

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. IPR2025-00021
Patent No. 11,096,039

DECLARATION OF DAVID H. WILLIAMS

Google Exhibit 1003 Google v Mullen IPR2025-00021

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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 1-19 (the “challenged claims”) of U.S. Patent No. 11,096,039 (“the ’039 patent”). 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 ’039 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 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, 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 the 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 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 cellphones 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. 11,096,039 (“the ’039 patent”)
1002	Prosecution History of U.S. Patent No. 11,096,039
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”)
1008	International Patent Application Publication No. WO 02/17075 (“Randall-WIPO”)
1013	U.S. Patent No. 6,968,179 (“De-Vries”)
1015	U.S. Patent No. 6,714,791 (“Friedman”)
1016	U.S. Patent Application Publication No. 2002/0145561 (“Sandhu”)
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”)
1023	U.S. Patent No. 6,084,951 (“Smith”)
1024	U.S. Patent No. 6,714,793 (“Carey”)
1025	U.S. Patent No. 6,415,224 (“Wako”)
1027	Korean Patent Application Publication No. 10-2001-0091381 (“Han”)
1028	U.S. Patent No. 7,080,124 (“Shankar”)
1029	U.S. Patent No. 6,456,854 (“Chern”)
1030	U.S. Patent No. 6,754,665 (“Futagami”)
1031	U.S. Patent No. 6,292,657 (“Laursen”)
1032	U.S. Patent Application Publication No. 2003/0097596 (“Muratov”)
1035	International Patent Application Publication No. WO 00/22860 (“Degnbol”)
1040	U.S. Patent No. 7,146,407 (“McNulty”)
1041	U.S. Patent Application Publication No. 2003/0074209 (“Tobin”)
1042	U.S. Patent No. 6,813,499 (“McDonnell”)
1043	U.S. Patent No. 6,133,853 (“Obradovich”)
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”)

1047	U.S. Patent No. 6,622,015 (“Himmel”)
1048	U.S. Patent Application Publication No. 2004/0051726 (“Martyn”)
1049	U.S. Patent No. 5,815,412 (“Allard”)
1050	U.S. Patent No. 6,668,173 (“Greene”)

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 ’039 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 '039 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 '039 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 '039 PATENT

[0055] The '039 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] The '039 Patent “relates to systems and methods for remotely determining a device’s location.” EX1001, 1:17-20. According to the specification, “any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed.” EX1001, 4:27-30. “[E]very user may assign rights (e.g. govern the security) to whom may or may not locate him/her.” EX1001, 4:60-62.

[0057] Figure 6 (copied below) shows a display screen that provides location information. EX1001, FIG. 6, 7:23-33.

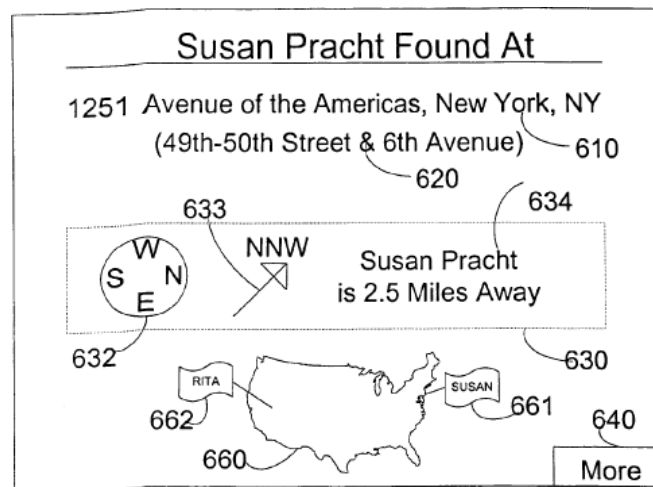


FIG. 6

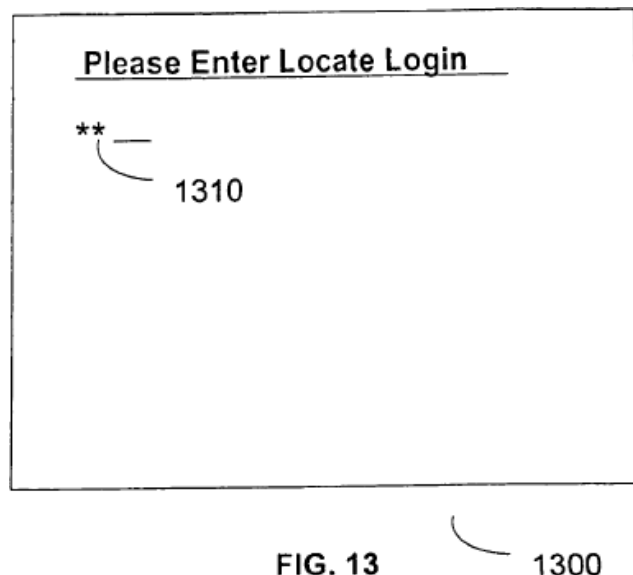
EX1001, FIG. 6

[0058] Available location information, “[d]epending on what scope the requesting user has access to...may include, for example, the country, state, city, exact location, or any combination thereof of location information to the user.”

EX1001, 7:36-39. A map may be included to show locations of users. EX1001, 7:51-8:21, 8:40-51.

[0059] According to the '039 patent, the amount of information provided on the display screen is limited to the scope of the requesting user's access rights. EX1001, 9:3-9; FIG. 8. A user may select which user(s) may access his or her location information and what information a specific user may access. EX1001, 9:10-26; FIGs. 9-10. A user may also set up alerts depending on the location of other users' phones. EX1001, 9:27-52; *id.*, FIGs. 11-12. For example, a user might receive an alert "if the requested user is in a specific city or the same city as the user of display 1100, is within a certain distance, or if a user located the user of display 1100." EX1001, 9:27-36; *id.* 9:36-52, FIGS. 11-12.

[0060] The '039 patent also describes a "login feature," where "user profiles would be used as the locating identifier and the devices into which these profiles are logged into (recognized by) would allow for the user to be located." EX1001, 9:53-60. As shown below in Figure 13, a user may log into a locating device by entering login 1310. EX1001, 9:60-65.



EX1001, FIG. 13

[0061] The login feature may also require a password associated with a user's profile, identity, or cell phone functionality access. EX1001, 10:12-15; FIG. 14.

[0062] A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. EX1001, 11:56-58.

"Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." EX1001, 11:58-60. After a location is requested, access rights to the requested location for the requesting device and/or user are checked. EX1001, 11:64-12:14. If the requestor has access rights, location information is provided to the requestor. EX1001, 12:14-16. If the requestor has not been assigned access rights, then the requestor is informed that he or she does not have access rights to obtain the location information. EX1001, 12:28-32.

B. Prosecution History of the '039 Patent

[0063] Application 11/841,750, which issued as the '039 patent, had a lengthy prosecution history lasting fourteen years and including fourteen office actions. *See* EX1002. Throughout prosecution, the Applicant argued that certain features were not disclosed in the prior art. The Examiner did not find these arguments persuasive, largely based on the conventional nature of the elements at issue. For example, the Examiner noted that “logins are notoriously old in the art and are used to identify a user.” EX1002, 75.

[0064] Eventually, after unsuccessfully arguing for the patentability of the claims for over a decade, the Applicant significantly amended the independent claims, adding language related to location-based events including that location-based events are “operable to be provided” and selectable from a list of at least three types of location-based events. EX1002, 452-453, 419-420. A notice of allowance followed, which did not include reasons for allowance. EX1002, 466-470.

C. The Challenged Claims

[0065] The '039 patent's two independent claims 1 and 2 each recite a “remote system” involved in functionality related to “location-based event[s].”

[0066] Claim 1 recites that a first wireless device's location is “operable to be recorded on said remote system” after user information has been

identified on the first wireless device by receiving a login and password. A “location-based event is operable to be provided” based on the first wireless device’s location, and is selectable from “at least three types of location-based events on a device.” A “location-based event notification is operable to be provided on said device as a result of...access rights of said device from said first wireless device.”

[0067] In claim 2, the “remote system” is “operable to perform a trigger of a request of location information of a wireless telephonic device for a device at an occurrence of a location-based event.” The “location-based event” is selectable from “at least three types of location-based events” on the “device.” “[A]ccess rights are operable to be obtained for said device,” as a result of which “a location-based event notification is operable to be provided on said device.”

[0068] Each of the dependent claims recites further functionality that was routine and conventional before the ’039 patent—including GPS, which the ’039 patent admits was well known. EX1001, 1:21-27.

VI. CLAIM INTERPRETATION

[0069] 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

[0070] 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

[0071] The '039 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[,]” Ex. 1001, 1:41-43, and more broadly, “provid[ing] systems and methods which better utilize the information about a device’s location.” Ex. 1001, 1:31-33.

[0072] 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.

[0073] 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.

[0074] 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 09-30-2024). 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->

[0075] 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, where 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.

[0076] 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 time³:

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

services/enhanced911/archives/factsheet_requirements_012001.pdf at p.3 (last checked 09-30-2024).

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).

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 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

[0077] 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,

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

enabling new use cases, and enhancing particular use case(s) and overall application customer experience.

[0078] 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”

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).

with “improved user interface” yielded over 84,000 results,⁹ and “navigation” instead of “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.

[0079] 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.

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).

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

B. Sheha (EX1005)

[0080] 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 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.

[0081] 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.

[0082] 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).

[0083] 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.

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.

	“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>], 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
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	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.
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.
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 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</i>
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	<i>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’]” 17:29-31.</i>
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
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	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 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
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	<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 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' because the transfer is triggered by the telecommunication event</i>]." 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.</i>, '<i>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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[0084] 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 '039 patent based on the filing date of Sheha's provisional application.

[0085] As discussed in Sections VIII.A-D below, in my opinion a POSA would have understood that Sheha, in combination with other references, renders obvious all claims of the '039 patent. *See also infra* §VIII.A.1 (additional discussion of Sheha).

C. Randall (EX1007)

[0086] 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].

[0087] 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 '039 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

[0088] As discussed in Sections VIII.E-F below, in my opinion a POSA would have understood that Randall, alone or in combination with other references, renders obvious all claims of the '039 patent. *See also infra* §VIII.E.1 (additional discussion of Randall).

D. Degnbol (EX1035)

[0089] Degnbol is titled “A method and a system for transmitting data between units” and relates to “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, 1:8-10. According to the face of the document, Degnbol (EX1035) is an international patent application published on April 20, 2000 as International Publication No. WO 00/22860 from an international patent application filed on October 12, 1999 as Application No. PCT/DK99/00548. I have been informed by counsel that Degnbol qualifies as prior art to the '039 patent based on Degnbol’s publication date. *See also infra* §VIII.A.2 (additional discussion of Degnbol).

E. McNulty (EX1040)

[0090] McNulty is titled “Data synchronization mechanism for information browsing systems” and relates to “organizing information accessible to two or more information browsing devices.” McNulty, 1:7-9. According to the

face of the document, McNulty (EX1040) is a United States patent issued on December 5, 2006 as Patent No. 7,146,407 from an application filed on October 22, 2001 as Application No. 10/037,489. I have been informed by counsel that McNulty qualifies as prior art to the '039 patent based on McNulty's filing date. *See also infra* §VIII.A.3 (additional discussion of McNulty).

F. Tobin (EX1041)

[0091] Tobin is titled "User device with service finding and purchasing functionality" and relates to "[a] user device couple[d] to a position determining system to determine relative positions of the device and a service vendor" and "[a] display may be coupled to the device to display the relative positions and the information about the service vendor on a map." Tobin, [0006]. According to the face of the document, Tobin (EX1041) is a United States patent publication published on April 17, 2003 as Publication No. 2003/0074209 from an application filed on October 15, 2001 as Application No. 09/981,342. I have been informed by counsel that Tobin qualifies as prior art to the '039 patent based on Tobin's filing date. *See also infra* §VIII.B.1 (additional discussion of Tobin).

G. McDonnell (EX1042)

[0092] McDonnell is titled "Providing location data about a mobile entity" and relates to "the provision and use of location data concerning mobile entities." McDonnell, 1:6-7. According to the face of the document, McDonnell

(EX1042) is a United States patent issued on November 2, 2004 as Patent No. 6,813,499 from an application filed on March 23, 2001 as Application No. 09/816,681. I have been informed by counsel that McDonnell qualifies as prior art to the '039 patent based on McDonnell's filing date. *See also infra* §VIII.C.1 (additional discussion of McDonnell).

H. Obradovich (EX1043)

[0093] Obradovich is titled "Personal communication and positioning system" and relates to "communicating and retrieving position and position related data." Obradovich, 1:16-17. According to the face of the document, Obradovich (EX1043) is a United States patent issued on October 17, 2000 as Patent No. 6,133,853 from an application filed on July 30, 1998 as Application No. 09/126,936. I have been informed by counsel that Obradovich qualifies as prior art to the '039 patent based on Obradovich's issuance date. *See also infra* §VIII.D.1 (additional discussion of Obradovich).

I. De-Vries (EX1013)

[0094] De-Vries is titled "Place specific buddy list services" and relates to "communications and messaging systems and services, and more particularly to such systems and services to facilitate communication based on location and inter-relationships of people." De-Vries, 1:5-8. According to the face of the document, De-Vries (EX1013) is a United States patent issued on November

22, 2005 as Patent No. 6,968,179 from an application filed on July 27, 2000 as Application No. 09/626,170. I have been informed by counsel that De-Vries qualifies as prior art to the '039 patent based on De-Vries's filing date. *See also infra* §VIII.E.2 (additional discussion of De-Vries).

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

[0095] I have been asked to provide my opinion concerning whether claims 1-19 of the '039 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 1-19 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), Degnbol (EX1035), McNulty (EX1040)	1-6, 13	Obviousness
2	Sheha, Degnbol, McNulty, Tobin (EX1041)	7-9, 19	Obviousness
3	Sheha, Degnbol, McNulty, McDonnell (EX1042)	10-12	Obviousness
4	Sheha, Degnbol, McNulty, McDonnell, Obradovich (EX1043)	14-18	Obviousness
5	Randall (EX1007), De-Vries (EX1013)	1-8, 10- 19	Obviousness
6	Randall, De-Vries, Tobin	9	Obviousness

A. Ground 1: Claims 1-6 and 13 Would Have Been Obvious over Sheha in View of Degnbol and McNulty

[0096] As explained in this section below, in my opinion claims 1-6 and 13 of the '039 patent would have been obvious to a POSA in view of the combined teachings of Sheha (EX1005), Degnbol (EX1035), and McNulty (EX1040).

1. Discussion of Sheha (EX1005)

[0097] 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, 6:39-47, 7:21-22, 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.

[0098] 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, 2:60-64, 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, 6:39-47, 7:21-22, 10:5-16, 10:66-11:51, 7:19-23.

[0099] 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.

[0100] 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. Every telephone account user has a username and password for the ODAS, by which the ODAS establishes that a user is genuine and verifies the level of authority each user is granted to receive different services (e.g., location services). Sheha, 8:40-50, 11:55-12:7. As noted above, users can define specific groups of other users to have access to their location information. Sheha, 11:63-12:1.

[0101] 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. 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, 11:10-51, 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.

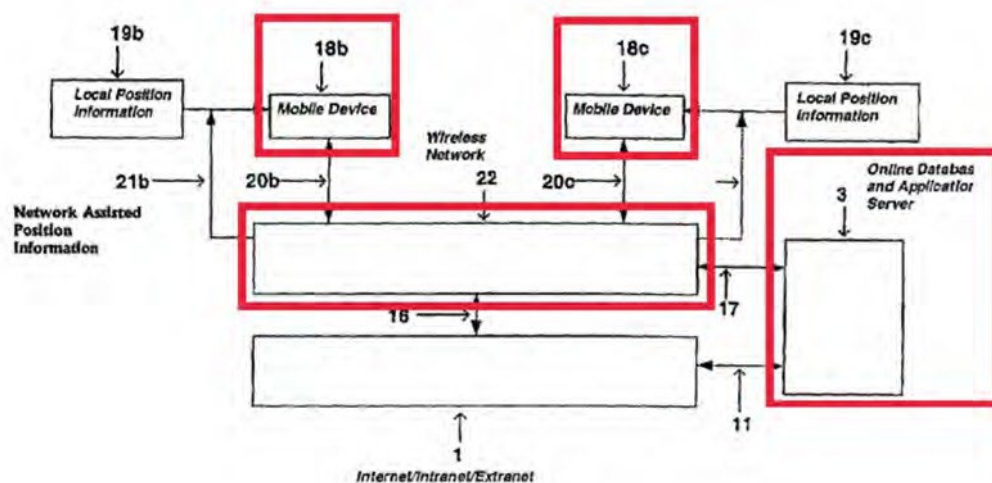


FIG. 3
Sheha, FIG. 3 (annotated)

[0102] Notifications can be displayed, including maps and directions.

E.g., Sheha, FIG. 5 (below). A Caller-ID notification window can display map information including the location of each device. Sheha, 9:4-28.

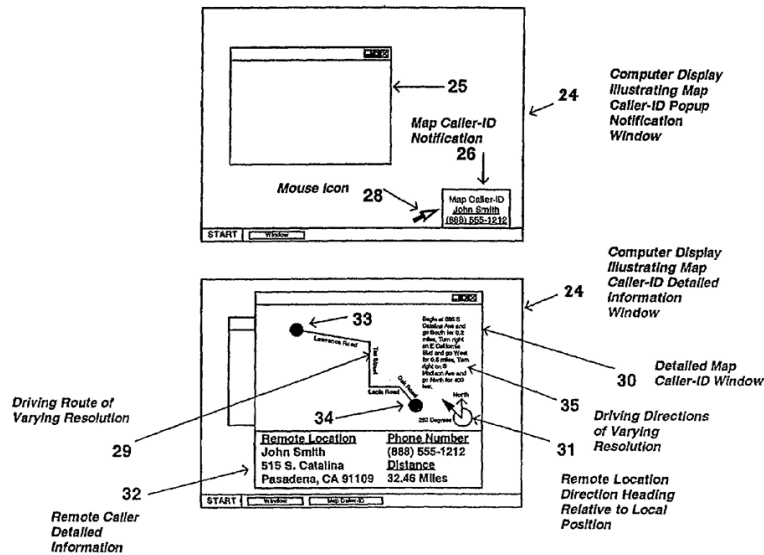


FIG. 5
Sheha, FIG. 5

2. Discussion of Degnbol (EX1035)

[0103] Degnbol describes notifying a user when another pre-selected user enters a pre-determined area or into proximity to a particular location.

Degnbol, Abstract.

[0104] Users can establish various alert parameters. For example, a user can establish a distance preference specifying that alerts be generated when a buddy enters a predetermined range. Degnbol, 11:5-11. The “predetermined

range” “may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street” or correspond to a distance. Degnbol, 6:6-17.

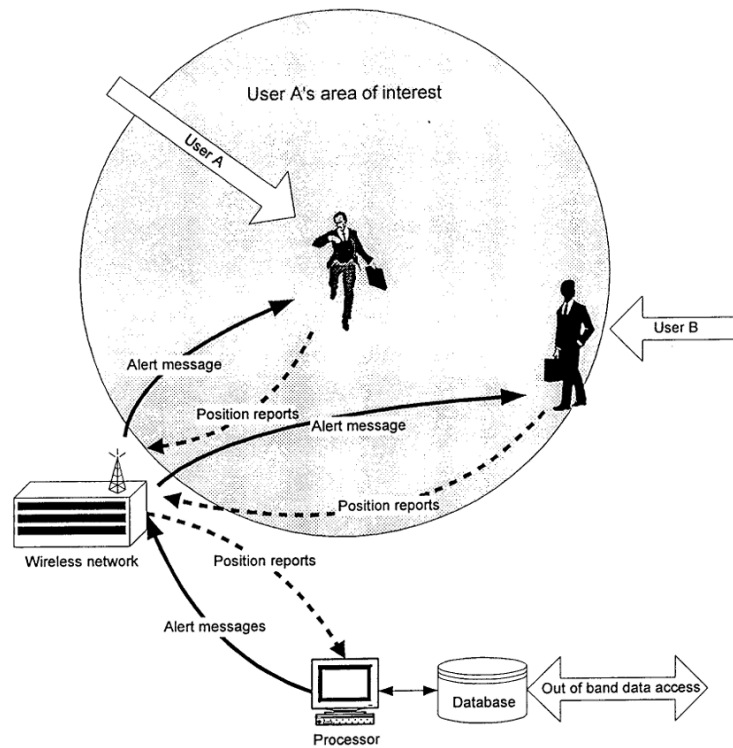


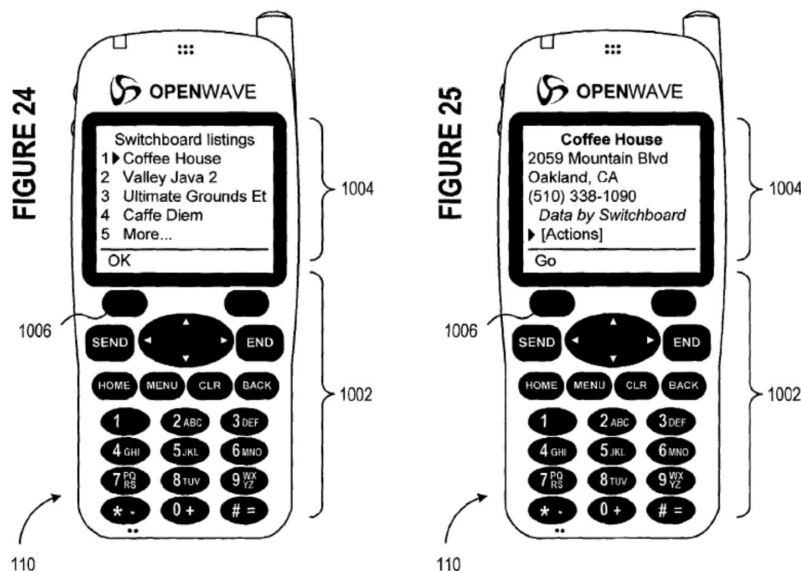
Fig. 1

Degnbol, FIG. 1

3. Discussion of McNulty (EX1040)

[0105] McNulty describes a system that organizes information stored on a server system for access through a mobile device, such as a wireless telephone. McNulty, 2:19-23. The system displays a list of data objects that can be accessed through the mobile device using user-interface gestures such as pressing a key. McNulty, 2:38-44.

[0106] Various display interfaces are disclosed, many of which relate to selecting an item from a list, which causes display of location information. E.g., McNulty, FIGs. 24-25. For example, FIG. 24 (below) shows a list of several coffee shops that a user can select to locate, transitioning to the display interface of FIG. 25 (below), which shows the address of the selected coffee shop. McNulty, FIGS. 24-25, 16:44-56.



McNulty, FIGs. 24, 25

4. Discussion of Sheha-Degnbol-McNulty Combination

[0107] As I discussed above in Section V.A, the '039 patent is related to wireless devices and using those wireless devices to determine locations of selected users. As I discussed above in Sections VIII.A.1-3, Sheha, Degnbol, and McNulty are also related to mobile devices and/or applications for mobile devices (e.g., positioning). As I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Sheha, Degnbol, and McNulty, based on the 1990s Federal mandate to update wireless devices and carrier network location-based technologies and services years and the possibility of monetizing their heavy investments. As I discussed above in Section VII.A, the device and wireless-network carriers had reason to capitalize on the additional capabilities and associated benefits that I discussed in that section of having location as part of the data set/app functionality would provide. A POSA would have understood that Sheha's system provides location sharing between wireless devices, including configuring location access and providing displayable location information. To the extent certain features of the challenged claims may not be explicitly disclosed in Sheha, such features were conventional and well-known features that would have been obvious additions to the system, as I discussed below in this section and in the sections below (§§VIII.A-D).

[0108] Sheha's system can provide user location information, as well as related notifications. *See, e.g.*, Sheha, 11:40-51, FIG. 4. A POSA, when considering when to send a location-related notification, would have looked to references such as Degnbol to identify such triggers. A POSA would have had a reasonable expectation of success applying such alerts because Sheha's system already identifies and shares location information and Degnbol illustrates additional examples of when and how to do so, which would easily be applied using Sheha's hardware with at most minor software modifications.

[0109] A POSA would further have understood that Sheha's system can be enhanced by displaying a variety of configuration options, selectable via user interface, as described in McNulty (FIGs. 24-25, 11:54-59, 16:44-56). Displaying user-selectable options on an interface was well-known in the art at the time of the alleged invention. *See infra* §VIII.A.5.a.v (citing as corroboration of POSAs' background knowledge McNulty (EX1040)). A POSA would have understood that there would need to be some means of accepting user input to configure the alert rules, and an obvious choice would be selection via user interface. In addition, because such functionalities were well-known, a POSA would have had a reasonable expectation of success in incorporating such functionality from McNulty into the Sheha wireless devices.

5. Mapping of Sheha-Degnbol-McNulty Combination to Claims 1-6 and 13

[0110] As explained in this section below, in my opinion a POSA would have understood that the Sheha-Degnbol-McNulty combination meets all limitations of claims 1-6 and 13 of the '039 patent, and therefore renders those claims obvious.

a. Claim 1

[0111] As explained in this section below, in my opinion a POSA would have understood that the Sheha-Degnbol-McNulty combination meets all limitations of claim 1 of the '039 patent, and therefore renders claim 1 obvious.

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

[0112] Claim 1's preamble simply recites "A system 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 the Sheha-Degnbol-McNulty combination discloses the preamble. Sheha discloses a "***system*** and method for providing real-time position information of one party to another party." Sheha, Abstract. Sheha further discloses systems enabling users of telephone devices (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 the locations of other telephone devices. Sheha, Abstract, 8:40-50.

As I will discuss below, it is my opinion that Sheha in view of Degnbol and McNulty meets all the limitations of claim 1.

ii. Element [1A]: a remote system,

[0113] Sheha's system includes an "online database and application server (ODAS)," which is *remote* from wireless telephones. Sheha, 7:20-23, FIGs. 1-3. For example, Figure 3 (annotated below) shows a mobile-to-mobile type of a configuration of the Sheha system: it includes two mobile devices (annotated red below), which are identified as mobile devices 18b and 18c, that both communicate with Sheha's Online Database and Application Server, or the "ODAS" 3 (annotated blue below), which is located remotely from the mobile devices via a wireless network (annotated green below), labeled as wireless network 22, with which the mobile devices 18b-18c communicate via their respective wireless connections 20b-20c. Sheha, 10:66-11:51.

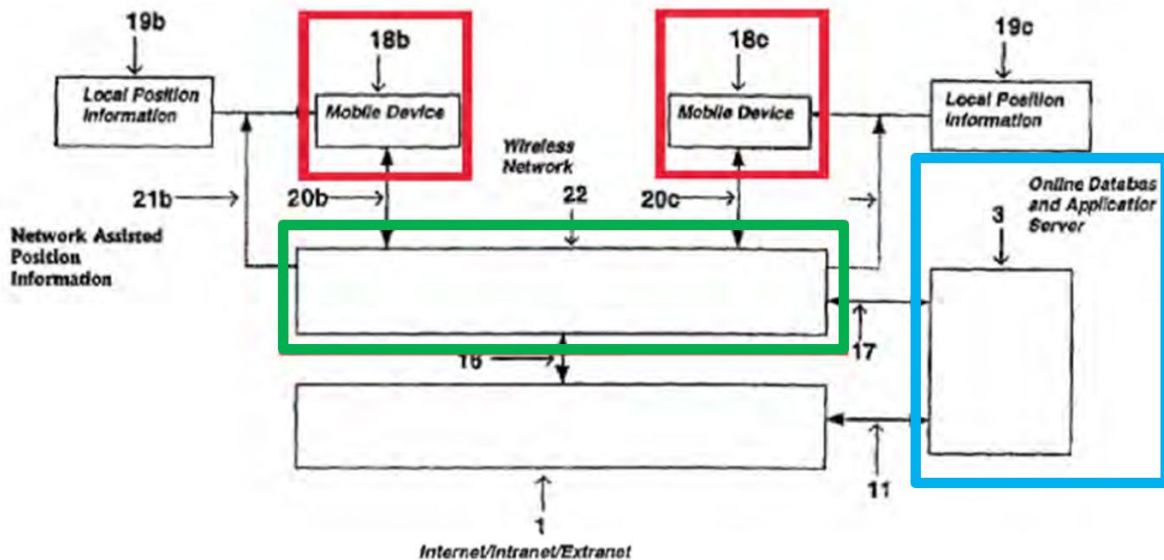


FIG. 3

Sheha, FIG. 3 (annotated)

[0114] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1A].

- iii. **Element [1B]: wherein user information is operable to be identified from a plurality of different user information by receiving at least a manually entered login from a first wireless device associated with said user information and a manually entered password associated with said login,**

[0115] Sheha describes identification of *user information* via *login* and *password*. “[E]very telephone account user has a ***username and password*** for the ODAS,” which “correlates both the origin and destination telephone ***users’ identifications*** to verify if the user is signed-on to the ODAS.” Sheha, 8:40-50. A

POSA would have understood that this information would generally be *manually entered via the first wireless device*. POSAs would have known that manual input on the wireless device was a typical, obvious, and predictable way with reasonable expectation of success for such a username and password to be submitted to the server by the user of the wireless device.

[0116] My testimony regarding POSAs' background knowledge with respect to manual input on a wireless device is corroborated by several references, as discussed in the paragraphs below.

[0117] Carey (EX1024) shows an example GUI that allows a user to enter a screen name, i.e., a username, and password to access instant messaging functionality provided by a remote service. Carey, FIG. 8, 7:67-8:10 ("As shown in FIG. 8, a wireless instant messaging sign on window 200 includes data fields for entry of the user's screen name 202 and password 204."). Therefore, Carey corroborates that manual input on the wireless device was a typical and obvious way for Sheha's username and password to be provided as shown and described in connection with FIG. 8 of Carey.

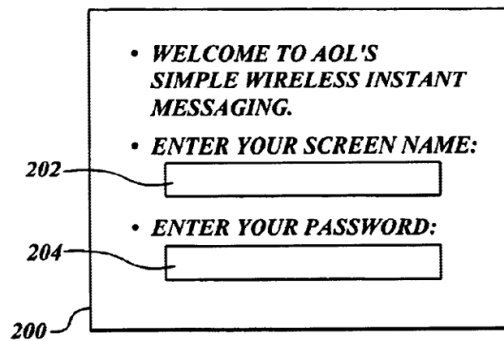


Fig. 8

Carey, FIG. 8

[0118] Laursen (EX1031) describes using a unique device ID to access a user account for a fleet managing system. Laursen, Abstract, 8:55-9:5. Laursen describes that a mobile station can display information on a display screen and on which user input can be provided. Laursen, 9:52-66. The user input can include “entering the correct username and password.” Laursen, 11:37-43. Therefore, Laursen’s entering of information on a display screen of a mobile station corroborates that manual input on a wireless device was a conventional way to provide usernames and passwords.

[0119] Muratov (EX1032) describes “protecting data within a portable electronic device to prevent unauthorized access to that data.” Muratov, Abstract. Muratov describes that the portable electronic device has a display “configured with a password entry portion...for entering a password.” Muratov, [0016]. The password can be entered through the “depression of buttons provided as part of the

portable electronic device for entering a password.” Muratov, [0016], *see also* [0038] (“the buttons 32 on the PDA 20 may be used to enter a password.”), [0104] (“Upon entry of a password at step 154 (i.e., using a stylus and the screen 21 or hardware buttons 32”). Therefore, Muratov’s entering of information on a display of a portable electronic device using “depression of buttons”, “a stylus”, etc., corroborates that manual input on a wireless device was a conventional way to provide security data like passwords.

[0120] Moreover, McNulty explicitly discloses manual entry of user information. *See* McNulty, 11:54-59 (“the user is identified according to the address of wireless telephone...manually entered as described above with respect to FIG. 10B”).

[0121] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha does not identify *user information from a plurality of different user information*. In my opinion, Mullen’s argument was incorrect. Sheha teaches that “**every telephone account number** has a username and password” (Sheha, 8:40-42), which POSAs would have understood means there are *a plurality of different user information* besides that for the *first wireless device* user. Sheha’s ODAS “**correlates**” the “users’ identifications to verify if the user is signed-on...using authentication and authorization protocols [that] establish that a user is genuine” (Sheha, 8:42-50), which POSAs would have understood means the

ODAS determines which of the many users of Sheha's system the username and password belong to (i.e., the ODAS *identifies the first wireless device's user information from a plurality of different user information* using the *login and password* received from the *first wireless device*).

[0122] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha discloses four discrete embodiments: landline-to-landline phone calls, landline-to-mobile phone calls, mobile-to-mobile phone calls, and no phone calls. I further understand that Mullen argued that Sheha at 8:40-50 describes the "landline-to-landline embodiment" and therefore that Sheha does not disclose any embodiment where the ODAS receives a login from a first wireless device. In my opinion, Mullen was incorrect. Sheha teaches using "authorization and authentication protocols to identify users that are permitted to access" other users' position information, and 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, 11:58-12:7. When a *first wireless device's* location is being accessed by another *device* user, "the ODAS...verifies, by using authorization and authentication protocols, if the user[s] of **both**" devices "are signed-on to the system." Sheha, 9:50-10:4. Sheha teaches that the ODAS uses the authorization and authentication protocols to verify that both users are signed on to access the ODAS's various services, including in

mobile-to-mobile embodiments. Sheha, 8:25-53 (ODAS uses “authentication and authorization protocols” that verify “username and password”), 11:20-23 (ODAS receives “users’ account information...for both mobile devices” in mobile-to-mobile embodiment as in landline-to-landline embodiment), 11:55-12:7.

[0123] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1B].

- iv. **Element [1C]: a location of said first wireless device is operable to be recorded on said remote system after said user information has been identified on said first wireless device and said location is associated with said user information and provided by said first wireless device to said remote system,**

[0124] In Sheha’s system, before the *first wireless device’s* user signs on to the ODAS, the user “is logged on to [the] wireless...device.” Sheha, 5:26-29. “The remote user that is logged on to [the] wireless...device” is then “verified by the networked server’s authentication and authorization protocol procedures.” Sheha, 5:26-29. Therefore, “*said user information has been identified on said first wireless device*” before the user signs on to the ODAS and interacts with “*said remote system,*” and the further actions that I discuss below occur “*after said user information has been identified on said first wireless device.*”

[0125] Sheha’s *first wireless device* determines its *location* and provides it to the ODAS in association with said user information. Sheha, 10:5-6

(“The location of the mobile device is typically calculated by the mobile device....”), 11:15-20 (same), 10:48-50 (“the mobile device...continually sends updated position information to the ODAS”), 11:23-37 (same), 2:25-29 (“Each remote unit... has access to its current position information” and “responds to a request for position information from a centralized server.”), 4:66-5:2 (“the system would request the position information from the remote mobile device”), 6:57-59 (“mobile telephone...obtain[s]” its own “local device’s position information”), 8:31-52 (“accompanying information, such as user identification information associated with each telephone number is also sent to the ODAS” for the “authentication and authorization protocols”), 9:61-10:4 (“Once the ODAS 3 has been notified of all the appropriate information, the system verifies, by using authorization and authentication protocols, if the user” is “signed-on to the system” and can “request the location of the mobile device”).

[0126] In this manner, “the position information of each device can be updated *in the ODAS*.” Sheha, 11:3-8. Thus, the “*location of said first wireless device is operable to be recorded on said remote system after*” the above-discussed actions are performed, meeting Element [1C].

[0127] Additionally, Degnbol illustrates how a “database” at a “central location[],” like Sheha’s ODAS, can record “status information on active units, including their latest reported position,” which is “dynamically updated,” like in

Sheha, for purposes of sharing the position information with other users. Degnbol, 22:10-18, 14:9-10 (“central locations (databases)”), FIG. 1 (showing “Database” at network server remote from users’ wireless devices), Table 2 (annotated below).

Unit ID	User Name	Update Time	Position	Alerted Users	Change In- dicator
jsmith@ domain. com	JohnS	1755:0 5	lat:long	JulieS	Yes

5

Table 2. POSITION Data

Degnbol, Table 2

[0128] POSAs would have had motivation and reasonable expectation of success based on Degnbol’s teachings to implement Sheha’s similar central server (ODAS) to “recei[ve] a position report message from the wireless” device, “check[] to see if the unit is associated with a user of the system” based on the identified user information, and “update[]” the “user’s record” in the ODAS’s database to “reflect[] the reported unit position.” Degnbol, 23:13-23.

[0129] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1C].

- v. **Element [1D]: a location-based event is operable to be provided based, at least in part, on said location of said first wireless device, wherein said location-based event is operable to be manually pre-selected from a list of at least three types of location-based events on a device,**

[0130] Degnbol describes at least three types of location-based events that can be selected on a device. Degnbol also describes “automatic notification of a user ‘A’” (i.e., at *a device*) “of the entry of pre-selected user ‘B’” (i.e., of a *first wireless device*) “into a pre-determined area (or proximity to a particular location),” where “[t]he location of users ‘A’ and ‘B’ is determined by reference to the position of their personal wireless communication unit, such as a mobile telephone.” Degnbol, Abstract, 1:7-13. This notification is “*a location-based event...operable to be provided based, at least in part, on said location of said first wireless device.*”

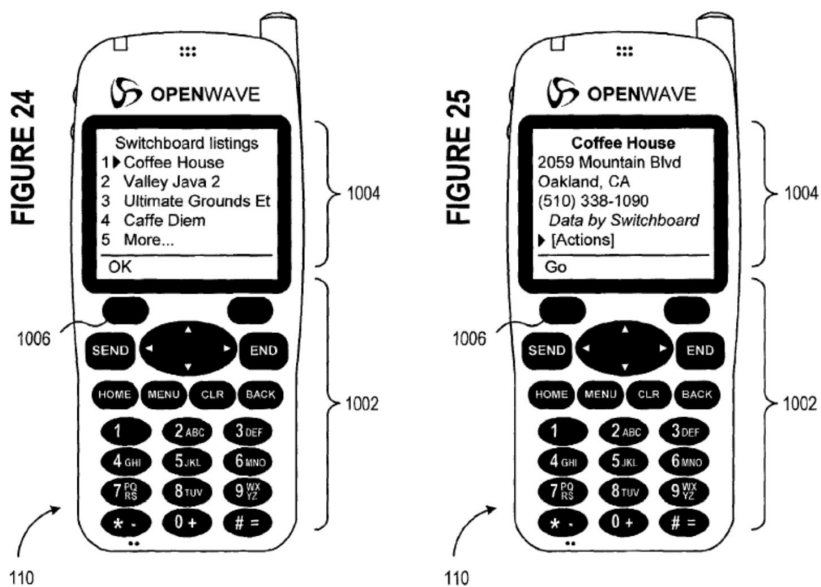
[0131] Degnbol teaches that the user of the *device* can “set[] various preferences...directly from the handset of the user[]’s cellular phone” with respect to “a ‘Buddy List’” of “users whose location and/or movements the user wishes to be notified of.” Degnbol, 9:32-10:3, 11:1-3. “Preferences can be configured on an individual Buddy basis” and “may include an ability to specify to be alerted only when certain criteria relating to distance, location, time or date are met.” Degnbol, 10:17-11:3, 18:5-7. The *device* user can “select[]” a “geographic area, such as a continent, country, district, city, co-ordinate range or a street,” to be notified when

the *first wireless device* enters that area. Degnbol, 6:1-8. For example, the user can “request to be alerted of the[ir] spouse’s arrival at a given area on his/her regular route home.” Degnbol, 13:17-21. Or the *device* user can “indicate[]” a “direct distance” to be notified when the *first wireless device* comes within that distance of the device. Degnbol, 6:10-17, 11:5-8. Either *device* can also be alerted that it was located by the other *device*. Degnbol, 21:4-6.

[0132] Thus, Degnbol describes more than three different types of location-based events, including (1) based on whether the buddy (i.e., *first wireless device*) is in a certain geographic area, (2) based on whether the buddy is within a certain distance of the device, (3) based on whether the buddy is in the same continent, (4) is in the same country, (5) is in the same district, (6) is within a coordinate range, (7) on a street, and (8) whether the user has been the subject of an alert to another user. Degnbol also describes configuring preferences for these events “directly from the handset of the user[’s] cellular phone.” Degnbol, 11:1-3. It would have been obvious to combine Degnbol’s disclosure of both selection of location-based events and manual entry using the handset of the phone with Sheha, to improve user ease (e.g., usability and utility of the location information because the user would not have to do the calculations themselves), given that such techniques were well-known and conventional to a POSA at the time of alleged

invention (which is also why a POSA would have had a reasonable expectation of success in doing so).

[0133] Moreover, manually selecting items from a list was also a well-known design choice to a POSA at the time of the alleged invention. For example McNulty (EX1040) describes various interfaces for a mobile device that a user can interact with to manually select items from a list of at least three selections. In one example, as shown in McNulty’s FIG. 24 (below left), a list of several coffee shops is displayed, and a user can select one of the coffee shops, with an example selection shown in FIG. 25 (below right). McNulty, FIGs. 24-25; 16:44-56.



McNulty, FIGs. 24, 25

McNulty also explicitly describes the wireless telephone accepting “manually entered” input. McNulty, 11:54-59.

[0134] As I discussed *supra* §VIII.A.4, POSAs would have had reason and a reasonable expectation of success to enhance Sheha’s system by displaying configuration options in a list from which each option is selectable via a user interface, per McNulty, and incorporating various location-alert settings as those options, per Degnbol, in order to more effectively provide location data.

[0135] I have been informed by counsel that Mullen argued in a prior proceeding that Degnbol only discloses distance-based alerts and therefore only one *type of location-based event*. As I discussed above, it is my opinion that POSAs would have understood that Degnbol discloses (more than) three different types of location-based events. Therefore, it is my opinion that Mullen was incorrect. Degnbol explicitly teaches that alerting a user when another user is within a specified distance of the user is just one set of available options, while other options can be set to alert the user when the other user is in a specified geographic area, and others alert the user when his location has caused an alert to another user. *See* Degnbol, 12:10-12 (“notification allows the user to...selectively (choose to) communicate with users in his area (*or another designated area*)”), 3:11-15 (“alert user ‘A’s’ communication device when a user ‘B’ enters a pre-defined area (*or* proximity to a particular location)”), 3:23-27 (alerting user “A” when user “B” enters “the defined location(s) or area(s)...enable[s] user ‘A’ to know in advance the proximity *or* approximate whereabouts of user ‘B’”), 6:6-8

(“Each predetermined range may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street. The geographical area may be selected by the user.”), 12:4-6 (“matching criteria based on unit locations *or* proximity”), 19:1-3 (same), 18:5-8 (“specify to be alerted only when certain criteria relating to distance, *location*, time or date are met”), 21:4-6 (alerting user “that he has been the subject of an alert to another user”).

[0136] For example, in Degnbol, a user can “request to be alerted of the[ir] spouse’s arrival *at a given area on his/her regular route home*,” which is a particular specified geographic area rather than simply a distance from the user. Degnbol, 13:17-21. Degnbol provides a further specific example in Table 1, where “JohnS has two profiles.... The first will alert him of any user with specified interests in a nearby area; the second will alert him of a specific user *reaching a particular map point*” specified as “City: Street.” Degnbol, 22:1-8:

User Name	Unit ID	Altering Times	Geo Area	Users	Interests	Permissions
JohnS	jsmith@domain.com	1000-1400	Proximity < 2km	Any	Sports: Bball: NBA: Bulls	Any
	555-234-5678	1700-2000	City: Street	JulieS	-	JulieS

Table 1. PROFILES Data

Degnbol, Table 1

Degnbol thus teaches pre-selecting from *at least three types of location-based events on a device*, as claimed.

[0137] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1D].

- vi. **Element [1E]: a location-based event notification is operable to be provided on said device as a result of, at least in part, location access rights of said device from said first wireless device,**

[0138] Sheha describes ways for a *first wireless device* to provide rights to another device to access its location. For example, the Sheha system can determine the target mobile device’s “permission settings” (Sheha, 5:3-20)—by which the device 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 target mobile device’s permissions settings information can include “a group database and authorization and authentication protocols” by which the target device’s user “can define a group of specific users that have *access to*” the target device’s location information. Sheha, 11:55-12:7, 4:59-5:20; *see also id.*, 13:65-14:2, 14:54-61, 19:9-13. The ODAS uses this permissions information to determine whether the target device has authorized the requesting device—i.e., has given the requesting device *access rights*—to obtain its *location* information. Sheha, 3:4-14, 3:22-28, 4:8-18, 5:21-46, 8:42-53, 9:59-10:4. Because this occurs before any location access in Sheha, the *access rights* govern whether the *device*

receives *location-based event notifications* for the *first wireless device's* location in the Sheha-Degnbol-McNulty combination.

[0139] The above description that privacy information in Sheha includes setting privacy information for a group of specific users in a mobile embodiment is further corroborated by Sheha's claims. Sheha, 13:65-14:2, 14:54-61, 19:9-13. For example, claim 1 recites, among other limitations, "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." Sheha, 13:65-14:2. Claims 11-12 claim an embodiment where the caller is on a wireless telephone. Sheha, 14:54-61. Those claims depend from claim 1, which recites that the caller specifies "privacy information" in the form of a pre-defined group of users. Thus, claims 11-12 further support my opinion that Sheha's group-based permissions are a type of "privacy" information and apply in a mobile embodiment. Claim 47 recites, among other limitations, "accessing ***privacy information*** of the second user, said privacy information of the second user identifying an ***authorized user group***, said authorized user group consisting a plurality of user group members pre-defined by the second user." Sheha, 19:9-13. Sheha's claims corroborate my opinion that a POSA would have understood that when Sheha refers to "privacy," Sheha is talking generally about ways to restrict

how much of a user's location information is accessible to other users. So when Sheha discusses "privacy settings" (as in 12:1-7), a POSA would understand those privacy settings can include the mobile device not letting anybody access its location (as in 5:39-41), and that the privacy settings can also include the mobile device user's group settings, which identify which specific users have access to the device's location and which users do not. In other words, Sheha's group specifications are not unrelated to "privacy settings." Rather, Sheha's "privacy" information includes both the target device's local settings and the group designations of groups of authorized users. Thus, a POSA would understand that when Sheha talks about "privacy" information, Sheha is referring to a set of information that includes the group specifications discussed in Sheha, 11:55-12:7, as well as other types of "privacy settings" that Sheha discusses.

[0140] I have been informed by counsel that Mullen argued in a prior proceeding that location access rights of said device from said first wireless device should be construed to mean location access rights given exclusively to the device by the first wireless device. In my opinion, Mullen was incorrect because that is not what the claims recite. Element [1E] recites "*location access rights of said device.*" That claim language does not recite "exclusively" or anything similar, and a POSA would have understood that the plain meaning of access rights "*of said device*" does not exclude the same access rights applying to other devices. I

have also been informed by counsel that Mullen cited various portions of the '039 patent's specification – 1:49-59, 1:66-2:2, 3:9-27, 4:60-5:2, 5:16-21, 7:3-12, 8:22-28, 9:10-15, 9:16-20, 11:64-12:2 – as alleged support for its argument that all instances of providing permissions in the '039 patent consist of assigning rights to a specific user. I understand from counsel that it is improper to import limitations from a specification's embodiment into claims that do not recite those limitations, even if the specification only describes a single embodiment. Moreover, the '039 patent at 13:9-12 explicitly discloses that “a user may organize his/her user list into *groups* and *assign access rights to that group* (e.g., family member user group, close friend user group),” just as Sheha does. *See also* EX1001, 3:23-25 (“Users may be added, individually *or in groups*, to a list of users with location access rights to a specific user by that specific user.”).

[0141] Alternatively, even if claim 1 required providing a permission specific to an individual second-device user, Sheha renders this obvious because POSAs would have known that “defin[ing] a group” of authorized users (Sheha, 11:63-65) can include defining a group having only one member, even if other defined groups have multiple members. For example, a “best friend” group may have just one person in it and that person might periodically change. In another example, an “emergency contact” might function similarly. As another example, a person could have a group for friends or business associates at particular

companies or in particular locations (e.g., different cities), some of which have only one person they know at a particular company or in a particular city. Similarly, a “plumber,” “electrician,” etc., group can have only one plumber, one electrician, etc., listed in the respective groups. In yet another example, a “children” group might function similarly if the user has only one child. An additional example can be a “Saturday meetup” group in which only one member may be included when the group is first created (and others may or may not be subsequently added). Further, the “Saturday meetup” example could be the group having multiple people in it but then everyone except one person drops out, leaving only one person in the group.

[0142] Alternatively, allowing a target device’s user to provide permissions specific to individuals in addition to groups 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 evidence as discussed below.

[0143] For example, Randall (EX1007) describes “a user can also specify the remote database access rights given to different people or groups” (Randall, [0052]) and “can be associated with individual entities, and can also be associated with groups of entities.” Randall, [0070]; *see also* [0136] (“Visible to

specific people (or groups))), [0144] (“The user must be able to switch location information on for a person or group of people”). Randall therefore corroborates that it was within a POSA’s background knowledge to specify access rights for individuals in addition to groups and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty combination, where mobile device users would have been accessing each other’s locations.

[0144] Friedman (EX1015) describes location-based instant messaging in which a user can specify a subset of users in a buddy list that can access the user’s positional data. Friedman, 12:60-13:9. POSAs would have understood that a subset of users can include a single user. Friedman corroborates that understanding by describing an example for assigning access rights for a single user: “User A may specify that ‘User B’ should only receive a measurement of the distance between User A and User B.” Friedman, 13:5-7. Friedman therefore also corroborates that it was within a POSA’s background knowledge to specify access rights for individuals in addition to groups and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty combination.

[0145] I have been informed by counsel that Mullen argued in a prior proceeding that Sheha’s description of “defin[ing] a group of specific users that have access” (Sheha, 11:63-12:7) is about landline-to-landline position requests

and is not relevant. In my opinion, Mullen was incorrect. Sheha discloses that the mobile embodiment may employ the same “authorization and authentication protocols...similarly to” the landline embodiment. Sheha, 12:4-7. This is further corroborated by Sheha’s claims which recite “determining whether the first user is a member of the authorized user group” as part of “accessing privacy information” for the location of a “mobile telephone.” Sheha, 18:45-19:46.

[0146] Alternatively, even if Sheha did not explicitly disclose using the group database in the mobile-to-mobile and no-call embodiments, doing so would have been an obvious variation because allowing a mobile user to specify a group of other mobile users to have access to the user’s location (or to provide access on an individual-user basis) without initiating a phone call 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.

[0147] For example, Sandhu (EX1016) 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, [0024]. 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, [0024]. Sandhu

therefore corroborates that it was within a POSA's background knowledge to use a group database in a mobile embodiment and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty combination.

[0148] Sandhu also discloses sending an "announcement to all users in the distribution group," where the "announcement[]" sent can contain a location stamp indicating the current location of the sender." Sandhu, [0031]. 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 the Sheha-Degnbol-McNulty combination.

[0149] 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* [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 the Sheha-Degnbol-McNulty combination.

[0150] Also, Degnbol teaches to condition *location-based event notifications* on *location access rights* in a mobile-to-mobile scenario, and teaches allowing a *first wireless device* to give *location access rights* exclusively to a *device*, as an alternative to providing rights at a group level. Degnbol, 1:11-13 (“users ‘A’ and ‘B’” each have “mobile telephone”), 10:9-11 (user may “group Buddies into different categories”), 11:13-14 (“All preferences can be configured on a *per-buddy basis*, [or] on a per-category basis....”), 10:17-18 (“Preferences can be configured *on an individual Buddy basis*”), 12:4-8 (“matching criteria based on unit locations or proximity,...as well as alerting *permissions*”), 20:23-32 (“User B’s profile includes a *permission to notify User A* of his whereabouts.”), 21:23-29

(“database...includes *permission* information that determines whether other users may be notified of the user’s activity”), 22:1-8 (“JohnS has set permissions that allow his position information to be provided to certain other users selected by him.”). POSAs would have had motivation and reasonable expectation of success, based on Degnbol’s teachings, to implement the *location access rights* in the Sheha-Degnbol-McNulty system in this way. Degnbol teaches that this beneficially and successfully makes “[u]se of the system build[] on mutual consent.” Degnbol, 11:16-18, 14:4-6.

[0151] Degnbol teaches to provide the *location-based event notification* as “text” or “graphics,” such as “a map or diagram with a pointer showing the location of the user,” by “SMS message or a synthesized voice call.” Degnbol, 5:16-20, 12:6-8. Degnbol thus teaches that “*a location-based event notification is operable to be provided on said device.*” And as I discussed above (*supra* §VIII.A.4), it would have been obvious to a POSA to provide a location-based event notification, as described in Degnbol, based on access rights, as described in both Sheha and Degnbol, and a POSA would have been motivated to do so to provide the location in a user-friendly manner.

[0152] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1E].

- vii. Element [1F]: wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.**

[0153] Degnbol describes region-based events such as “user ‘A’ configures the system so that he only receives alerts when he is not within a specific geographical area...from user ‘B,’” as well as a user selecting “a geographic area, such as a continent, country, district, city, co-ordinate range or a street” to trigger an alert. Degnbol, 10:31-33, 6:6-8, 8:18-20, 22:1-6 (Table 1: “Geo Area”=“City: Street”); *see also id.*, 13:19-20 (alert of user’s “arrival at a given area”).

[0154] And Degnbol describes distance-based events such as choosing “to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters.” Degnbol, 11:5-11, 6:10-17, 8:22-29. As I discussed above (§VIII.A.4), a POSA would have been motivated to provide location information as described in Sheha via alerts as described in Degnbol to more effectively provide the location data.

[0155] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [1F].

b. Claim 2

[0156] As explained in this section below, in my opinion a POSA would have understood that the Sheha-Degnbol-McNulty combination meets all limitations of claim 2 of the '039 patent, and therefore renders claim 2 obvious.

i. Preamble [2PRE]: A system comprising:

[0157] Like claim 1, claim 2's preamble only recites "A system 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 the Sheha-Degnbol-McNulty combination discloses the preamble for at least the reasons provided above with respect to claim 1's Preamble [1PRE] (§VIII.A.5.a.i). As I will discuss below, it is my opinion that Sheha in view of Degnbol and McNulty meets all the limitations of claim 2.

ii. Element [2A]: a remote system operable to perform a trigger of a request of location information of a wireless telephonic device for a device at an occurrence of a location-based event based, at least in part, on a location of said wireless telephonic device,

[0158] As I discussed *supra* §VIII.A.5.a.v (Element [1D]), Degnbol's teachings in the Sheha-Degnbol-McNulty combination provide *a location-based event* (e.g., an alert) *based, at least in part, on a location of said wireless telephonic device*. Degnbol teaches that the alert can be provided as "a map or diagram with a pointer showing the location of the user." Degnbol, 5:16-20. Once

this map is provided to the *device*, POSAs would have been motivated and reasonably expected success to keep it updated by updating the location on the map as the *wireless telephonic device* moves, based on Sheha’s teachings to receive “continually...updated position information” from the target mobile device for updating its “real-time position[]” on a map. Sheha, 10:44-65. Sheha teaches that either the mobile device automatically sends the information, or “the ODAS 3 requests position information from the destination mobile device.” Sheha, 11:23-35. Thus, by requesting updated location information to update the alert map once the alert is provided, the ODAS (*remote system*) is operable to perform a trigger of a request of location information of the wireless telephonic device for the device at the occurrence of the location-based event, meeting Element [2A].

[0159] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [2A].

iii. Element [2B]: wherein said located-based event is operable to be manually pre-selected from a plurality of located-based events on a first screen of said device from a list of at least three types of location-based events,

[0160] Manual selection of one of at least three location-based events is taught by Degnbol and McNulty, as I discussed above with respect to Element [1D] (§VIII.A.5.a.v). As I described above (§VIII.A.4, §VIII.A.5.a.v), it would

have been obvious to a POSA to enhance Sheha's location-providing using these features of Degnbol and McNulty.

[0161] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [2B].

- iv. **Element [2C]: access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger [sic]**

[0162] Element [1E] recites "a location-based event notification is operable to be provided on said device as a result of, at least in part, location access rights of said device from said first wireless device," while Element [2C] similarly recites that "as a result of said trigger of said trigger [sic]" "access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device." Thus, Element [2C] recites substantially the same functionality as recited in Element [1E].

[0163] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination renders Element [2C] obvious for the same reasons the Sheha-Degnbol-McNulty combination renders Element [1E] obvious, as I discussed above (§VIII.A.5.a.vi).

- v. **Element [2D]: a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,**

[0164] For the reasons discussed *supra* §VIII.A.5.a.vi (Element [1E]), the Sheha-Degnbol-McNulty combination provides *a location-based event notification on said device as a result of, at least in part, said trigger*—e.g., when the *wireless telephonic device* enters a specified geographic area or distance from the *device*.

[0165] McNulty discloses multiple display screens, including a first display screen for selecting an item from a list, and *a second display screen* for displaying location information. McNulty, FIGs. 24-25; 16:44-56; *supra* §VIII.A.5.a.iv (Element [1C]). It would have been obvious to provide *a location-based event notification* based on *access rights*, as described in the combination of Sheha’s and Degnbol’s teachings, via *a second display screen*, as described in McNulty. *See supra* §VIII.A.4. For example, given that mobile devices had limited screen space, POSAs would have known that it was common to display one function at a time on the screen (rather than multiple functions at the same time). A POSA would have understood that this is particularly true for the use of location in an application, where there can be many graphics, and a POSA would have been motivated to avoid crowding the screen by displaying functions on separate screens. Because it was a common functionality at the time, a POSA would have

had a reasonable expectation of success, as in McNulty, such that one function would be displayed on a *first display screen* and another function would be displayed on a *second display screen*.

[0166] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets Element [2D].

- vi. **Element [2E]: and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.**

[0167] Element [2E] recites substantially the same functionality as recited in Element [1F]. Thus, it is my opinion that the Sheha-Degnbol-McNulty combination renders Element [2E] obvious for the same reasons the Sheha-Degnbol-McNulty combination renders Element [1F] obvious, as I discussed above (§VIII.A.5.a.vii).

- c. **Claim 3: The system of claim 1, further comprising a second device, wherein said second device is a second wireless device, said second device includes a global positioning system and a second location is provided by said global positioning system and said second location is stored on said remote system.**

[0168] POSAs would have understood that more than two wireless devices can use Sheha's system; this is why, for example, "a mobile device user" must "specif[y] a telephone number of another position-enabled mobile device" to identify which mobile device's position is being requested. Sheha, 4:59-5:3.

Sheha teaches that any of the mobile devices can include an “onboard” *global positioning system* (GPS) for providing its location. Sheha, 10:5-16. Degnbol also teaches tracking the locations of “five or more buddies” using wireless devices having GPS for determining their location. Degnbol, 9:25-30, 1:11-13, 1:29-31, 4:27-31, 5:7-11, 10:7-9, 13:32-14:2. Thus, the combination includes a *second wireless device* that includes a *global positioning system* that provides a *second location* of the second wireless device, based on Sheha’s and Degnbol’s teachings. The location is stored on the ODAS, a *remote system*. Sheha, 11:3-8, 3:50-61, FIG. 3; *see supra* §VIII.A.5.a.iv (Element [1C]).

[0169] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets claim 3.

- d. **Claim 4: The system of claim 1, wherein said first wireless device includes a first global positioning system that is operable to provide said location and a second device is provided that includes a second global positioning system that is operable to provide a second location, wherein said second location is stored on said remote system.**

[0170] Claim 4 recites substantially the same functionality as recited in claim 3. Thus, it is my opinion that the Sheha-Degnbol-McNulty combination renders claim 4 obvious for the same reasons the Sheha-Degnbol-McNulty combination renders claim 3 obvious, as I discussed above (§VIII.A.5.c).

- e. **Claim 5:** The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information.

[0171] Sheha and Degnbol in combination allow a user to select which other individual users have access rights to the user's location information. Sheha, 11:64-12:1; Degnbol, 9:34-10:3, 10:17-18, 11:13-26. Degnbol teaches that a user can select "five or more" such buddies. Degnbol, 9:25-30, 13:32-14:2.

[0172] McNulty describes and illustrates various examples of user selection of information on a display screen from a list of at least four different items of information. McNulty, FIGs. 23-25, 11:54-59, 16:44-56, 15:45-54. For example, McNulty teaches how a wireless device user can select another user to provide that user access to a "data object," by selecting that other user from a list of contacts on the device's display screen. McNulty, 17:5-15. The device's "[u]ser configuration" can include "data fields" identifying "friends 416," who are other users "with whom the subject user is likely to share information." McNulty, 5:59-64, 6:51-58. When the user wants to share one of his/her "data objects" with someone, "the subject user is *presented with a list of people* identified by friends 416," and "[t]he user *selects from the list*" to specify the "destination person."

McNulty, 17:7-15. McNulty also describes manual selection of user information.

McNulty, 11:54-59.

[0173] Given Sheha's and Degnbol's disclosure of user configuration of access rights (as I discussed *supra* §VIII.A.5.a.vi (Element [1E])), it would have been obvious to implement this via an interface for where the user selects another user to receive the access rights from a list of the user's friends/contacts, as disclosed in McNulty. In the combination with Degnbol where the user has "five or more" buddies (Degnbol, 9:25-30, 13:32-14:2), the displayed list includes "*at least four different user information*" representing at least four users.

[0174] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets claim 5.

- f. **Claim 6: The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information and a user name associated of said user information is displayed on and selectable from said display screen.**

[0175] Claim 6 repeats claim 5's language, which is met for the reason I discussed *supra* §VIII.A.5.e.

[0176] As I discussed above for claim 5 (§VIII.A.5.e), McNulty's teachings in the Sheha-Degnbol-McNulty combination display *a user name*

selectable from said display screen. McNulty, 17:5-15 (“In performing the send-to- friend action, the subject user is presented with a list of people The user selects from the list.”). Additionally, as I discussed *supra* (§VIII.A.4, §VIII.A.5.e), displaying selectable options per McNulty would have also been an obvious choice to a POSA to enable user configuration per Sheha and Degnbol. Including the user’s own user name was also an obvious design choice. My opinion in that regard is further corroborated by Shankar (EX1028), which illustrates in FIG. 4 a GUI interface for a photo-management client that display “the current user,” along with “the current user’s buddies and buddy lists.” Shankar, 7:27-36; *see also id.*, 6:56-7:55 (describing “sharing services” that “provide various functionalities including the ability to share one or more digital resources with one or more buddies by way of a user-friendly graphical interface”).

[0177] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets claim 6.

g. Claim 13: The system of claim 1, wherein said first wireless device is a first wireless telephonic device and said device is a telephonic device.

[0178] Sheha discloses the devices being wireless telephonic devices. Sheha, 4:3-7 (“this invention” applies to “various forms of devices” including “telephone...wireless[] devices and devices with voice-over-IP (VoIP) capability”).

[0179] Thus, it is my opinion that the Sheha-Degnbol-McNulty combination meets claim 13.

B. Ground 2: Claims 7-9 and 19 Would Have Been Obvious over Sheha in View of Degnbol, McNulty, and Tobin

1. Discussion of Tobin (EX1041)

[0180] Tobin describes a user device using a GPS position determining system to determine relative positions of the device and a service vendor. Tobin, Abstract (“A user device couples to a position determining system to determine relative positions of the device and a service vendor.”), [0018] (“In one embodiment, the user device receives its current location from a Global Positioning System (GPS) and creates a default map for that location.”). A display screen can display a map with distance and time information such as an estimated remaining travel time to reach the service vendor. Tobin, [0028] (“Illustratively, display screen 125 is divided into two sections, an upper portion 112, and a lower portion 111. Upper portion 112 displays a local area map, which shows the positions of roads 135, service vendors 137, 127, and 129, and position 124 of user device 105. Also shown on the map are real-time distance and time information for each service vendor, the real-time speed and direction 139 of user device 105, and a compass indicator 133. In one embodiment, the distance and time information particular to each service vendor is shown in a small data box adjacent

to the service vendor logo.”). Tobin also teaches to provide display screens for selecting the target location for which to display the map. Tobin, FIG. 1B, [0023]-[0027].

2. Discussion of Sheha-Degnbol-McNulty-Tobin Combination

[0181] A POSA would have been motivated to provide a display screen for selecting a target location, and to display a map to the target location with an estimated travel time, as both were typical navigation information in POSA’s background knowledge and described in Tobin, in an interface for displaying location information as described in Sheha, to provide additional useful related information. Sheha discloses displaying user locations and maps with directions to travel between the locations. *See, e.g.*, Sheha, FIGs. 4-5. A POSA looking to implement such displayable information would have been motivated to include routine and conventional information related to location, such as selection screens, directions, and travel time as described in Tobin. Because such functionalities were typical, a POSA would have had a reasonable expectation of success in incorporating such functionality from Tobin into Sheha’s wireless devices. Further, as I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Sheha, Degnbol, McNulty, and Tobin, because of the desire to monetize location-based applications and services in mobile devices following heavy investments in mobile networks and the 1990s

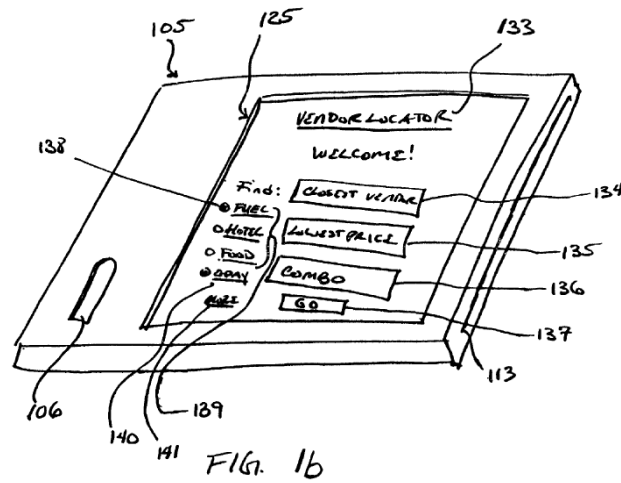
federal mandate to update wireless devices and carrier network location-based technologies and services years before the '039 patent was filed.

3. Mapping of Sheha-Degnbol-McNulty-Tobin Combination to Claims 7-9 and 19

- a. Claim 7: The system of claim 1, wherein a display screen is provided on said first wireless device after said identifying of said user information on said first wireless device that includes a first selectable option for providing a first map associated with said location and a second selectable option for providing a second map associated with a third location of a third user information.**

[0182] As I discussed *supra* §VIII.A.5.c (claim 3), Sheha and Degnbol disclose obtaining locations of multiple users (via their devices). Sheha and Degnbol also disclose providing maps displaying the target device's location, after identifying the *user information* of the user requesting the location. Sheha, FIG. 5, 8:42-46; 9:4-28; Degnbol, 5:16-18. *See supra* §VIII.A.5.a.iv (Element [1C], where I discuss providing location information after identifying user information).

[0183] Tobin discloses providing a display screen including selectable options for providing multiple maps of multiple target locations. In Tobin's FIG. 1B, a display screen includes buttons 134-136 and 138 that a user can interact with to configure different vendors to locate. Tobin, FIG. 1B, [0023]-[0027]. The user first selects one or more of buttons 134-136 and then selects the "Go" button. Tobin, FIG. 1B, [0023]-[0027].



Tobin, FIG. 1B

[0184] Based on one configuration, the “Go” button 137 will initiate display of a first map showing a first location (e.g., based on selecting a first button 134 or a hyperlink 138 associated with a first type of information), and the map will include the user’s own device location. Tobin, [0023]-[0028]; *see also* FIG. 1C (showing the map).

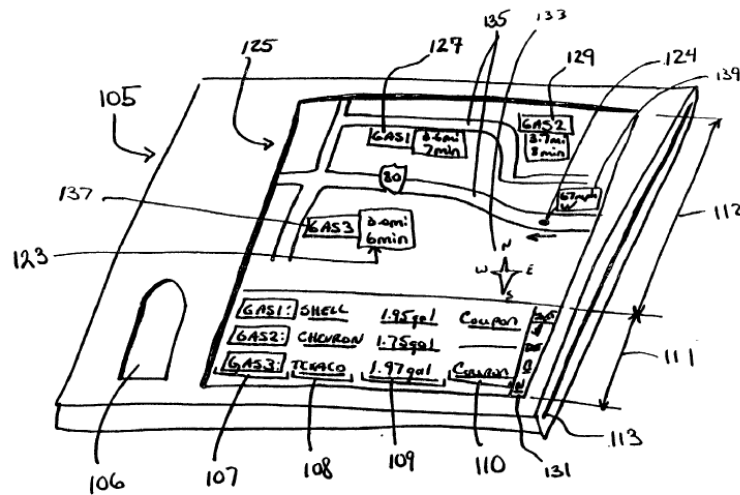


FIG. 1C

Tobin, FIG. 1C

[0185] Based on another configuration, for example, selecting a second button 135 associated with second information, the “Go” button 137 will initiate display of a second map showing a second location of a target destination. Tobin, [0023]-[0027]; *see also* FIG. 1C (showing the map). Based on yet another configuration, for example, selecting the third button 136 associated with third information, the “Go” button 137 will initiate display of a third map showing a third location, and so forth. Tobin, [0023]-[0027]; *see also* FIG. 1C (showing the map).

[0186] As I discussed *supra* §VIII.B.2, it would have been obvious to a POSA to include such selectable options to display maps of multiple locations, including the user’s own location, in Sheha’s system to improve the flexibility and

delivery of location information. For example, it would have been obvious to provide first, second, third, and more user-selectable options to provide respective maps of locations.

[0187] Thus, it is my opinion that the Sheha-Degnbol-McNulty-Tobin combination meets claim 7.

- b. **Claim 8: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a first map associated with said location and a second map associated with a third location of a third user information.**

[0188] Claim 8 recites substantially the same limitations as claim 7. Thus, it is my opinion that the Sheha-Degnbol-McNulty-Tobin combination renders claim 8 obvious for the same reasons the Sheha-Degnbol-McNulty-Tobin combination renders claim 7 obvious, as I discussed above (§VIII.B.3.a).

- c. **Claim 9: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a travel time between said location associated with said first user information and a third location associated with a third user information.**

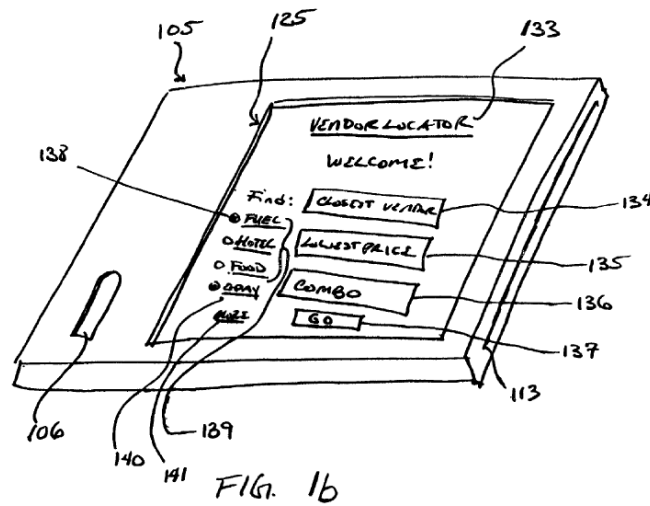
[0189] As I discussed *supra* §VIII.B.3.a (claim 7), Sheha discloses a wireless device providing locations of other wireless devices after identifying user information. Tobin discloses providing an “estimated remaining *travel time*” to a target location. Tobin, [0028]. As I discussed *supra* §VIII.B.2, it would have been

obvious to a POSA to *provide a travel time* on the *first wireless device* between that device's location and a *third location* of a *third user's* device in Sheha's system to improve the delivery of location information and assist the users in meeting up.

[0190] Thus, it is my opinion that the Sheha-Degnbol-McNulty-Tobin combination meets claim 9.

- d. **Claim 19: The system of claim 2, wherein a third display screen is operable to be provided on said device with a selectable option for providing a first map associated with said location information based on said access rights or a second map associated with second location information associated with said device.**

[0191] As I discussed *supra* §VIII.B.3.a (claim 7), Tobin teaches to provide a separate display screen (*third display screen*) with *selectable options* for selecting which location to map, where the user can configure parameters to display different locations on a map on a subsequent screen. *See* Tobin, FIG. 1B (below).



Tobin, FIG. 1B

[0192] As shown in FIG. 1C (annotated below), this includes the ability to display a map showing the location of one or more target locations 127, 129, 137 (i.e., *providing a first map associated with said location information, which is based on said access rights* in the combination as I discussed *supra* §VIII.A.5.a.vi (Element [1E]))—Sheha (EX1005), 11:55-12:7; Degnbol (EX1035), 11:16-26). Tobin (EX1041), FIG. 1C, [0028]. This also includes the ability to display a map showing the location 124 of the user device 105 (i.e., *providing a second map associated with second location information associated with said device*). Tobin, FIG. 1C, [0028].

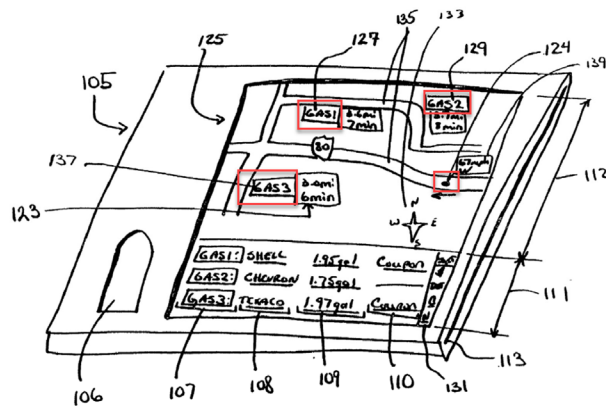


FIG. 1c

Tobin, FIG. 1C (annotated)

[0193] Thus, it is my opinion that the Sheha-Degnbol-McNulty-Tobin combination meets claim 19.

C. Ground 3: Claims 10-12 Would Have Been Obvious over Sheha in View of Degnbol, McNulty, and McDonnell

1. Discussion of McDonnell (EX1042)

[0194] McDonnell teaches a “method and device...for obscuring the location of a mobile entity to a specified accuracy level.” McDonnell, Abstract. A “user of a mobile entity can limit the accuracy of location data provided.” McDonnell, 8:5-7. For example, “if the accuracy of the available location data is higher tha[n] the specified accuracy limit, then the location data L is modified” so “the accuracy of the location data is decreased.” McDonnell, 9:24-36.

2. Discussion of Sheha-Degnbol-McNulty-McDonnell Combination

[0195] McDonnell explains that, in some cases, “because of privacy concerns, the user of the mobile entity does not want the service system to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit.” McDonnell, 8:30-36. A POSA would have been motivated to allow for protecting privacy by filtering the location resolution before providing it to another device, such as by filtering by geographic region and/or exact location, to enhance Sheha’s location sharing, and would have had a reasonable expectation of success based on McDonnell’s teachings. Further, as I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Sheha, Degnbol, McNulty, and McDonnell, because of the desire to monetize location-based applications and services in mobile devices following heavy investments in mobile networks and the 1990s federal mandate to update wireless devices and carrier network location-based technologies and services years before the ’039 patent was filed.

3. Mapping of Sheha-Degnbol-McNulty-McDonnell Combination to Claims 10-12

[0196] Claims 10-12 recite filtering location by different *types of geographic region, state and city, or exact location*. As I discuss in Sections

VIII.C.3.a-c below, these claims would have been obvious over the Sheha-Degnbol-McNulty-McDonnell combination.

- a. **Claim 10: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or a second type of geographic region.**

[0197] Sheha discloses that “each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information.” Sheha, 5:38-46. Sheha’s system can provide “*position-specific information*, such as latitude and longitude coordinates” (e.g., *an exact location* as in claim 12), “address information, and/or *map information of varying size and resolution*.” Sheha, 3:50-55. In some cases, the provided location “is one of *a metropolitan area, a state within the United States of America, and an international political territory*”—i.e., the location can be provided according to various different *types of geographic region*—where “the caller information is received from a wireless communication device.” Sheha, claims 22-24.

[0198] Degnbol also teaches that location notifications “work[] at many levels of precision” that can differ from “exact co-ordinates.” Degnbol, 12:14-16, 19:14-16. Providing location at different precision levels from coarse (e.g., state) to medium (e.g., city) to fine (e.g., exact location) was also well known

in the art. My testimony regarding POSAs' background knowledge in this regard is corroborated, for example, by Greene (EX1050), which discloses at 4:40-5:14 providing location information ranging from "in the cafeteria" or "in the reception area," to "a specific address in" a city (e.g., "Fort Worth, Tex."), to "specify[ing] the city in which the user is located," such as "in Dallas" or "in Paris." In other words, "[t]he location, identified by the message, (preferably) would be configurable by the user from coarse such as 'in Texas,' to medium such as 'in Fort Worth, Tex.,' to fine such as a specific address such as 'at 5401 Beach Street, Fort Worth, Tex.,' to micro giving the specific room in which the wireless device is located." Greene, 4:67-5:5.

[0199] Further, McDonnell describes a way for a *first wireless device* to limit how other devices obtain its position information, by "obscuring the location of a mobile entity to a specified accuracy level. Available location data that has a known accuracy greater than the specified accuracy has its accuracy decreased." McDonnell, Abstract. The accuracy of the location data L is based on an accuracy limit established on the mobile entity (e.g., *said first wireless device*). McDonnell, 9:20-22, 1:18-22. Based on the specified accuracy limit, the location data may or may not be "modified to make it less reliable," for example, *filtered*. McDonnell, 9:20-35, 1:18-22; *see also* FIG. 16, 11:38-44. The location data "with

accuracy limited to the level specified by the...parameter set by the mobile entity is then returned to the service system.” McDonnell, 9:36-39.

[0200] As I discussed *supra* §VIII.C.2, a POSA would have been motivated to look to McDonnell for techniques with reasonable expectation of success for protecting privacy by filtering the location information to adjust the resolution before providing it to the other device, such as by filtering an exact location to different other levels of precision, including different *types of geographic regions* (e.g., city or state), or providing the *exact location* unfiltered, as described in Degnbol, Sheha, and the POSA’s background knowledge, as I discussed above.

[0201] In the combination, the location is provided to the ODAS (and from there to a *third user information* who has access rights and requests it) *after said identifying of said user information on said first wireless device*, as I discussed *supra* §VIII.A.5.a.iv (Element [1C]).

[0202] Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell combination meets claim 10.

- b. Claim 11: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered to by a first type of geographic region or a second type of geographic region, said first geographic region is a state and said second geographic region is a city.**

[0203] Claim 11 recites substantially the same limitations as claim 10, but adds that “said first geographic region is a state and said second geographic region is a city.” As I discussed above for claim 10 (§VIII.C.3.a), Sheha discloses providing “position-specific information,” where the provided location includes “a metropolitan area” (e.g., a city) or “a state within the United States of America.” Sheha, 3:50-55, claims 22-24. As I also discussed above for claim 10 (§VIII.C.3.a), Degnbol and McDonnell both disclose providing location accuracy at different levels. Degnbol, 12:14-16, 19:14-16; McDonnell, 9:20-39, 1:18-22, FIG. 16. Similarly, I discussed above for claim 10 (§VIII.C.3.a) that providing location at different precision levels from coarse (e.g., state) to medium (e.g., city) to fine was also well known in the art. *See* Greene, 4:40-5:14. Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell combination renders claim 11 obvious for the same reasons the Sheha-Degnbol-McNulty-McDonnell combination renders claim 10 obvious, as I discussed above (§VIII.C.3.a).

- c. **Claim 12: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or an exact location.**

[0204] Claim 12 recites substantially the same limitations as claim 10, except filters “by a first type of geographic region or an exact location” rather than “by a first type of geographic region or a second type of geographic region.” As I discussed above for claim 10 (§VIII.C.3.a), Sheha discloses providing “position-specific information,” which is an exact location. Sheha, 3:50-55. As I discussed above for claim 10 (§VIII.C.3.a), the Sheha-Degnbol-McNulty-McDonnell combination meets filtering based on various types of geographic regions. Similarly, I discussed above for claim 10 (§VIII.C.3.a) that providing location at different precision levels from coarse (e.g., state) to medium (e.g., city) to fine was also well known in the art. *See* Greene, 4:40-5:14. Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell combination renders claim 12 obvious for the same reasons the Sheha-Degnbol-McNulty-McDonnell combination renders claim 10 obvious, as I discussed above (§VIII.C.3.a).

D. Ground 4: Claims 14-18 Would Have Been Obvious over Sheha in View of Degnbol, McNulty, McDonnell, and Obradovich

1. Discussion of Obradovich (EX1043)

[0205] Obradovich discloses a “system for communicating and retrieving position and position related data.” Obradovich, 1:16-17. To control information sent to remote parties, Obradovich teaches allowing the user to assign a security level index to requesting individuals and to provide specific restrictions on what information about the user is shared with each security level, including information about the user’s location. Obradovich, 26:29-27:10.

2. Discussion of Sheha-Degnbol-McNulty-McDonnell-Obradovich Combination

[0206] A POSA, in view of Sheha’s, Degnbol’s, and McDonnell’s teachings of providing location information at various levels of accuracy such as exact location or just geographic region, would have been motivated to allow a user to select which users are allowed to access which levels, as taught by Obradovich. A POSA would have had a reasonable expectation of success in incorporating this functionality from Obradovich because it would have required only routine and conventional programming to integrate into Sheha’s existing authentication and authorization process. Further, as I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Sheha (EX1005), Degnbol (EX1035), McNulty (EX1040), McDonnell

(EX1042), and Obradovich (EX1043), because of the desire to monetize location-based applications and services in mobile devices following heavy investments in mobile networks and the 1990s federal mandate to update wireless devices and carrier network location-based technologies and services years before the '039 patent was filed.

3. Mapping of Sheha-Degnbol-McNulty-McDonnell-Obradovich Combination to Claims 14-18

- a. Claim 14: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a type of geographic region or an exact location.**

[0207] Sheha and Degnbol disclose limiting devices from obtaining position information based on user permission, which Sheha in combination with Degnbol and McDonnell teach may correspond to a type of geographic region or an exact location, as I discussed *supra* §VIII.A.5.a.vi (Element [1E]) and §VIII.C.3.a (claim 10). Obradovich teaches configuring access levels from a number of selectable options.

[0208] Obradovich teaches a “security level index” used for providing different location-related information, which can be configured by a user. Obradovich, 26:37-46. For example, an individual assigned a security index level of seven could only obtain a user’s general office number, whereas an individual

assigned a security index level of six could obtain the user's direct dial number.

Obradovich, 26:45-56.

[0209] A POSA would have been motivated to also display a set of options in a menu list for selecting access rules, as POSAs would have known that *selection from a list* is a typical and obvious way for a device user to select among such a set of available options, such as to facilitate access rule configuration in Sheha's system. My testimony regarding POSAs' background knowledge with respect to displaying a set of options in a menu list for selecting access rules is corroborated by several references, as discussed in the paragraphs below.

[0210] Robertson (EX1044) describes "computer software used to manage contact information—such as mailing addresses, e-mail addresses, phone numbers, and birthdays—and more specifically to a method of creating links between members over a network and providing information to each member based on levels of permission maintained by the other members to which they are linked." Robertson, 1:4-10. Robertson describes that such levels of permissions may be displayed as a set of options in a menu list as shown in FIG. 9. Robertson, FIG. 9, 8:11-14 ("Referring now to FIG. 9, a pseudo GUI 600 is shown allowing a first user to specify which types of data fields from the first user's personal data record to grant a specific second user permission to view."). Robertson therefore corroborates that it was within a POSA's background knowledge to display a set of

options in a menu list for selecting access rules (e.g., levels of permission) and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination.

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 ☒ 600-6 Crossing Paths Notification Permission

600-9 ☐ 600-8 Personal Information

☒ 600-10 Work Information

☒ 600-12 Birthday Notification

☒ 600-14 Friend of Friends Information

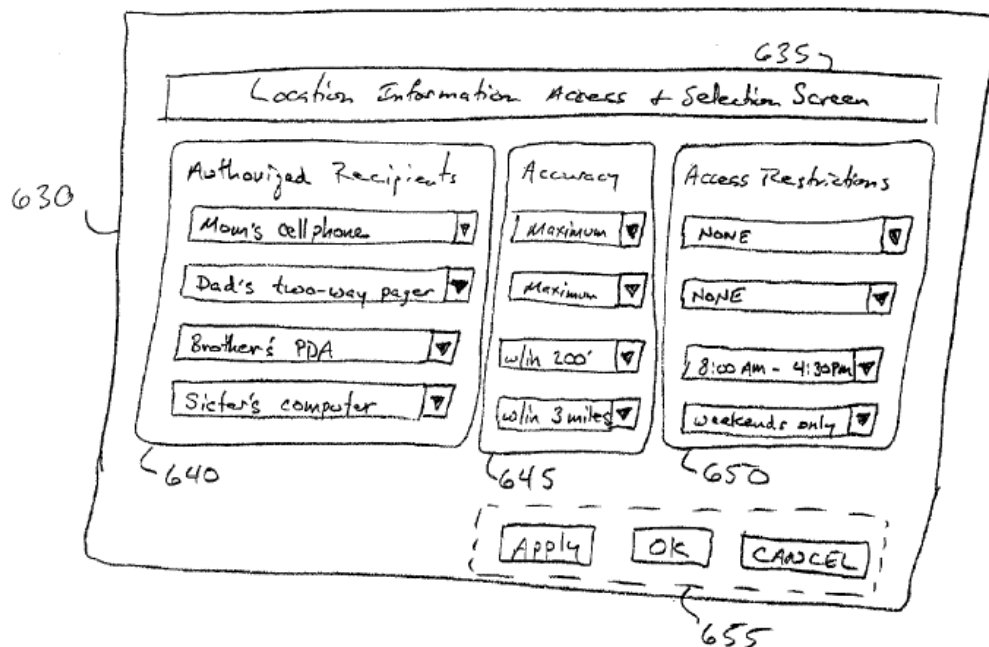
600-16

FIG. 9

Robertson, FIG. 9 (excerpted)

[0211] Menard (EX1045) provides “a screen shot appearing on a computer display” including “[f]ields within portion 640 allow user selection of authorized recipients of the location information for the teenager’s mobile device.” Menard, FIG. 10, [0067]. “Pull-down menus allow user selection of predetermined recipients and their associated devices”, “[f]ields within portion 645 allow...to specify the location information accuracy for each of the authorized recipients”, and “[f]ields within portion 650 allow...to specify restrictions on access to the

location information”. Menard, [0067]; *see also* [0068] (“the 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.”). Menard therefore corroborates that it was within a POSA’s background knowledge to display a set of options in a menu list for selecting access rules (e.g., accuracy, access restrictions) and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination.



Menard, FIG. 10 (excerpted)

[0212] Lee (EX1046) describes “[t]echniques for securing electronic data.” Lee, Abstract. A graphic user interface (GUI) can be used to establish or

create access rules. Lee, 16:1-2 (“FIG. 2D shows an exemplary graphic user interface (GUI) 275 that can be used to establish or create access rules.”). An example of such an interface is shown in FIG. 2D (below), which shows several different access rules that can be selected by a user via the GUI. Lee, FIG. 2D, 16:1-25. Lee therefore corroborates that it was within a POSA’s background knowledge to display a set of options in a menu list for selecting access rules and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination.

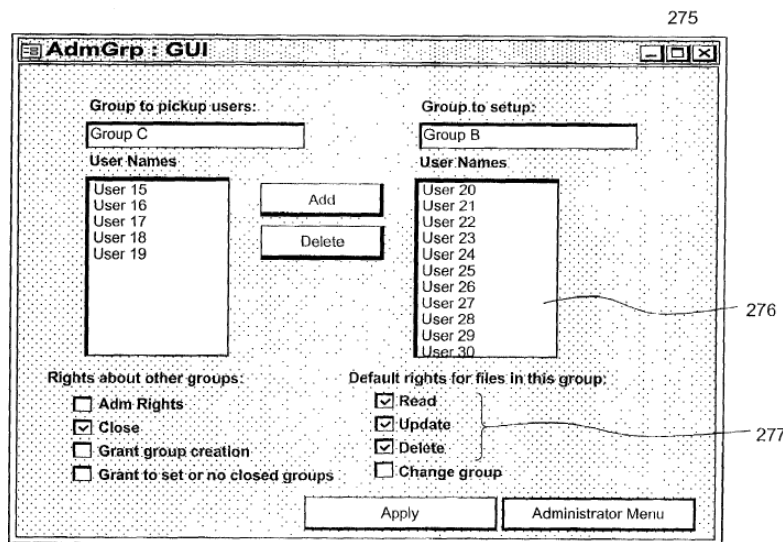
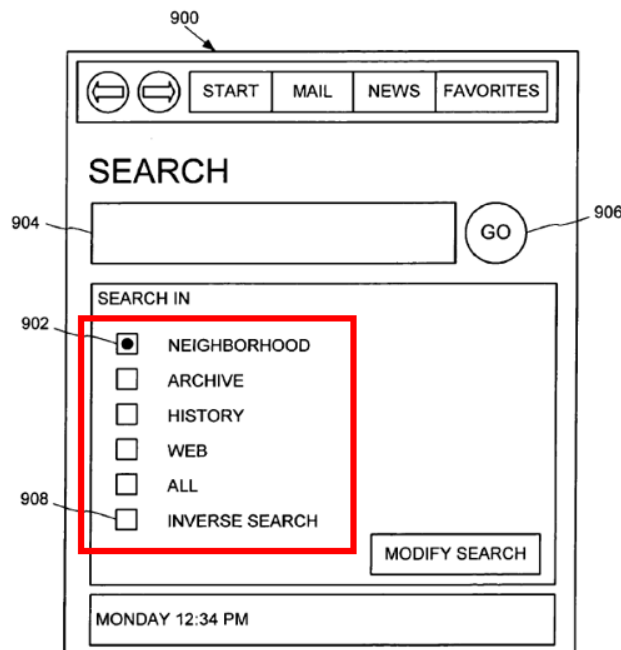


Fig. 2D

Lee, FIG. 2D

[0213] De-Vries (EX1013) teaches that parameter settings can be part of “a graphical user interface...for accessing the information service from a client device.” De-Vries, 8:60-67. And in FIG. 11 (annotated below), De-Vries

illustrates a typical graphical user interface (GUI) for the device user to select among a set of available options, by manually pre-selecting one of the options from a list. De-Vries therefore corroborates that it was within a POSA's background knowledge to display a set of options in a menu list for selecting access rules (e.g., parameter settings) and that a POSA would have had a reasonable expectation of success doing so in the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination.



De-Vries, FIG. 11 (annotated)

[0214] Given that Sheha describes user configuration of alert rules, POSAs would have known it to be desirable and typical to provide a way of accepting user input to configure the alert rules. Thus, a POSA would have been motivated to consider the above-discussed known design choices for accepting

user input to configure the alert rules. In addition, because such functionalities were standard, a POSA would have had a reasonable expectation of success in incorporating such functionality into the Sheha wireless devices. As I discussed *supra* §VIII.D.2, it would have been obvious to a POSA to modify Sheha’s system to limit access to location information using access levels and selectable options, as taught by Obradovich. In the combination, the selectable access-level options include *access to a type of geographic region or an exact location*, as I discussed above (§VIII.A.5.a.vi (Element [1E]); §VIII.C.3.c (claim 12)).

[0215] Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination meets claim 14.

- b. Claim 15: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a first type of geographic region or a second type of geographic region.**

[0216] Claim 15 recites substantially the same limitations as claim 10 (reciting filtering based on a “*first*” “*or a second type of geographic region*”) and claim 14 (which recites a “*list of selectable options*” “*to a type of geographic region or an exact location*”). Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders claim 15 obvious for the same reasons discussed above that the Sheha-Degnbol-McNulty-McDonnell-

Obradovich combination renders obvious claims 10 (§VIII.C.3.a) and claim 14 (§VIII.D.3.a).

- c. Claim 16: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least two access options.**

[0217] Claim 16 recites substantially the same limitations as claim 10 (reciting filtering based on a “*first*” “*or a second type of geographic region*”), claim 14 (reciting a “*list of selectable options*” “*to a type of geographic region or an exact location*”), and claim 15 (reciting a “*list of selectable options*” “*to a first*” “*or a second type of geographic region*”). Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders claim 16 obvious for the same reasons discussed above that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders obvious claim 10 (§VIII.C.3.a), claim 14 (§VIII.D.3.a), and claim 15 (§VIII.D.3.b).

- d. Claim 17: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least three access options.**

[0218] Claim 17 recites substantially the same limitations as claim 16 except recites “*at least three access options*” as opposed to “*at least two access options.*” Similarly, claim 15 recites selecting from a list of selectable options that include “*access to a first*” “*or a second type of graphic region.*” As I discussed

above for claim 10 (§VIII.C.3.a), Sheha teaches at least three *access options* that correspond to different types of geographic regions. As I discussed above for claim 14 (§VIII.D.3.a), Obradovich teaches configuring access levels from several selectable options. Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders claim 17 obvious for the same reasons discussed above that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders obvious claim 10 (§VIII.C.3.a), claim 14 (§VIII.D.3.a), claim 15 (§VIII.D.3.b), and claim 16 (§VIII.D.3.c).

- e. **Claim 18: The system of claim 2, wherein said access rights are operable to be selected from include a list of selectable options including at least four access options.**

[0219] Claim 18 recites substantially the same limitations as claim 17 except recites “*at least four access options*” as opposed to “*at least three access options*.” As I discussed above (§VIII.C.3.a), Sheha teaches at least three types of geographic regions plus an exact location (i.e., “*at least four access options*”). Thus, it is my opinion that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders claim 18 obvious for the same reasons discussed above that the Sheha-Degnbol-McNulty-McDonnell-Obradovich combination renders obvious claim 10 (§VIII.C.3.a), claim 14 (§VIII.D.3.a), claim 15 (§VIII.D.3.b), claim 16 (§VIII.D.3.c), and claim 17 (§VIII.D.3.d).

E. Ground 5: Claims 1-8 and 10-19 Would Have Been Obvious over Randall in View of De-Vries

1. Discussion of Randall (EX1007)

[0220] Randall is an international (PCT) application filed August 22, 2001, and published in the international stage as EX1008 and in the U.S. national stage as EX1007. Citations herein are to the U.S. publication (EX1007); the identical description is present in the international publication (EX1008). *See supra* §VII.C (where I provide a mapping of paragraph numbers in EX1007 to page numbers of EX1008).

[0221] 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].

[0222] 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”), [0029], [0080]-[0081], [0086], [0085]-[0115].

[0223] 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].

[0224] 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.

[0225] 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].

[0226] 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].

[0227] 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]. One way the server provides Alice's location information to Bob's device is by "alert[ing] Bob when [Alice] 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 (Table 4, "Old buddy finder").

[0228] 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. Discussion of De-Vries (EX1013)

[0229] De-Vries relates to “notifications to inform when certain people (e.g., friends, family, business contacts, etc.) are nearby” based on “devices carried by the people” such as “cell phone[s].” De-Vries, Abstract, 2:21-26. In De-Vries, a device’s “user can set rules and/or parameters to control when notifications are generated”—“[f]or example, a user may set a proximity parameter designating that notifications are provided only when the other users on his or her buddy list are within a certain proximity.” De-Vries, 2:52-59. “This proximity parameter can have the form of a geographic distance threshold” or “same city/town/neighborhood,” etc. De-Vries, 9:1-18. “This applies both the degree to which a user discloses their location to others, and the relevance of another’s location relative to the user.” De-Vries, 9:19-22. “[T]he user can segregate” their contacts “into separate subsets, such as subsets of family, friends, business contacts, co-workers, etc.” and “set the rules and/or parameters that control notifications to also be based on the subset of the other user who moved.” De-Vries, 3:5-14.

3. Discussion of Randall-De-Vries Combination

[0230] Randall, like De-Vries, provides notifications via wireless devices when certain contacts are nearby, including via an “Old buddy finder” service that, e.g., “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 (Table 4). To the extent that Randall does not specify that the user receiving these location alerts (e.g., Bob) or the user whose location is the subject of an alert (e.g., Alice) can set the rules/parameters for receiving them and choose among various ways of defining what level of proximity triggers notifications with respect to particular other device users, a POSA would have been motivated to implement Randall's service that way based on De-Vries's teachings, to provide the user with control over what alerts they receive and trigger, about whom, and in what circumstances. POSAs would have reasonably expected success based on De-Vries's teachings of successfully implementing such functionality in a system similar to Randall's where wireless device users are accessing each other's locations. Further, as I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Randall and De-Vries, because of the desire to monetize location-based applications and services in mobile devices following heavy investments in mobile networks and the 1990s federal mandate to update wireless devices and carrier network location-based technologies and services years before the '039 patent was filed.

4. Mapping of Randall-De-Vries Combination to Claims 1-8 and 10-19

[0231] As explained in this section below, in my opinion a POSA would have understood that the Randall-De-Vries combination meets all limitations of claims 1-8 and 10-19 of the '039 patent, and therefore renders those claims obvious.

a. Claim 1

[0232] As explained in this section below, in my opinion a POSA would have understood that the Randall-De-Vries combination meets all limitations of claim 1 of the '039 patent, and therefore renders claim 1 obvious.

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

[0233] Claim 1's preamble simply recites "A system 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 the Randall-De-Vries combination discloses the preamble. Randall teaches a "**system**" that allows "wireless applications to access and share information." Randall, [0028], [0029], [0052]-[0053], [0071]. As I discussed *supra* §VIII.E.1, the system provides access control for a wireless device user to track the location of another wireless device user and receive alerts regarding the other user's location. As I demonstrate in the sections below, Randall's system meets or renders obvious all elements of claim 1.

ii. Element [1A]: a remote system,

[0234] Randall’s system includes an “internet server[.]” (“i-server”)—a “server on the Internet”—which POSAs would have known is a remote system. Randall, [0029], [0046], [0503], [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 wireless devices).

[0235] Thus, it is my opinion that the Randall-De-Vries combination meets Element [1A].

iii. Element [1B]: wherein user information is operable to be identified from a plurality of different user information by receiving at least a manually entered login from a first wireless device associated with said user information and a manually entered password associated with said login,

[0236] 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 device* (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). For example, Randall posits

“[c]onsider Alice, who is publishing some information, and Bob who is accessing it.” Randall, [0053]. POSAs would have understood Randall to be using language to introduce a hypothetical example in which Alice and Bob are arbitrary, generic users of the ADS system and the only distinction between them is the order in which these arbitrary users are performing operations using the ADS system. POSAs would have understood that, in this example, Bob is interested in accessing Alice’s data, but the example could easily be reversed in which Alice is interested in Bob’s data. Indeed, Randall teaches such a scenario by providing that “Bob also has stored on the server his own personal information” ([0067]), which POSAs would have understood as Bob storing his own personal information on the server for a potential use case of another user, e.g., Alice, accessing his information in the same way that Randall provides that Bob can access Alice’s information. For example, Randall at [0510] discloses that “Bob’s details” are downloaded to “Alice’s...device” just as “Alice’s contact” is provided to “Bob’s device[.]” Randall at [0144] similarly discloses that “[t]he user” – which is generic to Alice or Bob – “must be able to switch location information on for a person or group of people.” That understanding is also consistent with Randall’s claims (e.g., claim 1), which refer to a user operating a generic and interchangeable “wireless information device”.

[0237] But even if Randall had not explicitly taught that Randall's functionality is equally available to any wireless information device in Randall's system, 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, to provide flexibility and allow each subscriber to choose and access the functionality that appeals to them.

[0238] 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].

[0239] 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 that Bob inputs a *login*

(i.e., an identifier “identifying an entity seeking information” as purporting to be “Bob the person”) on the *first wireless device* he is using, from which the server receives it. Randall, [0067]. The “PIN” or “select[ed] answer[] from a multiple choice” is a password that, if it “correctly” matches what the server has stored as Bob’s “PIN” or “favourite colour/restaurant/recent film” (Randall, [0067]) *associated with said login*, authenticates that the user is truly Bob. Randall, [0380] (“[t]he authentication can use...a basic WID and password/passphrase”).

Randall’s “authentication” can be used for access control “both locally and on the server” (Randall, [0380]), corroborating that it is input locally on the wireless device and then received by the server. POSAs would have understood that *manually entering* on the wireless device was a typical, obvious, and predictable way for such identifier and PIN or answer word to be submitted to the server by a person who is using the wireless device. My testimony regarding POSAs’ background knowledge with respect to manual input on a wireless device is corroborated by several references, as discussed in the paragraphs below.

[0240] Carey (EX1024) shows an example GUI that allows a user to enter a screen name, i.e., a username, and password to access instant messaging functionality provided by a remote service. Carey, FIG. 8, 7:67-8:10 (“As shown in FIG. 8, a wireless instant messaging sign on window 200 includes data fields for entry of the user’s screen name 202 and password 204.”). Therefore, Carey

corroborates that manual input on the wireless device was a typical and obvious way for Randall's identifier and PIN to be provided as shown and described in connection with FIG. 8 of Carey.

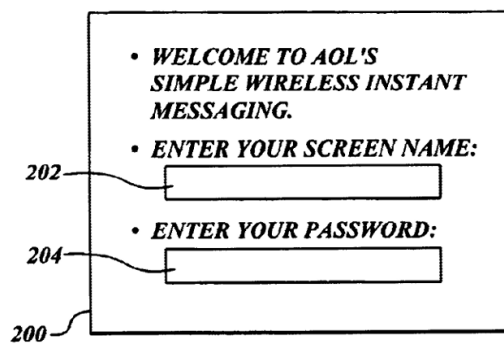


Fig. 8

Carey, FIG. 8

[0241] Laursen (EX1031) describes using a unique device ID to access a user account for a fleet managing system. Laursen, Abstract, 8:55-9:5. Laursen describes that a mobile station can display information on a display screen and on which user input can be provided. Laursen, 9:52-66. The user input can include “entering the correct username and password.” Laursen, 11:37-43. Therefore, Laursen’s entering of information on a display screen of a mobile station corroborates that manual input on a wireless device was a conventional way to provide usernames and passwords.

[0242] Muratov (EX1032) describes “protecting data within a portable electronic device to prevent unauthorized access to that data.” Muratov, Abstract.

Muratov describes that the portable electronic device has a display “configured with a password entry portion...for entering a password.” Muratov, [0016]. The password can be entered through the “depression of buttons provided as part of the portable electronic device for entering a password.” Muratov, [0016], see also [0038] (“the buttons 32 on the PDA 20 may be used to enter a password.”), [0104] (“Upon entry of a password at step 154 (i.e., using a stylus and the screen 21 or hardware buttons 32”). Therefore, Muratov’s entering of information on a display of a portable electronic device using “depression of buttons”, “a stylus”, etc., corroborates that manual input on a wireless device was a conventional way to provide security data like passwords.

[0243] Alternatively, even if Randall had not explicitly taught *receiving at least a manually entered login from a first wireless device* and if Randall’s PIN or selected answer were not considered *a manually entered password associated with said login*, it would have been obvious to modify Randall to receive these inputs on Bob’s device to authenticate Bob. Using these inputs 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. My testimony regarding POSAs’ background knowledge with respect to using these inputs to authenticate a device user seeking

another user's information (including location) is corroborated by several references, as discussed in the paragraphs below.

[0244] Carey (EX1024) describes "instant message communication in a wireless and non-wireless environment." Carey, Abstract; *see also id.*, 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).

[0245] 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 user name 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).

[0246] 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).

[0247] Sandhu (EX1016) relates to "distributing positional information and location specific messages to mobile units by using a data network." Sandhu, [0002]. Sandhu discloses users that register with the positioning system receive "a login name and a password" entered via the user's mobile device. Sandu, [0023]-[0024]. The positional and location information of mobile devices in the system is thus obtainable without the user of one mobile device calling the other. 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).

[0248] 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 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 personal information.

[0249] Darling (EX1022) concerns communications with mobile devices. 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 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).

[0250] Randall teaches that the same “need for authentication of the user” applies “when they access their data” (Randall, [0380]), such as when Alice is using her *first wireless device* to access “Alice's i-Data” on the i-server (Randall, [0503]-[0505]). POSAs would have understood that Randall's i-server receives a manually entered login and password to authenticate Alice and update her i-Data

via her *first wireless device* in the same way it receives the same type of authentication information from Bob’s device to authenticate Bob.

[0251] Randall’s system can have many users (e.g., Alice, Bob, John, Charles, Peter). Randall, [0511]-[0512] (Table 2). As such, the i-server’s “database contains **information** from or relating to many different entities,” including “individual[s].” Randall, [0046]. By using Bob’s login and password to identify that the user is “Bob (as opposed merely to Bob’s device)” and allow Bob to access “his own personal information” in the database (Randall, [0067]-[0068]), Randall’s system identifies Bob’s *user information from a plurality of different user information*. And by using Alice’s login and password to identify that the *first wireless device* user is Alice with access to her personal information (Randall, [0503]-[0505]), Randall’s system *identifies Alice’s user information from a plurality of different user information*.

[0252] Thus, it is my opinion that the Randall-De-Vries combination meets Element [1B].

- iv. **Element [1C]: a location of said first wireless device is operable to be recorded on said remote system after said user information has been identified on said first wireless device and said location is associated with said user information and provided by said first wireless device to said remote system,**

[0253] Randall's "authentication" can be used for access control "both *locally* and on the server." Randall, [0380]. Thus, Alice's *user information* is *identified* locally on her *first wireless device* before she uses her device to access and update her i-Data on the i-server, and the further actions discussed below, including updating Alice's location on the i-server, occur "*after said user information has been identified on said first wireless device.*"

[0254] "[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, which transmits location information to the i-server." Randall, p. 24 (Table 4, "People tracking"). By Alice's wireless device presenting Alice's GPS location to the i-server in association with Alice, *said location is associated with said user information and provided by said first wireless device to said remote system.*

[0255] For example, "Alice stores her data on a server on the Internet." Randall, [0053]. As shown in Table 1 (which I annotated below), 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)

[0256] Thus, *a location of said first wireless device is operable to be recorded on said remote system.* Thus, it is my opinion that the Randall-De-Vries combination meets Element [1C].

- v. **Element [1D]: a location-based event is operable to be provided based, at least in part, on said location of said first wireless device, wherein said location-based event is operable to be manually pre-selected from a list of at least three types of location-based events on a device,**

[0257] Randall's system provides an "Old buddy finder" service wherein 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 (Table 4, "Old buddy finder"). The alert is a *location-based event* provided based in part on Alice's *first wireless device's* location (and in part on Bob's location).

[0258] De-Vries concerns the same type of proximity-based *location-based events* as Randall. De-Vries, Abstract ("notifications to inform when certain people...are nearby" as "tracked by positioning equipment based on personal communications/computing devices carried by the people"), 2:18-35 ("mobile personal information devices such as cell phone"), 4:39-44, 4:60-65, 5:20-62 (wireless device GPS locations are "stored in the people/place database" on the server to "provide alerts" to other users' devices). In that context, De-Vries teaches to provide *at least three types* of such *location-based events*. One type is distance-based: a "parameter sets a proximity threshold within which people...are to be considered proximate to the user...for purposes of...providing notifications. This proximity parameter can have the form of a geographic distance threshold,

e.g., a radius in miles or kilometers, within which the people...must be located to be considered in proximity to the user.” De-Vries, 9:1-8. Another type is region-based: “proximity parameters, such as same city/town/neighborhood.” De-Vries, 9:8-13. Other types include “same building, same room,” etc. De-Vries, 9:13-14. Still further types are based on one or both users’ “place context,” which is “place-specific information” beyond simply the “location”—e.g., whether the place the user is currently located is their “home or place of work” or a “public place[,]” or whether in “a movie theatre” vs. “a shopping mall or library.” De-Vries, 6:4-7:12, 7:44-54, 8:41-67, 9:63-10:11. Further types of *location-based events* are additionally based on “times of the day or week.” De-Vries, 9:63-10:19. De-Vries thus teaches *at least three types of location-based events*.

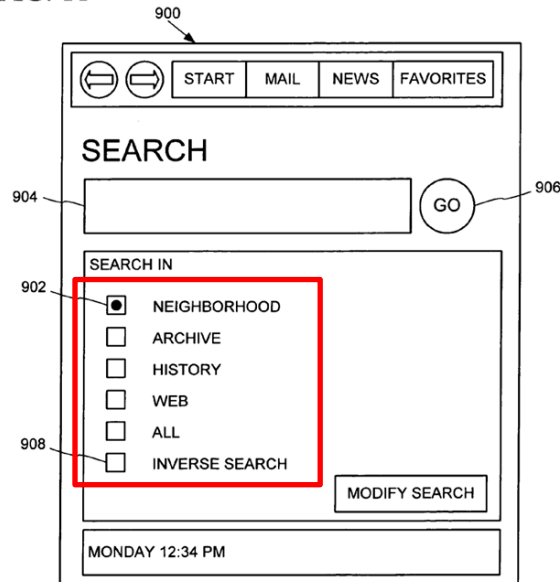
[0259] Thus, in the Randall-De-Vries combination that I discussed *supra* §VIII.E.3, *at least three types of location-based events are operable to be provided*—e.g., Bob can be alerted when Alice’s *first wireless device* is “within a defined proximity” (Randall, p. 24, “Old buddy finder”) defined in “the form of a geographic distance threshold” (De-Vries, 9:5-8), when Alice’s device is in the “same foreign city” (Randall, p. 24, “Old buddy finder”) or “town/neighborhood” (De-Vries, 9:12-13), when Alice’s device is in the “same building, same room,” etc. (De-Vries, 9:13), when Alice/Bob is at home or work or in a social place, and

at specified times of the day or week (De-Vries, 6:4-7:12, 7:44-54, 8:41-67, 9:63-10:19).

[0260] In the Randall-De-Vries combination, based on obvious implementations of De-Vries's teachings, Bob can *manually pre-select* from a *list* on his *device* what type of *location-based event* to receive about Alice's *first wireless device*'s location. De-Vries teaches that "parameters can be designated explicitly by the user," who can set them so that "different people have different proximity thresholds." De-Vries, 8:41-46, 9:19-20. For example, "a user may only be interested in notification of the location of a person they see frequently if that person [is] within a block or so" (i.e., a distance-based event), "whereas they may wish to be notified if a close friend who lives in another country happens to be in the same city as the one they currently find themselves in" (i.e., a region-based event). De-Vries, 9:26-31.

[0261] De-Vries teaches that parameter settings can be part of "a graphical user interface...for accessing the information service from a client device." De-Vries, 8:60-67. And in FIG. 11 (annotated below), De-Vries illustrates a typical graphical user interface (GUI) for the device user to select among a set of available options, by *manually pre-selecting* one of the options from a *list*.

FIG. 11



De-Vries, FIG. 11 (annotated)

[0262] Although the specific example in FIG. 11 is illustrating a GUI for submitting a search query (De-Vries, 16:34-44), POSAs would have known that this form of GUI was typical and common for user selection among available options. POSAs would, therefore, have had motivation and reasonable expectation of success in implementing Bob's pre-selection of a type of *location-based event* to receive about Alice's location in this way, by manually *pre-selecting from a list* of the available *at least three types of location-based events* on Bob's device.

[0263] Thus, it is my opinion that the Randall-De-Vries combination meets Element [1D].

- vi. **Element [1E]: a location-based event notification is operable to be provided on said device as a result of, at least in part, location access rights of said device from said first wireless device,**

[0264] Randall's system provides a *location-based event notification* on Bob's *device* when that "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 (Table 4, "Old buddy finder"); *see supra* §VIII.E.4.a.v (Element [1D]).

[0265] Randall further teaches that Bob's device can only access Alice's location (as is necessary for alerting Bob that Alice is located nearby) if Alice has provided Bob's "*device*" sufficient "*location access rights*" from Alice's "*first wireless device*." 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 *supra* §VIII.E.4.a.iv (Element [1C]) and shown in Table 1 (which I have excerpted and annotated below), one of the fields in Alice's database is information about her device's "GPS *location*," and she has designated that field as only being accessible to users whom she has designated as part of the "i-Group" called "partner." Randall, [0503]-[0512].

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
[...]			
GPS	location	London W1, Seymour St.	partner
Hobby	preferences	Photography, travel	friends
Book	preferences	Maverick	friends
AlbumOfTheWeek	InstaPoll		friends

**Randall, Table 1 (pp. 21-22)
(excerpted and annotated)**

[0266] “[S]ensitive 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)”). 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.’” Randall, [0509]. This is a “method[] of making contacts into members of a particular i-Group,” which Alice can use via her *first wireless device* to provide *location access rights* of Bob’s device to access information about her device’s location. Randall, [0509], [0495]. “*Access 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, in one example, if Alice assigns Bob to the “partner” i-Group having access to Alice’s GPS location and Alice has only one partner, then Alice is assigning *location access rights* exclusively to Bob (and his device). Randall, Table 1.

[0267] Thus, Randall’s “Old buddy finder” alert provides *a location-based event notification* on Bob’s device *as a result of location access rights of said device from Alice’s first wireless device*.

[0268] Additionally, as I discussed *supra* §VIII.E.4.a.v (Element [1D]), De-Vries similarly teaches to provide such *location-based event notifications on said device*. De-Vries, Abstract (“service provides...**notifications** to inform when certain people are nearby...via the user’s personal communications/computing **device**”), 8:27-39 (“the information service...transmits a **notification** message...to the user’s personal mobile data communications **device**”). And De-Vries teaches to provide such *location-based event notifications as a result of location access rights of said device from said first wireless device*. De-Vries, 9:32-45 (a user like Alice can “set the visibility parameters to be either visible or not visible to a particular user” like Bob “or group of users,” such that “by setting the visibility parameter for different groups of people, the person could

elect to have the information service inform some groups of his or her contacts about his or her proximity, while not informing others”).

[0269] Thus, POSAs would have had motivation and reasonable expectation of success to implement the Randall-De-Vries combination to provide *a location-based event notification on said device as a result of location access rights of said device from said first wireless device*, in view of both Randall’s and De-Vries’s teachings of successfully doing so.

[0270] Thus, it is my opinion that the Randall-De-Vries combination meets Element [1E].

- vii. **Element [1F]: wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.**

[0271] As I discussed *supra* §VIII.E.4.a.v (Element [1D]), in the Randall-De-Vries combination, a *first one of the types of location-based events* is *region-based* (“same foreign city” (Randall, p. 24, “Old buddy finder”) or “town/neighborhood” (De-Vries, 9:12-13)), and a *second one of the types of location-based events* is *distance-based* (“within a defined proximity” (Randall, p. 24, “Old buddy finder”) defined in “the form of a geographic distance threshold, e.g., a radius in miles or kilometers” (De-Vries, 9:5-8)).

[0272] Thus, it is my opinion that the Randall-De-Vries combination meets Element [1F].

b. Claim 2

[0273] As explained in this section below, in my opinion a POSA would have understood that the Randall-De-Vries combination meets all limitations of claim 2 of the '039 patent, and therefore renders claim 2 obvious.

i. Preamble [2PRE]: A system comprising:

[0274] Like claim 1, claim 2's preamble only recites "A system 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 the Randall-De-Vries combination discloses the preamble for at least the reasons provided above with respect to claim 1's Preamble [1PRE] (§VIII.E.4.a.i).

ii. Element [2A]: a remote system operable to perform a trigger of a request of location information of a wireless telephonic device for a device at an occurrence of a location-based event based, at least in part, on a location of said wireless telephonic device,

[0275] Element [2A] recites substantially the same functionality as recited in Element [1A], which recites "*a remote system*", and Element [1C], which is directed to providing a location of a wireless device to a remote system. Thus, it is my opinion that the Randall-De-Vries combination renders Element [2A] obvious for the same reasons the Randall-De-Vries combination renders Element

[1A] and Element [1C] obvious, as I discussed above (*see supra* §VIII.E.4.a.ii (Element [1A]) and §VIII.E.4.a.iv (Element [1C])).

[0276] Moreover, once Bob’s “device alerts Bob” that Alice is “in the same foreign city” (Randall, p. 24, “Old buddy finder”), it would have been obvious to request updates of Alice’s location as she moves and “[t]he I-server is up-dated with [her] location” (Randall, p. 24, “People tracking”). Thus, by requesting updated location information once the alert is provided, the i-server (*remote system*) *is operable to perform a trigger of a request of location information of the wireless telephonic device for the device at the occurrence of the location-based event*, meeting Element [2A].

iii. Element [2B]: wherein said located-based event is operable to be manually pre-selected from a plurality of location-based events on a first screen of said device from a list of at least three types of location-based events,

[0277] Element [2B] recites substantially the same functionality as recited in Element [1D]. Thus, it is my opinion that the Randall-De-Vries combination renders Element [2B] obvious for the same reasons the Randall-De-Vries combination renders Element [1D] obvious, as I discussed above (§VIII.E.4.a.v, Element [1D])).

- iv. **Element [2C]: access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger**

[0278] Element [2C] recites substantially the same functionality as recited in Element [1E], where Element [2C] recites obtaining *access rights* for a *device as a result of* a trigger (to be provided to the device) and Element [1E] recites providing a location-based event notification to a *device as a result of* location access rights of the device. Therefore, both Element [2C] and Element [1E] are directed to *access rights*/location access rights in connection with a trigger/location-based event notification. Thus, it is my opinion that the Randall-De-Vries combination renders Element [2C] obvious for the same reasons the Randall-De-Vries combination renders Element [1E] obvious, as I discussed above (§VIII.E.4.a.vi, Element [1E])).

- v. **Element [2D]: a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,**

[0279] Element [2D] recites substantially the same functionality as recited in Element [1E]. Thus, it is my opinion that the Randall-De-Vries combination renders Element [2D] obvious for the same reasons the Randall-De-Vries combination renders Element [1E] obvious, as I discussed above (§VIII.E.4.a.vi, Element [1E])).

[0280] Moreover, it would have been obvious to provide the alert on a separate *display screen* from the specification of alerts of interest, given that the user's specification of which alerts are of interest occurs before those alerts are provided.

- vi. **Element [2E]: and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.**

[0281] Element [2E] recites substantially the same functionality as recited in Element [1F]. Thus, it is my opinion that the Randall-De-Vries combination renders Element [2E] obvious for the same reasons the Randall-De-Vries combination renders Element [1F] obvious, as I discussed above (§VIII.E.4.a.vii (Element [1F])).

- c. **Claim 3: The system of claim 1, further comprising a second device, wherein said second device is a second wireless device, said second device includes a global positioning system and a second location is provided by said global positioning system and said second location is stored on said remote system.**

[0282] Randall's *remote system* (i-server) serves multiple users having wireless devices. For example, Table 2 (below) shows Alice's "contacts database" that includes contacts named John, Charles, Peter, etc. 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

Randle, Table 2

[0283] Randall teaches that any “of the people in the list above” can view a subset of Alice’s data on the i-server to which Alice has given them access rights, “using an application on their...wireless information devices.” Randall, [0512]-[0513]. Thus, Randall’s system includes (more than) *a second wireless device*.

[0284] As I discussed *supra* §VIII.E.4.a.iii (Element [1B]), a POSA would have understood that in Randall’s system, any of the functionality that Randall discloses and/or renders obvious for performance by one wireless device (e.g., Alice’s device) can equally be performed by any other wireless device. Randall teaches that any wireless device can use the “People tracking” service discussed *supra* §VIII.E.4.a.iv (Element [1C]) by which “[t]he I-server is up-dated with the location of a person” as “obtained via a GPS wireless information device, which transmits location information to the i-server.” Randall, p. 24 (Table 4); *see*

also supra §VIII.E.4.a.iii (Element [1B], where I explain that any wireless device in Randall’s system can use any of Randall’s functionality). Thus, *said second device includes a global positioning system* that provides a second location that is *stored on said remote system*.

[0285] Thus, it is my opinion that the Randall-De-Vries combination meets claim 3.

- d. **Claim 4: The system of claim 1, wherein said first wireless device includes a first global positioning system that is operable to provide said location and a second device is provided that includes a second global positioning system that is operable to provide a second location, wherein said second location is stored on said remote system.**

[0286] Claim 4 recites substantially the same functionality as recited in Element [1C] (*first wireless device* limitations) and claim 3 (*second device* limitations, where I discuss that Sheha teaches that any of the mobile devices in the system have a GPS for providing the device’s location, Sheha, 10:5-16). Thus, it is my opinion that the Randall-De-Vries combination renders claim 4 obvious for the same reasons the Randall-De-Vries combination renders Element [1C] and claim 3 obvious, as I discussed above (§VIII.E.4.a.iv (Element [1C]), §VIII.E.4.c (claim 3)).

- e. **Claim 5: The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information.**

[0287] As I discussed above with respect to Element [1B] (*supra* §VIII.E.4.a.iii), Bob’s second user information is associated with the “information from or relating to” Bob in the “database” on Randall’s i-server. Randall, [0046]. “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 [1E] (*supra* §VIII.E.4.a.vi), these include the claimed access rights. Thus, *said access rights are associated with Bob’s second user information.*

[0288] Each of Randall’s wireless devices can have “a directory application” that “contains a user’s contacts list.” Randall, [0009]. A user’s “contacts database”—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” (below) is “an example” of “Alice’s Universe.” 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

[0289] As Table 2 shows, Alice’s Universe can include *a list of at least four different user information* (e.g., user information for John Bently, Charles Davies, Peter Entwistle, Greenfield Ventures, etc.). The Universe contacts database is both “stored on the i-server” and “cached on” the user’s “wireless information device[.]” Randall, p. 23 (Table 4, “Auto-entering address book”), [0062]-[0063] (wireless device has “local copies of the master information held on the central server(s)” including “contact numbers”), [0069] (wireless device “typically includes a cached version of all of [its user’s] information which is on the central server”). Like other server-stored data, the copy of Alice’s contacts list on her wireless device is for “*display* in an appropriate application,” and thus is *on a display screen*. Randall, [0013], [0021] (“contacts application” on user’s device “allow[s] them to see” their contacts’ information), [0179] (if “user has allowed

Buddies to see specific” information, “user should be able to easily determine this through their Buddy view”), [0222] (similar), [0400] (other user’s “unique ID” can be “store[d]” in user’s “contact manager”).

[0290] 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.’” Randall, [0509]. As I discussed above with respect to Element [1E] (*supra* §VIII.E.4.a.vi), this is a “method[] of making contacts into members of a particular i-Group,” which Alice can use to select Bob’s *access rights* to her location. Randall, [0509], [0495]. Alice is “able to switch location information on for a person” (e.g., Bob), “i.e. being able *to select the person* and allow *access*.” Randall, [0144], [0012] (“user could click on” data displayed on wireless device “to perform...actions”), [0146]-[0151] (user can take “action” on a “specific contact” in “their buddy list”).

[0291] Randall thus teaches, or at minimum renders obvious, allowing Alice to manually select Bob’s level of *access rights* on the *display screen* from the *list* of Alice’s contacts (e.g., by selecting Bob from the list and allowing him access). Randall, [0144]. Manually selecting another user from a displayed contacts list was well-known in POSAs’ background knowledge as a suitable option with reasonable expectation of success for performing an action in relation

to that user. My testimony regarding POSAs' background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0292] Smith (EX1023) describes a “[m]obile telephone 210 provid[ing] a user-friendly interface” to facilitate a user’s interactions with the telephone. Smith, 5:15-18. The user-friendly interface can present, to a user, information such as a “directory of entries each including a telephone number and associated information.” Smith, 3:17-20. Smith provides example formats of such information and one such format is shown in FIG. 6 of Smith. Smith, 6:53-7:3; *see also* 7:41-49; FIG. 9.

NAME	TITLE	ORGANIZATION	ADDRESS	COMMUNICATION ADDRESS	ICONS	MISC
NAME A	PRESIDENT	ABC CORP.	123 ABC DR. SOMEWHERE, CA 90210	(613)543-9999	(HOME) 	19 1/2 SHIRT SIZE B-DAY 1-2-34
				(613)789-4356	(WORK) 	
				(613)555-3496	(CELLULAR) 	
				NAME@CA	(EMAIL) 	
				(613)789-4357	(FAX) 	
NAME B • • •						
NAME Z						

FIG. 6

Smith, FIG. 6

[0293] Smith further describes that the telephone can “receiv[e] a user input selecting an icon, one of the entries corresponding to the selected icon is selected.” Smith, 3:24-26, 5:15-18, 6:53-7:3, 7:41-49, 9:42-61, 10:29-11:4. Thus,

Smith corroborates that manually selecting another user from a displayed contacts list was within a POSAs' background knowledge.

[0294] Han (EX1027) describes “a position tracking service system and method using wireless communication and Internet.” Han, [0002]. Han discloses a display screen from which a user “selects the target for which he intends to receive position tracking service via the registration window output on the screen of the computer.” Han, [0033]. Therefore, Han corroborates that a user manually selecting to receive position information of a target that is selected from a list of targets was within a POSAs' background knowledge as a suitable option for selecting a contact of interest, including to access their location and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.

[0295] Meadows (EX1018) describes a monitoring system that “monitor[s] the geographical location of individuals within a geographical region from a remote location.” Meadows, 2:29-32. As shown in Meadows's FIG. 4A (reproduced below), Meadows describes that a user is “presented with a list of names of persons” and from that list the user can manually “select[] which of the individuals to monitor” for their location information. Meadows, 5:30-47. Therefore, Meadows also corroborates that a user manually selecting individuals to receive location information for from a graphical user interface was within a

POSAs' background knowledge as a suitable option for selecting a contact of interest, including to access their location and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.

WELCOME TO THE WORLD WIDE WATCHER		
ACCESS CODE: <u>1582</u>		
		<u>STATUS</u>
1. DEBORAH	(301) 663-9580	ACTIVE
2. MARCIA	(410) 222-3344	ACTIVE
3. BRIAN	(301) 663-9301	ACTIVE
4. ADAM	(301) 494-5000	ACTIVE
PLEASE SELECT INDIVIDUALS TO MONITOR		
①	②	③ ④ ALL

FIG. 4a

Meadows, FIG. 4A

[0296] Darling (EX1022) describes “facilitating flexible communication between users...using mobile equipment” (Darling, 1:44-45) to “enable a user to determine the location of another user” (Darling, 2:10). Darling describes that a user can, using their mobile equipment, “scroll through the list of people that they are allowed to view locations for and find out where they are.” Darling 41:1-5; *see also* 41:6-15. Therefore, Darling also corroborates that a user manually selecting a person to retrieve location information from a list of contacts that they are allowed to locate was within a POSAs' background knowledge as a suitable option for selecting a contact of interest, including to access their location

and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.

[0297] Thus, it is my opinion that the Randall-De-Vries combination meets claim 5.

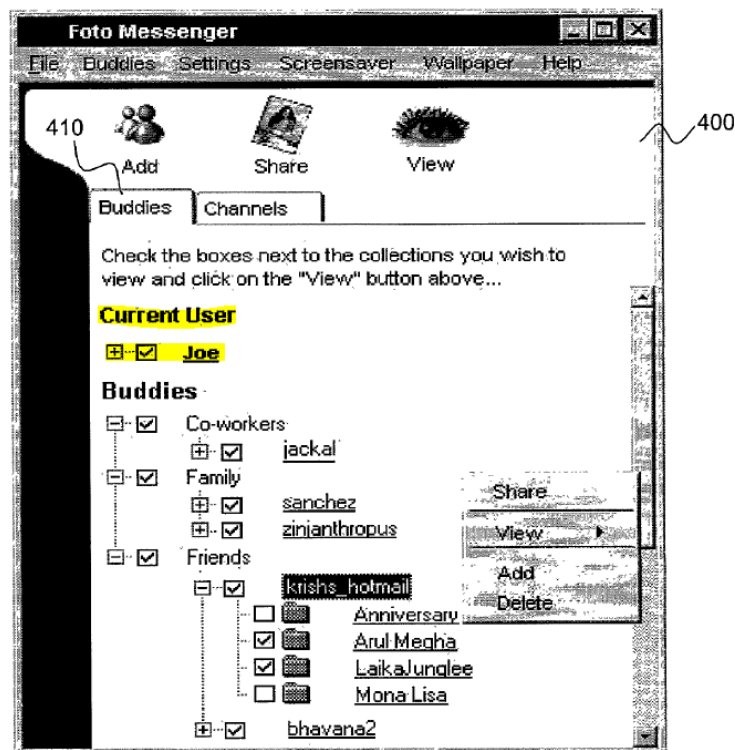
- f. **Claim 6: The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information and a user name associated of said user information is displayed on and selectable from said display screen.**

[0298] The first part of Claim 6 repeats language that is found in claim 5, which is met as I discussed above with respect to claim 5 (§VIII.E.4.e).

[0299] Claim 6 adds over claim 5 “*a user name associated of said user information is displayed on and selectable from said display screen.*” Randall’s wireless device also displays its own user’s “i-Data” for the user to interact with. Randall, [0505] (“Table 1[] is an example application view of Alice’s i-Data” that “would be provided on Alice’s mobile device to allow her to manage her data”), [0176]. Thus, Randall renders obvious making Alice’s user name associated of said user information displayed on and selectable from said display screen to access her data. Additionally, implementing Randall’s contacts list to display an entry for the wireless device’s own user in addition to that user’s contacts would

have been an obvious known design choice to provide the user a convenient way of accessing the user's own shared data by selecting the user's own entry from the display in the same contacts list where the user can select other contacts to access their shared data.

[0300] My opinion that displaying an entry for the wireless device's own user in addition to that user's contacts was background knowledge for POSAs is corroborated by Shankar (EX1028). Shankar provides for a "digital media resource messaging system" that enables users to share photos with buddies on their "buddy list". Shankar, 3:31-51, 6:65-7:3.



Shankar, FIG. 4 (annotated)

[0301] As shown in Shankar's FIG. 4 (reproduced above), Shankar provides for a buddy list "organized into collections using a hierarchical directory structure." Shankar, 7:3-5. FIG. 4 shows a graphical user interface that displays the buddy list for the current user Joe, and the buddy list includes the current user Joe (annotated in yellow above) along with Joe's buddies (e.g., "jackal," "sanchez"). Shankar, 7:34-36. Shankar teaches that a user can display their own "list of collections" because the user's own name is in the "buddy tab" (e.g., the "Current User" "Joe" is in the buddy tab). Shankar, 7:44-46, 7:30. By including the user's own name in a "buddy tab," a user can also elect to share their own list of collections with buddies (e.g., by "right-click[ing] on a particular file or folder," like a file or folder under the user's own name). Shankar, 7:58-8:4.

[0302] Though Shankar is in the context of a displaying a buddy list for photo sharing, POSAs would have understood that the same concept of displaying a user and their buddies in the user's buddy list would apply in any similar use case, such as a user having a contacts list on a wireless telephone in which the contacts list includes the user and the user's contacts and where the user and contacts are all sharing data.

[0303] Thus, Shankar corroborates my opinion that it was well-known in a POSA's background knowledge and an obvious, known design choice to display in a user's list of contacts an entry for the user themselves.

[0304] Thus, it is my opinion that the Randall-De-Vries combination meets claim 6.

- g. **Claim 7: The system of claim 1, wherein a display screen is provided on said first wireless device after said identifying of said user information on said first wireless device that includes a first selectable option for providing a first map associated with said location and a second selectable option for providing a second map associated with a third location of a third user information.**

[0305] Randall's system provides a "Your map and then some" application/function, where "[a]t the touch of a button, your phone can display a map of the area you are standing in." Randall, p. 29. On Alice's *first wireless device*, this "touch of a button" is a first selectable option (on a *display screen provided on said first wireless device*) for providing a first map associated with said location.

[0306] Separately, Randall's system provides another application/function where "a user might choose to subscribe to a service which allowed other users to track his or her location. ... Once the user has subscribed to the location service, then the friends/parents could add a 'map' application to their own devices, which could show their position on digital maps and...could also show the position of the user." Randall, [0021]. On Alice's *first wireless device* this application/function *provides a second map associated with a third location of*

a third user information of another user (perhaps Peter or John in Alice’s contacts in Randall’s Table 2) who is allowing Alice to track his location.

[0307] Both applications/functions are “*provided on said first wireless device after said identifying of said user information on said first wireless device*” because, as I discussed supra §VIII.E.4.a.iv (Element [1C]), Randall teaches that Alice logs in and is authenticated “locally” before using her device and before accessing others’ locations. Randall, [0380], [0067].

[0308] It would have been obvious to POSAs to provide a *second selectable option* for accessing the location tracking application/function on the same *display screen* with the *first selectable option* for accessing the “Your map and then some” application/function, because providing a menu of selectable options for applications/functions available on the wireless device (e.g., a home screen or main menu screen) was well-known and commonplace in POSAs’ background knowledge as typical for wireless devices. My testimony regarding POSAs’ background knowledge with respect to providing a menu of selectable options for applications/functions available on a wireless device is corroborated by several references, as discussed in the paragraphs below.

[0309] Himmel (EX1047) provides “displays of a user interface that may be provided to a user of a smart phone for managing e-documents.” Himmel, 6:58-59. One such user interface is shown below in FIG. 6A, which “has title 601

of ‘Smart Phone Applications’ showing the applications available to the user of smart phone 450: Address Book 602, Calculator 603, Calendar 604, E-Mail 605, NSP Directions 606, Voice Mail 607, and Wallet 608.” Himmel, 6:60-64; *see also* 6:65-7:7. Himmel’s user interface providing a menu of selectable options (e.g., Address Book 602, Calculator 603, Calendar 604, E-Mail 605, NSP Directions 606, Voice Mail 607, Wallet 608) for applications/functions available on smart phone 450 (e.g., a wireless device) corroborates that providing a menu of selectable options for applications/functions available on a wireless device was in POSAs’ background knowledge.

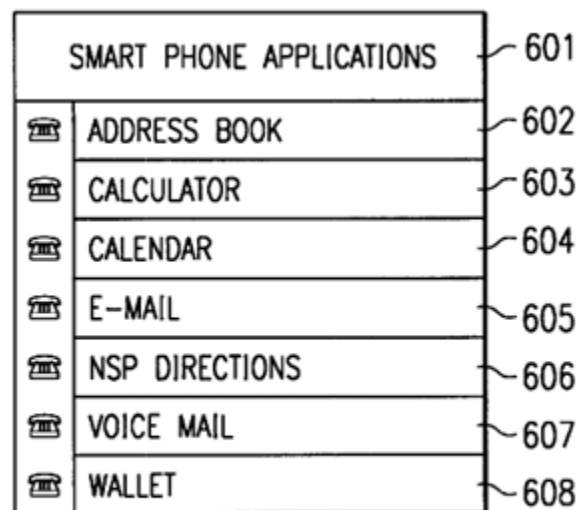


FIG. 6A 600

Himmel, FIG. 6A

[0310] Martyn (EX1048) provides a summary window on “small screen devices” (Martyn, [0015]) in which a user can select data or function of

interest from a summary window. Martyn, [0009]-[0012]. As shown in FIG. 1, “the main view may be an Application Launcher for several applications such as ‘Messages’, ‘Contacts’, ‘Calendar’, and ‘Phone’.” Martyn, [0016]. On the main view, “the user may take conventional navigation steps, such as scrolling, to move the highlight and using the available select function to navigate to the required highlighted application.” Martyn, [0016]. Martyn’s summary window providing a main view of several selectable applications (e.g., ‘Messages’, ‘Contacts’, ‘Calendar’, ‘Phone’) corroborates that providing a menu of selectable options for applications/functions available on a wireless device was in POSAs’ background knowledge.

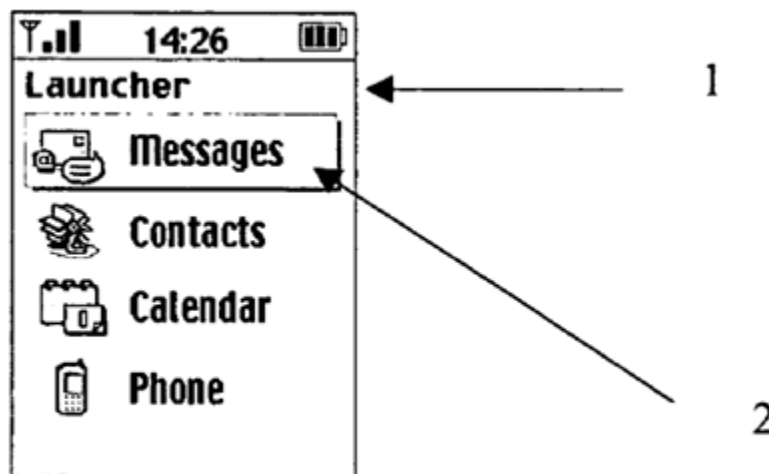


Figure 1

Martyn, FIG. 1

[0311] Allard (EX1049) provides for a “cellular telephone” (Allard, 3:2) to display a “mobile office screen” (Allard, 3:14) shown in FIG. 4. As shown

in FIG. 4, the “mobile office screen” displays “a number of different applications which the data processing system of device 2 is capable of” such as a “calendar and note pad, as well as a filer and an address book”. Allard, 3:15-18. Allard’s mobile office screen displaying a number of different selectable applications (e.g., ‘Calendar,’ ‘Note Pad,’ ‘Filer,’ ‘Address Book’) corroborates that providing a menu of selectable options for applications/functions available on a wireless device was in POSAs’ background knowledge.

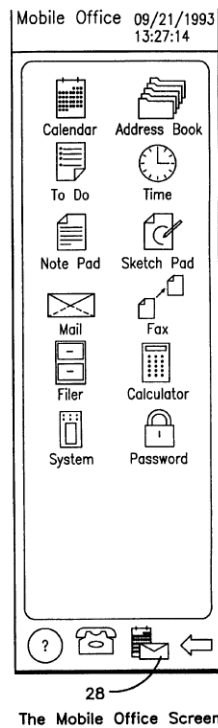


FIG. 4

Allard, FIG. 4

[0312] Thus, it is my opinion that the Randall-De-Vries combination meets claim 7.

- h. Claim 8: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a first map associated with said location and a second map associated with a third location of a third user information.**

[0313] Claim 8 recites substantially the same functionality as recited in

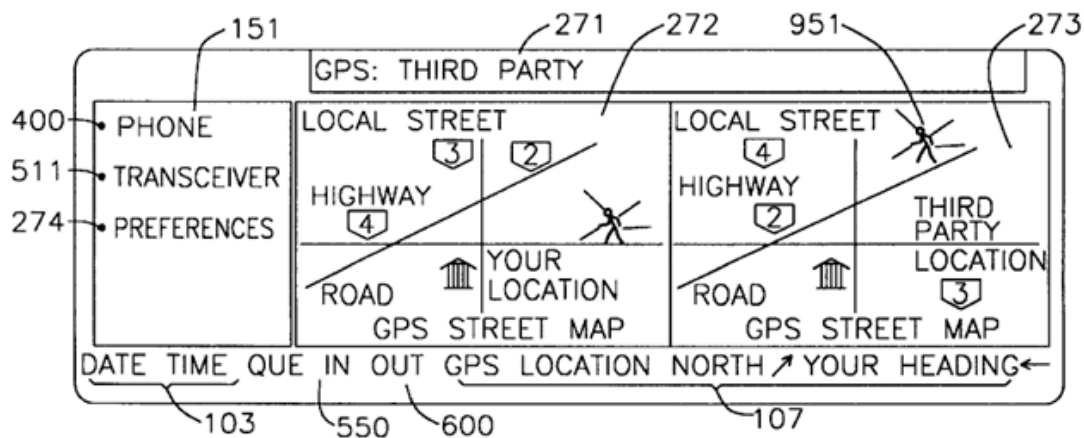
7. Thus, it is my opinion that the Randall-De-Vries combination renders claim 8 obvious for the same reasons the Randall-De-Vries combination renders claim 7 obvious, as I discussed above *see supra* §VIII.E.4.g (claim 7).

[0314] Additionally, claim 8 does not require the two “*selectable option[s]*” of claim 7, and it would have been obvious to POSAs to implement Randall’s location-tracking application (Randall, [0021]) to split Alice’s location and the other user’s location into two maps when the locations are too far apart to fit well on the same map.

[0315] My testimony regarding POSAs’ background knowledge with respect to splitting different locations into respective maps is corroborated by Obradovich (EX1043). Obradovich describes both single screen and split-screen embodiments. In the single screen embodiment, “[i]f the third party’s location is sufficiently close to the user’s location, or if the user’s displayed map covers a sufficiently large area, both the user’s and third party’s location can be shown on the same map without resort to a split screen display. Obradovich, 12:10-14. In

the split-screen embodiment where the two users' locations are not close to each other, which is shown in FIG. 11, "[a] split screen displays the user's location on a map on the left side of display 272 and, after contact with a third party via a communication link, the third party's map and location on the right side of display 273." Obradovich, 12:6-10. Obradovich's split-screen embodiment corroborates that splitting different locations into respective maps when the locations are too far apart to fit well on the same map was in POSAs' background knowledge.

FIG. 11



Obradovich, FIG. 11

[0316] Thus, it is my opinion that the Randall-De-Vries combination meets claim 8.

- i. **Claim 10: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or a second type of geographic region.**

[0317] As I discussed above with respect to Element [1C]

(§VIII.E.4.a.iv), Randall teaches that Alice’s *first wireless device* provides its location to the i-server (and from there to other users such as *a third user information*) *after said identifying of said user information on said first wireless device*.

[0318] Randall teaches that Alice “allow[s] others to track...her location...using the location attribute of [Alice’s] data object.” Randall, [0021]. The location attribute can be “at different levels of granularity—for example, location might be defined in very approximate terms...no better than a given city,” or as “enriched location information” that is exact “to within a few meters.” Randall, [0024]. “[S]ince the objects can be sent between users, ... **access control**” is “invoked to ensure that access to enriched data is only provided to those entitled.” Randall, [0023]. Randall thus teaches that Alice’s *first wireless device* can provide its location to a *third user* as *filtered by a first type of geographic region* (e.g., city) or *a second type of geographic region* (e.g., the nearest few meters).

[0319] Additionally, De-Vries teaches to allow the *first wireless device* user to control the granularity at which the “user discloses their location to others,” such that the “user may provide very accurate information to trusted individuals (e.g. location to 10 meter resolution to family members) and less accurate data to others (e.g. simply the city where one is located to a co-worker).” De-Vries, 9:19-26.

[0320] Thus, POSAs would have had motivation and reasonable expectation of success to implement the Randall-De-Vries combination such that Alice’s *first wireless device* provides its location to a *third user as filtered by a first type of geographic region* (e.g., city) or a *second type of geographic region* (e.g., the nearest few meters), in view of both Randall’s and De-Vries’s teachings of successfully doing so.

[0321] Thus, it is my opinion that the Randall-De-Vries combination meets claim 10.

- j. **Claim 11: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered to by a first type of geographic region or a second type of geographic region, said first geographic region is a state and said second geographic region is a city.**

[0322] As I discussed above with respect to claim 10 (§VIII.E.4.i), De-Vries teaches to allow a user to “disclose[] their location to others” using “different proximity thresholds” for accuracy of the location, and that “proximity parameters” span a wide variety, “such as same city/town/neighborhood, same venue, same building, same room, and the like.” De-Vries, 9:8-26. Thus, one *geographic region is a city*, and it would have been obvious to POSAs to provide another *geographic region* as a *state*, given De-Vries’s suggestion of “the like” and given that state is a next-level geographic region in the neighborhood-town-city sequence.

[0323] My testimony regarding POSAs’ background knowledge with respect to providing another geographic region as a state is corroborated by Sheha (EX1005), which describes that “the location of the caller is one of a metropolitan area, a state within the United States of America, and an international political territory.” Sheha, 16:4-6 (claim 24).

[0324] My opinion is further corroborated by Greene (EX1050), which discloses at 4:40-5:14 providing location information ranging from that is “configurable by the user from coarse such as ‘in Texas,’ [*geographic region is a state*] to medium such as ‘in Fort Worth, Tex.’ [*geographic region is a city*].” Greene, 4:67-5:5.

[0325] Thus, it is my opinion that the Randall-De-Vries combination meets claim 11.

- k. **Claim 12: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or an exact location.**

[0326] As I discussed above with respect to claim 10 (§VIII.E.4.i), De-Vries provides for a city – *a first type of geographic region* and accuracy to within a few meters as – *an exact location*. See, e.g., De-Vries, 9:19-26 (providing location data with “10 meter resolution,” which is “very accurate” or “less accurate data to others (e.g. simply the city where one is located to a co-worker)”). Thus, the Randall-De-Vries combination meets claim 12 for the same reasons I discussed above that the combination meets claim 10 (*supra* §VIII.E.4.i).

- l. Claim 13: The system of claim 1, wherein said first wireless device is a first wireless telephonic device and said device is a telephonic device.**

[0327] Randall’s “*wireless* information *device[s]*”—including Alice’s and Bob’s—can be “radio *telephones*” or “smart *phones*.” Randall, [0002], [0491] (“Bob’s...mobile *phone*”), [0495] (“Alice’s *phone*”).

[0328] Thus, it is my opinion that the Randall-De-Vries combination meets claim 13.

- m. Claim 14: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a type of geographic region or an exact location.**

[0329] Randall and De-Vries teach that *said access rights* can be *selected from selectable options including access to a type of geographic region or an exact location*. See *supra* §VIII.E.4.k (claim 12). Randall teaches that “whenever Alice wishes to, she can change the level of access of a current contact.” Randall, [0509]. As I discussed above with respect to Element [1D] (*supra* §VIII.E.4.a.v), De-Vries teaches, and POSAs would have known, that *selection from a list* is a typical and obvious way for the device user to select among such a set of available options. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0330] Robertson (EX1044) describes “computer software used to manage contact information—such as mailing addresses, e-mail addresses, phone numbers, and birthdays—and more specifically to a method of creating links between members over a network and providing information to each member based on levels of permission maintained by the other members to which they are linked.” Robertson, 1:4-10. Robertson describes that such levels of permissions may be displayed as a set of options in a menu list as shown in FIG. 9 (excerpted below). Robertson, FIG. 9, 8:11-14 (“Referring now to FIG. 9, a pseudo GUI 600 is shown allowing a first user to specify which types of data fields from the first user’s personal data record to grant a specific second user permission to view.”). Robertson therefore corroborates that it was within a POSA’s background knowledge that selection from a list is a typical and obvious way for the device user to select among such a set of available options and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.

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
☒

600-6
Crossing Paths Notification Permission

600-9
☐

600-8
Personal Information

☒

600-10
Work Information

☒

600-12
Birthday Notification

☒

600-14
Friend of Friends Information

600-16
Submit

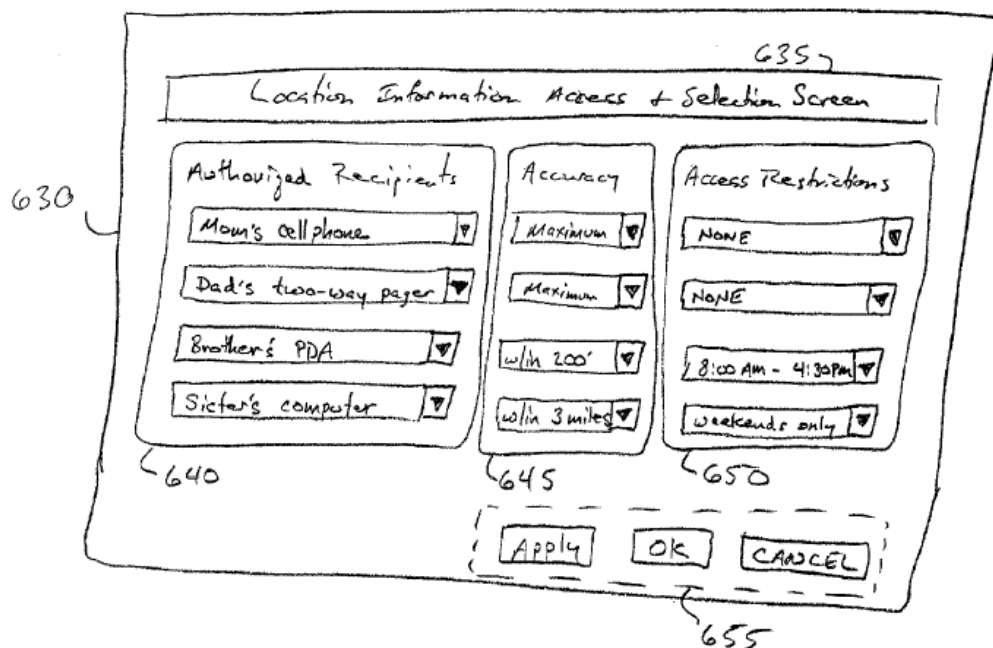
FIG. 9

Robertson, FIG. 9 (excerpted)

[0331] Menard (EX1045) provides “a screen shot appearing on a computer display” including “[f]ields within portion 640 allow user selection of authorized recipients of the location information for the” “mobile device.”

Menard, FIG. 10, [0067]. “Pull-down menus allow user selection of predetermined recipients and their associated devices,” “[f]ields within portion 645 allow...to specify the location information accuracy for each of the authorized recipients,” and “[f]ields within portion 650 allow...to specify 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.”).

Menard therefore corroborates that it was within a POSA's background knowledge that selection from a list is a typical and obvious way for the device user to select among such a set of available options and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.



Menard, FIG. 10 (excerpted)

[0332] Lee (EX1046) describes “[t]echniques for securing electronic data.” Lee, Abstract. A graphic user interface (GUI) can be used to establish or create access rules. Lee, 16:1-2 (“FIG. 2D shows an exemplary graphic user interface (GUI) 275 that can be used to establish or create access rules.”). An example of such an interface is shown in FIG. 2D (below), which shows several different access rules that can be selected by a user via the GUI. Lee, FIG. 2D,

16:1-25. Lee therefore corroborates that it was within a POSA's background knowledge that selection from a list is a typical and obvious way for the device user to select among such a set of available options and that a POSA would have had a reasonable expectation of success doing so in the Randall-De-Vries combination.

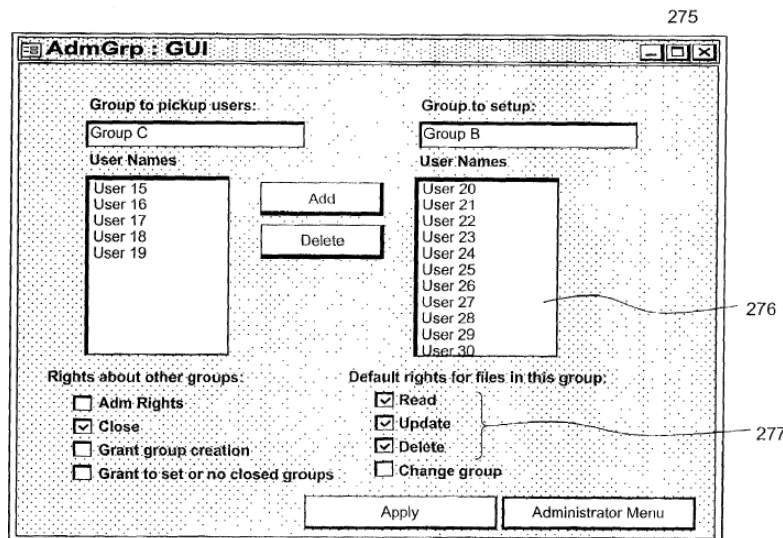


Fig. 2D

Lee, FIG. 2D

[0333] Thus, it is my opinion that the Randall-De-Vries combination meets claim 14.

- n. **Claim 15:** The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a first type of geographic region or a second type of geographic region.

[0334] Claim 15 recites substantially the same limitations as claims 10 (reciting filtering based on a “first” “or a second type of geographic region”) and

14 (which recites a “*list of selectable options*” “*to a type of geographic region or an exact location*”). Thus, it is my opinion that the Randall-De-Vries combination renders claim 15 obvious for the same reasons the Randall-De-Vries combination renders obvious claim 10 (§VIII.E.4.i) and claim 14 (§VIII.E.4.m), as I discussed above.

- o. Claim 16: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least two access options.**

[0335] Claim 16 recites substantially the same limitations as claim 10 (reciting filtering based on “*first*” “*or a second type of geographic region*”), claim 14 (reciting a “*list of selectable options*” “*to a type of geographic region or an exact location*”), and claim 15 (reciting a “*list of selectable options*” “*to a first*” “*or a second type of geographic region*”). Thus, it is my opinion that the Randall-De-Vries combination renders claim 16 obvious for the same reasons the Randall-De-Vries combination renders obvious claim 10 (§VIII.E.4.i), claim 14 (§VIII.E.4.m), and claim 15 (§VIII.E.4.n), as I discussed above.

- p. Claim 17: The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least three access options.**

[0336] Claim 17 recites substantially the same functionality as recited in claims 10, 11, and 14, where city, town, neighborhood, venue, building, room,

and nearest few meters are more than (i.e., *at least*) *three access options*. De-Vries, 9:8-26; Randall, [0023]-[0024], p. 24 (“New buddy finder” providing other user’s location in a “club”). Thus, it is my opinion that the Randall-De-Vries combination renders claim 17 obvious for the same reasons the Randall-De-Vries combination renders obvious claim 10 (§VIII.E.4.i), claim 11 (§VIII.E.4.j), and claim 14 (§VIII.E.4.m), as I discussed above.

- q. Claim 18: The system of claim 2, wherein said access rights are operable to be selected from include a list of selectable options including at least four access options.**

[0337] Claim 18 recites substantially the same functionality as recited in claim 17 except recites “at least four access options” rather than “at least three access options.” As I discussed above for claim 17 (§VIII.E.4.p), the Randall-De-Vries combination meets providing *at least four access options*, such as city, town, neighborhood, venue, building, room, and nearest few meters, as I discussed above for claim 10 (§VIII.E.4.i), claim 11 (§VIII.E.4.j), and claim 14 (§VIII.E.4.m). Thus, it is my opinion that the Randall-De-Vries combination renders claim 18 obvious for the same reasons the Randall-De-Vries combination renders claim 17 obvious, as I discussed above (§VIII.E.4.p).

- r. **Claim 19: The system of claim 2, wherein a third display screen is operable to be provided on said device with a selectable option for providing a first map associated with said location information based on said access rights or a second map associated with second location information associated with said device.**

[0338] Claim 19's recitations are met for the same reasons as claim 7's (*supra* §VIII.E.4.g), because as I discussed above with respect to Element [1B] (§VIII.E.4.a.iii), all services in Randall's system that are available to Alice's device are equally available to Bob's device, and Bob's ability to map Alice's location information is based on said access rights (as I discussed above for Element [1E] (§VIII.E.4.a.vi). For the reasons that I discussed above for claim 7 (§VIII.E.4.g), it would have been obvious to provide on Bob's *device* a menu screen (*third display screen*) of *selectable options* for providing a *first map* showing Alice's location or a *second map* showing Bob's location. Thus, it is my opinion that the Randall-De-Vries combination meets claim 19.

F. Ground 6: Claim 9 Would Have Been Obvious over Randall in View of De-Vries and Tobin

1. Discussion of Randall-De-Vries-Tobin Combination

[0339] Randall (EX1007) 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." Randall, p. 29. Randall also 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. 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).

[0340] As I discussed *supra* §VIII.B.1, Tobin (EX1041) teaches beneficial features for “navigation systems,” including “display[ing] the estimated remaining travel time” to a target destination. Tobin, [0005], [0028]. POSAs would have had motivation and expectation of success to incorporate Tobin’s disclosed feature to provide useful information in Randall’s navigation functionality. Further, as I discussed above in Section VII.A, a POSA would have had a general motivation to combine references, such as Randall, De-Vries, and Tobin, because of the desire to monetize location-based applications and services in mobile devices following heavy investments in mobile networks and the 1990s federal mandate to update wireless devices and carrier network location-based technologies and services years before the ’039 patent was filed.

2. Mapping of Randall-De-Vries-Tobin Combination to Claim 9

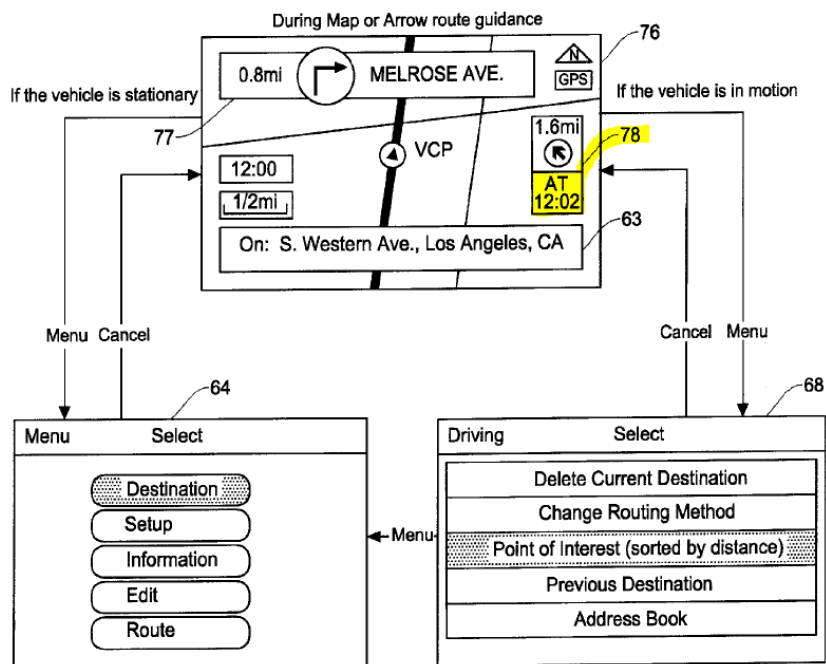
- a. Claim 9: The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a travel time between said location associated with said first user information and a third location associated with a third user information.**

[0341] As I discussed above *supra* §VIII.F.1, it would have been apparent to POSAs from Randall’s disclosures that another user’s location (e.g., a *third user’s* location), which is displayed on a map, may be one of the disclosed places “where you want to go” that Randall’s “Route finder” can provide directions to on Alice’s *first wireless device*. Randall, [0021], p. 29. In the Randall-De-Vries-Tobin combination, *a travel time* between Alice’s *location* and the *third user’s* location is provided based on Tobin’s teachings. Tobin, [0028]. Because travel time was known to be an important piece of navigational information that a user of Randall’s “Route finder” would have expected to see when reviewing directions to a destination, a POSA would have found it obvious to incorporate Tobin’s travel time teachings into Randall’s “Route finder.”

[0342] My testimony regarding POSAs’ background knowledge that travel time was a known and expected piece of navigational information to see when reviewing directions to a destination is further corroborated by Wako (EX1025). Wako describes a “route guidance screen” that, shown in FIG. 7

(annotated below), “includes an information box 78 which shows a distance to the final destination and an anticipated time to reach the final destination.” Wako, 9:18-21. Wako’s route guidance screen providing a travel time corroborates that providing a travel time between two locations was in POSAs’ background knowledge.

Fig. 7



Wako, FIG. 7 (annotated)

[0343] In the Randall-De-Vries-Tobin combination, this service of providing a travel time is provided “*after said identifying of said user information on said first wireless device*” because, as I discussed *supra* §VIII.E.4.a.iv (Element [1C]), Randall teaches that each wireless device user logs in and is authenticated

“locally” before using their device and before accessing others’ locations. Randall, [0380], [0067].

[0344] Thus, it is my opinion that the Randall-De-Vries-Tobin combination meets claim 9.

IX. COMMENTS ON MULLEN’S CHARACTERIZATIONS OF MY DEPOSITION TESTIMONY CITED IN IPR2023-00096, PAPER 13

[0345] I am aware that in IPR2023-00096 (039 Patent), Mullen argued that I “conceded” “at deposition” that “Sheha does not disclose user-specific privacy settings for mobile devices.” IPR2023-00096, Paper 13, at 4 (citing IPR2023-00096, Ex. 2003, 17:6-12, 114:12-25). I did not concede that. What I said at 17:6-12 of Ex. 2003 of IPR2023-00096 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.” IPR2023-00096, Ex. 2003, 17:19-20. I testified that “you can have a group of one” because “in my experience, particularly in the location world, the way group has been used is that it is not required to have at least two. It can have at least one. It can be just one.” IPR2023-00096, Ex. 2003, 18:11-24. I 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.” IPR2023-00096, Ex. 2003, 18:21-24. At 114:12-25 of Ex. 2003 of IPR2023-00096, 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.” IPR2023-00096, 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.

[0346] I am aware that in IPR2023-00096 (039 Patent), Mullen argued that I “agreed” that Degnbol’s “first aspect” and “second aspect” described in Degnbol’s “Summary of the Invention” “both require ‘generating a message when the distance between the first and second unit is within a predetermined range.’” IPR2023-00096, Paper 13, at 28-29 (citing IPR2023-00096, Ex. 2003, 122:21-126:23). I am aware that Mullen further argued that I “agreed” that “Degnbol’s reference to the ‘predetermined range [that] may be selected by the user associated with a unit’ ‘refers to the distance between the first and second unit.’” IPR2023-00096, Paper 13, at 29 (citing IPR2023-00096, Ex. 2003, 125:24-126:16). That is not an accurate characterization of my testimony. The testimony Mullen cited at 122:21-126:23 of Ex. 2003 in IPR2023-00096 consists mostly of me agreeing that the questioning attorney accurately read portions of Degnbol into the record—specifically Degnbol’s title, a sentence in Degnbol’s Abstract, and portions at 3:3-6, 4:1-21, and 6:1 of Degnbol. At no point did I agree that those aspects “require”

generating a message or that the message can only be generated based on the first and second units being a pre-determined distance apart. But even if I had, the cited testimony concerns only one small portion of Degnbol, not the entirety of Degnbol's disclosure. At no point did I agree that all disclosures in Degnbol are based only on a distance between the first and second units. As discussed in other portions of my deposition in IPR2023-00096 and in my declaration for this matter, other disclosures in Degnbol include other types of location-based events, such as based on whether a buddy is within a particular country, district, street, etc. E.g., IPR2023-00096, Ex. 2003, at 134:6-155:5, 135:19-147:5, Degnbol, 6:6-17, 10:17-11:8, 12:10-12, 13:17-21, 18:5-7.

[0347] I am aware that in IPR2023-00096 (039 Patent), Mullen argued that my deposition testimony was “[i]nconsistent with [my] own admissions and Degnbol's clear disclosures” because (according to Mullen's characterization) I testified that “that Degnbol's reference on page 6 to geographic areas – ‘such as a continent, country, district, city, co-ordinate range or a street’ – discloses a new embodiment unrelated to the distance-based ranges described in the Summary of the Invention.” IPR2023-00096, Paper 13, at 29-32 (citing IPR2023-00096, Ex. 2003, 140:5-141:8, 141:17-142:8, 143:4-25, 145:25-146:24). As explained below, I disagree that any of my testimony was inconsistent with any other testimony that I gave at deposition or in my declaration.

[0348] At 140:5-141:8 of Ex. 2003 in IPR2023-00096, I explained that when Degnbol discloses that “Each predetermined range may be associated with a geographic area such as a continent” (Degnbol, 6:6-7), “a continent is a geographical area” and “continents can vary from really wide” to “really narrow,” and so “whether or not you’re in a continent would be a type of event” not necessarily measurable as a “distance range.” IPR2023-00096, Ex. 2003, 140:5-141:8. That is also what I explained at 141:17-142:8, where I testified that Degnbol’s disclosure that “Each predetermined range may be associated with a continent” is “talking about...whether or not something is within a continent or not” because “what a POSITA would recognize as being a predetermined range associated with a continent is that’s the area and boundaries associated with a continent.” IPR2023-00096, Ex. 2003, 141:17-142:8. I further explained that “continents and countries and cities, they all have specific boundaries and areas contained within those boundaries” and “all of those are predetermined and consisting of ranges.” IPR2023-00096, Ex. 2003, 142:24-143:3.

[0349] At 143:4-25, I was asked how, “based on the technology at the time,” Degnbol could determine the range of a geographic area. IPR2023-00096, Ex. 2003, 142:24-143:6. I explained that one way it could have been done was by using “the country code of the telephone number,” and another way was that “every country has been well known from a coordinate, a world geospacic []

coordinate system for many, many years.” IPR2023-00096, Ex. 2003, 143:10-25.

I further explained that “a person of the ordinary skill in the art...would realize that all continents and nations and states and counties and cities and towns have...well-defined boundaries represented by specific sets of coordinates that you could then do a calculation to see if you’re inside or outside of that,” and that this was so well known that it was not “necessary” for Degnbol “to explain in gruesome detail.” IPR2023-00096, Ex. 2003, 144:4-13.

[0350] At 145:25-146:24, I was asked whether if Degnbol said that “each predetermined range may may be associated with a geographic area such as continent [sic],” that “could be a distance-based location-based event.” IPR2023-00096, Ex. 2003, 145:25-146:3. I responded that “I don’t know that I said” that in the way the questioning attorney phrased it, and I explained that states, for example, “can vary greatly” in terms of the “ranges involved,” meaning the “amounts of area covered and boundaries” and I explained that “I’ve articulated” “region, distance-based, as well as other types of things, such as covering the home or the street or a geofence,” all of which “are different types of events” “that I would view as being distinct from a region or distance-based.” IPR2023-00096, Ex. 2003, 146:7-24.

[0351] Thus, I disagree with Mullen that I provided testimony that was inconsistent with any of my other testimony or inconsistent with Degnbol’s

disclosures. Rather, I explained how Degnbol does, in fact, disclose embodiments that are not restricted to providing location messages that are based only the distance between two users or devices. The fact that Degnbol can use distance between users as a factor for a generating an alert is not inconsistent with Degnbol's disclosure of using other factors (like geographic location), with or without regard for the relative distance between the two users, as I discussed above, at deposition in IPR2023-00096, and in my declaration in this matter (*see supra* §VIII.A.5.a.v (Element [1D])).

[0352] I am aware that in IPR2023-00096 (039 Patent), Mullen argued that I was “unable to make sense of” an allegedly “spontaneous theory” about how Degnbol discloses using geographic areas to trigger notifications, and that Mullen argued that I “conceded” that “the ‘predetermined range’ described by Degnbol in the context of geographic areas was indeed based on distance.” IPR2023-00096, Paper 13, at 32-33 (citing IPR2023-00096, Ex. 2003, 148:14-149:18). I disagree that my testimony was “spontaneous” or that I “conceded” that Degnbol's predetermined range based on geographic area was based on distance.

[0353] My testimony at 148:14-149:18 of Ex. 2003 in IPR2023-00096 concerned Degnbol's disclosure on page 6, lines 1-6. IPR2023-00096, Ex. 2003, 148:14-149:18. I testified that the “predetermined range” that Degnbol mentions at 6:1 “may well be associated with distance between two units” in some examples,

but as I explained, “that distance” “is being assessed as to whether it’s, for example, on the same continent or in the same country or in a district, city, coordinate range, or street.” IPR2023-00096, Ex. 2003, 148:23-149:3. I stated that a “primary set of embodiments” in Degnbol may involve distance between two units, but I also explicitly noted that “all of the other ones” need not all be distance-based, regardless of whether any specific examples were in my memory at that particular moment. IPR2023-00096, Ex. 2003, 149:6-18. Thus, the cited deposition testimony explained how Degnbol discloses using geographic locations to trigger notification, and that testimony was consistent with my opinions then and now that Degnbol discloses providing messages about the location of users based on distance and/or location of the users and is not restricted to providing messages based only on the users being a predetermined distance apart, as I discussed above. I did not testify otherwise at deposition in IPR2023-00096.

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: 10-08-2024



X. 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 system comprising:
[1A] a remote system,
[1B] wherein user information is operable to be identified from a plurality of different user information by receiving at least a manually entered login from a first wireless device associated with said user information and a manually entered password associated with said login,
[1C] a location of said first wireless device is operable to be recorded on said remote system after said user information has been identified on said first wireless device and said location is associated with said user information and provided by said first wireless device to said remote system, ¹²
[1D] a location-based event is operable to be provided based, at least in part, on said location of said first wireless device, wherein said location-based event ¹³ is operable to be manually pre-selected from a list of at least three types of location-based events on a device,
[1E] a location-based event notification is operable to be provided on said device as a result of, at least in part, location access rights of said device from said first wireless device,
[1F] wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.
Claim 2
[2PRE] A system comprising:

¹² [1C] originally recited “said remove server,” and was changed by Certificate of Correction to recite “said remote system.” EX1002 at 486.

¹³ [1D] originally recited “located-based event,” and was changed by Certificate of Correction to recite “location-based event.” EX1002 at 486.

[2A] a remote system operable to perform a trigger of a request of location information of a wireless telephonic device for a device at an occurrence of a location-based event based, at least in part, on a location of said wireless telephonic device,
[2B] wherein said located-based event is operable to be manually pre-selected from a plurality of located-based events on a first screen of said device from a list of at least three types of location-based events,
[2C] access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger
[2D] a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,
[2E] and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.
Claim 3
The system of claim 1, further comprising a second device, wherein said second device is a second wireless device, said second device includes a global positioning system and a second location is provided by said global positioning system and said second location is stored on said remote system.
Claim 4
The system of claim 1, wherein said first wireless device includes a first global positioning system that is operable to provide said location and a second device is provided that includes a second global positioning system that is operable to provide a second location, wherein said second location is stored on said remote system.
Claim 5
The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information.
Claim 6
The system of claim 1, wherein said access rights are associated with a second user information, and said access rights for said second user information are operable to be manually selected on a display screen from a list of at least four different user information and a user name associated of said user information is displayed on and selectable from said display screen.
Claim 7

The system of claim 1, wherein a display screen is provided on said first wireless device after said identifying of said user information on said first wireless device that includes a first selectable option for providing a first map associated with said location and a second selectable option for providing a second map associated with a third location of a third user information.

Claim 8

The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a first map associated with said location and a second map associated with a third location of a third user information.

Claim 9

The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide a travel time between said location associated with said first user information and a third location associated with a third user information.

Claim 10

The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or a second type of geographic region.

Claim 11

The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered to by a first type of geographic region or a second type of geographic region, said first geographic region is a state and said second geographic region is a city.

Claim 12

The system of claim 1, wherein said first wireless device is operable after said identifying of said user information on said first wireless device to provide said location to a third user information filtered by a first type of geographic region or an exact location.

Claim 13

The system of claim 1, wherein said first wireless device is a first wireless telephonic device and said device is a telephonic device.

Claim 14

The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a type of geographic region or an exact location.

Claim 15
The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including access to a first type of geographic region or a second type of geographic region.
Claim 16
The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least two access options.
Claim 17
The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least three access options.
Claim 18
The system of claim 2, wherein said access rights are operable to be selected from include a list of selectable options including at least four access options.
Claim 19
The system of claim 2, wherein a third display screen is operable to be provided on said device with a selectable option for providing a first map associated with said location information based on said access rights or a second map associated with second location information associated with said device.