognis[es] Bob’s device and determin[es] the database *access* rights which Alice has given him.” Randall, [0067]. “The database can define which entities can read different fields: Alice can therefore give Bob rights to read only certain fields in her database.” Randall, [0047]. As I discussed above with respect to Element [1B] (§VIII.E.2.a.iii) and shown in Randall’s Table 1, one of the fields in Alice’s “i-Data” database on the i-server is information about her device’s “GPS *location*,” and she can designate that field as

being accessible to a particular list of user—in the Table 1 example, she has designated “GPS location” as accessible to users whom she has designated as part of the “i-Group” called “partner;” POSAs would have understood that she could similarly designate it to be accessible to a different i-Group, such as “friends” or “family.” Randall, [0503]-[0512], [0021] (“[t]he user’s friends or parents etc” can be “allowed...to track his or her location”). Such “sensitive information,” as location information “is only available to people in certain i-Groups; allowing Alice to control what data they see.” Randall, [0509], [0136] (“Location information” is “[v]isible to specific people (or groups)”). Such “[a]ccess rights can be associated with individual entities, and can also be associated with groups of entities.” Randall, [0070], [0052], [0146] (“users will be prepared to allow specific people access to more of their data than others”). Thus, the users Alice has designated as having access to her GPS location are *a list of users on said remote server for a profile associated with said first wireless telephone* (Alice’s iData profile on the i-server) *that are allowed to access said location*.

[0285] A user’s “contacts database” on Randall’s i-server—called their “Universe”—“is the list of all the entities known to an entity and to whom access to more private data is to be given.” Randall, [0511]. “Table 2” is “an example” of “Alice’s Universe, which shows how contacts are assigned to...iGroup[s], thus defining the level of access they get to Alice’s data.” Randall, [0511].

TABLE 2

<u>ALICES UNIVERSE</u>		
NAME	DETAILS	i-GROUP
Aardvark plumbers	Number, email, address etc . . .	contractors
Bently, John	Number, email, address etc . . .	friend
Coppermill Corp	Number, email, address etc . . .	contractors
Davies, Charles	Number, email, address etc . . .	work 1
Entwistle, Peter	Number, email, address etc . . .	partner, friend
Greenfield Ventures	Number, email, address etc . . .	business 1

Randall, Table 2

[0286] Randall teaches that at least some of these users in Alice’s Universe have their own wireless information devices. Randall, [0512] (“people in the list” can “look[] at” the user’s information “using an application on their...wireless information devices”), Appendix 1 p. 25 (user’s “address book” of contacts includes “mobiles you regularly phone”), [0511], Table 2 (showing “Number” of each contact). Thus, Alice can choose wireless user contacts to assign to the i-Group designated to have access to her GPS location, such that *each user of said list of users is representative of one of a plurality of wireless telephones*.

[0287] Randall teaches that “whenever Alice wishes to, she can *change* the level of access of a current contact—perhaps promoting Bob from ‘business’ to ‘friend’” (or, POSAs would have understood, another i-Group—e.g., “partner”). Randall, [0509]. This is a “method[] of making contacts into members

of a particular i-Group”—i.e., *changing the list of users* in that i-Group—which Alice can use via her device (i.e., *at the direction of said first wireless telephone*) to provide permission for Bob’s device to access information about her device’s location, making Bob one of the *users* of the *list of users*. Randall, [0509], [0495].

[0288] Thus, it is my opinion that Randall meets Element [1C].

v. Element [1D]: transmitting said location from said remote server to at least one of said users of said list of users;

[0289] “When one of the people in [Alice’s contact] list...looks at Alice’s ADS Number, (using an application on their...wireless information device[])”—e.g., when Bob’s device requests Alice’s location information—“they see a view onto Alice’s personal data that is defined by Alice.” Randall, [0512], [0049], [0053], [0067], [0509] (“Bob” is Alice’s “contact” and has “access” to Alice’s “information”). “When Bob’s device sends Alice’s ADS Number to the server, then the server recognises Bob’s device and allows that device to read Alice’s information held on the database which is specified as being accessible to Bob.” Randall, [0049]. “[T]he server recognis[es] Bob’s device and determin[es] the database access rights which Alice has given him,” and then “[o]nce authenticated, the server passes to Bob’s device the information it requests.” Randall, [0067]. This “enabl[es] authorised people to track the location of the GPS

wireless information device by polling the server” which has been “up-dated with the location of” Alice’s device. Randall, p. 24 (Table 4, “People tracking”).

[0290] Thus, Randall’s system *transmits* Alice’s *location from said remote server to at least one of said users of said list of users* (e.g., Bob).

[0291] Thus, it is my opinion that Randall meets Element [1D].

vi. Element [1E]: determining a second location associated with one of said plurality of wireless telephones; and

[0292] Randall teaches that “a user might choose to subscribe to a service which allowed others to track his or her location. ... Once the user [e.g., Alice] has subscribed to the location service, then the friends[] [e.g., Bob] could add a ‘map’ application to their own devices, which could show their position on digital maps and also...show the position of the user.” Randall, [0021]. Thus Randall teaches *determining a second location associated with Bob’s wireless telephone, to show Bob’s location on his own device. Bob’s second location is also determined when Bob’s “[w]ireless information device alerts Bob when a contact happens to be within a defined proximity” of Bob’s location.* Randall, p. 24 (“Old buddy finder”).

[0293] Another way Randall meets Element [1E] is because, as I discussed above with respect to Element [1A] (§VIII.E.2.a.ii), POSAs would have understood Randall’s example of Alice sharing her location with Bob to be a

generic example that is equally applicable to Bob sharing his location with Alice. Randall, [0067] (“Bob also has stored on the server his own personal information”). Randall teaches that any “user must be able to switch location information on for a person or group of people..., i.e. being able to select the person and allow access” to make the user’s device’s location “[v]isible to specific people (or groups) for a specific period of time”—e.g., “for the half hour that the group of friends are trying to locate each other in town.” Randall, [0144], [0136], [0143]. Thus, Bob can also “choose to subscribe to [the] service which allowed others to track his...location” (Randall, [0021]), thus *determining* Bob’s *second location* and transmitting it to the i-server.

[0294] Thus, it is my opinion that Randall meets Element [1E].

vii. Element [1F]: providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.

[0295] Randall provides a “Route finder” service, “similar to GPS tracking in cars, but for mobile phones. You identify where you want to go, the phone knows where you are already. It can therefore give you *step by step instructions* on how to get there (eg. Turn left at the next lights. Carry on 100 metres. Go straight over the roundabout).” Randall, p. 29. These “instructions”

meet Mullen’s proposed construction of directions as “instructions indicating how to navigate from one location to another location.”

[0296] Further, Randall provides a “Rendezvous” service “on your mobile phone to help you meet friends and family in crowded or unfamiliar places. Temporarily you can elect to have your location visible to others—so using your phones everyone in your group can tell precisely where the others are.” Randall, p. 29. Randall teaches that “[a]t the touch of a button, your phone can display a map of the area you are standing in” (Randall, p. 29) and it can also “show [your] position” and “the position of [another] user” (Randall, [0021]). POSAs would have understood and found it obvious from these disclosures that another user’s position can be “where you want to go” in Randall’s “Route finder,” which can “give you step by step instructions on how to get there” (Randall, p. 29). As I discussed above with respect to my discussion of Randall (§VIII.E.1), Randall teaches that applications share information and coordinate to provide services of interest to users. POSAs would have had motivation and reasonably expected success to use, e.g., Alice’s location (which is provided to Bob’s device by the i-server as I discussed above with respect to Element [1D] (§VIII.E.2.a.v) as a “Rendezvous”-type destination in the “Route finder” service on Bob’s device to provide Bob directions to Alice’s location.

[0297] Thus, Randall teaches, or at minimum renders obvious, *providing directional information to Bob's wireless telephone, representative of directions between Alice's location and Bob's second location.*

[0298] To the extent Element [1F] requires calculating the *directions* remotely and sending them to the *wireless telephone* (which Element [1F] does not require, as I discussed above with respect to Element [1F] in Ground 1 (§VIII.A.2.a.vii)), generating the *directions* between Bob's and Alice's locations at the i-server and transmitting the *directions* from the i-server to Bob's device would have been an obvious implementation of Randall's system to, e.g., reduce storage and/or processing requirements at the wireless device[s], in view of POSAs' background knowledge of the well-known design choice and reasonable expectation of success to do so. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0299] Froeberg (EX1051), like Randall, relates to “a cellular telephone providing a map and driving directions for a remote location associated with a remote telephone number.” Froeberg, 1:6-10. Froeberg describes “[a] system providing a map and driving directions to a user of a user telephone for a remote location associated with a remote telephone number.” Froeberg, Abstract, 1:40-65 (similar). “The system includes the user telephone and a server connected through a telephone system.” Froeberg, Abstract, 1:40-65 (similar), FIG. 1

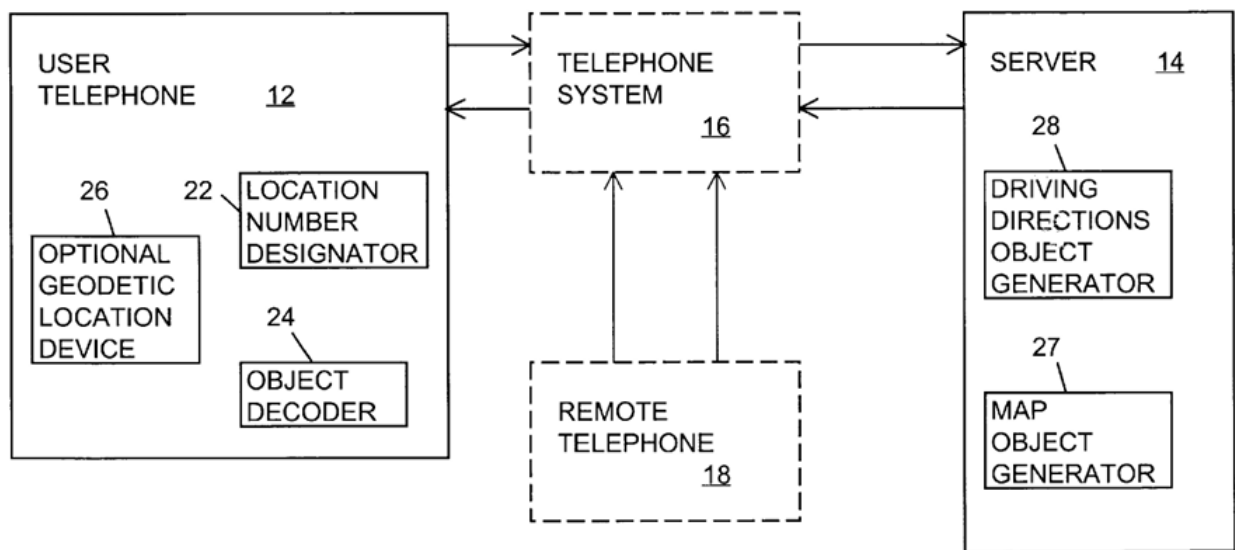
(excerpted below). Froeberg describes the server converting “the remote telephone number to an associated remote street address” and “geocod[ing] the remote street address to a remote street network segment.” Froeberg, 3:30-4:4, 7:5-46 (similar). Thus, like Randall’s wireless devices, Froeberg’s user telephone provides its “geodetic location such as latitude and longitude” using GPS. Froeberg, 3:46-52. Froeberg teaches that in such a system (like Randall’s), “the server” can “reverse geocode[] the geodetic location to a local street network address segment,” “create[] a route and driving directions between the local street network segment” (i.e., the user telephone’s location) “and the remote street network segment” (i.e., the remote telephone’s location), and “transmit[] the driving directions...to the user telephone” to “display[] the driving directions to the user of the user telephone.” Froeberg, 4:4-26. POSAs would have been motivated to implement Randall’s i-server to generate the claimed *directions* for transmission to Bob’s wireless device in view of, e.g., Froeberg’s teachings that doing so allows storage and/or processing requirements for generating *directions* to be implemented server-side, thus reducing such requirements locally at the mobile device. Froeberg teaches to implement driving directions functionality via a server-side “reverse street segment geocoder” with “a database of geodetic coordinates and street network segments” and a server-side “route generator” (Froeberg, FIG. 5 (below), 7:5-22), that then need not be implemented locally at the user telephone (Froeberg,

FIG. 4 (below), 4:27-6:20). Instead, the “user telephone” only needs to implement functionality to “decode[] the driving directions object [from the server] into driving directions” and “display[] the driving directions.” Froeberg, 4:23-26. POSAs would have reasonably expected success because Froeberg teaches how this may be successfully implemented in a system like Randall’s with a server serving client wireless telephones.

[0300] Froeberg further discloses that the user telephone can be “a cellular telephone” with a display and an “object decoder.” Froeberg, 5:6-19, FIG. 4. The object decoder “decodes a software object received...from the server,” which “can be a map object [e.g., an HTML or WML document] having information for a map area about the remote location or a driving directions object having” “driving directions to the remote location.” Froeberg, 5:19-27. The received documents “include map data and display semantics,” which the “object decoder” for “rendering” the data. Froeberg, 5:28-39. The device can also receive a “Java class map object [that] includes both map data and program code” that “enables [the] user to interact with the map, for example to click on a street, zoom in, zoom out, and enable/disable display of various street classes, labels, and points of interest” and to “display[] the location of the user telephone [] on the map.” Froeberg, 5:40-54. The Java object decoder can also “cache[] enough map data to show location continuously as the user telephone [] moves on the map within a

local area without further map data from the server.” Froeberg, 5:55-59. “In the case of a map object,” the telephone’s display provides “a visual presentation of the map area with an indication of the position of the remote location” and “[i]n the case of the driving directions the display []” provides “a list of instructions on the visual display or through the speaker or issues highlighted lines and directions on the visual display.” Froeberg, 6:15-20.

[0301] POSAs would have been motivated and reasonably expected success from these teachings to implement Randall’s server to generate the claimed directions for transmission to Bob’s wireless device to, e.g., reduce storage and/or processing requirements at the mobile device. I refer to the resulting combination as Randall-Froeberg.



Froeberg, FIG. 1 (excerpt)

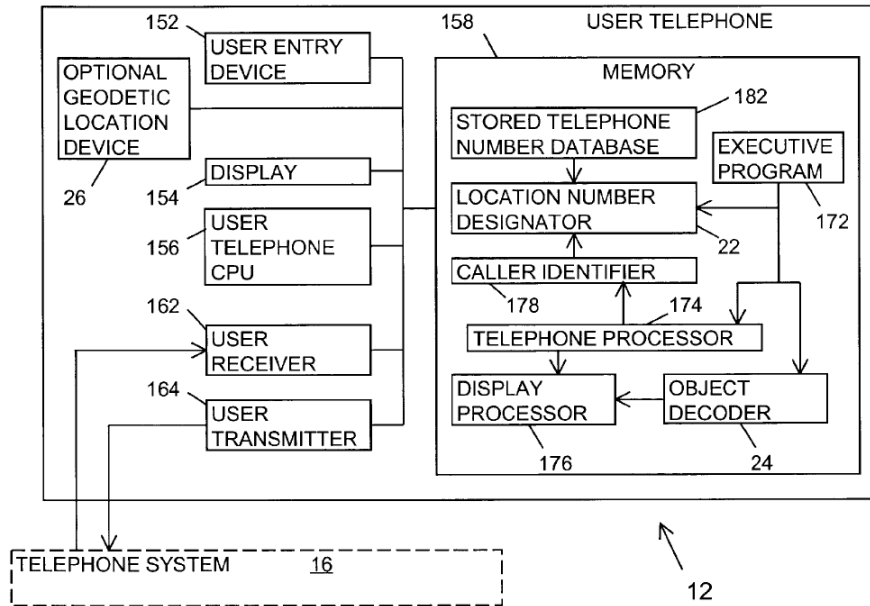


Fig. 4

Froeberg, FIG. 4

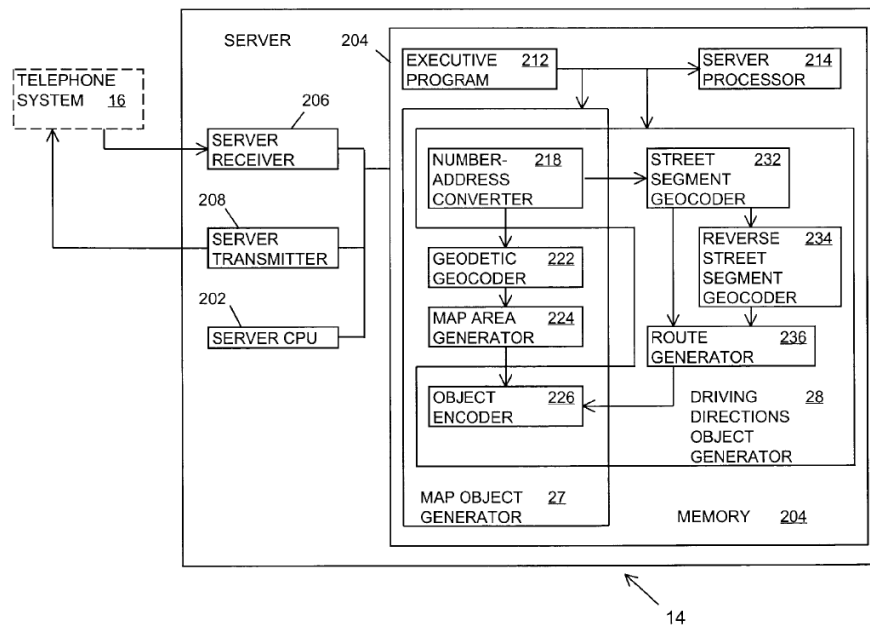


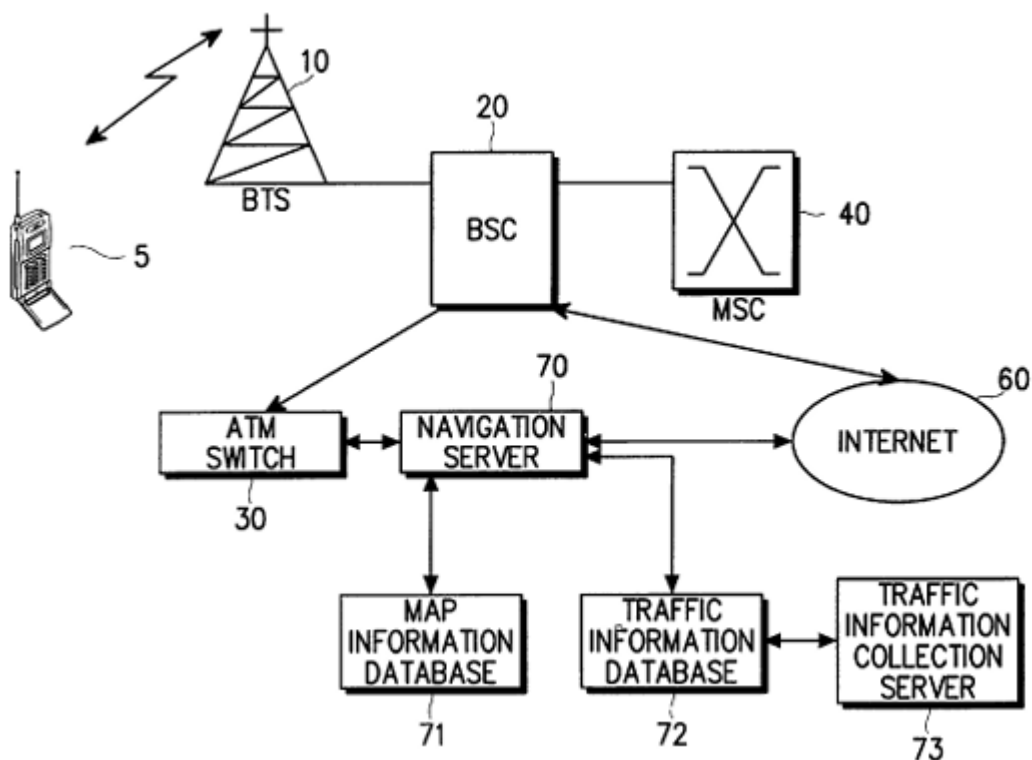
Fig. 5

Froeberg, FIG. 5

[0302] My opinion that generating the *directions* between Bob's and Alice's locations at the i-server and transmitting the *directions* from the i-server to Bob's device would have been an obvious implementation of Randall's system to, e.g., reduce storage and/or processing requirements at the wireless device[s], in view of POSAs' background knowledge of the well-known design choice and reasonable expectation of success to do so is further corroborated by several references, as discussed below.

[0303] Chun (EX1055) describes "a vehicle navigation system or network, and a vehicle navigation apparatus in a mobile telecommunication system, which provides accurate information about road conditions along a traveling route." Chun, 2:3-7. Chun describes "[w]hen the vehicle navigation service is requested from an [asynchronous transfer mode] switch, the navigation server receives information about the current location and destination of a vehicle, road condition information, [and] map information and transmits route information to the navigation apparatus." Chun, 2:28-34; *see also* Chun, 4:30-51 ("When a navigation service is requested by mobile phone 5...the navigation server 70 updates the route information and provides traffic information to mobile phone 5."), FIG. 4. It would have been obvious to POSAs that a destination of a vehicle, which includes a user's mobile device, could be another mobile device at a different location from the vehicle. Chun further describes "[t]he navigation server

70 determines the shortest route based on information about the current vehicle location, the destination received from the user, the map data and road condition data” and “the navigation server 70 transmits the route information together with the map data to the mobile terminal.” Chun, 7:40-8:4. Chun therefore corroborates that it was within a POSA’s background knowledge to generate *directions* between two mobile devices’ locations at a server and transmit the *directions* from the server to one or both mobile devices and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s.



Chun, FIG. 4 (excerpt)

[0304] Stewart (EX1056) describes a “portable telephone” that includes a “position locator” to “determine the location of the portable telephone”.

Stewart, Abstract. Stewart describes that the portable telephone forwards its location to the “centralized base station 17” (Stewart, 7:43-52) and the centralized base station 17 can “use the location information and map database 24 to determine a street address.” Stewart, 8:20-23. The centralized base station can use “the geographic location of portable telephone 28 and the previously determined geographic location of calling first telephone 10...to calculate the distance between called portable telephone 28 and calling first telephone 10” and the distance can be “based on the shortest road route using map database 24.” Stewart, 8:12-32. “Any or all of these items of information can be forwarded...to the calling first telephone 10.” Stewart, 8:32-37. POSAS would have understood that “any or all of these items of information” would include location information, such as a street address and distance to or from the street address using a map database (i.e., *directions*). POSAs would have understood that the street address of a destination could be a location of another portable telephone. Stewart therefore corroborates that it was within a POSA’s background knowledge to generate *directions* between two mobile devices’ locations at a server and transmit the *directions* from the server to one or both mobile devices and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s.

[0305] Thus, it is my opinion that Randall or Randall-Froeberg meets Element [1F].

- b. Claim 2: The method of claim 1, wherein said changing comprises adding an additional user to said list of users.**

[0306] As I discussed above with respect to Element [1C]

(§VIII.E.2.a.iv), Randall teaches that *said changing comprises* Alice “promoting Bob from” one i-Group to another to “change [his] level of access.” Randall, [0509]. Adding Bob to the i-Group that has access to Alice’s location information is *adding an additional user to said list of users*. See, e.g., Randall, [0503]-[0512].

[0307] Thus, it is my opinion that Randall / Randall-Froeberg meet claim 2.

- c. Claim 3: The method of claim 1, further comprising transmitting the address of said location to said at least one of said users of said list of users.**

[0308] When Bob accesses Alice’s data on the i-server (including her location, as I discussed above with respect to claim 1 (§VIII.E.2.a) “using” his “wireless information device[,]” he “see[s] a view onto Alice’s personal data” that is a subset of, e.g., Table 1. Randall, [0512], *compare* Table 3 ([0512]) *with* Table 1 ([0505]). In Table 1, an example “GPS location” is “London W1, Seymour St.,” which is *the address of said location* of Alice’s *first wireless telephone*. Randall, [0505]. That example in the “view” Bob “see[s]” of Alice’s data on the i-server (Randall, [0512]) discloses *transmitting the address* to Bob, who is *said at least*

one of said users of said list of users I discussed above with respect to Element [1D] (§VIII.E.2.a.v).

[0309] Additionally, *transmitting the address* of a wireless device's *location* from the server to another wireless device user who is accessing that location was obvious functionality to provide, because doing so was well-known as a beneficial option with reasonable expectation of success in a system like Randall's. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0310] Froeberg (EX1051) describes "providing...driving directions to a user of a user telephone for a remote location associated with a remote telephone number." Froeberg, Abstract; *see also* 1:40-65 (similar). Froeberg describes the user telephone can be a "cellular telephone" (Froeberg, 2:29-33) and that the "server 14 transmits the driving directions object through the telephone system 16 to the user telephone 12." Froeberg, 4:21-26; *see also* 3:30-4:20, 7:5-46 (describing the server converting "location-determination information" from the user telephone 12 into driving directions that can be transmitted from the server to the user telephone 12). Froeberg describes that the "user telephone 12 decodes the driving directions object into driving directions" and "displays the driving directions to the user of the user telephone 12." Froeberg, 4:23-26. POSAs would have understood that the driving directions transmitted from the server to the user

telephone would have included an address such that the user telephone can display driving directions to a destination (i.e., an address). Froeberg therefore corroborates that it was within a POSA's background knowledge to *transmit the address* of a wireless device's *location* from a server to another wireless device user who is already accessing that location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's.

[0311] My opinion that *transmitting the address* of a wireless device's *location* from the server to another wireless device user who is already accessing that location was obvious as a well-known, beneficial option with reasonable expectation of success in a system like Randall's / Randall-Froeberg's is further corroborated by several references, as discussed below.

[0312] Stewart (EX1056) describes a "portable telephone" that includes a "position locator" to "determine the location of the portable telephone". Stewart, Abstract. Stewart describes that the portable telephone forwards its location to the "centralized base station 17" (Stewart, 7:43-52) and the centralized base station 17 can "use the location information and map database 24 to determine a street address." Stewart, 8:20-23. The centralized base station can use "the geographic location of portable telephone 28 and the previously determined geographic location of calling first telephone 10...to calculate the distance between called portable telephone 28 and calling first telephone 10" and the distance can be

“based on the shortest road route using map database 24.” Stewart, 8:12-32. “Any or all of these items of information can be forwarded...to the calling first telephone 10.” Stewart, 8:32-37. POSAS would have understood that “any or all of these items of information” would include location information, such as a street address and distance to or from the street address using a map database (i.e., *directions*). POSAs would have understood that the street address of a destination could be a location of another portable telephone. Stewart therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a wireless device’s *location* from a server to another wireless device user who is accessing that location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s.

[0313] Sandhu (EX1054) describes a mobile unit (Sandhu, 4:18-33) that derives location data from GPS code sequences and “convert[s] the location data (e.g., latitude, longitude, and maybe altitude) into [a] street address.” Sandhu, 4:34-39. Sandhu describes “sending the location data [(i.e., a street address)] to service provider 8.” Sandhu, 4:40-5:8. Sandhu describes the service provider “retriev[ing] the current location of the target user from location database and transmits it to the sender in a response package.” Sandhu, 7:42-67; *see also* Sandhu, 6:22-43. POSAs would have understood that the “current location of the target user” could include an address of the target user since the mobile unit (i.e.,

the mobile unit of the target user) transmits location data, such as a street address, to the service provider and the service provider sends the location data it receives from the mobile unit to another mobile unit (i.e., the mobile unit of a requesting user). Sandhu therefore corroborates that it was within a POSA's background knowledge to *transmit the address* of a wireless device's *location* from a server to another wireless device user who is accessing that location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0314] In another example, Chern-005 (EX1057) describes “a method for presenting the current street address of a wireless communications device on a display of the device.” Chern-005, 3:7-9. Chern-005 describes that “[t]he current latitude and longitude of the device is acquired and sent to a Web server. The Web server reverse geocodes the latitude and longitude to generate the street address of the device, and sends the street address from the server to the device for display.” Chern-005, 3:10-14. Chern-005 therefore corroborates that it was within a POSA's background knowledge to *transmit the address* of a wireless device's *location* from a server to another wireless device user (i.e., the wireless device that transmitted the address, a different wireless device) and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0315] In yet another example, Meadows (EX1018) describes “monitoring the geographical location of a subscriber’s mobile cellular telephone, and for providing the location information to an authorized user through the world wide web.” Meadows, Abstract. Meadows describes a “network-based location system” that translates a “code” into an “address, which may include information such as a street name, street intersection, county, or township.” Meadows, 4:61-5:12. Meadows can store this information in a table in a “graphical location database.” Meadows, 5:13-5:19, FIG. 3 (below). This information (i.e., an address) can be displayed on a “graphical user interface using a... computer system having an Internet connection to the world wide web.” Meadows, 5:30-57 (“In this map, as can be seen, Deborah is located on P Street, Marcie is located on Howard Street, Brian is located on Philadelphia Avenue, and Adam is located on Q Street.”). Meadows therefore corroborates that it was within a POSA’s background knowledge to *transmit the address* of a wireless device’s *location* from a server to another device user (i.e., a user of a computing system) who is accessing that location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s / Randall-Froeberg’s.

CODE	DEVICE NUMBER	USER NAME	LOC. ADDR.	LOCATION NAME	TIME	DIRECTION	SPEED
1582	(301) 663-9580	DEBORAH	1225 P STREET	SAFEWAY SUPERMARKET	2:30 PM	-----	-----
1983	(301) 982-9503	BRETT	I-95	-----	2:33 PM	NORTH	67 MPH
2092	(301) 666-9292	BETH	WALNUT ST.	RITE-AID PHARMACY	2:30 PM	-----	-----
1582	(410) 222-3344	MARCIA	HOWARD ST.	-----	2:32 PM	-----	-----
2933	(215) 947-5555	NANCY	I-66	-----	2:34 PM	EAST	55 MPH
1582	(301) 663-9301	BRIAN	PHILA AVE.	-----	2:32 PM	N.E.	64 MPH
2290	(301) 444-3926	ADAM	1333 N ST.	WALMART	2:35 PM	-----	-----
3955	(301) 999-9826	ALLISON	10 PHILA AVE.	MICRO GRAPHIC STORE	2:33 PM	-----	-----
1983	(410) 555-3355	ASLAN	I-94	-----	2:31	S.E.	72 MPH
1983	(301) 487-7265	DAVID	56 COVE ST.	SIMS BAR			
1582	(301) 494-5220	ADAM	Q ST.	BILLY'S BAR	2:32	-----	-----

FIG. 3
Meadows, FIG. 3

[0316] Thus, it is my opinion that Randall / Randall-Froeberg meets claim 3.

d. Claim 4: The method of claim 1, further comprising:

i. Element [4A]: obtaining the address of said location from a remote information provider; and

[0317] Given that Alice's example iData on the i-server in Table 1 include a "GPS location" mapped to "London W1, Seymour St." (Randall, [0505]), Randall teaches that the i-server *obtains the address of said location*. Froeberg teaches, and it was background knowledge, that such a i-server obtains the address from a database (e.g., "a database of geodetic coordinates and street network segments") (i.e., *a remote information provider*) to reverse geocode the mobile phone's geo-coordinates to obtain the address of the location, with reasonable expectation of success.

[0318] Froeberg (EX1051) describes “the server 14 reverse geocod[ing] the geodetic location to a local street network address segment.” Froeberg, 4:4-7, 7:5-46; *see also* 3:12-14 (“a remote geodetic location such as a latitude and a longitude”). Froeberg therefore corroborates that it was within a POSA’s background knowledge to reverse geocode a mobile phone’s geo-coordinates (i.e., a latitude and a longitude) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s.

[0319] My testimony regarding POSAs’ background knowledge regarding using such a i-server to obtain the address from a database (e.g., “a database of geodetic coordinates and street network segments”) (i.e., *a remote information provider*) to reverse geocode the mobile phone’s geo-coordinates to obtain the address of the location is further corroborated by several additional references, as discussed below.

[0320] Stewart (EX1056) describes that “[a] first location signal, corresponding to the geographical location of portable telephone 38 as determined by GPS location detector 40” (Stewart, 7:47-49) is received at base station 17. Stewart, 8:12-15. Stewart describes that base station 17 “can use the location information and map database 24 to determine a street address of a called portable telephone 28 from which a location signal has been received.” Stewart, 8:12-23.

Stewart therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., geographical location) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0321] In another example, Sandhu (EX1054) describes “convert[ing] the location data (e.g., latitude, longitude, and maybe altitude) into [a] street address.” Sandhu, 4:34-39; *see also* Sandhu, 4:40-5:8 (“Using...the GPS code sequences, processor 16-i of mobile unit 10-i derives the street addresses.”). Sandhu therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., latitude, longitude, and maybe altitude) to obtain the address of the location and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0322] In yet another example, Chern-005 (EX1057) describes acquiring “[t]he current latitude and longitude of the device” and “reverse geocod[ing] the latitude and longitude to generate the street address of the device.” Chern-005, 3:7-14. Chern-005 therefore corroborates that it was within a POSA's background knowledge to reverse geocode a mobile phone's geo-coordinates (i.e., current latitude and longitude) to obtain the address of the location and that a

POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0323] A POSA would have been motivated to provide the aforementioned address-retrieval functionality for mobile devices in Randall's / Randall-Froeberg's system to assist in navigation and routing between two mobile devices.

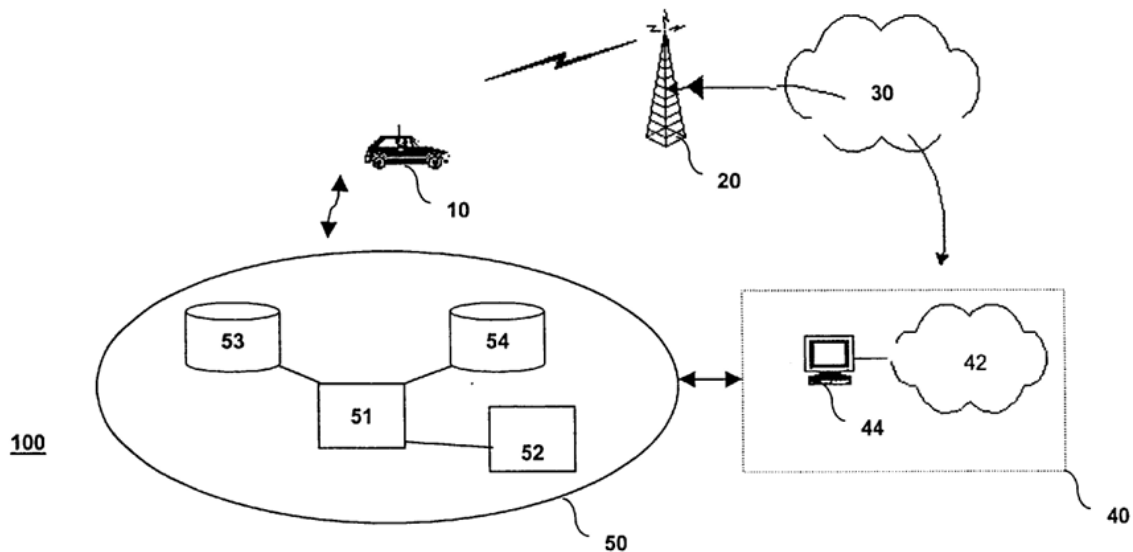
[0324] It was also a known, obvious design option for an application server like Randall's i-server to forward a client device's geo-coordinates to another server (remote information provider) to perform the reverse geocoding and return the address to the i-server for transmission to an authorized user. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0325] Chern-005 (EX1057) describes "the Web *server* may send the latitude and longitude data to a *separate, independent reverse geocode server*...for processing." Chern-005, 11:2-6. Chern-005 also describes "[o]nce the Web server has the street address corresponding to the latitude and longitude data, it is sent to the handset that initiated the request." Chern-005, 11:7-10. Chern-005 therefore corroborates that it was within a POSA's background knowledge for an application server to forward a client device's geo-coordinates to another server to perform the reverse geocoding and return the address to the application server for transmission

to an authorized user and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.

[0326] Stefan (EX1058) describes “a system for providing services to a vehicle” and the system includes “clients 10” and “service management subsystems 40,” which can “comprise one or more service management applications 42 and one or more service managers 44.” Stefan, 3:38-60, FIG. 1; *see also* Stefan, 4:66-5:10 (describing “system 200” including a “subscriber 210” and a “service management application 240” which provides access to various services), FIG. 2. Stefan also describes that the system can include “navigation subsystems 50...for generating routes to be delivered to vehicle client 10 and for receiving route information from vehicle client 10.” Stefan, 3:47-52. As shown in FIG. 1 (excerpted below), the service management subsystems 40 are in communication with the navigation subsystems 50. *See also* Stefan, 5:5-10 (“service management subsystem 240 is also in communication with a subsystem for processing route information shown at 251”), FIG. 2. Stefan further describes that generating routes may be performed “in any suitable manner” such as using “reverse geocoding.” Stefan, 7:31-34. “That is, the application 351, 352 determines a corresponding navigation address based on input latitude and longitude coordinates.” Stefan, 7:32-48. Stefan therefore corroborates that it was within a POSA's background knowledge for an application server (i.e., a service

management subsystem) to forward a client device's geo-coordinates to another server (i.e., a navigation subsystem) to perform the reverse geocoding and return the address to the application server for transmission to an authorized user (i.e., a client) and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's / Randall-Froeberg's.



Stefan, FIG. 1 (excerpt)

- ii. **Element [4B]: transmitting the address of said location to said at least one of said users of said list of users.**

[0327] Randall meets Element [4B] as I discussed above with respect to claim 3 (§VIII.E.2.c). Thus, it is my opinion that Randall meets claim 4.

- e. **Claim 5: The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones.**

[0328] Bob's *one of said plurality of wireless telephones receives* Alice's *location* as I discussed above with respect to Element [1D] (§VIII.E.2.a.v).

[0329] Alice's location is *displayed on* Bob's *wireless telephone* when Bob's "'map' application...show[s] the position of" Alice, who has "subscribe[d] to [the] service which allowed others to track...her location." Randall, [0021].

[0330] Thus, it is my opinion that Randall meets claim 5.

- f. **Claim 6: The method of claim 1, further comprising determining a third location associated with one of said plurality of wireless telephones.**

[0331] As I discussed above with respect to Element [1C] (§VIII.E.2.a.iv), Alice can set her *list of users* who are allowed to access her location to include any number of users corresponding to *a plurality of wireless telephones*. One example may be Bob; another may be "Peter," who is listed in exemplary Table 2 as part of the "partner" i-Group that has access to Alice's "GPS location" in exemplary Table 1. Randall, [0505] (Table 1), [0511] (Table 2).

[0332] Randall teaches that any user's "location data can be obtained via a GPS wireless information device, which transmits location information to the i-server." Randall, p. 24 ("People tracking"). Thus, POSAs would have

understood Randall to teach *determining a third location associated with, e.g., Peter's one of said plurality of wireless telephones*.

[0333] Randall's system also *determines a third location associated with Bob's one of said plurality of wireless telephones* when Bob's device "update[s]" the i-server with its new location (i.e., a *third location* subsequent to the *second location* as I discussed above with respect to Element [1E] (§VIII.E.2.a.vi)) as Bob's device moves. Randall, p. 24 ("People tracking").

[0334] Thus, it is my opinion that Randall meets claim 6.

g. Claim 7: The method of claim 1, further comprising:

i. Element [7A]: receiving said location by at least one of said plurality of wireless telephones; and

[0335] Randall / Randall-Froeberg meets Element [7A] as I discussed above with respect to Element [1D] (§VIII.E.2.a.v) and claim 5 (§VIII.E.2.e).

ii. Element [7B]: displaying the name of said location on said at least one of said plurality of wireless telephones.

[0336] Alice's device can determine its location for reporting to the i-server via GPS, or "[a]lternatively, a Bluetooth pod could transmit information to the person's wireless information device, which in turn passes it up to the I-server." Randall, p. 24 ("People tracking"). As I discussed above with respect to claim 3 (§VIII.E.2.c), when Bob accesses Alice's data (including her location, as I discussed above with respect to claim 1 (§VIII.E.2.a)), "using" his "wireless

information device[],” he “see[s] a view onto Alice’s personal data” that is a subset of, e.g., Table 1. Randall, [0512], *compare* Table 3 ([0512]) *with* Table 1 ([0505]). In Table 1, an example “GPS location” is “London W1, Seymour St.,” and an example “Bluetooth location” is “Sentinel room 2.” Randall, [0505]. Each example is a *name of Alice’s location*. Either of those examples in the “view” Bob “see[s]” of Alice’s data (Randall, [0512]) are *displaying the name of said location* on Bob’s *wireless telephone*.

[0337] Alternatively, it would have been obvious to *display the name of Alice’s location* as part of allowing Bob to track Alice’s location (Randall, [0021], p. 24 “People tracking”) to help Bob understand where Alice is, in view of POSAs’ background knowledge of the well-known design choice and reasonable expectation of success to do so when displaying the location of a mobile device. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0338] Zellner (EX1059) describes “determining the calling party’s location using a location system of the location-tracking network”, “returning...the calling party’s location to the...called party”, and “***displaying*** the calling party’s location on the called party’s display unit.” Zellner, 4:4-18; *see also* 6:57-67 (“called party 102 could also be a wireless network user to which SCP 200 delivers location information.”). Zellner describes that “the calling party’s location” is

recorded “in a way meaningful to the location delivery subscriber of the location information delivery service” and “could include street addresses, landmarks, or building names” or “use a mapping converter to translate the position coordinates...into a street address or building name for *display* on the display unit.” Zellner, 4:19-32. Zellner therefore corroborates that it was within a POSA’s background knowledge to display the name of a location on a mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s.

[0339] In another example, Meadows (EX1018) describes “providing the location information [of a subscriber’s mobile cellular telephone] to an authorized user through the world wide web.” Meadows, Abstract. Meadows describes “present[ing] location information about [a] selected individual with greater detail” and provides the example of “Adam’s location on Q Street is ‘Billy’s Bar’”. Meadows, 6:1-6. Meadows also describes the location can be presented on a “graphical user interface using a... computer system having an Internet connection to the world wide web.” Meadows, 5:30-57 (“In this map, as can be seen, Deborah is located on P Street, Marcie is located on Howard Street, Brian is located on Philadelphia Avenue, and Adam is located on Q Street.”). Meadows therefore corroborates that it was within a POSA’s background knowledge to display the name of a location on a device (i.e., a computing system)

and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's.

[0340] Jhanji (EX1060) describes electronic data privacy protection in connection with “the sharing of [] posted information.” Jhanji, 11:1-3. “In one embodiment, the location information (present and/or future) is entered by the user himself through the mobile Internet device, thereby giving him full control of whether to let the system (and thus anyone else) know his location information.” Jhanji, 11:3-7. More specifically, Jhanji describes that “location entry” “may take any form” such as by being “fully descriptive (e.g., ‘Restaurant Mikasa on Main Street’) to ensure understanding.” Jhanji, 11:12-19. Jhanji therefore corroborates that it was within a POSA's background knowledge to display the name of a location (e.g., “Restaurant Mikasa on Main Street”) on a mobile device and that a POSA would have had a reasonable expectation of success doing so in a system like Randall's.

[0341] Thus, it is my opinion that Randall meets claim 7.

h. Claim 8: The method of claim 1, further comprising: determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.

[0342] Randall / Randall-Froeberg meet claim 8 in several ways.

[0343] First, Randall provides “[a] function that lets you send a very quick burst of information to friends who may be waiting for you somewhere.

Worked out via satellite, you can tell the phone to send your location to them [friends] in an instant, letting them *see how far away you are.*” Randall, p. 30 (“The Beacon Button”). When Alice lets Bob see how far away she is, POSAs would have understood this to involve *determining the distance between Alice’s first wireless telephone and Bob’s one of said plurality of wireless telephones.*

[0344] Second, Randall’s “Old buddy finder...alerts Bob when a contact happens to be *within a defined proximity.*” Randall, p. 24. POSAs would have understood that one of a finite number of known options for determining whether Alice’s and Bob’s devices are within a defined proximity involves *determining the distance between the two wireless telephones.*

[0345] Third, as I discussed above with respect to Element [1F] (§VIII.E.2.a.vii), POSAs would have understood that Alice’s location can be “where [Bob] want[s] to go” in Randall’s “Route finder,” which can “give [Bob] step by step instructions on how to get there (eg. Turn left at the next lights. Carry on 100 metres. Go straight over the roundabout).” Randall, p. 29. POSAs would have understood that once Bob is on the final leg of the route, the system will *determine the distance between Alice’s and Bob’s devices to tell Bob how many more “metres” to “[c]arry on.”*

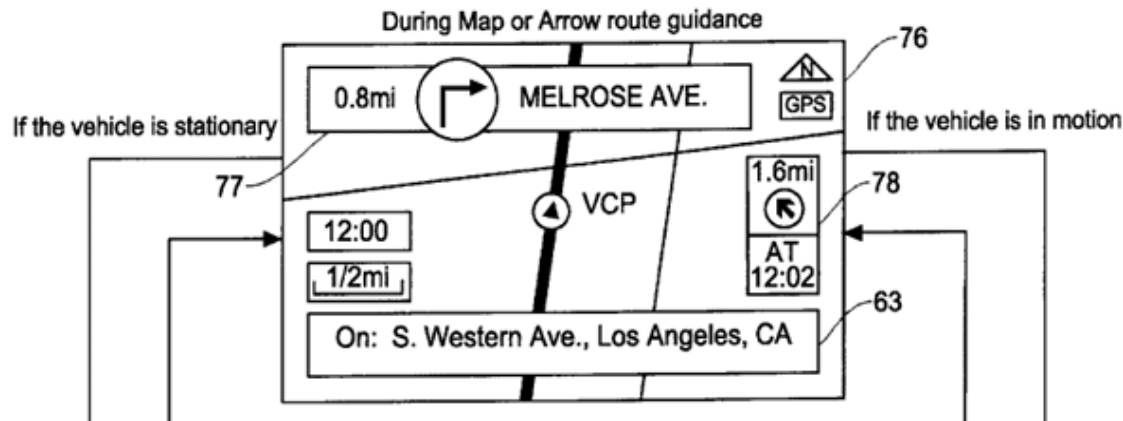
[0346] Alternatively, it would have been obvious to implement Randall’s “Route finder” to determine the distance between Alice’s and Bob’s

wireless telephones when Alice's location is "where [Bob] want[s] to go," in view of POSAs' background knowledge that it was conventional for "system[s] similar to GPS tracking in cars" (Randall, p. 29) to determine the distance from the user's device to the desired destination, to aid the user in planning their trip. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0347] Stewart (EX1056) describes a "portable telephone" that includes a "position locator" to "determine the location of the portable telephone". Stewart, Abstract. Stewart describes that the portable telephone forwards its location to the "centralized base station 17" (Stewart, 7:43-52) and the centralized base station 17 can "use the location information and map database 24 to determine a street address." Stewart, 8:20-23. The centralized base station can use "the geographic location of portable telephone 28 and the previously determined geographic location of calling first telephone 10...to calculate the distance between called portable telephone 28 and calling first telephone 10" and the distance can be "based on the shortest road route using map database 24." Stewart, 8:12-37.

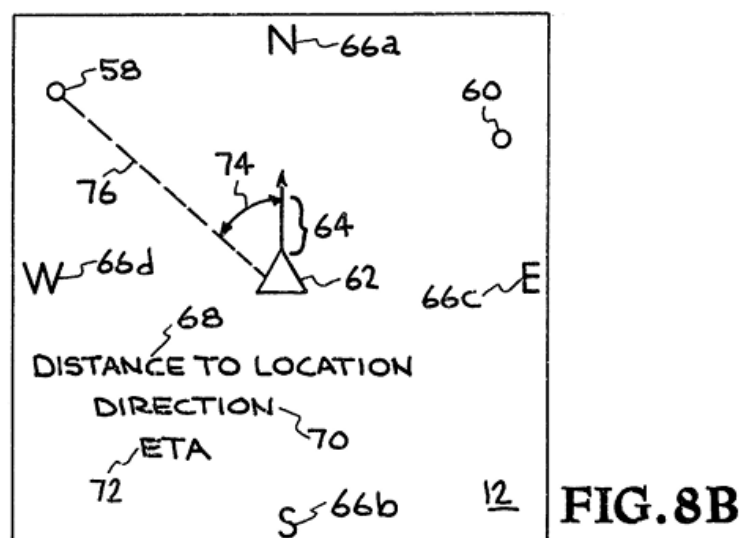
[0348] Wako (EX1025) describes a "route guidance screen 76 further includ[ing] an information box 78 which shows a distance to the final destination and an anticipated time to reach the final destination." Wako, 9:18-28, FIG. 7 (excerpted below); *see also* 2:12-34 ("[A]n information box 24 at the bottom of the

display screen includes information regarding the remaining distance to the final destination.”).



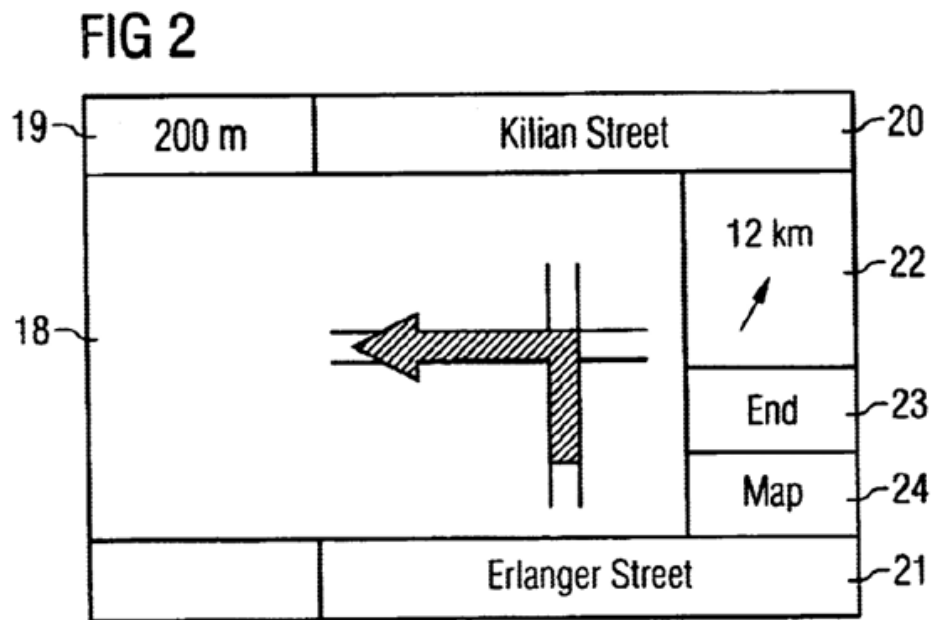
Wako, FIG. 7 (excerpt)

[0349] Mura-Smith (EX1067) describes “display[ing] navigational information in text form on display screen 12.” Mura-Smith, 8:45-47, FIGs. 8A-8B (below). “As shown in FIGS. 8A and 8B, navigational information displayed in text format includes, for example, ‘Distance to Destination’ 68”. Mura-Smith, 8:47-50; *see also* 8:50-61.



Mura-Smith, FIG. 8B

[0350] Deworetzki (EX1068) describes “a display mode on the display apparatus 12 during the journey to the selected destination” that includes “various information” such as “a distance (200 m) [] depicted in an area 19 on the left, and a destination (Kilian Street) [] depicted in an area 20 situated next to that on the right...In an area 22 on the right of the picture, the distance to the destination (12 km) is shown by an arrow indicating the direction of the destination.” Deworetzki, 4:55-5:7, FIG. 2 (below).



[0351] Tobin (EX1041) describes a “graphical user interface for use with user device 105.” Tobin, [0028], FIG. 1C (below). Tobin describes “the distance and time information particular to each service vendor is shown in a small data box adjacent to the service vendor logo. For example, data box 123 displays the real-time time and distance information for service vendor 137, which is a

Texaco™ station. The time information displays the estimated remaining travel time, calculated by dividing the approximate distance separating the Texaco™ station from user device 105 by the speed of user device 105. The distance information displays the approximate distance in miles or kilometers separating user device 105 from the service vendor 137. Similar data boxes are provided for other service vendors 127 and 129.” Tobin, [0028], FIG. 1C.

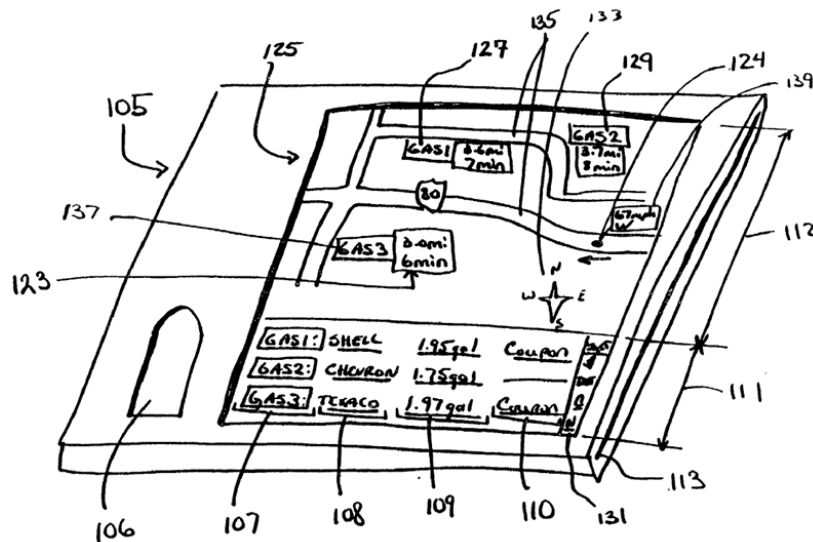


FIG. 1C
Tobin, FIG. 1C

[0352] Thus, the above references corroborate my opinion that it was well-known background knowledge to determine the distance from a user’s device to a desired destination, such as a location of another user’s device, to aid the user in planning their trip and that a POSA would have had a reasonable expectation of success doing so in a system like Randall’s / Randall-Froeberg’s.

[0353] Thus, it is my opinion that Randall / Randall-Froeberg meets claim 8.

i. **Claim 9: The method of claim 1, further comprising:**

Element [9A]: receiving said location by at least one of said plurality of wireless telephones; and

Element [9B]: displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location.

[0354] Randall meets Element [9A] as I discussed above with respect to Element [1D] (§VIII.E.2.a.v), claim 5 (§VIII.E.2.e), and claim 7 (§VIII.E.2.g).

[0355] In Randall's system, once Alice "has subscribed to the location service, then [Alice's] friends[] [including Bob] could add a '*map*' application to their own devices, which could show their position on digital *maps* and...also *show the position* of the user [Alice]." Randall, [0021]. Thus, Bob's *wireless telephone displays a map* with Alice's *location*. POSAs would have understood that "show[ing]" Alice's "position" on the map (Randall, [0021]) involves displaying *a marker representative of said location*, because the position is a *location* and showing it would involve displaying a *marker*.

[0356] Alternatively, it would have been obvious to implement this disclosure of showing Alice's location on the map by displaying *a marker* at that location on the map, because displaying a marker was well-known in POSAs' background knowledge as a beneficial and commonly used option for representing

a location of interest (including a current location of a person's wireless telephone) on a digital map.

[0357] Wollrab (EX1014) describes “translat[ing] remote sensing location coordinates into a graphic map image, e.g. a .jpg or .gif file, depicting the relative locations of all members/PDA devices within a family.” Wollrab, 3:28-31, 4:40-58 (“PDA device 14-1 through 14-5 can display a map image via display device 15-5 through 15-5 depicting the relative locations of all members/PDA devices within a family...”), FIG. 4B (below illustrating markers 44-2 through 44-5).

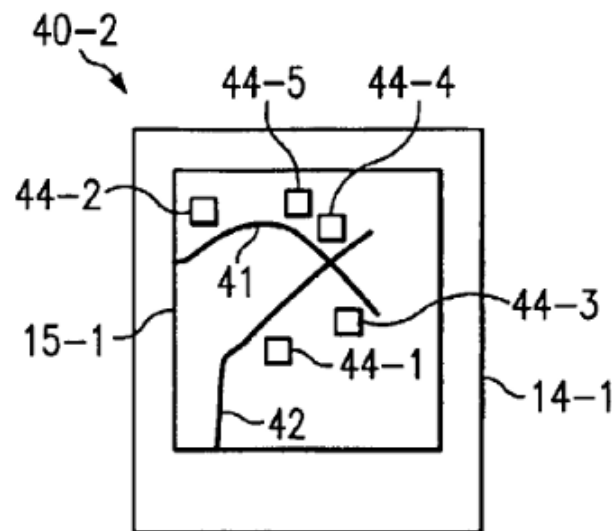


FIG. 4B

Wollrab, FIG. 4B

[0358] Meadows (EX1018) describes “monitoring the geographical location of a subscriber's mobile cellular telephone, and for providing the location information to an authorized user through the world wide web.” Meadows, 2:2-7.

The authorized user can access the location information through various media including a “wireless handheld device 20b”. Meadows, 3:59-67. Meadows describes the location information can be displayed on a map. Meadows, 5:48-57, FIGs. 4B (below), 5B (below).

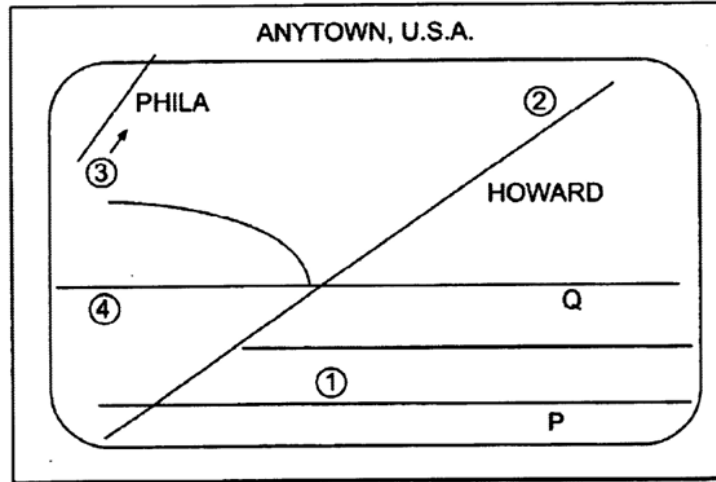


FIG. 4b

Meadows, FIG. 4B

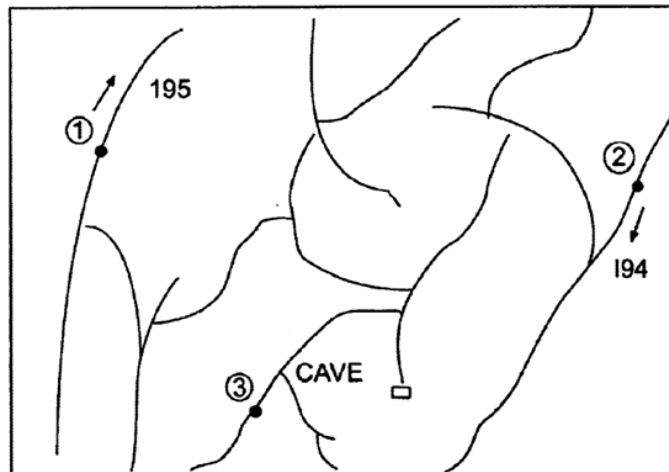
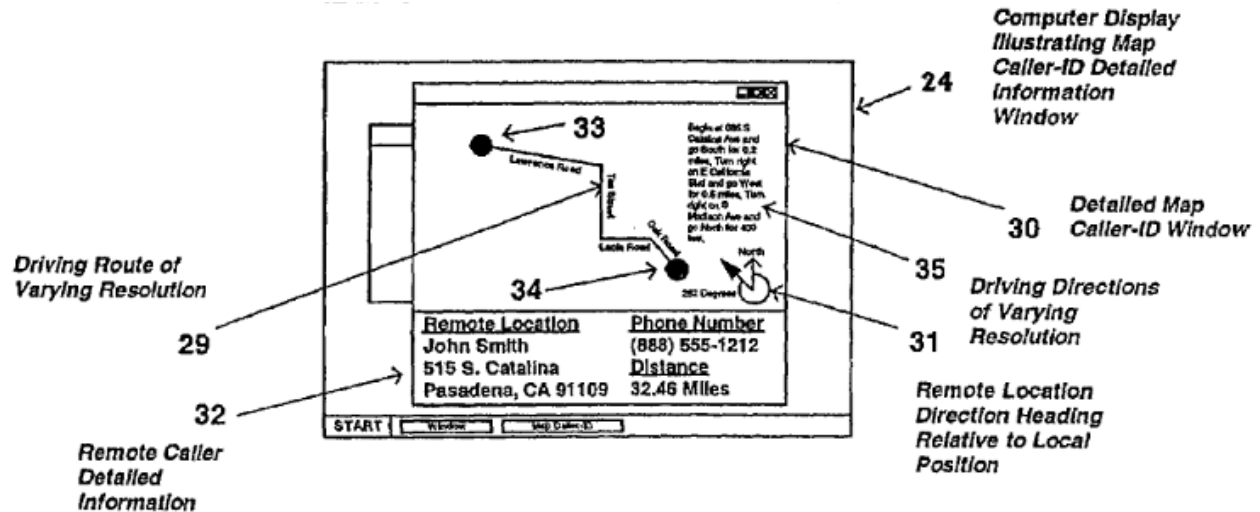


FIG. 5b

Meadows, FIG. 5B

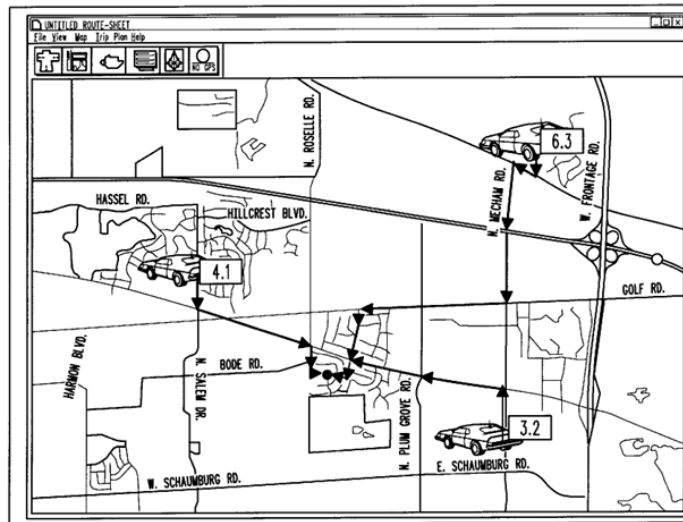
[0359] Sheha (EX1005) shows an “information window 30” in FIG. 5 (excerpted below) that “display[s] remote location direction heading information relative to local position information 31 in addition to...line-of-sight distances, and curved Earth line-of-sight distances. Additionally, the window 30 can display all of the identification information 32 of both the originating and destination users...and provide driving direction distance information for the optimal route.” Sheha, 9:23-39.



Sheha, FIG. 5 (excerpt)

[0360] Grube (EX1017) describes displaying, on mobile devices (Grube, 4:38-57, 5:13-17, FIG. 2 (excerpted below)), maps of tracked vehicles, and the maps displaying icons to represent the current locations of the tracked vehicles. Grube, 6:59-7:6, *see also* 6:14-27.

MOBILE GROUP LOCATION MAP DISPLAY



Grube, FIG. 2 (excerpt)

[0361] Thus, the above references corroborate my opinion that displaying a map on the requesting wireless device with a marker representative of the location of the target wireless device would have been an obvious variation in view of POSAs' background knowledge of the convenient option and reasonable expectation of success in doing so in a system like Randall's / Randall-Froeberg's.

[0362] Thus, it is my opinion that Randall / Randall-Froeberg meets claim 9.

- j. **Claim 10: The method of claim 1, wherein the location is obtained by way of manual input that is received by way of a locate button provided on said first wireless telephone.**

[0363] Randall discloses a "Beacon *Button*," which provides "[a] function that lets you send a very quick burst of information to friends," whereby "*you can tell the phone to send your location to them* in an instant, letting them

see how far away you are.” Randall, p. 30. The “Beacon Button” is *a locate button provided on said first wireless telephone*, and by the user pressing the “Beacon Button” to “tell the phone to send [its] location,” (Randall, p. 30) *the location is obtained by way of manual input that is received by way of the locate button*, as I discussed above (§VIII.B.1).

[0364] Thus, it is my opinion that Randall meets claim 10.

k. Claim 11: The method of claim 1, further comprising: determining a third location of a device based on the IP address of said device; and transmitting said location to said device.

[0365] Randall teaches that a user like Bob can be “[a]uthenticat[ed]” to access his data and Alice’s data on the i-server, not only from his own wireless device, “but also where Bob borrows someone else’s wireless information device or uses a public device.” Randall, [0067]. POSAs would have understood that a public device may often be a non-mobile device without GPS capability, and Bob (or another user) may still wish to update the i-server with his location (Randall, p. 24, “People tracking”) and receive Alice’s location (Randall, [0021]) at that public device to help find each other (Randall, p. 29, “Rendezvous”). To accommodate this sort of scenario, POSAs would have been motivated and have reasonable expectation of success to allow the i-server to *transmit* Alice’s *location* to Bob at *said device* that he is using (in the manner I discussed above with respect to

Element [1D]) (§VIII.E.2.a.v), and to *determine a third location of that device based on the IP address of said device.*

[0366] Furthermore, as I discussed above (§VIII.A.j), it was background knowledge for POSAs that a device’s IP address was conventional information to use to determine its geographic location in lieu of GPS. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0367] Parekh (EX1061) describes “determining a geographic location of an Internet user.” Parekh, Abstract. More specifically, Parekh describes “ascertain[ing] the geographic location of an IP address.” Parekh, 4:64-67.

[0368] McElligott (EX1062) describes “determin[ing] the...geographical location of [a] PC.” McElligott, Abstract. More specifically, McElligott describes “[t]he geographical location of an IP address can be deduced if the geographical location of an IP address that shares the same router is known.” McElligott, 7:8-12.

[0369] Anderson (EX1063) describes “associat[ing] a geographic location associated with a network address.” Anderson, Abstract; *see also* Anderson, 1:26-31 (“Geographic location may be utilized to infer demographic characteristics of a network user.”). More specifically, Anderson describes using an IP address “to estimate a geographic location”. Anderson, 7:57-8:31 (“[M]ost

network addresses (e.g., IP addresses) are associated with a particular geographic location.”).

[0370] Thus, the above references corroborate my opinion that a device’s IP address was conventional information to use to determine its geographic location in lieu of GPS in a system like Randall’s / Randall-Froeberg’s.

[0371] Additionally, as I discussed above (§VIII.A.j), POSAs also would have had motivation and reasonable expectation of success to *determine a third location* of a wireless device (e.g., Bob’s device or that of another user authorized to access Alice’s location) *based on the IP address of said device*, as an alternative to GPS when the device had inadequate GPS reception, such as when the device was inside a building or when weather interfered with GPS reception. Padmanabhan (EX1064) elaborates such a motivation when describing that “GPS is ineffective indoors.” Padmanabhan, 2:28-29.

[0372] Furthermore, it was well-known background knowledge to determine a wireless device’s location based on its IP address, which indicates the nearest network access point that has a known geographical location. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0373] Kimoto (EX1065) describes “an IP address of a fixed terminal is detected as the position identification information if the mobile terminal 4 is

connected to the fixed terminal.” Kimoto, 37:47-57; *see also* Kimoto, 51:7-13 (“[I]f the mobile terminal 4 is connected to a fixed terminal such as a public telephone [or LAN (a Local Area Network)] to access to the information center 5, the user who will use a service transmits identification of the fixed terminal such as...an IP address automatically obtained upon connecting to the LAN[] and position information to the information center 5.”). Kimoto further describes “the position information detecting unit 41 of the mobile terminal 4 detects position identification information (... an IP address in the case of LAN or the like) of the fixed terminal 6 to which the mobile terminal 4 is connected...Therefore, the information center 5...can certainly provide information or a service relating to a position necessary to the mobile terminal 4.” Kimoto, 53:13-22.

[0374] Turcotte (EX1066) appreciates that “there are many different ways to determine the precise or approximate location of a mobile device on a globe. These methods include, among others, the use of...Internet IP address...to determine position information.” Turcotte, 10:54-67.

[0375] McElligott (EX1062) describes “determin[ing] the...geographical location of [a] PC.” McElligott, Abstract. More specifically, McElligott describes “[t]he geographical location of an IP address can be deduced if the geographical location of an IP address that shares the same router is known.” McElligott, 7:8-12.

[0376] Thus, the above references corroborate my opinion that it was well-known background knowledge to determine a wireless device's location based on its IP address, which indicates the nearest network access point that has a known geographical location and would have been an obvious variation in view of POSAs' background knowledge of the convenient option and reasonable expectation of success in doing so in a system like Randall's / Randall-Froeberg's.

[0377] Further, Randall teaches *transmitting said location to said device* as I discussed above with respect to Element [1D] (§VIII.E.2.a).

[0378] Thus, it is my opinion that Randall / Randall-Froeberg meets claim 11.

I. Claim 12: The method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location.

[0379] As I discussed above with respect to claim 10 (§VIII.C.2.j), Randall provides a “Beacon Button” that any user can press to “tell the phone to send [its] location,” which is *receiving manual input for a third location*. Randall, p. 30. Randall also teaches that any user can “up-date[]” the “I-server” with their “location” as “obtained via [their] GPS wireless information device.” Randall, p. 24 (“People tracking”). Thus, POSAs would have understood that any wireless device user (e.g., Bob, Peter, etc.) can be a *third user* who is *associated with said*

manually input third location by pressing their “Beacon Button” in Randall’s system.

[0380] Additionally, POSAs would have been motivated and reasonably expected success to *receive manual input* for the *third location* of the *third user* (e.g., in the form of entering, tapping the location, e.g., on a map or selecting it from a list/table), in view of Froeberg’s teaching to allow a user to “enter...a local street address” as an alternative to GPS-provided location (Froeberg, 3:46-54) and to allow a user to “enter any address...from a telephone book” (Froeberg, 3:60-62). *See supra* §VIII.B.1. POSAs also would have been motivated and reasonably expected success to *receive manual input* for the *third location* of the *third user* based on POSAs’ background knowledge that allowing manual location input as an alternative to GPS was conventional for purposes of, e.g., convenience, privacy, power savings, etc. *See supra* §VIII.B.1. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0381] Tanaka (EX1011) teaches design options for how to obtain a location from a wireless telephone. Tanaka teaches to provide an alternative to GPS, where “the user could manually enter his position into the mobile unit, either by typing on a keypad or keyboard, or by using a stylus and **tapping** a map or location in a table,” “similar to...where a computer mouse is used to ‘click’ on a

computer icon.” Tanaka, 2:58-3:20; *see also* Tanaka, 6:15-37, 7:49-52, 8:44-47, 10:11-14. The location on the map or table that the user tapped is recognized sent to the server. Tanaka, 6:18-37. Thus, the position (i.e., *a third location*) is obtained by way of *receiving manual input* (i.e., the displayed item “similar to...a computer icon” (Tanaka, 3:7-20) on which the user tapped) from a user (i.e., *said third user*). POSAs would have been motivated to provide this alternative so a user can update their location to the server, e.g., when GPS reception is unreliable or is determining an inaccurate location, and would have reasonably expected success as I discussed above with respect to the Sheha-Tanaka / Sheha-Froeberg-Tanaka combination (§VIII.C.2). POSAs also would have been motivated to provide this alternative for users concerned about “privacy” with GPS “track[ing] the user at every instant” or about GPS “power requirement[s],” who may prefer to sometimes share their location “by tapping on a map displayed on the screen” or a “dropdown list” while other times using “GPS” as “a substitute for or a supplement to the current location information entered by the user.” EX1060, 3:49-58, 9:66-10:2, 11:66-12:4. My testimony regarding POSAs’ background knowledge in this regard is corroborated by Jhanji (EX1060), as I discuss below.

[0382] Jhanji (EX1060) describes “the need to furnish time-relevant location information for mobile Internet users...using location-finding technologies such as Global Positioning System (GPS).” Jhanji, 3:43-47. Jhanji

describes “drawbacks to such a proposal” including “GPS tracking seriously threaten[ing] the privacy of the user of the GPS-enabled mobile Internet device since it renders it possible to track the user at every instant” which would be “simply an unwelcomed intrusion.” Jhanji, 3:48-54. Jhanji describes other drawbacks to include “additional power requirement, complex circuitries and costs, both for the mobile Internet devices and for the transmission networks that handle them.” Jhanji, 3:55-58. To enhance user privacy, Jhanji describes “users...make available and [] control the sharing of...location (present or planned)” (Jhanji, 9:18-38) and “envision[s] that location entry may be made by tapping on a map displayed on the screen” or selecting from a “dropdown list” to “self-declare[]” the user’s current location. Jhanji, 9:66-10:15; *see also* Jhanji, 11:61-12:4 (“user entry for location information is one advantageous mode of operation”).

[0383] Levi discloses techniques for “electronic, portable navigational systems” to use when “GPS data can be either unreliable or unavailable.” Levi, 1:8-11, 1:59-63. The software “normally uses GPS to obtain starting positions when GPS is valid, but also accepts manual position fixes by map selection or text entry.” Levi, 8:3-7. Levi further teaches that “[t]he simplest method for a manual fix is to enter a known current location.” Levi, 8:36-37; *see also* Levi, 9:16-19 (“Manual position update is achieved when the user moves the cursor to indicate his present position.”). POSAs would have had motivation and reasonably

expected success, based on Levi's teachings, to allow such manual input of location information in Randall's system to allow a wireless device user to update the i-server with their current location when automatic location-finding services are unavailable (e.g., in a location or conditions where a GPS signal could not be received).

[0384] Darling (EX1022) discloses a display screen for functionality on a mobile device where the users can manually "Add Current Location to Favourites" by "typ[ing] a location in to [sic] the phone." Darling, 40:17-22.

[0385] Thus, the above reference corroborates by opinion that POSAs would have been motivated to provide this alternative for users concerned about "privacy" with GPS "track[ing] the user at every instant" or about GPS "power requirement[s]," who may prefer to sometimes share their location "by tapping on a map displayed on the screen" or a "dropdown list" while other times using "GPS" as "a substitute for or a supplement to the current location information entered by the user." EX1060, 3:49-58, 9:66-10:2, 11:66-12:4.

[0386] Further, alternatively, POSAs would have understood that when a user "uses a public device" (Randall, [0067]), it may often be a non-mobile device without GPS capability as corroborated by Hancock described further below. POSAs would have been motivated and reasonably expected success to allow the non-mobile device user (*said third user*) to provide their *third location* at

a non-mobile device by *manual input*, given POSAs’ knowledge of the usefulness of allowing manually-input location information on fixed devices that do not have GPS (e.g., a user’s home PC or a public device).

[0387] Hancock teaches techniques to allow a device user to, for example, “direct someone using a locational service to her house” which has a fixed location. Hancock, 4:59-63. The “positional information could be entered manually, by, for example, inputting the ULA [universal locational address] or coordinates of the location from a known mapping system.” Hancock, 4:57-65, 5:10-19, 2:58-65. POSAs would have had motivation and reasonably expected success, based on Hancock’s teachings, to allow such manual input of location information in Randall’s system to allow a user to update the i-server with their current location when using a non-mobile device or non-GPS-enabled device (e.g., a user’s home PC or a public device).

[0388] Thus, it is my opinion that Randall / Randall-Froeberg meets claim 12.

m. Claim 13

i. Preamble [13PRE]: A method comprising:

[0389] Like claim 1, claim 13’s preamble only recites “*A method comprising.*” As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as

Randall and Randall-Froeberg meet the preamble. Claim 13 recites a method with several elements that are essentially the same elements as recited in claim 1. Thus, Randall and Randall-Froeberg meet Element [13PRE] for the same reasons I discussed in relation to Element [1PRE] (*see supra* §VIII.E.2.a.i). As explained in this section below, in my opinion a POSA would have understood that Randall and Randall-Froeberg meet all limitations of claim 13 of the '575 patent.

ii. Element [13A]: determining a location of a first wireless telephone;

[0390] Element [13A] recites essentially the same functionality recited in Element [1A], which recites “*obtaining a location of a first wireless telephone*” and thus is *determining* that location. Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13A] for the same reasons Randall and Randall-Froeberg meet Element [1A], as discussed above (§VIII.E.2.a.ii).

iii. Element [13B]: transmitting said location from said first wireless telephone to a remote server;

[0391] Element [13B] recites the same functionality recited in Element [1A], which also recites “*transmitting said location from said first wireless telephone to a remote server.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13B] for the same reasons Randall and Randall-Froeberg meet Element [1B], as discussed above (§VIII.E.2.a.iii).

- iv. **Element [13C]: changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;**

[0392] Element [1C] recites “*changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones.*” Element [13C] recites essentially the same functionality except does not recite that the “changing [of] a list of users” is “at the direction of said first wireless telephone....” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13C] for the same reasons Randall and Randall-Froeberg meet Element [1C], as discussed above (§VIII.E.2.a.iv).

- v. **Element [13D]: transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location**

[0393] Randall provides an “Old buddy finder” service by which Bob’s “[w]ireless information device *alerts Bob* when a contact happens to be *within a defined proximity* (e.g. Bob and Alice are both in the same foreign city and didn’t know it).” Randall, p. 24. POSAs would have understood “within a defined proximity” to teach, or at minimum render obvious, alerting Bob (*a user of said list*

of users) when Bob *is within a certain distance* of Alice's location. See §VIII.E.2.h. As I discussed above with respect to claim 1 (§VIII.E.2.a), Alice's location data on which the alert is based is provided through the i-server that collects, manages, and transmits location information to devices in the system; thus, POSAs would have understood Randall to teach, or at minimum render obvious, that the i-server *transmits an alert message* to Bob's device. Transmitting the alert message from the *remote server* when a user of interest *is within a certain distance* was a well-known design option with reasonable expectation of success in a system and service like Randall's / Randall-Froeberg's. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed below.

[0394] De-Vries (EX1013) describes an “information service 100 [that] can be used to locate people” (De-Vries, 10:61-62) and “provides notifications or alerts [] based on people and place.” De-Vries, 4:36-39. More specifically, De-Vries describes “the information service can provide information in addition to proximity or non-proximity, such as actually detailing the location of a person or persons on the user's buddy list.” De-Vries, 10:64-67. De-Vries also describes “[u]pon an update to the people/place state data 300 in which the relative locations of the user and/or those on the user's buddy list(s) change, the information service 100 determines which people are in the user's proximity based

on the notification parameters at 502, and then formulates and transmits a notification message to the user at 503 (i.e., to the user's personal mobile data communications device for appropriate presentation to the user)." De-Vries, 8:27-40.

[0395] Degnbol (EX1035) describes "a method and a system for automatic notification of a user 'A' of the entry of pre-selected user 'B' into a pre-determined area (or proximity to a particular location)." Degnbol, 1:7-10. More specifically, Degnbol describes that such notification could be a "message" (Degnbol, 4:1-11) that "comprise[s] text, e.g. information about the distance between user 'A' and user 'B', graphics, such as an image or an icon, a map or diagram with a pointer showing the location of the user." Degnbol, 5:16-18. Degnbol provides an example in which "User A's profile includes a desire to be alerted when User B is in his vicinity; User B's profile includes a permission to notify User A of his whereabouts" and when "the position report indicates a match of User A's alerting criteria with the current locations of 'A' and 'B', and User 'B's permissions" then "an alert message" is "generat[ed]" to "User 'A'". Degnbol, 20:23-21:6.

[0396] Tanaka (EX1011) teaches allowing the user to submit a search request for users of geographically close mobile devices matching search terms in the search request, including a search radius specifying a *distance*. Tanaka,

Abstract, 6:10-7:1. The server automatically notifies the user (i.e., *transmitting an alert message*) when another user satisfying the search terms is “within the search radius” (i.e., *within a certain distance*). Tanaka, 6:49-66, 7:28-30, 7:61-64, 8:56-59, 10:24-27. The notification *comprises information associated with said location* because it informs the user that the *location* of the *first wireless telephone* is near the user’s current location. Tanaka, 6:60-66.

[0397] Thus, the above references corroborate my opinion that transmitting an alert message from a remote server when a user of interest is within a certain distance was a well-known design option with reasonable expectation of success in a system and service like Randall’s / Randall-Froeberg’s.

[0398] Randall’s alert *comprises information associated with said location* because it informs Bob that Alice’s *location* is within the defined proximity of Bob’s current location. Additionally, it would have been obvious to POSAs to include Alice’s *location* itself in Randall’s alert, so that Bob “can tell precisely where” Alice is, to “help” them “meet” up. Randall, p. 29 (“Rendezvous”). Including the other user’s *location* in a proximity alert was a well-known design option with reasonable expectation of success in a system and service like Randall’s / Randall-Froeberg’s. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0399] De-Vries (EX1013) describes an “information service 100 [that] can be used to locate people” (De-Vries, 10:61-62) and “provides notifications or alerts [] based on people and place.” De-Vries, 4:36-39. More specifically, De-Vries describes “the information service can provide information in addition to proximity or non-proximity, such as actually detailing the location of a person or persons on the user’s buddy list.” De-Vries, 10:64-67.

[0400] Degnbol (EX1035) describes “a method and a system for automatic notification of a user ‘A’ of the entry of pre-selected user ‘B’ into a pre-determined area (or proximity to a particular location).” Degnbol, 1:7-10. More specifically, Degnbol describes that such notification could be a “message” (Degnbol, 4:5-11) that “comprise[s] text, e.g. information about the distance between user ‘A’ and user ‘B’, graphics, such as an image or an icon, a map or diagram with a pointer showing the location of the user.” Degnbol, 5:16-18.

[0401] Thus, the above references corroborate my opinion that including Alice’s *location* itself in Randall’s alert was a well-known, obvious design option with reasonable expectation of success in a system like Randall’s / Randall-Froeberg’s.

[0402] Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13D].

vi. Element [13E]: determining a second location associated with said wireless telephone associated with said one user; and

[0403] Element [13E] recites essentially the same functionality as Element [1E], which recites “*determining a second location associated with one of said plurality of wireless telephones.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13E] for the same Randall and Randall-Froeberg meet Element [1E], as discussed above (§VIII.E.2.a.vi).

vii. Element [13F]: providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location.

[0404] Element [13F] recites essentially the same functionality as Element [1F], which recites “*providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [13F] for the same reasons Randall and Randall-Froeberg meet Element [1F], as discussed above (§VIII.E.2.a.vii).

n. Claim 14

i. Preamble [14PRE]: A method comprising:

[0405] Like claim 1, claim 14’s preamble only recites “*A method comprising.*” As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Randall and Randall-Froeberg meet the preamble. Claim 14 recites a method with several elements that are essentially the same elements as recited in claim 1. Thus, and Randall-Froeberg meet Element [14PRE] for the same reasons I discussed in relation to Element [1PRE] (*see supra* §VIII.E.2.a.i). As explained in this section below, in my opinion a POSA would have understood that Randall and Randall-Froeberg meet all limitations of claim 14 of the ’575 patent.

ii. Element [14A]: obtaining a location of a first wireless telephone;

[0406] Element [14A] recites the same functionality recited in Element [1A], which also recites “*obtaining a location of a first wireless telephone.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14A] for the same reasons Randall and Randall-Froeberg meet Element [1A], as discussed above (§VIII.E.2.a.ii).

iii. Element [14B]: transmitting said location from said first wireless telephone to a remote server;

[0407] Element [14B] recites the same functionality recited in Element [1B], which also recites “*transmitting said location from said first wireless telephone to a remote server.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14B] for the same reasons Randall and Randall-Froeberg meet Element [1B], as discussed above (§VIII.E.2.a.iii).

iv. Element [14C]: changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and

[0408] Element [14C] recites the same functionality recited in Element [1C], which also recites “*changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14C] for the same reasons Randall and Randall-Froeberg meet Element [1C], as discussed above (§VIII.E.2.a.iv).

v. Element [14D]: transmitting said location from said remote server to at least one of said users of said list of users;

[0409] Element [14D] recites the same functionality recited in Element [1D], which also recites “*transmitting said location from said remote server to at least one of said users of said list of users.*” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14D] for the same reasons Randall and Randall-Froeberg meet Element [1D], as discussed above (§VIII.E.2.a.v).

vi. Element [14E]: receiving manual input for a second location;

[0410] Claim 12 recites “[t]he method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location” and claim 10 recites “[t]he method of claim 1, wherein the location is obtained by way of manual input that is received by way of a locate button provided on said first wireless telephone.” Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14E] for the same reasons Randall and Randall-Froeberg meet claim 12 (where the “*third location*” for the “*third user*” is instead for “*a second location*”) and Randall and Randall-Froeberg meet claim 10 (where the “*location [that] is obtained by way of a manual input*” is “*for a second location*”), as I discussed above (§VIII.E.2.j (claim 10), §VIII.E.2.1 (claim 12)).

vii. Element [14F]: determining an identity of a second user for a device by way of a login; and

[0411] Randall teaches that “an entity seeking information,” such as Bob seeking Alice’s location, must be “[a]uthenticat[ed] (i.e. identif[ied]...)” by “the server recognising Bob’s device and determining the database access rights which Alice has given him.” Randall, [0067]. The user “Bob (as opposed merely to Bob’s device)” may be “authenticated” by inputting “a PIN” or “select[ing] [his] favourite colour/restaurant/recent film etc.[], with the server only authenticating Bob when he answers correctly.” Randall, [0067]. In some examples, this can be “relevant...where Bob borrows someone else’s wireless information device or uses a public device” to access both “his own personal information” and information of his contacts, including Alice. Randall, [0067].

[0412] Because Bob can be authenticated as “Bob the person, rather than Bob’s device,” even when using “someone else’s” device or “a public device,” POSAs would have understood Randall to teach determining an identity of a second user (e.g., Bob) for a device (e.g., the device Bob is using) by way of a login (i.e., an identifier “identifying an entity seeking information” as purporting to be “Bob the person”). Randall, [0067]. The “PIN” or “select[ed] answer[] from a multiple choice,” if it “correctly” matches what the server has stored as Bob’s “PIN” or “favourite colour/restaurant/recent film” (Randall, [0067]), authenticates that the user is truly Bob, and thereby determines that the user’s identity is Bob.

[0413] Alternatively, any other user (e.g., Peter) can be the second user and have their identity determined the same way. See Randall, [0380] (teaching “[t]here is a need for authentication of [any] user when they access their data perhaps via their WID. ...The authentication can use...a basic WID and password/passphrase.”).

[0414] Alternatively, even if Randall had not explicitly taught a login, it would have been obvious to modify Randall to use a login to authenticate a wireless device user like Bob or Peter. Using a login to authenticate a device user seeking another user’s information (including location) was well-known in POSAs’ background knowledge as a beneficial and commonly used option that would have been merely simple substitution of one known element for another with predictable results. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0415] Carey (EX1024) describes “instant message communication in a wireless and non-wireless environment.” Carey, Abstract, see also 1:8-12, 3:18-34. Carey describes authenticating a user to access the “wireless instant message service” by “completing a **sign-on or logon with password verification.**” Carey 4:6-33, *see also id.*, 5:5-28 (“a sign on”). Carey provides an example of using “a wireless instant messaging sign on window 200 [that] includes data fields for entry

of the **user's screen name 202 and password 204**" to authorize a user to access the service. Carey, 7:65-8:16, FIGs. 8-14. Therefore, Carey corroborates that the entering of log-on information and password to authenticate a device accessing a service was within a POSAs' background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user's information (including location).

[0416] Thomas (EX1019) describes a "location monitoring system" for "location tracking, location utilization, and dissemination and management of location information." Thomas, 1:15-55 (disclosing that the "present invention relates to computing or communication devices," which include "wireless communication devices," such as "mobile phones [and] personal digital assistants (PDAs)"); *see also id.*, 2:58-3:6. Prior to disseminating location information to a requesting user, the requesting user "must login with an appropriate **user name and/or password**. This allows restricted access to the location information." Thomas, 5:49-54, *see also id.*, 6:53-7:49 (describing waiting for a log-in response and then, once received, determining whether it was successful), 7:27-40 (describing providing location information to a requesting user after the log-in response is successful). The location information of mobile devices in the system is thus obtainable by a user if the user is authorized and authenticated via user name and password. Therefore, Thomas corroborates that the entering of a

username and password to authenticate a requesting user accessing a location of another user via that user's mobile device was well-known in POSAs' background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user's information (including location).

[0417] Chern (EX1029) concerns mobile wireless communication devices and a system and method for "locating and tracking mobile telephone devices via the Internet." Chern, 1:6-9. Chern discloses that when users "want to know the location of a particular mobile telephone" they connect to a Web server "via a browser residing on a mobile telephone device" that "displays an authorization screen that requires the requesting party to enter a valid **user name and password combination.**" Chern, 6:55-7:20. The location information of mobile devices in the system is thus obtainable by another mobile device without the user of one mobile device calling the other. Therefore, Chern also corroborates that the entering of a user name and password to authenticate a requesting user accessing a location of another user was well-known in POSAs' background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user's information (including location).

[0418] Sandhu (EX1054) relates to "distributing positional information and location specific messages to mobile units by using a data network." Sandhu, 1:8-10. Sandhu discloses users that register with the positioning system receive "a

login name and a password” entered via the user’s mobile device. Sandhu, 5:9-34. The positional and location information of mobile devices in the system is thus obtainable without the user of one mobile device calling the other. Sandhu, 5:35-51. Therefore, Sandhu also corroborates that the entering of a user name and password via a mobile device was within a POSAs’ background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user’s information (including location).

[0419] Futagami (EX1030) concerns an information processing apparatus that uses “**a password together with user identification**” to access a “management server” (8:56-67) from which “personal information of user[s]” can be obtained (10:9-17). The personal information of mobile devices in the system is thus obtainable without the user of one mobile device calling the other. Therefore, Futagami also corroborates that the entering of a username and password via a mobile device was within a POSAs’ background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user’s personal information.

[0420] Darling (EX1022) concerns communications with mobile device. Darling discloses a user using an “identifier (e.g., **login name and/or password and/or email address**)” (8:32-34) to gain access to a service that permits “a user to determine the location of another user without specifically

having to contact that other user” (2:1-12). The location information of mobile devices in the system is thus obtainable without the user of one mobile device calling the other. Therefore, Darling also corroborates that the entering of a username and password via a mobile device was within a POSAs’ background knowledge as a typical and obvious way to use manual inputs to authenticate a device user seeking another user’s information (including location).

[0421] Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14F].

viii. Element [14G]: transmitting said location to said device

[0422] As I discussed above with respect to claim 6 (§VIII.E.2.f), Bob and Peter are each examples of a *device* user who can receive Alice’s location. Randall teaches *transmitting said location to said device* if that *device*’s user is authenticated and determined to have been given access rights to Alice’s location, as I discussed above with respect to Element [1D] (§VIII.E.2.a.v).

[0423] Thus, it is my opinion that Randall and Randall-Froeberg meet Element [14G].

ix. Element [14H]: wherein said second user is associated with said manually input second location.

[0424] Claim 12 recites “[t]he method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated

with said manually input third location.” As I discussed above for Element [14E] (§VIII.E.2.vi), Randall and Randall-Froeberg meet Element [14E] for essentially the same reasons Randall and Randall-Froeberg meet claim 12, where the “*third location*” for the “*third user*” is instead for “*a second location.*” Similarly, Randall and Randall-Froeberg meet Element [14H] for essentially the same reason discussed above that Randall and Randall-Froeberg meet claim 12 (§VIII.E.2.1), where the “*second user is associated with said manually input second location*” rather than the “*third user....*”

o. Claim 15

[0425] Claim 15 is identical to claim 13 except that Element [15A] recites “*obtaining a location of said first wireless telephone*” where Element [13A] recites “*determining a location of a first wireless telephone.*” Randall and Randall-Froeberg meet claim 15 for the same reasons as claim 13, as I discussed above with respect to claim 13 (§VIII.E.2.m) and claim 1 (§VIII.E.2.a).

p. Claim 30

[0426] Claim 30 recites elements substantively identical to Elements [1PRE]-[1A], and Elements [1C]-[1F], while omitting Element [1B]. Therefore, Randall and Randall-Froeberg meet claim 30 for the reasons I discussed above with respect to claim 1 (§VIII.E.2.a).

q. Claim 38

[0427] Claim 38 recites elements substantively identical to Elements [15PRE]-[15A], and Elements [15C]-[15F], while omitting Element [15B].

Therefore, Randall and Randall-Froeberg meet claim 38 for the reasons I discussed above with respect to claim 15 (§VIII.E.2.o), claim 13 (§VIII.E.2.m), and claim 1 (§VIII.E.2.a).

r. Claims 16-29, 31-37, and 39-46

i. Claims 16, 23, 31, and 39

[0428] Claims 16, 23, 31, and 39 add to claims 15, 13, 30, and 38, respectively, the limitation of “*wherein said changing comprises adding an additional user to said list of users,*” which is the same limitation that claim 2 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 16, 23, 31, and 39 for the same reasons Randall and Randall-Froeberg meet claim 2, as discussed above (§VIII.E.2.b).

ii. Claims 17, 24, 32, and 40

[0429] Claims 17, 24, 32, and 40 add to claims 15, 13, 30, and 38, respectively, the limitation of “*further comprising transmitting the address of said location to said at least one of said users of said list of users,*” which is the same limitation that claim 3 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 17, 24, 32, and 40 for the same reasons Randall and Randall-Froeberg meet claim 3, as discussed above (§VIII.E.2.c).

iii. Claims 18, 25, 33, and 41

[0430] Claims 18, 25, and 41 add to claims 15, 13, and 38, respectively, the limitation of “*obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users,*” which is the same limitation that claim 4 adds to claim 1. Claim 33 adds to claim 30 that claim 4 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 18, 25, 33 and 41 for the same reasons Randall and Randall-Froeberg meet claim 4, as discussed above (§VIII.E.2.d).

iv. Claim 34

[0431] Claim 34 adds to claim 30 the limitation of “*receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones,*” which is the same limitation that claim 5 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claim 34 for the same reasons Randall and Randall-Froeberg meet claim 5, as discussed above (§VIII.E.2.e).

v. Claims 19, 26, 35, and 42

[0432] Claims 19, 26, and 42 add to claims 15, 13, and 38, respectively, the same limitation of “*further comprising determining a third location associated with said wireless telephone associated with said user,*” which

is essentially the same limitation of “*further comprising determining a third location associated with one of said plurality of wireless telephones*” that claim 6 adds to claim 1. Claim 35 adds the same limitation to claim 30 that claim 6 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 19, 26, 35, and 42 for the same reasons Randall and Randall-Froeberg meet claim 6, as discussed above (§VIII.E.2.f).

vi. Claims 20, 27, 36, and 43

[0433] Claims 20, 27, and 43 add to claims 15, 13, and 38, respectively, the same limitation of “*receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user,*” which is essentially the same limitation of “*receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones*” that claim 7 adds to claim 1. Claim 36 adds to claim 30 the same limitation that claim 7 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 20, 27, 36, and 43 for the same reasons Randall and Randall-Froeberg meet claim 7, as discussed above (§VIII.E.2.g).

vii. Claims 21, 28, 37, and 44

[0434] Claims 21, 28, and 44 add to claims 15, 13, and 38, respectively, the same limitation of “*further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user,*” which is essentially the same limitation of “*further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones*” that claim 8 adds to claim 1. Claim 37 adds to claim 30 the same limitation that claim 8 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claims 21, 28, 37, and 44 for the same reasons Randall and Randall-Froeberg meet claim 8, as discussed above (§VIII.E.2.h).

viii. Claims 22, 29, and 45

[0435] Claims 22, 29, and 45 add to claims 15, 13, and 38, respectively, the same limitation of “*receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location,*” which is essentially the same limitation of “*receiving said location by at least one of said plurality of wireless telephones; and displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location*” that claim 9 adds to claim 1. Thus,

it is my opinion that Randall and Randall-Froeberg meet claims 22, 29, and 45 for the same reasons Randall and Randall-Froeberg meet claim 9, as discussed above (§VIII.E.2.i).

ix. Claim 46

[0436] Claim 46 adds to claim 38 the limitation of “*wherein location is obtained by way of manual input manual input that is received by way of a locate button provided on said first wireless telephone,*” which is essentially the same limitation that claim 10 adds to claim 1. Thus, it is my opinion that Randall and Randall-Froeberg meet claim 46 for the same reasons Randall and Randall-Froeberg meet claim 10, as discussed above (§VIII.E.2.j).

IX. COMMENTS ON MULLEN’S CHARACTERIZATION OF MY DEPOSITION TESTIMONY CITED IN IPR2023-00097, PAPER 13

[0437] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “admitted” that elements [1C], [14C], and [30C] recite a set of “conditions” listed by Mullen in IPR2023-00097, Paper 13, at 12. *Id.* at 12-13 (citing IPR2023-00097, Ex. 2003, at 150:12-152:7. I did not testify that these claim elements recite the “conditions” that Mullen listed in Mullen’s own phrasing. I testified only that the claim elements recite the language that they actually recite. And I testified that Sheha discloses the requirements that the claim elements actually recite. *See* IPR2023-00097, Ex. 2003 at 152:9-11. I also explained above in this declaration

my opinion as to how Sheha discloses and renders obvious elements [1C] (*supra* §VIII.A.2.a.iv), [14C] (*supra* §VIII.B.3.iv), and [30C] (*supra* §VIII.A.2.1).

[0438] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “conceded” “at deposition” that in Sheha “the privacy settings on a target mobile device are not user specific and apply to any location request received from any device logged into the ODAS that satisfies the implemented privacy setting.” IPR2023-00097, Paper 13, at 15-16 (citing IPR2023-00097, Ex. 2003, at 17:6-12; 114:12-25; 116:2-7; 20:13-21:9 (arguing that I “admitt[ed] that anybody with access to the ODAS can access the location of mobile device 18A when the privacy setting allows location sharing while calls are being received”); 23:22-24:7 (arguing that I “stat[ed] that recipients of the location ‘would potentially be anybody who was calling or being called by the phone’ when privacy settings allow location sharing during calls”); 24:20-25:11 (arguing that I “stat[ed] that recipients of the location ‘would be anybody who was interested – is signed up, essentially, to get that information from that phone’ when privacy settings are set for a time period”); 154:2-5 (arguing that I “agree[d that] ‘privacy settings apply to the users that are signed into the ODAS system’”). As explained below, that is not what I agreed to in any of the cited portions of my deposition.

[0439] What I said at 17:6-12 of Ex. 2003 of IPR2023-00097 was that Sheha discusses privacy “at the group level.” And I testified that, in Sheha, “a

group *can be a group of one* or it can be a group of many.” IPR2023-00097, Ex. 2003, 17:19-20. I further testified that “you can have a group of one” because “in my experience, particularly in the location world, the way group has been used it is not required to have at least two. It can have at least one. It can be just one.” IPR2023-00097, Ex. 2003, 18:11-24. I also testified that, “[f]or example, if you have a friend section in your contact list, you just have one friend as your group of friends, sadly for you, but it’s still just one person.” IPR2023-00097, EX2003, 18:21-24. At 114:12-25 of Ex. 2003 of IPR2023-00097, I testified similarly. I said that Sheha’s “privacy settings, as well as the group database settings, are not individual by individual,” because they are not *only* set individual by individual, but I reiterated again that “the group permutation, in my view, can have a group of one.” IPR2023-00091, Ex. 2003, 114:22-115:3. When a privacy setting or group permission setting is set for a group of one (i.e., there is one individual in the group), it is set exclusively for that individual.

[0440] At 116:2-7 of Ex. 2003 of IPR2023-00097, I said it was “accurate” that “privacy settings” that “are stored on the devices” (which is just “*one* of the ways” Sheha describes “establish[ing] permission rights”) “indicate under what conditions a target device with those privacy settings will send out its own position information.” IPR2023-00097, Ex. 2003, at 115:15-116:7. That does not negate the other ways Sheha describes establishing permission rights via other

types of privacy configurations, such as “utilizing a group database and authorization and authentication protocols to identify users that are permitted to access” location information. Sheha, 11:63-12:7.

[0441] At 20:13-21:19 of Ex. 2003 of IPR2023-00097, I was asked whether “anybody that has access to the ODAS database can access the location mobile device 18a based on that sentence” at 10:17-26 of Sheha, and I answered that “[t]hat passage is not specific to that kind of question.” I said “I think that’s one of the embodiments that Sheha enables,” but that enabled embodiment is not specifically discussed in “[t]hat passage” (*id.*), and it would not negate other embodiments Sheha teaches where “users can define a group of specific users that have access to” their location information (Sheha, 11:63-12:7).

[0442] At 23:22-24:7 of Ex. 2003 of IPR2023-00097, I was asked “who, in the ODAS system, may receive device 18a’s position information,” and I responded, “Just in that narrow sentence, that would *potentially* be anybody who was calling or being called by the phone.” It is only “potentially,” because it also depends in part on whether that person/device has permission to receive the position information.

[0443] At 24:20-25:11 of Ex. 2003 of IPR2023-00097, I testified that “[w]ithin...*the scope of that sentence*” at 10:20-25 of Sheha, “*notwithstanding any of the other group or authentication kinds of information discussion that*

Sheha discusses,...in theory, that would be anybody who...is signed up, essentially, to get that information from that phone.” I said that because the person has to be “signed up” and authenticated to receive the information, *and* the “other group or authentication kinds of information...that Sheha discusses” *add to* what is discussed at 10:20-25 of Sheha, resulting in embodiments that only provide location information when the receiving has permission based on “a group database and authorization and authentication protocols” (Sheha, 11:63-12:7) and other privacy settings.

[0444] At 154:2-5 of Ex. 2003 of IPR2023-00097, I said it “would be fair” to say that “privacy settings apply to the users that are signed in to the ODAS system.” I did not say that no access permissions are user-specific. My statement merely reflects that each user signs on to the ODAS in order to access its services

[0445] I consistently testified in my deposition in IPR2023-00097 that “the mere fact that [a user is] logged in to the ODAS and there’s a video call by itself may not be – wouldn’t necessarily be sufficient to get the location. There would also have to be a privacy setting saying, ‘Okay, this caller can receive the location information.’” IPR2023-00097, Ex. 2003, at 16:24-17:4. I consistently testified that “there is a group capability within Sheha that you can say, For the people in this group, I will allow location information to be provided. And a group can be a group of one or it can be a group of many.” IPR2023-00097, Ex. 2003, at

17:16-20. I consistently testified that the capability to specify permissions to a group of one or more users is complementary to and used with other types of privacy settings in Sheha. For example, I testified that Sheha “has a group capability by which if you're on that group, then you would be able to have these permutations that we just went through applied to you, meaning if you're on the group and you are -- have a particular time period that's also there, then you would be able to get the location information. *If you're not on the group, you would not be allowed to do that.*” IPR2023-00097, Ex. 2003, at 25:16-24.

[0446] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “conceded” “at deposition” that “the privacy settings as described in Sheha do not include a list of users” IPR2023-00097, Paper 13, at 17-18 (citing IPR2023-00097, Ex. 2003, at 152:12-154:5; 17:6-12; 20:13-21:9; 23:22-24:7; 24:20-25:11; 114:12-25; 116:2-7). I did not concede that.

[0447] What I said at 152:12-153:19 of Ex. 2003 of IPR2023-00097 is that Sheha's disclosure at 5:38-46 does not specifically refer to list of users in those words. At 153:20-154:5 of Ex. 2003 of IPR2023-00097, I explained that Sheha refers to privacy setting of, e.g., users that are signed into the ODAS system. However, I did not concede at 152:12-154:5 of Ex. 2003 of IPR2023-00097 that Sheha does not includes a list of users. For example, at 160:11-161:23, I testified that Sheha at 11:61-12:1 discloses that ““Uses can define a group of specific users

that have access to this information. This is also accomplished by utilizing a group database.” I explain that “defining a group of specific users is a form of a list.” IPR2023-00097, Ex. 2003, at 161:15-16.

[0448] At 17:6-12 of Ex. 2003 of IPR2023-00097, as discussed above, what I said was that Sheha discusses privacy “at the group level.” I did not concede at 17:6-12 that Sheha’s privacy settings do not include a list of users. As I explained above, at deposition I explained that Sheha’s disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0449] At 20:13-21:19 of Ex. 2003 of IPR2023-00097, as discussed above, what I said was that Sheha’s 10:17-26 “is not specific” about whether “anybody that has access to the ODAS database can access the location” of “mobile device 18a” and that in other embodiments Sheha teaches where “users can define a group of specific users that have access to” their location information (Sheha, 11:63-12:7). I did not concede at 20:13-21:19 that Sheha’s privacy settings do not include a list of users. Again, as I explained above, at deposition I explained that Sheha’s disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0450] At 23:22-24:7 of Ex. 2003 of IPR2023-00097, as discussed above, who may receive device 18's position information depends in part on whether that person/device has permission to receive the position information. I did not concede at 23:22-24:7 that Sheha's privacy settings do not include a list of users. As I explained above, at deposition I explained that Sheha's disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0451] At 24:20-25:11 of Ex. 2003 of IPR2023-00097, as discussed above, I testified that person has to be "signed up" and authenticated to receive the position information, and the "other group or authentication kinds of information...that Sheha discusses" add to what is discussed at 10:20-25 of Sheha, resulting in embodiments that only provide location information when the receiving has permission based on "a group database and authorization and authentication protocols" (Sheha, 11:63-12:7) and other privacy settings. I did not concede at 24:20-25:11 that Sheha's privacy settings do not include a list of users. As I explained above, at deposition I explained that Sheha's disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0452] At 114:12-25 of Ex. 2003 of IPR2023-00097, as discussed above, I testified that Sheha's "privacy settings, as well as the group database

settings, are not individual by individual,” because they are not *only* set individual by individual, but I reiterated again that “the group permutation, in my view, can have a group of one.” IPR2023-00097, Ex. 2003, at 114:22-115:3. I did not concede at 114:22-115:3 that Sheha’s privacy settings do not include a list of users. As I explained above, at deposition I explained that Sheha’s disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0453] At 116:2-7 of Ex. 2003 of IPR2023-00097, I said it was “accurate” that “privacy settings” that “are stored on the devices” (which is just “*one* of the ways” Sheha describes “establish[ing] permission rights”) “indicate under what conditions a target device with those privacy settings will send out its own position information.” IPR2023-00097, Ex. 2003, at 115:15-116:7. That does not negate the other ways Sheha describes establishing permission rights via other types of privacy configurations, such as “utilizing a group database and authorization and authentication protocols to identify users that are permitted to access” location information. Sheha, 11:63-12:7. I did not concede at 116:2-7 that Sheha’s privacy settings do not include a list of users. As I explained above, at deposition I explained that Sheha’s disclosure of defining group(s) of users that have access to position information is defining a list of users that have access to the position information.

[0454] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that at my deposition I “could not identify any disclosure in Sheha of storing privacy settings on a remote server.” IPR2023-00097, Paper 13, at 20-22 (citing IPR2023-00097, Ex. 2003, at 26:4-9; 115:15-25; 156:1-157:13). I disagree. At 26:4-9 of Ex. 2003 in IPR2023-00097, I explained that while some privacy settings are “stored on the phone generally,” the “group delineation” in particular would “generally be stored on the ODAS to provide a permissions capability to filter out people who the original phone doesn’t want to have their location information.” IPR2023-00097, EX2003, at 26:7-13.

[0455] At 115:15-25 of Ex. 2003 in IPR2023-0097, I said it was “accurate” that “*one* of the ways” Sheha describes “establish[ing] permission rights” is by having “privacy settings” that “are stored on the devices.” IPR2023-00097, 115:15-116:7. That does not negate the other ways Sheha describes of storing privacy settings, including on a remote server. Moreover, I testified that storing privacy and permission settings on the server would have been at minimum obvious because “it would make more sense in embodiments where a fresh location is not needed to store privacy and permission settings on the server to avoid needing to ping the device each time you’re wanting that information.” IPR2023-00097, Ex. 2003, at 157:14-21. I consistently testified that Sheha’s system “encompasses the various privacy and permissions aspects associated with

the invention” and “it would be a far more efficient design to” have “privacy settings or groups” “stored on the server” “as opposed to having to constantly access that information on the target’s [sic] device itself.” IPR2023-00097, Ex. 2003, at 156:1-19. In any event, as I discussed above in my declaration for this matter, Sheha discloses that the group database is stored in the ODAS server, which teaches or at least renders obvious having privacy settings stored on Sheha’s remote ODAS server.

[0456] At 156:1-157:13 of Ex. 2003 in IPR2023-00097, I was asked, “[S]itting here now, *without looking*, you don’t know whether Sheha explicitly teaches privacy settings stored on a system server...?” and I said, “I don’t know for certain in terms of a particular passage.” I did not know for certain in that moment simply because the questioning attorney specifically instructed me *not to look* at Sheha. Nonetheless, as discussed above, I testified that storing privacy and permission settings on the server would have been at minimum obvious (IPR2023-00097, Ex. 2003, at 157:14-21) and that “it would be a far more efficient design to” have “privacy settings or groups” “stored on the server” “as opposed to having to constantly access that information on the target’s [sic] device itself” (IPR2023-00097, Ex. 2003, at 156:1-19). Moreover, I note again that as I discussed above in my declaration for this matter, Sheha discloses that the group database is stored in

the ODAS server, which teaches or at least renders obvious having privacy settings stored on Sheha's remote ODAS server. *See supra* §VIII.A.2.a.iv.

[0457] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “conceded at [my] deposition that” Sheha’s reference to “this information” at Sheha’s 11:55-12:4 is “in the landline description [and] ties the ‘define a group of specific users’ and ‘group data’ disclosures to the ‘landline-to-landline position request.’” IPR2023-00097, Paper 13, at 25 (citing IPR2023-00097, Ex. 2004, at 185:14-188:5). I did not concede that the cited portion of Sheha “ties the ‘define a group of specific users’ and ‘group database’ disclosures to the ‘landline-to-landline position request.’” At 187:22-188:5 of Ex. 2004 of IPR2023-00097, I was asked whether “this information” in Sheha’s sentence at 11:65-12:1 is “referring to this information that’s been discussed in the previous three sentences – four sentences,” and I said, “Right.” And I subsequently testified that “this information” in one of the previous sentences is “referring to the telephone number and its associated position information.” IPR2023-00097, Ex. 2004, at 189:2-14. Sheha makes clear that mobile telephones and landline telephones can both have position information associated with their numbers. E.g., Sheha, 9:66-10:4, 10:44-47, 10:66-11:8. I did not at all testify that Sheha’s “define a group of specific users” and “group database” disclosures are tied to the “landline-to-landline position request.” As I discussed at deposition and in my declaration for this

matter, Sheha discloses that mobile-to-mobile, mobile-to-landline/landline-to-mobile, and landline-to-landline embodiments operate similarly. E.g., Sheha, 4:13-18, 4:59-62, 10:44-47. *See, e.g., supra* §VIII.A.2.a.iv.

[0458] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “conceded” that Sheha’s “No Phone Call embodiment descriptions were ambiguous.” IPR2023-00097, Paper 13, at 26 (citing IPR2023-00097, Ex. 2003, 28:16-29:7, 29:19-30:14, 29:5-32:4). I did not concede that. At 28:16-29:10 of Ex. 2003 in IPR2023-00097, I stated that the “in one embodiment” phrase in Sheha’s sentence at 11:61-63 is “potentially a little more ambiguous” *in isolation*, but that “given the overall scope of Sheha,” that “sentence is applicable to both mobile and landline.” At 29:5-30:18 of Ex. 2003 in IPR2023-00097, I gave substantially the same testimony—that the sentence is “ambiguous” in isolation, but “given the full scope context of this whole paragraph and the whole patent itself – is also applicable to mobile embodiments.” As I’ve discussed, Sheha at 11:58-12:7 makes clear that the paragraph’s discussion that follows also applies to mobile-to-mobile, which Sheha elsewhere says works similar to landline-to-landline and mobile-to-landline, which has “the same” “objectives” (Sheha, 4:13-17), as I’ve discussed above. And at 31:19-32:4 of Ex. 2003 in IPR2023-00097, I was only asked whether Sheha at 11:58-61 makes “reference to the ODAS database,” and I said that *particular* paragraph of Sheha was “not getting into” that

level of detail on “any specific system component.” Sheha discusses such details elsewhere. *See supra* §VIII.A.2.a.iv.

[0459] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I was “speculating about how the ‘group database’ of Sheha could have been used to exchange position information between mobile devices without initiating a phone call” and that I “went beyond the disclosures in Sheha, was not able to articulate how the technology at the time would have supported using a group database for mobile device position exchanges and admitting [sic] that such methodology would have been costly (‘\$500 data bill’) and impractical (‘impact battery power’).” IPR2023-00097, Paper 13, at 27-28 (citing IPR2023-00097, Ex. 2003, at 69:3-71:20). I disagree that my testimony went beyond Sheha’s disclosure and in the cited testimony I was not asked to “articulate how the technology at the time would have supported using a group database for mobile device position exchanges.” However, I explained that there would have been many “different embodiments” within the POSA’s ordinary skill that are consistent with Sheha’s disclosure where the “location would be stored on the ODAS.” IPR2023-00097, Ex. 2003, at 70:17-71:12. I also did not testify that any such methodology would be “costly” or “impractical.” I explained that a POSA would have known to implement “different ways of kind of calibrating or controlling” the frequency of location reporting using “location settings” because the frequency

“[c]ould impact batter power” and “you wouldn’t necessarily want to just say, Hey, I’m going to keep my data fresh every two minutes, and wind up with a \$500 data bill at the end of the month.” IPR2023-00097, Ex. 2003, at 70:17-71:20. *Some* users, however, might find such costs worth paying to have near real-time location monitoring. POSAs would have known how to provide settings to allow each user to balance trade-offs of freshness of location reporting vs. power consumption and commercial service costs, all of which were well within a POSA’s level of ordinary skill to address, and none of which were non-obvious. The challenged patent’s claims recite no requirements about cost, battery-power, or how “fresh” the location data must be.

[0460] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I “admitted” at deposition that Sheha’s disclosure that “using the authorization and authentication protocols a user can request the position of a mobile device, similarly to requesting the position of a landline device” (Sheha, 12:4-7) “merely indicates that requesting position information for a landline or mobile device may both involve using a login and password, i.e., authorization and authentication protocols.” IPR2023-00097, Paper 13, at 30-31 (citing IPR2023-00097, EX2003, at 73:13-22). I understand that Mullen further argued that I attempted “to change this testimony on redirect” in a way that “contradicts” my “initial understanding and the plain text of Sheha.” IPR2023-00097, Paper 13, at 31 (citing IPR2023-

00097, Ex. 2004, at 205:17-206:5). As explained below, I disagree with Mullen's characterization of my testimony.

[0461] At 73:13-22 of Ex. 2003 in IPR2023-00097, I was asked, "What is your understanding of the language 'similarly to' in the context of that sentence" in Sheha at 12:4-7. I responded that "[o]ne way to look at it,...if you view...authorization and authentication as equating to log-on and password submission, then...the need for a log-on and password wouldn't be any different or much different between landline and mobile." That is, "[o]ne way" in which landline and mobile embodiments are "similar" is that they have the same "need for a log-on and password." That "need for a log-on and password" is to access various services provided by the ODAS and to verify what access permissions the requesting user has, including to other users' location information, "similarly" in landline and mobile embodiments, as I have explained elsewhere in this declaration.

[0462] That is what I explained at deposition as well at the testimony Mullen cited at IPR2023-00097, Ex. 2004, at 205:17-206:5. There I testified that Sheha at 11:55-12:7 says that "A user can request the position of a mobile device, similarly to requesting the position of a landline device," which I agreed means that if a user requests the position of a mobile device, that will involve the use of

that group database and authorization and authentication protocol. IPR2023-00097, Ex. 2004, at 205:17-206:5.

[0463] Thus, I disagree with Mullen that I changed my testimony and deposition and I disagree that my testimony contradicts any of my other testimony or Sheha's disclosure. My testimony was, in fact, consistent with Sheha's disclosure, as I explained above.

[0464] I am aware that in IPR2023-00097 (575 Patent), Mullen argued that I "confirmed that" Sheha's disclosure at 4:52-58 "does not refer to Figure 5." IPR2023-00097, Paper 13, at 44 (citing IPR2023-00097, Ex. 2003, at 85:6-9). I did not confirm that Sheha's disclosure at 4:52-58 does not refer to Figure 5. Instead, all I agreed was that Sheha at 4:52-58 "does not contain the words 'Figure 5.'" IPR2023-00097, Ex. 2003, at 85:6-9. To the extent Mullen is characterizing my deposition testimony as being that Sheha at 4:52-58 is unrelated to Sheha's Figure 5, that was not my testimony and I disagree with Mullen's characterization. Sheha at 4:52-58 says that embodiments include "the mobile telephone" "be[ing] able to provide navigation information, such as route information in the form of real-time driving directions, or else a map and address of the destination telephone number can be displayed on the mobile telephone." Sheha's FIG. 5 is consistent with that disclosure as it illustrates an "information window 30" that displays "a map location 33 of the caller, and the user's location position information" and

“can also provide a driving route 29.” Sheha, 9:23-39. Thus, in my opinion, Sheha at 4:52-58 is related to Sheha’s FIG. 5.

I declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: 11-01-2024



X. APPENDIX: CLAIM LISTING

The following claim listing assigns labels (e.g., [1A], [1B], etc.) to certain claim elements for ease of reference.

Claim 1
[1PRE] A method comprising:
[1A] obtaining a location of a first wireless telephone;
[1B] transmitting said location from said first wireless telephone to a remote server;
[1C] changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;
[1D] transmitting said location from said remote server to at least one of said users of said list of users;
[1E] determining a second location associated with one of said plurality of wireless telephones; and
[1F] providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.
Claim 2
The method of claim 1, wherein said changing comprises adding an additional user to said list of users.
Claim 3
The method of claim 1, further comprising transmitting the address of said location to said at least one of said users of said list of users.
Claim 4
The method of claim 1, further comprising:
[4A] obtaining the address of said location from a remote information provider; and
[4B] transmitting the address of said location to said at least one of said users of said list of users.
Claim 5
The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones.

Claim 6
The method of claim 1, further comprising determining a third location associated with one of said plurality of wireless telephones.
Claim 7
The method of claim 1, further comprising:
[7A] receiving said location by at least one of said plurality of wireless telephones; and
[7B] displaying the name of said location on said at least one of said plurality of wireless telephones.
Claim 8
The method of claim 1, further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.
Claim 9
The method of claim 1, further comprising:
[9A] receiving said location by at least one of said plurality of wireless telephones; and
[9B] displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location.
Claim 10
The method of claim 1, wherein the location is obtained by way of manual input that is received by way of a locate button provided on said first wireless telephone.
Claim 11
The method of claim 1, further comprising: determining a third location of a device based on the IP address of said device; and transmitting said location to said device.
Claim 12
The method of claim 1, further comprising: receiving manual input for a third location wherein said third user is associated with said manually input third location.
Claim 13
[13PRE] A method comprising:
[13A] determining a location of a first wireless telephone;
[13B] transmitting said location from said first wireless telephone to a remote server;
[13C] changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

[13D] transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;
[13E] determining a second location associated with said wireless telephone associated with said one user; and
[13F] providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location.
Claim 14
[14PRE] A method comprising:
[14A] obtaining a location of a first wireless telephone;
[14B] transmitting said location from said first wireless telephone to a remote server;
[14C] changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and
[14D] transmitting said location from said remote server to at least one of said users of said list of users;
[14E] receiving manual input for a second location;
[14F] determining an identity of a second user for a device by way of a login; and
[14G] transmitting said location to said device,
[14H] wherein said second user is associated with said manually input second location.
Claim 15
[15PRE] A method comprising:
[15A] obtaining a location of said first wireless telephone;
[15B] transmitting said location from said first wireless telephone to a remote server;
[15C] changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;
[15D] transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;
[15E] determining a second location associated with said wireless telephone associated with said one user; and

[15F] providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location.
Claim 16
The method of claim 15, wherein said changing comprises adding an additional user to said list of users.
Claim 17
The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users.
Claim 18
The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.
Claim 19
The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user.
Claim 20
The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user.
Claim 21
The method of claim 15, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.
Claim 22
The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.
Claim 23
The method of claim 13, wherein said changing comprises adding an additional user to said list of users.
Claim 24
The method of claim 13, further comprising transmitting the address of said location to at least one of said users of said list of users.
Claim 25
The method of claim 13, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.

Claim 26
The method of claim 13, further comprising determining a third location associated with said wireless telephone associated with said user.
Claim 27
The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user.
Claim 28
The method of claim 13, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.
Claim 29
The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.
Claim 30
[30PRE] A method comprising:
[30A] obtaining a location of a first wireless telephone; ¹³
[30B] changing, at the direction of said first wireless telephone, a list of users on a remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;
[30C] transmitting said location from said remote server to at least one of said users of said list of users;
[30D] determining a second location associated with one of said plurality of wireless telephones; and
[30E] providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location.
Claim 31

¹³ Claim 30 originally recited “*said first wireless telephone*,” and was changed by Certificate of Correction to recite “*a first wireless telephone*.” EX1002 at 526; EX1001, p.29.

The method of claim 30, wherein said changing comprises adding an additional user to said list of users.
Claim 32
The method of claim 30, further comprising transmitting the address of said location to said at least one of said users of said list of users.
Claim 33
The method of claim 30, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users.
Claim 34
The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones.
Claim 35
The method of claim 30, further comprising determining a third location associated with one of said plurality of wireless telephones.
Claim 36
The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones.
Claim 37
The method of claim 30, further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.
Claim 38
[38PRE] A method comprising:
[38A] obtaining a location of said first wireless telephone;
[38B] changing a list of users on a remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;
[38C] transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;
[38D] determining a second location associated with said wireless telephone associated with said one user; and
[38E] providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location.

Claim 39
The method of claim 38, wherein said changing comprises adding an additional user to said list of users.
Claim 40
The method of claim 38, further comprising transmitting the address of said location to at least one of said users of said list of users.
Claim 41
The method of claim 38, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.
Claim 42
The method of claim 38, further comprising determining a third location associated with said wireless telephone associated with said user.
Claim 43
The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user.
Claim 44
The method of claim 38, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.
Claim 45
The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.
Claim 46
The method of claim 38, wherein location is obtained by way of manual input manual input that is received by way of a locate button provided on said first wireless telephone.