

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. IPR2025-00367
Patent No. 11,234,117

DECLARATION OF DAVID H. WILLIAMS

Google Exhibit 1003 Google v Mullen IPR2025-00367

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h. Claim 69: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a radio.	182
i. Claim 71: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying information indicating time to reach said location from of said second wireless device from said location of said wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.	183
j. Claim 72: The wireless telephone of claim 42, wherein said programming is further capable of downloading from a remote system associated with said server a phone book corresponding to a user of said wireless telephone.....	184
IX. APPENDIX: CLAIM LISTING	187

I, David H. Williams, declare:

[0001] I have been retained by Wolf, Greenfield & Sacks, P.C., counsel for Petitioner Google LLC, to assess claims 42-72 (the “challenged claims”) of U.S. Patent No. 11,234,117 (“the ’117 patent”) (EX1001).

[0002] 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 ’117 patent.

I. PERSONAL AND PROFESSIONAL BACKGROUND

[0003] 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.

[0004] 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.

[0005] 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.

[0006] 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.

[0007] 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.

[0008] 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.

[0009] From 1993 to 2002, I worked at Accenture as an Associate Partner in the Communications and High-Technology Strategy and Information

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

[0010] 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.

[0011] 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.

[0012] 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.

[0013] 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.

[0014] I have written a number of books on wireless location including: The Definitive Guide to IoT Sensors and IoT Use Cases (In Development), The Definitive Guide to GPS, RFID, Wi-Fi, and Other Wireless Location-Based Services (2005/2009 versions, new version in development), The Definitive Guide to Wireless E911 (2004 and 2005 versions), and (co-authored) The Definitive Guide to Mobile Positioning and Location Management.

[0015] I am the inventor or a co-inventor of ten issued U.S. patents and numerous pending applications. These include:

[0016] “Method and apparatus for providing mobile social networking privacy.” (U.S. Patent Number 8,613,109, Issued December 17, 2013).

[0017] “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).

[0018] “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).

[0019] “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).

[0020] “Systems and methods for developing, monitoring, and enforcing agreements, understandings, and/or contracts.” (U.S. Patent Number 10,853,897, Issued December 1, 2020).

[0021] “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).

[0022] “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).

[0023] “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).

[0024] “Dynamic and adaptive systems and methods for rewarding and/or disincentivizing behaviors” (U.S. Patent Number 11,636,941, Issued April 25, 2023).

[0025] “Systems and Methods for Conducting/Defending Digital Warfare or Conflict” (U.S. Patent Number 12,096,308, Issued September 17, 2024).

[0026] 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:

[0027] 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.

[0028] 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.

[0029] 1995-2001 – Was responsible for the development of Accenture's wireless location practice to capitalize on opportunities from The 1996 Telecommunications Act. I led development of business, technology, and product strategies for numerous communications and technology-centric companies

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

[0030] 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.

[0031] 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.

[0032] 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.

[0033] 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).

[0034] 2010-Present – Worked on patent and related cases involving over 200 patents involving wireless networks, wireless positioning technologies such as GPS and triangulation, and end user devices such as cell phones, PDAs, and other mobile devices.

[0035] 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.

[0036] 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

[0037] My findings, as explained below, are based on my years of education, research, experience, and background in the field of wireless networks and devices, such as cell phones and personal digital assistants (“PDAs”), as well as wireless positioning technologies, such as GPS or triangulation, as well as my investigation and study of relevant materials for this declaration. When developing the opinions set forth in this declaration, I assumed the perspective of a person having ordinary skill in the art (“POSA”), as set forth in Section IV below. In forming my opinions, I have studied and considered the materials identified in the list below.

Exhibit	Description
1001	U.S. Patent No. 11,234,117 (“the ’117 patent”)
1002	Prosecution History of U.S. Patent No. 11,234,117
1005	U.S. Patent No. 7,333,820 (“Sheha”)
1006	U.S. Provisional Patent Application No. 60/305,975 (“Sheha-Prov.”)
1007	U.S. Patent Application Publication No. 2004/0024846 (“Randall”)

Exhibit	Description
1008	International Patent Application Publication No. WO 02/17075 (“Randall-WIPO”)
1009	U.S. Patent No. 7,233,795 (“Ryden”)
1010	U.S. Provisional Patent Application No. 60/277,117 (“Ryden-Prov”)
1013	U.S. Patent No. 6,968,179 (“De-Vries”)
1014	U.S. Patent No. 6,920,328 (“Wollrab”)
1015	U.S. Patent No. 6,714,791 (“Friedman”)
1017	U.S. Patent No. 6,885,874 (“Grube”)
1018	U.S. Patent No. 6,716,101 (“Meadows”)
1022	International Patent Application Publication No. WO 01/91486 (“Darling”)
1023	U.S. Patent No. 6,084,951 (“Smith”)
1025	U.S. Patent No. 6,415,224 (“Wako”)
1027	Korean Patent Application Publication No. 10-2001-0091381 (“Han”)
1030	U.S. Patent No. 6,754,665 (“Futagami”)
1035	International Patent Application Publication No. WO 00/22860 (“Degnbol”)
1039	Plaintiff’s Disclosure of Asserted Claims and Infringement Contentions in <i>Mullen Industries LLC v. Samsung Electronics Co., Ltd. et al.</i> , Case No. 2:24-cv-00049 (E.D. Tex.) (May 15, 2024)
1054	U.S. Patent No. 6,867,733 (“Sandhu”)
1056	U.S. Patent No. 6,049,718 (“Stewart”)
1071	U.S. Patent No. 7,203,752 (“Rice”)
1072	U.S. Patent No. 6,366,856 (“Johnson”)
1074	U.S. Patent No. 6,285,867 (“Boling”)
1075	U.S. Patent No. 6,208,934 (“Bechtolsheim”)
1076	U.S. Patent Application Publication No. 2003/0040272 (“Lelievre”)
1077	U.S. Patent No. 5,048,117 (“Aisaka”)
1078	U.S. Patent No. 5,212,811 (“Kuge”)

III. MY UNDERSTANDING OF PATENT LAW

[0038] 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:

[0039] 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.

[0040] 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.

[0041] 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.

[0042] 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.

[0043] 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

[0044] 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.

[0045] 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

[0046] 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.

[0047] 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.

[0048] 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.

[0049] 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.

[0050] 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”)

[0051] 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.

[0052] The '117 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 '117 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 '117 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.

[0053] 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.

[0054] 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.

[0055] 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 '117 PATENT

[0056] The '117 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

[0057] Generally, the '117 patent discusses techniques for determining a device's location, such as via the Global Positioning System (“GPS”). EX1001, 1:15-28. The patent alleges that “GPS systems have been integrated into cellular phones” but “only minimally utilized,” so the patent purports to provide functionality to allow one cellphone user to “locate the position of” another user's cellphone. EX1001, 1:28-43.

[0058] Cellphones in the '117 patent can share their locations with a remote system, from which other users can obtain them. EX1001, 5:11-34. A user can also restrict access to their location by identifying authorized users or groups, thus specifying which other users may obtain their location information. EX1001, 3:22-31.

[0059] FIG. 2's example method (below) to obtain another user's location includes receiving a location request, determining whether the requesting user is authorized, and, if so, providing the location to the requestor. The location can be displayed on a map. EX1001, 8:11-14.

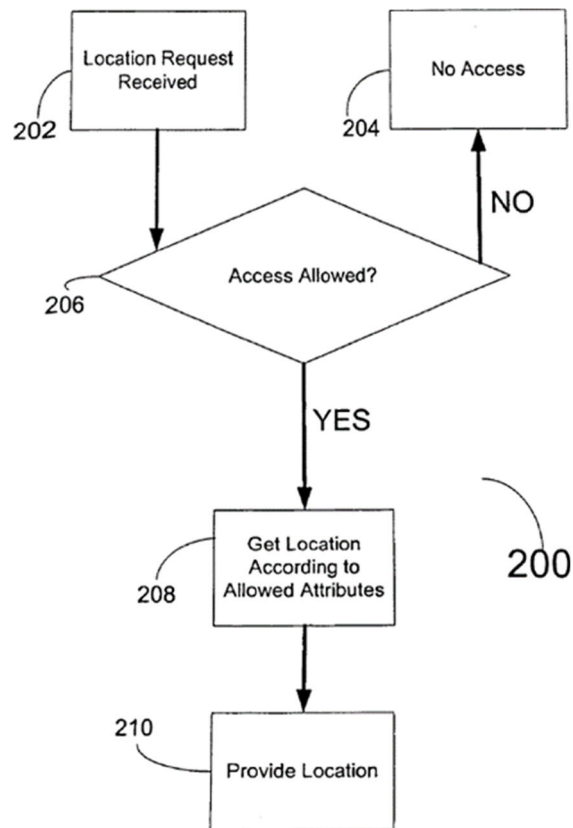


FIG. 2
EX1001, FIG. 2

B. Prosecution History of the '117 Patent

[0060] The '117 patent's prosecution spanned fourteen years and seven office actions. Finally, the applicant canceled all pending claims and added new independent claims to mirror claims in other related patents. EX1002, pp. 1484-1494, 1542-1561. The Examiner then allowed the claims because they “are similar to already allowed claims in other patents with small word or small phrase changes.” EX1002, p. 1503 (reasons for allowance).

C. The Challenged Claims

[0061] Independent claim 42 is a “wireless telephone” claim that adapts recitations from method claim 1 of related U.S. Patent No. 9,635,540 (which I discussed in my declaration submitted in IPR2025-00227).

[0062] As I discuss further below in §VIII, each of the dependent claims recites further functionality that was routine and conventional before the ’117 patent.

VI. CLAIM INTERPRETATION

[0063] 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

[0064] 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

[0065] The ’117 patent purports to have provided a variety of innovations, such as “locat[ing] the position of a different user’s cellular phone (e.g., a requested user) based upon requestor-assigned access rights[,]” EX1001,

1:38-42, and more broadly, “provid[ing] systems and methods which better utilize the information about a device’s location.” EX1001, 1:31-33.

[0066] 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.

[0067] 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.

[0068] The 911 Mandate was rooted in part in the inability of 911 dispatchers to locate mobile phone callers, which set off a subsequent FCC order process that resulted in a mandate by the FCC requiring wireless carriers to be able to locate cell phones for 911 emergency purposes. Federal Communications

Commission. “Third Report and Order.” October 6, 1999.

<https://transition.fcc.gov/Bureaus/Wireless/Orders/1999/fcc99245.pdf> (last checked 09-030-2024). The original mandate had a target of 5 years for completion (by December 2001, later revised to the end of 2005), with a variety of interim milestone targets to be met. The mandate required that carriers be able to determine and deliver to Public Safety Answering Points (PSAPs, e.g., 911 dispatchers) the location of a cell phone within a specific range of accuracy.¹

[0069] Thus, well before Mr. Mullen purportedly invented the ideas described in the challenged patents, the U.S. E911 mandate requiring the locating devices and sharing that location with other systems (and in turn other users) had been in existence for several years and much of the wireless industry (particularly wireless carriers and their suppliers) had been actively working for years to meet the original mandate milestones, to avoid multi-million dollar fines, and to enable applications that could monetize the extensive (many millions of dollars) infrastructure investments that the mandate necessitated.

[0070] Further, a variety of location information sharing innovations were occurring by that time, stimulated by the coming ubiquity of cell phone

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

location capabilities and further buoyed by the elimination in May 2000 of the GPS system's "Selective Availability," which had deliberately distorted GPS signals so they would be inaccurate up to 100 meters.² As the White House's press release said at the time:³

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

[0071] 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

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).

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

provide. These include improving efficiencies and costs of mobile resources deployment and utilization, new revenue potential from new and more tailored apps, personalizing/customizing functionality based on location, improved convenience, improved privacy and security, providing real-time status based on/including current location, collecting historical location for after-the-fact analysis and forward-looking projections of location-related resources, in enabling more custom data presentation based on/utilizing a user's (device) location, enabling new use cases, and enhancing particular use case(s) and overall application customer experience.

[0072] 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

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).

efficiencies.”⁷ Similarly, a search for “location services” and “sharing” and “new revenue” yielded over 15,000 results.⁸ Replacing the search of “new revenue” with “improved user interface” yielded over 84,000 results,⁹ and “navigation” instead of “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.

[0073] 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

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

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

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

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

LBS, particularly with Selective Availability removed. Further, it is my opinion that the general advances in the LBS field would have motivated a POSA to combine the asserted references as I describe in more detail below.

B. Sheha (EX1005)

[0074] 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.

[0075] 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.

[0076] 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).

[0077] 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	“The act of dialing the telephone number to another remote landline telephone [‘a telecommunication

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.

initiated by the caller, said caller information including at least one of a caller identification information and the phone number information of the caller;	<i>event</i>], such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices.” 6:13-17. “In one embodiment the display unit on the destination telephone 8 [<i>i.e.</i>, the device receiving the caller information] can display the caller’s name [<i>‘caller identification information’</i>], 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
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	embodiment, the display 24 of the user's device shows that he or she is signed-on and can have numerous miscellaneous window(s) 25 open at the time the Map Caller-ID notification is activated. The Map Caller-ID notification window 26 typically contains only the originating user identification and telephone number, but may also contain map information of varying resolution." 14:6-13.
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
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	information, and position information for both mobile devices 18b and 18c [‘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’]” 17:29-31.
verifying whether the receiver is a member of the caller user group;	“A mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call. For a landline-to-landline position request, the specified telephone number is correlated to its position information using telephone information from a known database or sets of databases. In one embodiment, the online database that contains this information only includes users that do not have unlisted telephone numbers. In another embodiment, users can define a group of specific users that have access to this information. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information. When a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device. In another embodiment, using the authorization and authentication protocols a user can request the position of a mobile device, similarly

	to requesting the position of a landline device.” 18:23-19:6.
retrieving a caller position information, said caller position information indicating a location of the caller; and	“It is another object of the present invention to provide a method for...the purpose of determining position information associated with the telephone number [<i>‘retrieving a call position information ... indicating a location of the caller’</i>] by searching a networked database.” 4:6-10. “It is yet another object of the invention to provide an alternative form of Caller-ID (Map Caller-ID) to a local computing telephone device for display of the caller’s position information This position information transfer is done utilizing authentication and authorization procedures or telephone-to-position information correlation procedures for caller identification.” 4:19-28. <i>See also</i> 5:5-11 (“acquire local or remote position information through the methods described above”); 6:13-17 (“The act of dialing the telephone number to another remote landline telephone, such as a residential telephone, triggers the transfer of position information, such as in the form of a map, to either one or both of the local and/or remote telephone devices.”); 7:19-23 (“In another embodiment, the destination remote mobile device receiving the telephone call obtains the position information from the calling local mobile device [<i>‘retrieving a call position information ... indicating a location of the caller’</i>],

	based on permission settings of the calling local mobile device, for the performance of various operations, such as mapping and calculating driving directions.”); 11:21-24 (“Map Caller-ID includes additional position information fields of various formats, and can include map information at varying resolutions of both the originating and destination telephone number’s locations.”); 14:21-25 (“In one embodiment, this new information window 30 is a detailed Map Caller-ID information window of varying resolution displaying the originating position information, such as a map location 33 of the caller, and the user’s location position information, such as a map location 34 of the destination telephone number.”); 18:15-22 (“The mobile devices 18b and 18c continually send their updated position information to the ODAS 3, when the position information has changed significantly as compared to the positioning error probability and as determined by the positioning technology or network configuration. The ODAS 3 periodically updates each mobile device with the other’s position information, thus providing real-time driving directions and route information. In another embodiment, the position information transfer can be sent in a peer-to-peer configuration, thus circumventing the ODAS 3.”)
transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group,	“The mobile devices 18b and 18c continually send their updated position information to the ODAS 3, when the position information has

	changed significantly as compared to the positioning error probability and as determined by the positioning technology or network configuration. The ODAS 3 periodically updates each mobile device with the other's position information [<i>“transmitting to the receiver the caller position information”</i>], thus providing real-time driving directions and route information. In another embodiment, the position information transfer can be sent in a peer-to-peer configuration, thus circumventing the ODAS 3.” 18:15-22. “A mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call. For a landline-to-landline position request, the specified telephone number is correlated to its position information using telephone information from a known database or sets of databases. In one embodiment, the online database that contains this information only includes users that do not have unlisted telephone numbers. In another embodiment, users can define a group of specific users that have access to this information [<i>‘receiver is verified to be a member of the caller user group’</i>]. This is also accomplished by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information [<i>‘receiver is verified to be a member of</i>
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	<i>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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[0078] 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 ’117 patent based on the filing date of Sheha’s provisional application.

[0079] As discussed in Sections VIII.C-D below, in my opinion a POSA would have understood that Sheha, in combination with other references, renders obvious claims 42-72 of the ’117 patent. *See also infra* §VIII.A.1 (additional discussion of Sheha).

C. Randall (EX1007)

[0080] 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].

[0081] According to the face of the document, Randall (EX1007) is a published U.S. patent application, published on February 5, 2004 as Publication No. 2004/0024846 from an international patent application that was filed on August 22, 2001 as PCT (WIPO) Application No. PCT/GB01/03788 and entered the U.S. national stage as U.S. Application No. 10/362,109. I have been informed by counsel that Randall qualifies as prior art to the ’575 patent based on Randall’s international filing date. I have also compared the WIPO publication of Randall (EX1008) to the U.S. publication of Randall (EX1007) and I have observed that they are substantively identical. In Table 2 below, I have listed the paragraphs in the U.S. publication of Randall that appear on each page of the WIPO publication

of Randall. Thus, although in this declaration I cite to the U.S. publication of Randall (EX1007) for ease of reference, each citation to the U.S. publication has a substantively identical citation in the WIPO publication of Randall at the corresponding page shown in the following table:

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

Randall PCT	Randall US
Pg. 1	[0001 - 0004]
Pg. 2	[0005 - 0007]
Pg. 3	[0008 - 0009]
Pg. 4	[0009 - 0012]
Pg. 5	[0012 - 0015]
Pg. 6	[0015 - 0020]
Pg. 7	[0020 - 0022]
Pg. 8	[0022 - 0026]
Pg. 9	[0027 - 0032]
Pg. 10	[0033 - 0046]
Pg. 11	[0046 - 0050]
Pg. 12	[0051 - 0054]
Pg. 13	[0055 - 0059]
Pg. 14	[0060 - 0063]
Pg. 15	[0063 - 0067]
Pg. 16	[0067 - 0069]
Pg. 17	[0069 - 0073]
Pg. 18	[0073 - 0074]
Pg. 19	[0075 - 0081]
Pg. 20	[0081 - 0086]
Pg. 21	[0087 - 0097]
Pg. 22	[0098 - 0107]
Pg. 23	[0108 - 0115]
Pg. 24	[0116 - 0127]
Pg. 25	[0127 - 0130]
Pg. 26	[0130 - 0139]
Pg. 27	[0140 - 0147]
Pg. 28	[0147 - 0153]
Pg. 29	[0153 - 0162]
Pg. 30	[0163 - 0171]
Pg. 31	[0172 - 0181]
Pg. 32	[0181 - 0190]
Pg. 33	[0191 - 0196]
Pg. 34	[0197 - 0209]
Pg. 35	[0210 - 0224]
Pg. 36	[0225 - 0239]
Pg. 37	[0240 - 0249]
Pg. 38	[0250 - 0257]
Pg. 39	[0257 - 0261]
Pg. 40	[0262 - 0279]
Pg. 41	[0280 - 0292]
Pg. 42	[0293 - 0303]

Pg. 43	[0303 - 0312]
Pg. 44	[0313 - 0336]
Pg. 45	[0337 - 0354]
Pg. 46	[0354 - 0354]
Pg. 47	[0355 - 0362]
Pg. 48	[0362 - 0367]
Pg. 49	[0368 - 0377]
Pg. 50	[0377 - 0384]
Pg. 51	[0385 - 0394]
Pg. 52	[0395 - 0400]
Pg. 53	[0401 - 0409]
Pg. 54	[0409 - 0417]
Pg. 55	[0418 - 0420]
Pg. 56	[0420 - 0426]
Pg. 57	[0427 - 0434]
Pg. 58	[0435 - 0443]
Pg. 59	[0443 - 0450]
Pg. 60	[0451 - 0457]
Pg. 61	[0458 - 0468]
Pg. 62	[0468 - 0472]
Pg. 63	[0473 - 0481]
Pg. 64	[0482 - 0486]
Pg. 65	[0487 - 0495]
Pg. 66	[0495 - 0499]
Pg. 67	[0499 - 0500]
Pg. 68	[0501 - Table 1]
Pg. 69	[Table 1 - 506]
Pg. 70	[0507 - 0509]
Pg. 71	[0510 - Table 2]
Pg. 72	[0512 - 0514]
Pg. 73	[0515 -Table 4]
Pg. 74	[Table 4]
Pg. 75	[Table 4]
Pg. 76	[Table 4]
Pg. 77	[Table 4]
Pg. 78	[Table 4]
Pg. 79	[Table 4]
Pg. 80	[Table 4]
Pg. 81	Appendix 1
Pg. 82	Appendix 1
Pg. 83	Appendix 1
Pg. 84	Appendix 1
Pg. 85	Appendix 1
Pg. 86	Appendix 1

[0082] As discussed in Sections VIII.A-B below, in my opinion a POSA would have understood that Randall, alone or in combination with other references, renders obvious claims 42-72 of the '117 patent. *See also infra* §VIII.A.1 (additional discussion of Randall).

D. Darling (EX1022)

[0083] Daring is titled “Informing a subscriber about the position of another subscriber” and relates to “using mobile equipment, in which messages can be sent to and from a server thereby allowing information to be obtained concerning users of the mobile devices even when the users are off line and without requiring direct contact with the users.” Darling, Abstract. According to the face of the document, Darling (EX1022) is an international patent application published on November 29, 2001 as International Publication No. WO 01/91486 from an international patent application filed on May 22, 2001 as Application No. PCT/GB01/02244. I have been informed by counsel that Darling qualifies as prior art to the '117 patent based on Darling’s publication date. *See also infra* §VIII.A.2 (additional discussion of Darling).

E. Futagami (EX1030)

[0084] Futagami is titled “Information processing apparatus, information processing method, and storage medium” and relates to “an information processing apparatus, an information processing method, and a storage

medium, which allow personal information of a user, such as a name, address, telephone number, and electronic mail address, to be recorded in an address table or the like and which also make it possible to easily control the access of another user to the personal information.” Futagami, 1:10-16. According to the face of the document, Futagami is a United States patent issued on June 22, 2004 as Patent No. 6,754,665 from an application filed on June 13, 2000 as Application No. 09/592,977. I have been informed by counsel that Futagami qualifies as prior art to the ’540 patent based on Futagami’s filing date. *See also infra* §VIII.A.3 (additional discussion of Futagami).

F. Smith (EX1023)

[0085] Smith is titled “Iconized Name List” and relates to “a directory with graphical icons representing characteristics of the entries for a communication device.” Smith, Abstract. According to the face of the document, Smith (EX1023) is a United States patent issued on July 4, 2000 as Patent No. 6,084,951 from an application filed on April 23, 1997 as Application No. 08/842,036. I have been informed by counsel that Smith qualifies as prior art to the ’117 patent based on both Smith’s issue date and its filing date. *See also infra* §VIII.D.1 (additional discussion of Smith).

G. Degnbol (EX1035)

[0086] 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 ’117 patent based on Degnbol’s publication date. *See also infra* §VIII.B.3 (additional discussion of Degnbol).

H. Bechtolsheim (EX1075)

[0087] Bechtolsheim is titled “Method and system for providing walking instructions with route guidance in a navigation program” and relates to “improved navigation programming that provides information about walking to a final destination in combination with information about driving toward the final destination.” Bechtolsheim, 1:6-10. According to the face of the document, Bechtolsheim (EX1075) is a United States patent issued on March 27, 2001 as Patent No. 6,208,934 from an application filed on January 19, 1999 as Application No. 09/234,154. I have been informed by counsel that Bechtolsheim qualifies as

prior art to the '117 patent based on Bechtolsheim's filing date. *See also infra* §VIII.B.4 (additional discussion of Bechtolsheim).

I. Boling (EX1074)

[0088] Boling is titled "Combination emergency phone and personal audio device" and relates to providing the location of a device that combines "a single-button emergency cellular telephone with a personal audio device." Boling, 1:12-15, 4:34-39. According to the face of the document, Boling (EX1074) is a United States patent issued on September 4, 2001 as Patent No. 6,285,867 from an application filed on November 3, 1998 as Application No. 09/185,191. I have been informed by counsel that Boling qualifies as prior art to the '117 patent based on Boling's filing date. *See also infra* §VIII.D.2 (additional discussion of Boling).

J. De-Vries (EX1013)

[0089] 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 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 '117 patent based on De-Vries's filing date. *See also infra* §VIII.B.1 (additional discussion of De-Vries).

K. Wako (EX1025)

[0090] Wako is titled "Display Method and Apparatus for Navigation System" and relates to "displaying information necessary for guiding a driver of a vehicle." Smith, Abstract. According to the face of the document, Wako is a United States patent issued on July 2, 2002 as Patent No. 6,415,224 from an application filed on February 6, 2001 as Application No. 09/777,990. I have been informed by counsel that Wako qualifies as prior art to the '540 patent based on Wako's filing date. *See also infra* §VIII.B.2 (additional discussion of Wako).

VIII. THE CHALLENGED CLAIMS WOULD HAVE BEEN OBVIOUS IN LIGHT OF THE PRIOR ART

[0091] I have been asked to provide my opinion concerning whether claims 42-72 of the '117 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 42-72 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 ¹²	Basis
1	Randall (EX1007-EX1008), Darling (EX1022), Futagami (EX1030)	42 , 43-44, 46, 51-54, 56-59, 63, 65-66, 69-70, 72	Obviousness

¹² I have **bolded** the independent claim(s) in this table.

2	Randall, Darling, Futagami, De-Vries (EX1013), Wako (EX1025), Degnbol (EX1035), Bechtolsheim (EX1075)	45, 47-50, 55, 60-62, 64, 67-68, 71	Obviousness
3	Sheha (EX1005), Darling, Futagami	42, 43-44, 46-47, 51-54, 59-61, 63, 65-66, 70	Obviousness
4	Sheha, Darling, Futagami, De-Vries, Wako, Smith (EX1023), Degnbol, Boling (EX1074), Bechtolsheim	45, 48-50, 55-58, 62, 64, 67-69, 71-72	Obviousness

A. Ground 1: Claims 42-44, 46, 51-54, 56-59, 63, 65-66, 69-70, and 72 would have been obvious over Randall in view of Darling and Futagami

[0092] As explained in this section below, in my opinion claims 42-44, 46, 51-54, 56-59, 63, 65-66, 69-70, and 72 of the '117 patent are unpatentable over the combination of Randall (EX1007-EX1008), Darling (EX1022), and Futagami (EX1030).

1. Discussion of Randall (EX1007-EX1008)

[0093] Randall is an international (PCT) application filed August 22, 2001, and published in the international stage as EX1008 (in English, designating the United States) and then in the U.S. national stage as EX1007. I understand that Randall is therefore prior art to the '117 patent. Citations herein are to the U.S. publication (EX1007) paragraph numbers for convenience; however, the identical description is present in the international publication (EX1008), as I demonstrated

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

[0094] Randall relates to “enabling a wireless information device to access data services,” using “an extensible framework which handles data passing to and from several applications resident on the device, the framework being shared by each of the applications.” Randall, [0002], [0006]. The wireless devices can be “radio telephones, smart phones,” etc., which “can access information on” “internet servers hosting extensible databases.” Randall, [0002], [0029]. Examples of applications on a wireless device that can all access the same server-based database framework and coordinate to provide services include “a directory application (which contains a user’s contacts list...)” and “a location application (which gives a user’s location and includes digital maps).” Randall, [0009], [0012], [0025], [0028] (“applications...share information”), [0080]-[0081], [0086], [0085]-[0115].

[0095] 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].

[0096] 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.

[0097] 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].

[0098] 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].

[0099] 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].

[0100] 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 Darling (EX1022)

[0101] Darling relates to “[m]obile telephones,” and “enabl[ing] a user to determine the location of another user without specifically having to contact that other user, even when that other user is not online or when their mobile telephone or other device is switched off.” Darling, 1:26, 9:11-16, 2:10-12. Each phone’s GPS position is provided to a server, such that a second user can request a first user’s location from the server. Darling, 2:1-8, 2:47-50. Users’ locations “may be determined by GPS or by triangulation, by the user’s mobile telephone or by the network, or both and preferably sent at intervals or on request by the server or at the request of [another] user.” Darling, 2:47-50. Darling teaches that “[e]ach user

may specify that location information is available only to specified users or groups or categories of users or that the information is publicly available” and “the server stores” this “permission information.” Darling, 2:1-8, 2:47-3:5, 22:23-40, 33:15-32, 41:21-42:2. When a second user requests a first user’s location, the server “check[s] the permission information prior to...transmitting” the location. Darling, 2:6-8, 3:1-3. “If the second user is not permitted to know the location of the first user, the information is not transmitted.” Darling, 3:8-9. Darling further teaches that “[i]n addition or instead of a first user granting permission to a second user, the second user may request permission to have access to information from the first user’s profile, for example business card details, location information, preferences and the like.” Darling, 3:15-18. “A request for permission may be communicated to the first user, preferably as a question, who may respond, preferably with a simple yes/no command.” Darling, 3:18-19.

3. Discussion of Futagami (EX1030)

[0102] Futagami describes techniques for controlling access to the personal information of a user of a portable telephone device, such as the user’s “name, telephone number, address,” etc. Futagami, Abstract. “A management server stores [the] personal information,” and “if a user...transmits a request...to the management server to transmit personal information of [another] user..., the management server determines, in accordance with access restriction information,

whether or not providing of the personal information...is restricted.” Futagami, Abstract, 14:50-15:12. If the server determines that the requesting user “is not permitted to access” the requested information, the server “transmit[s] a message” informing the requesting user. Futagami, 15:40-53. In response to this “refusal message, if the user still wants to access the [requested] personal information,” the user can “request...to change the access restriction.” Futagami, 15:54-62. The server then “inquires of the [other] user...whether to give permission to provide the personal information,” and “[i]f permission is given, the management server provides the personal information” to the requesting user. Futagami, Abstract, 16:7-32. This is shown in Figures 19-21 as a “determination as to whether to issue a request for changing the access restriction,” to which the user can input “yes” or “no.” If the user inputs “yes,” then the user’s device transmits a restriction removal request message to the management server, and the management server transmits a restriction removal inquiry message to the device of the other user. Futagami, 16:7-18, 17:1-8, 20:40-43. The other user can then decide whether to “approve[] the removal of access restriction” by “giv[ing] permission, as to access to the personal information, to the user.” Futagami, 16:25-32, 19:60-63, 20:60-65.

4. Discussion of Randall-Darling-Futagami Combination

[0103] As I discussed above (§§VIII.A.1-3) and further below, Randall, Darling, and Futagami describe highly overlapping techniques and use

cases. As I explain below, all three describe a system where a server stores personal information of client users of wireless devices.

[0104] Randall teaches that its wireless devices’ “‘map’ application” can show the device’s “position on digital maps and also, by using the location attribute of [another] user’s data object, it could also show the position of the [other] user.” Randall, [0021]. Randall discloses an “ADS System Database,” which “is at the heart of much of the ADS System’s extensibility,” where “[e]ach piece of data [stored] on the server (the ‘i-server’) has an associated tag (or name) which defines its meaning.” Randall, [0502]-[0505], Table 1 (“Alice’s iData” stored on i-server, including “name,” “E-mail,” “Mobile Phone” number, “Home Address,” etc.).

[0105] Darling similarly discloses a “server” that “stores permission information indicating whether the location information ... is available to the second user,” with “[s]imilar permissions” “associated with other information stored for each user,” where “the preferred features of this aspect may be provided independently or in combination with other aspects” of Darling’s system. Darling, 3:1-8, *see also* Darling, 21:19-22:17 (“Personal Profile” including “name,” “Mobile Phone Number,” “Personal Email Address,” “Date of Birth,” “Address,” etc.).

[0106] Futagami similarly discloses a “management server” that “manages personal information of all users of,” for example, “portable telephone device 5, and other client terminals” “in terms of, for example, names, telephone numbers, addresses, dates of birth, and electronic mail addresses.” Futagami, 4:7-12.

[0107] As I explain below, all three references also describe similar access control techniques, where each user specifies which other individual users or groups of users have access rights to specific items of the user’s personal information.

[0108] Randall discloses “Specifying Data Visibility” because “data provided by or on behalf of the user will have varying levels of visibility assigned to it” and so users can “define...for themselves” to various data, including “[v]isible to specific people (or groups).” Randall, [0131]-[0136]. Randall further discloses that “sensitive information is only available to people in certain i-Groups” and “allowing Alice to control what data they see.” Randall, [0509].

[0109] Darling similarly discloses that “[e]ach user may specify that location information is available only to specified users or groups.” Darling, 3:3-5. Darling further discloses defining information about “People who have access to My Personal Details,” which is a “[l]ist of individuals who have access to the Personal Details,” and “will use” various information “to identify the user

depending on how much information the system has on that user” (e.g., “Nickname,” “Username,” “Mobile Phone Number,” “Email address”). Darling, 22:23-40. Darling further discloses functionality for “Requests for Access to this profile.” Darling, 22:41-23:13; *see also* Darling, 33:16-34:3 (“People who have access to My Location Details”).

[0110] Futagami similarly discloses that “for each user, the access restriction information may specify personal information which is not permitted to be accessed by the user.” Futagami, 13:33-67. Futagami further discloses that, for example, “user B is permitted to access data A and data C; user C is permitted to access data C and data D;” etc. Futagami, 14:1-44; *see also* Futagami, FIGs. 15-16.

[0111] As I explain below, in all three references, when a second user requests an item of a first user’s personal information, the server determines whether the second user has access rights from the first user to that information, and only transmits the information to the second user if the second user has such access rights.

[0112] Randall discloses performing “Authentication (i.e., identifying an entity seeking information)” where “the server recogniz[es] Bob’s device 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].

[0113] Darling similarly discloses that with the “server stores permission information indicating whether the location information for the first user is available to the second user” and “checking the permission information prior to the transmitting step.” Darling, 3:1-3. Users “may specify that location information is available only to specified users or groups or categories of users” and “[s]imilar permission may be associated with other information stored for each user.” Darling, 3:3-8. “If the second user is not permitted to know the location of the first user, the information is not transmitted.” Darling, 3:8-9.

[0114] Futagami similarly discloses that the “management server” functioning so that “access to personal information is restricted in accordance with the access restriction information.” Futagami, 14:44-49. The server “receives a personal information retrieval request together with a keyword from the client terminal” and “retrieves personal information, which matches the keyword...from personal information recorded in the personal information database.” Futagami, 14:50-65. The “server unit 32” then “determines, in accordance with the access restriction information, whether the user of the client terminal which has issued the retrieval request is permitted to access the personal information.” Futagami, 14:66-15:3. The server unit will “check[] the access restriction information

included in the personal information” and “determine[.]...whether the access to that personal information is permitted or not.” Futagami, 15:4-12. If the “user of the client terminal which has issued the retrieval request is permitted to access the personal information” the server will cause the “communication controller 31” “to transmit the personal information...to the client terminal which has issued the above retrieval request.” Futagami, 15:13-35. “[I]f it is determined” “that the user of the client terminal” “is not permitted to access the personal information,” the “server unit 32 controls the communication controller 31 so as to transmit a message (refusal message) to the client terminal which has issued the retrieval request to tell that access to the requested personal information is not allowed.” Futagami, 15:36-53, *see also* Futagami, 18:26-19:27

[0115] In my opinion, therefore, a POSA implementing Randall’s system would have been motivated to incorporate teachings and techniques from Darling and Futagami, and would have reasonably expected success given the many similarities among the described systems. For example, POSAs would have been motivated to supplement Randall’s access control techniques for personal information requests (including location requests) with aspects of both Darling’s and Futagami’s access control techniques, given that all three references discuss overlapping, complementary, and beneficial techniques for controlling access to personal information, and both Randall and Darling teach that such personal

information can include location information. Randall, [0505] Table 1 (Alice's iData including "Bluetooth location" and "GPS location"); Darling, 3:1-8 (applying "[s]imilar permissions" to "location information" and "other information stored for each user"), 21:19-23:13 ("Personal Profile" with access rights options), 32:39-34:3 ("Location Profile" with same access rights options).

[0116] For example, Darling demonstrates that it was known to "request...permission" for a "second user" to access a "first user's...location information" if the second user does not already have permission. Darling, 3:15-19. Darling further teaches that "[s]imilar permissions" as are applied to location information "may be associated with other information stored for each user" (Darling, 3:1-8), and Darling teaches to apply the same techniques for "Requests for Access to this profile" to providing "access to My Location Details" as to providing "access to My Personal Details" (Darling, 22:21-23:13, 33:14-34:3). This would have reinforced POSAs' motivation and reasonable expectation of success to apply to location requests in Randall's system any of Darling's and/or Futagami's techniques for controlling access to personal information.

[0117] As a specific example, for the above reasons, POSAs would have been motivated and reasonably expected success to apply, to location requests in Randall's system, Futagami's teachings (discussed above) for how to proceed when the requesting user does not already have access to the requested

information, including providing the requesting user the option to have the server request access from the target user (or not). *See also* Futagami, 15:40-16:32, 18:62-20:67, FIGs. 19-20. POSAs would have understood Futagami’s technique to be desirable, e.g., because it allows the requesting user to choose whether it makes sense to disturb the other user at that particular time with a request to obtain location access rights.

5. Mapping of claims 42-44, 46, 51-54, 56-59, 63, 65-66, 69-70, and 72 to Randall-Darling-Futagami combination

a. Claim 42

i. Preamble [42PRE]: A wireless telephone comprising:

[0118] Claim 42’s preamble recites “[a] wireless telephone 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 Randall discloses the preamble. Randall discloses that each of Randall’s “*wireless* information device[s]” can be a “radio *telephone*[.]” or “smart *phone*[.]”—i.e., a *wireless telephone*. Randall, [0002].

[0119] Randall discusses some examples involving Alice and Bob, who are both users of wireless information devices (*wireless telephones*). Randall, [0053], [0491] (“Bob’s...mobile phone”), [0505] (“Alice’s mobile device”). Bob’s device is an exemplary *wireless telephone*, as is Alice’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 posing a hypothetical example in which Alice and Bob are arbitrary 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 one 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 potential use by another user, e.g., Alice, accessing Bob's information in the same way that Randall provides that Bob can access Alice's information. That understanding is also consistent with Randall's claims (e.g., claim 1), which refer to a user operating a generic "wireless information device."

[0120] Thus, Randall-Darling-Futagami meets Preamble [42PRE].

ii. Element [42A]: a processor;

[0121] Randall teaches that its “wireless information devices run[] applications which access data...using a standardised set of APIs,” which involves running “[s]oftware.” Randall, [0048], [0450], p. 31 (claim 19). POSAs would have understood that devices such as smart phones (Randall, [0002]) that run software applications and use APIs typically, conventionally, and obviously do so via *a processor*. My opinion regarding a POSA’s background knowledge in this regard is corroborated by the following references.

[0122] De-Vries (EX1013) discusses “mobile...devices” that include “cell phones” (a *wireless telephone*). De-Vries, 4:60-65. De-Vries discloses that a “mobile device[]...typically is configured to include a processing unit...(e.g., a microprocessor...) and system memory.” De-Vries, 12:40-51; *see also* De-Vries, 4:12-14, 12:40-44, FIG. 6 (illustrating an exemplary block diagram of a mobile device that includes “processing unit 602 (e.g., a microprocessor or micro-controller” and volatile and non-volatile system memory).

[0123] Similarly, Stewart (EX1056) discloses that “[m]ost of the functions of portable telephone...are executed by [a] processor” executing “programming code...stored” in “main storage.” Stewart, 5:41-58; *see also* Stewart, 3:56-58, 5:41-46, FIG. 2 (illustrating a block diagram of “the components

of a portable telephone” with a “processor 32” that executes “the function of” the device and main storage (memory) 48).

[0124] Smith (EX1023) likewise confirms that wireless telephones conventionally included processors. Smith, 5:19-62 (disclosing that “the hardware elements in mobile telephone 21” includes, among other components, “feature processor 430,” which “provides graphical user interface features” and “[m]emory 440 [that] stores data and program code used by feature processor 430”).

[0125] Thus, Randall-Darling-Futagami meets Element [42A].

iii. Element [42B]: a positioning system for determining a location of said wireless telephone; and

[0126] Randall’s wireless device uses “GPS” to *determine its location*. Randall, p. 24 Table 4 (“People tracking”), p. 22 Table 1 (“GPS location”), p. 29 (“Route finder”). POSAs would have known that “GPS” stands for “global *positioning system*.” The ’117 patent also admits GPS was prior-art “background” knowledge. EX1001, 1:21-34.

[0127] Thus, Randall-Darling-Futagami meets Element [42B].

iv. Element [42C]: memory storing programming capable of:

[0128] As I discussed above (§VIII.A.5.ii), Randall teaches that its “wireless information devices run[] applications which access data...using a standardised set of APIs,” which involves running “[s]oftware.” Randall, [0048],

[0450], p. 31 (claim 19). POSAs would have understood that devices such as smart phones (Randall, [0002]) that run software applications and use APIs typically, conventionally, and obviously do so via a processor executing *programming* stored in *memory*. My opinion regarding a POSA's background knowledge in this regard is corroborated by the following references.

[0129] De-Vries (EX1013) discusses “mobile...devices” that include “cell phones” (a *wireless telephone*). De-Vries, 4:60-65. De-Vries discloses that a “mobile device[...]...typically is configured to include a processing unit...(e.g., a microprocessor...) and system memory.” De-Vries, 12:40-51; *see also* De-Vries, 4:12-14, 12:40-44, FIG. 6 (illustrating an exemplary block diagram of a mobile device that includes “processing unit 602 (e.g., a microprocessor or micro-controller” and volatile and non-volatile system memory).

[0130] Similarly, Stewart (EX1056) discloses that “[m]ost of the functions of portable telephone...are executed by [a] processor” executing “programming code...stored” in “main storage.” Stewart, 5:41-58; *see also* Stewart, 3:56-58, 5:41-46, FIG. 2 (illustrating a block diagram of “the components of a portable telephone” with a “processor 32” that executes “the function of” the device and main storage (memory) 48).

[0131] Smith (EX1023) likewise confirms that wireless telephones conventionally included *memory storing programming* for execution by the

device's processor. Smith, 5:19-62 (disclosing that "the hardware elements in mobile telephone 21" includes, among other components, "feature processor 430," which "provides graphical user interface features" and "[m]emory 440 [that] stores data and program code used by feature processor 430").

[0132] Thus, Randall-Darling-Futagami meets Element [42C].

v. Element [42D]: requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;

[0133] As I discussed above (§VIII.A.5.a.i, Preamble [1PRE]), Bob's wireless information device is an exemplary *wireless telephone* and Alice's is an exemplary *second wireless device* (and vice versa, because, as I discussed above (§VIII.A.5.a.i), 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).

[0134] Randall discloses that "resident on the wireless information device" (*wireless telephone*) 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 [an] i-**server**, enabling authorised people to track the location of the GPS wireless information device by polling the server." Randall, p. 24 (Tabel 4, "People tracking"). The i-server is an "internet **server**[]"—a "**server** on the

Internet”—which POSAs would have known is *located remotely* from the wireless devices. Randall, [0029], [0053], [0030] (“application resident on the device queries and receives data from the *remote*, extensible database”), FIG. 4 (showing the system’s servers located remotely from wireless devices).

[0135] “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]. For example, “Alice stores her data on a *server* on the Internet.” Randall, [0053]. As shown in Table 1 (which I highlighted 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	all
Company Address	work	Device gets R Us 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

[0136] Randall teaches that Bob's *wireless telephone* can request Alice's data from the i-*server* (which includes the *location* of her *second wireless device* as discussed above) "by sending to the server an unchanging pointer or key (an 'ADS Number') which is unique to" Alice. Randall, [0049]. Thus, as Alice's data changes (e.g., as "[t]he I-server is up-dated" with Alice's current location), "Bob can pull the new data into his device" by "polling the server." Randall, p. 24 (Table 4 "People tracking"), [0053], [0015] ("pull[ing]" information from server is

“*request[ing]*” it). If Alice has given Bob the appropriate permissions, “the server passes to Bob’s wireless device the information it *requests*.” Randall, [0049], [0067], [0512]. Bob’s wireless device indicates which “relevant information” it is *requesting* (which may be, e.g., Alice’s *location* information) by “sending various data tags defining its enquiry.” Randall, [0067].

[0137] Thus, in my opinion, Randall discloses Element [42D].

[0138] Additionally, Darling reinforces Randall’s teaching to meet Element [42D] by the Randall-Darling-Futagami combination by disclosing “receiving at the server a request from a second user querying where the first user is located,” as “communicated by means of mobile devices.” Darling, 2:1-15 (“receiving at the server a request from a second user querying where the first user is located,” as “communicated by means of mobile devices”); *see also* Darling, 34:22-35:22, 89:23-30

[0139] Thus, Randall-Darling-Futagami meets Element [42D].

- vi. **Element [42E]: displaying on said wireless telephone an option to request location access rights from said second wireless device after it is determined that said wireless telephone does not have location access rights for said second wireless device;**

[0140] Randall’s “server recognis[es] Bob’s *device* and *determin[es]* the database *access rights* which Alice has given him.” Randall, [0067]. “The database can define which entities can read different fields: Alice can therefore

give Bob rights to read only certain fields in her database.” Randall, [0047]. As I discussed above (§§VIII.A.5.a.v, Element [42D]) and shown in Table 1, one of the fields in Alice’s database is her device’s “GPS *location*,” and she can designate that field as only being accessible to users whom she designates as part of a particular “i-Group” (e.g., “partner”). Randall, [0503]-[0512]. “[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)”). Thus, if Alice has not designated Bob as being in an i-Group that she has designated as having access to her location, then *it is determined that Bob’s wireless telephone does not have location access rights for Alice’s second wireless device.*

[0141] “When one of the people in [Alice’s contacts] list” (e.g., Bob) “looks at Alice’s ADS Number, (using an application on their...wireless information devices), they see a view onto Alice’s personal data that is defined by Alice. For example, someone in the business 1 group might see the Table 3 information.” Randall, [0512], Table 3 (copied below):

TABLE 3

Name	Ms Alice Edwards
Title	European Marketing Manager
Company	Wireless Information Device gets R Us
ADS Number	urls.co.uk/1238947532345235
Last verified	7 th July 2000
e-mail	alice.edwards@Wireless Information Device getsrus.com
Work phone 1	0207 200 2000
Work phone 2	0207 200 2012
Mobile	0840 1234 567
Address	1 The Science Park, London, N1 9PQ
Other info	Met her at meeting with Tom Jones, August 2000.

[0142] Comparing Randall’s Table 3 with Table 1 demonstrates that, in this example, if Bob is in Alice’s “business 1” i-Group, the server *determines that Bob’s wireless telephone does not have location access rights for Alice’s second wireless device*, and therefore provides Bob only the subset of Alice’s i-Data that is in Table 3, which does not include Alice’s “GPS location” designated as accessible to the “partner” i-Group in Table 1 (which I have excerpted and highlighted below).

TABLE 1

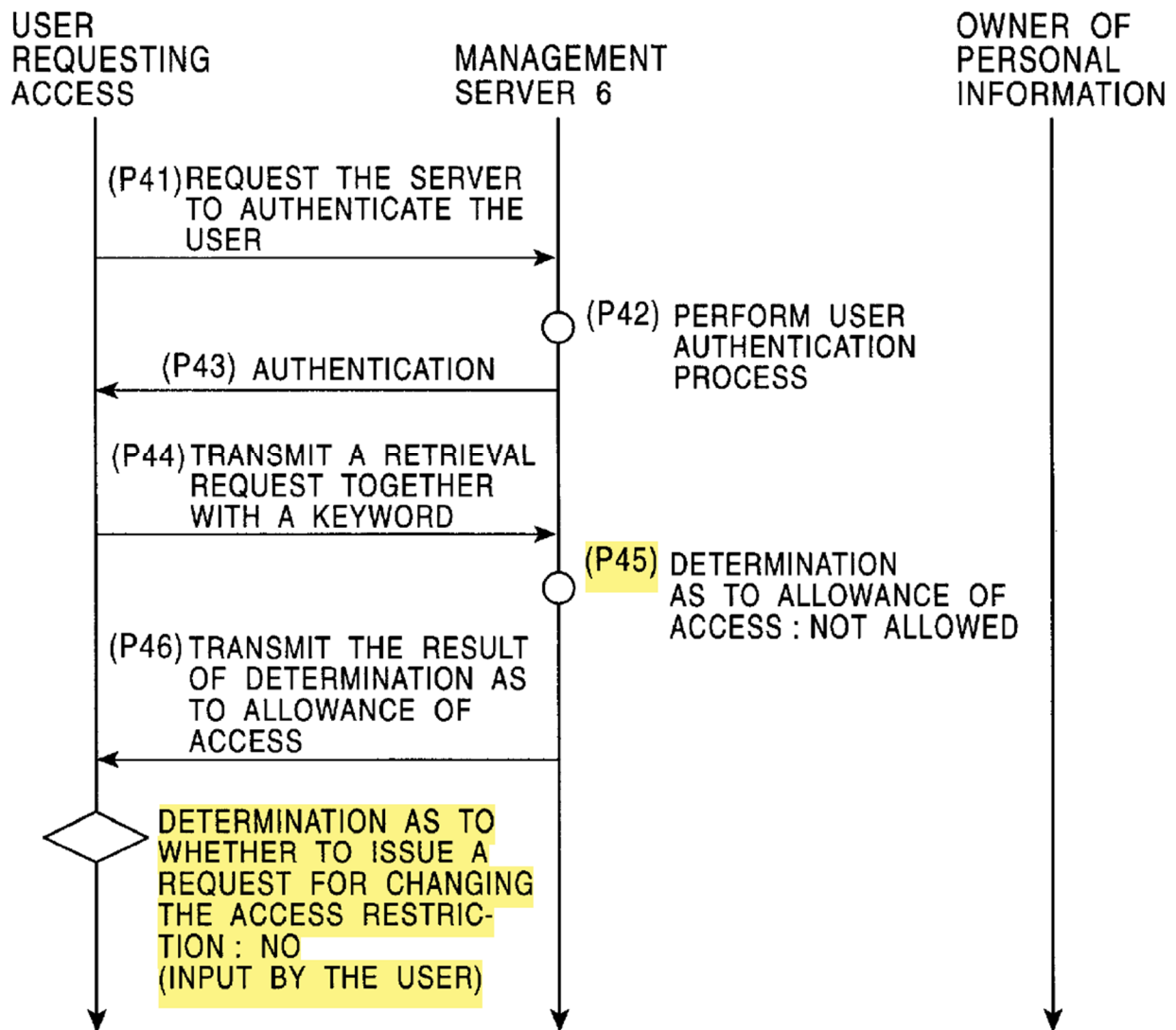
Alice’s iData			
Field/Attribute	Category	Details	i-Groups
First name	personal	Alice	all
Family name	personal	Edwards	all
Title	work	European Marketing Manager	all
[...]			
GPS	location	London W1, Seymour St.	partner
Hobby	preferences	Photography, travel	friends
Book	preferences	Maverick	friends
AlbumOfTheWeek	InstaPoll		friends

[0143] Additionally, Darling reinforces Randall’s teaching that it can be *determined that said wireless telephone does not have location access rights for said second wireless device*. Darling, 3:1-9 (“[T]he server stores...and...check[s] the permission information.... If the second user is not permitted to know the location of the first user, the information is not transmitted.”), 35:24-28. Futagami also reinforces this teaching. Futagami, 15:40-53 (“it is determined in step S62 that” the requesting user “is not permitted to access the personal information”), FIG. 17 (arrow “N” from S62), FIG. 19 (“(P45) Determination as to allowance of access: not allowed”), FIG. 20 (P55).

[0144] Futagami teaches that “if it is determined in step S62 that” the requesting user “is not permitted to access the personal information[,]...the process goes to step S63. In step S63” (i.e., *after it is determined that said wireless telephone does not have access rights for said second wireless device’s personal information that was requested*), “the server...transmit[s] a message (refusal message) to the client terminal [which has issued the retrieval request].” Futagami, 15:40-53. “When the user reads the refusal message,” *an option is displayed* to the user, “if the user still wants to access the retrieved personal information,” to “transmit[] a message (restriction removal request message)...to request...to change the access restriction information so that the user is allowed to access the personal information.” Futagami, 15:54-62, 19:15-23, 19:47-59. As shown in

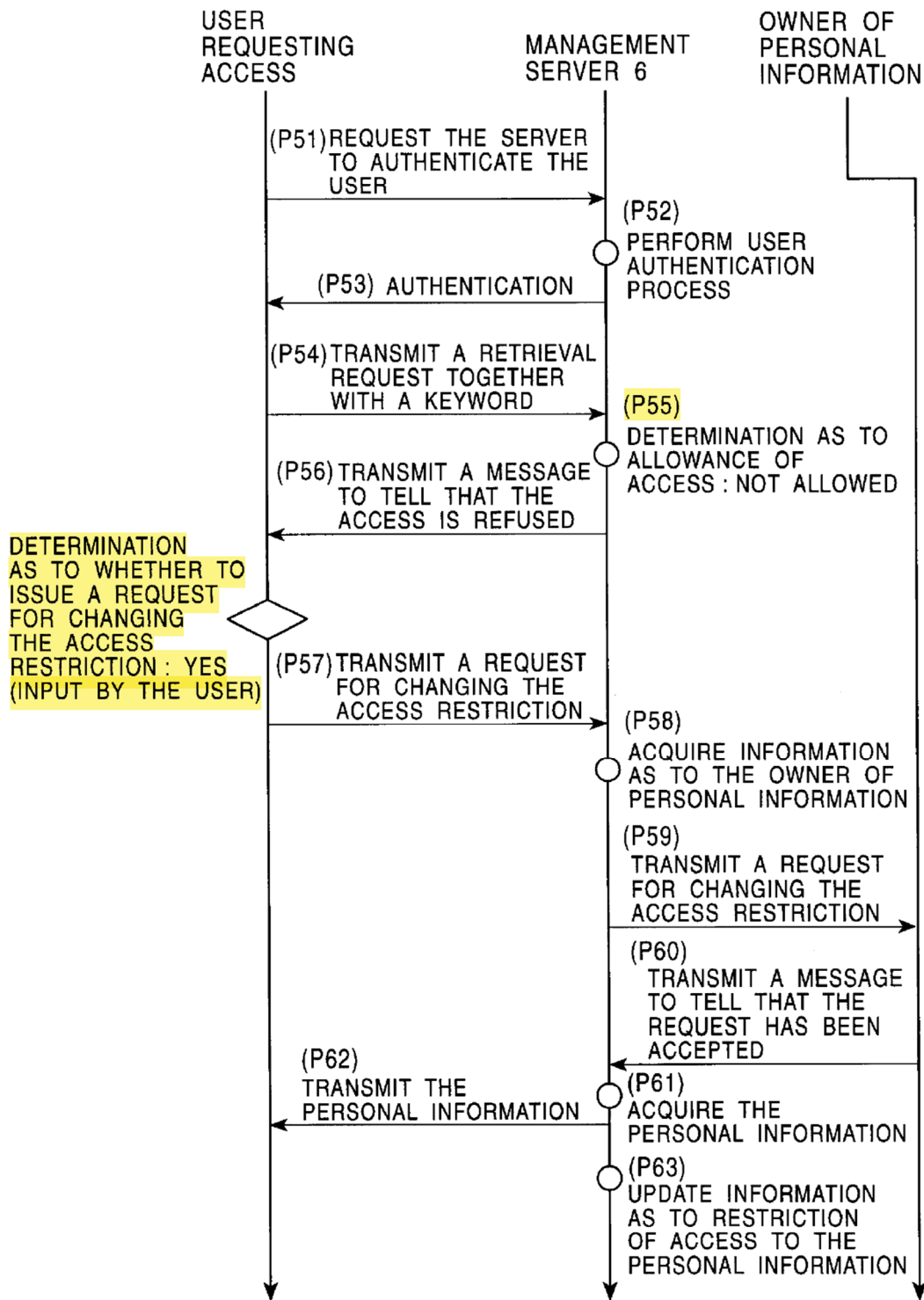
Randall's Figures 19-20 (which I highlighted below), the refusal message prompts for a "determination as to whether to issue a request for changing the access restriction," to which either "yes" or "no" can be "input by the user."

FIG. 19



Futagami, FIG. 19 (highlighted)

FIG. 20



Futagami, FIG. 20 (highlighted)

[0145] In my opinion, POSAs would have understood, for example, that an obvious implementation to solicit the “yes” or “no” to be “input by the user” would include *displaying an option* in the refusal message (e.g., “Would you like to request removal of the access restriction?”).

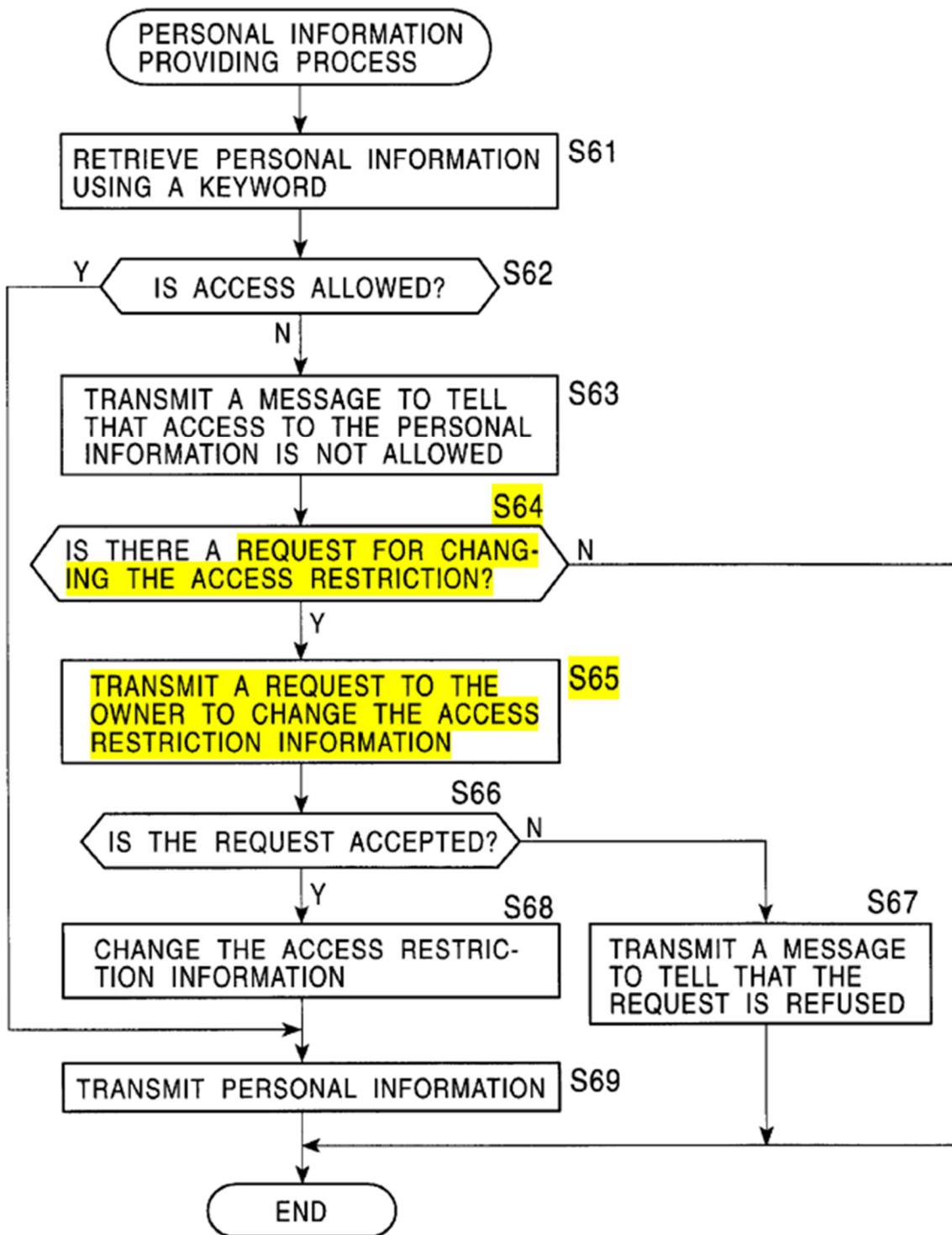
[0146] Thus, Futagami teaches *displaying on said wireless telephone an option to request location access rights from said second wireless device after it is determined that said wireless telephone does not have location access rights for said second wireless device*. In the combination with Randall and Darling, as I discussed above (§VIII.A.4), the personal information being requested by Bob is Alice’s *second wireless device*’s location, and the access rights are *location access rights*, which meets Element [42E]. As I discussed above (§VIII.A.4), POSAs would have been motivated to display this option, to provide a user (Bob) with a way to obtain location access rights from another user (Alice) if he has not already been given them, in a way that allows him to control whether to disturb Alice with an access request. In my opinion, POSAs would have had a reasonable expectation of success based on Futagami’s teachings of successfully implementing such functionality in a system like Randall’s with a server sharing personal information among wireless device users, as I discussed above (§VIII.A.4).

[0147] Thus, Randall-Darling-Futagami meets Element [42E].

vii. Element [42F]: transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and

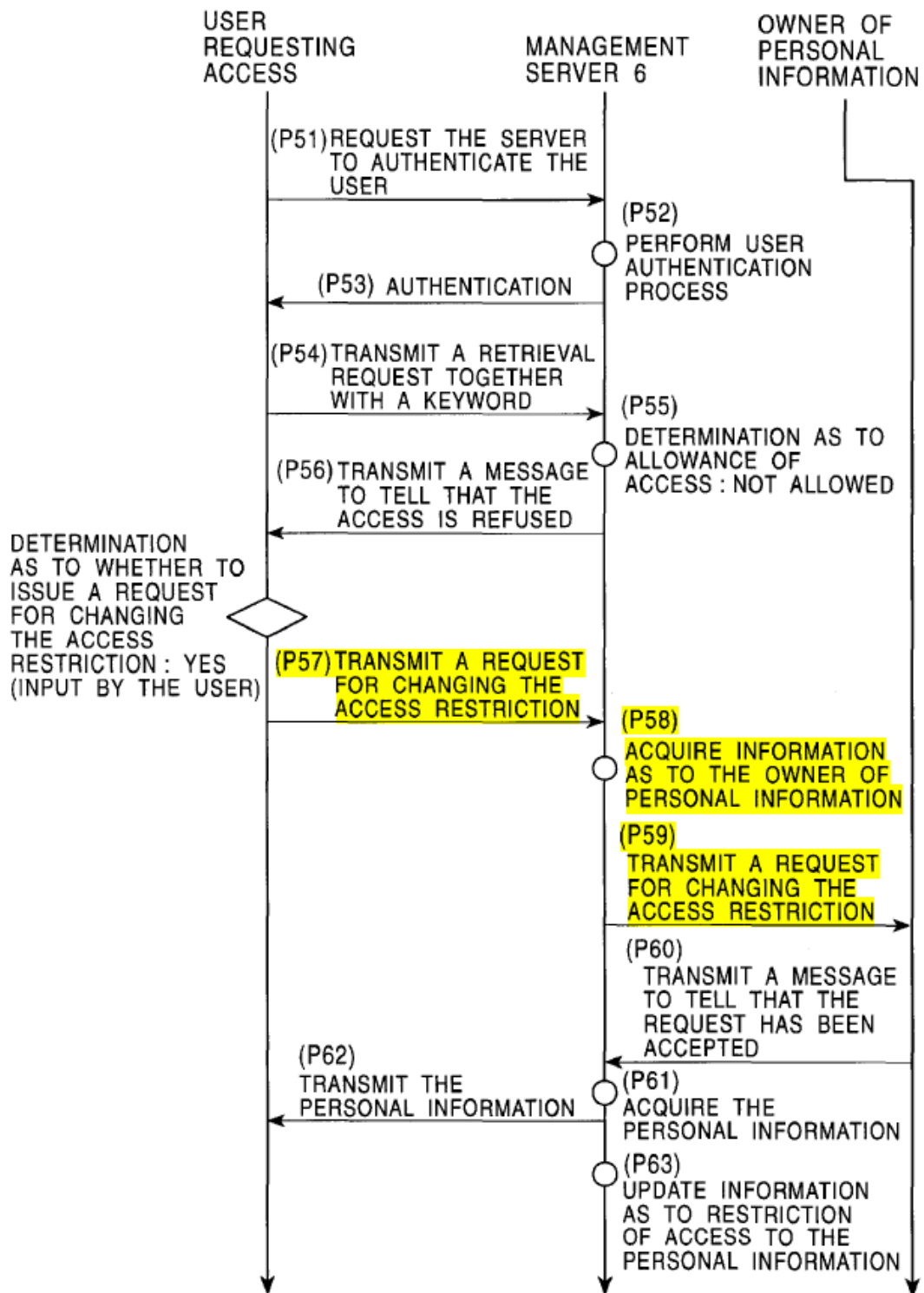
[0148] Futagami teaches that if the user inputs “yes” to the *option* in Element [42E] (which I discussed *supra* §VIII.A.5.a.vi), the user’s *wireless telephone* “***transmits*** a message (restriction removal ***request*** message) ***to the...server...to request...to change the access*** restriction information so that the user is allowed to ***access*** the personal information” (Futagami, 15:56-62), upon which the server “transmit[s] a message (restriction removal inquiry message) to the client terminal of the user who is the owner of the...personal information” (the *second wireless device*) “to inquire whether to permit the access restriction information to be changed...such that the requester is permitted to ***access*** the personal information.” Futagami, 16:7-21, FIG. 17 (which I have highlighted below); *see also id.*, 17:1-8, 19:27-59, 20:38-43, FIG. 20 (which I have highlighted below).

FIG. 17



Futagami, FIG. 17 (highlighted)

FIG. 20



Futagami, FIG. 20 (highlighted)

[0149] Thus, Futagami teaches *transmitting a request to said server that the access rights be assigned for said wireless telephone by said second wireless device*. Darling further reinforces that the Randall-Darling-Futagami combination meets Element [42F] by teaching that when “the second user is not [already] permitted to know the location of the first user,” a “request for permission may be communicated to the first user,” who may respond with a “yes/no command.” Darling, 3:1-19

[0150] Thus, Randall-Darling-Futagami meets Element [42F].

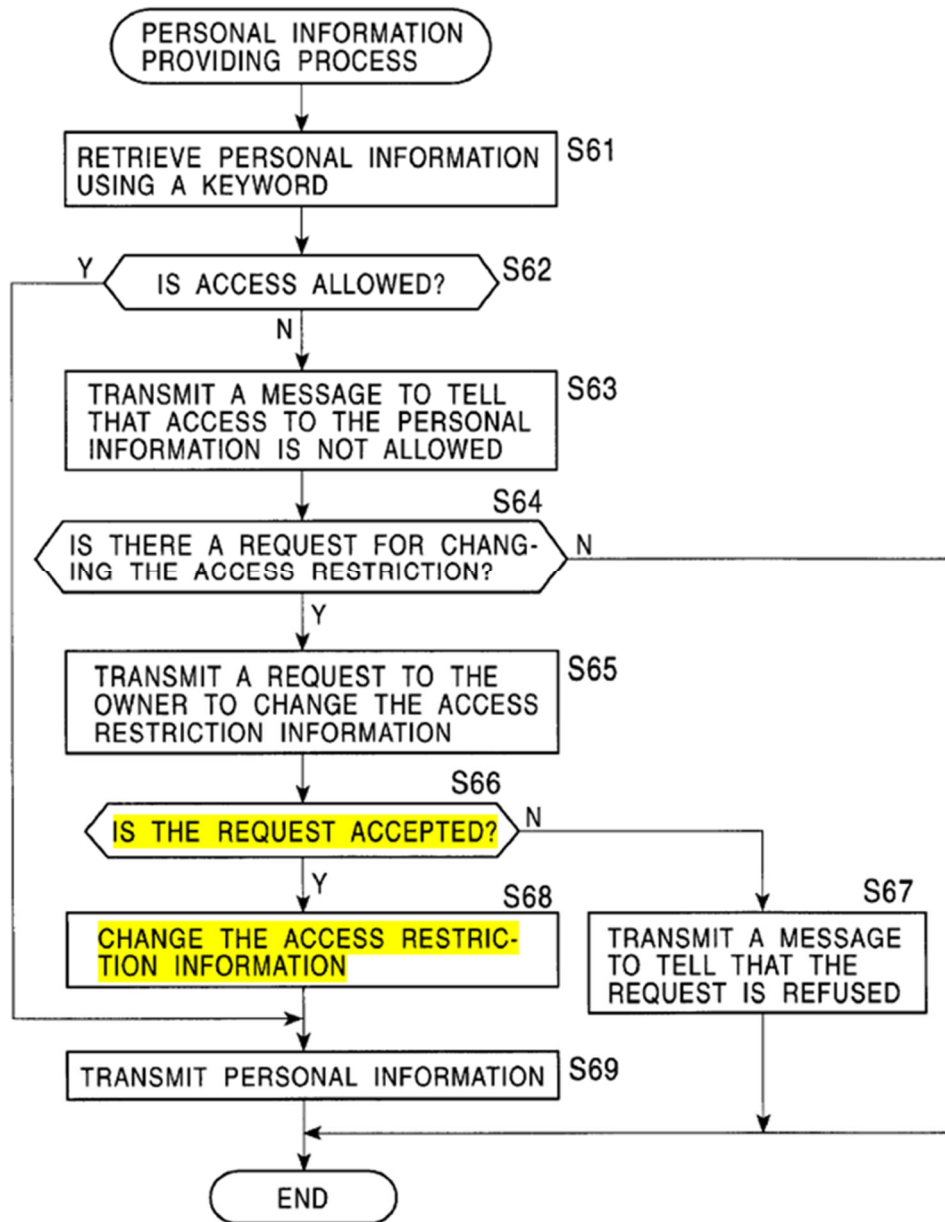
viii. Element [42G]: receiving said location of said second wireless device from said server dependent upon said access rights.

[0151] 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 to provide *said location access rights* to Bob’s *wireless telephone*, by assigning Bob to an i-Group that Alice specifies as having access to her location (or Alice can change her location field to be accessible to the i-Group that Bob is already in). Randall, [0509], [0495].

[0152] Further, Futagami teaches to prompt the *second wireless device* user to do this in response to a request as in Element [42F] (*supra* §VIII.A.5.a.vii). “When the owner of the personal information reads the restriction removal inquiry

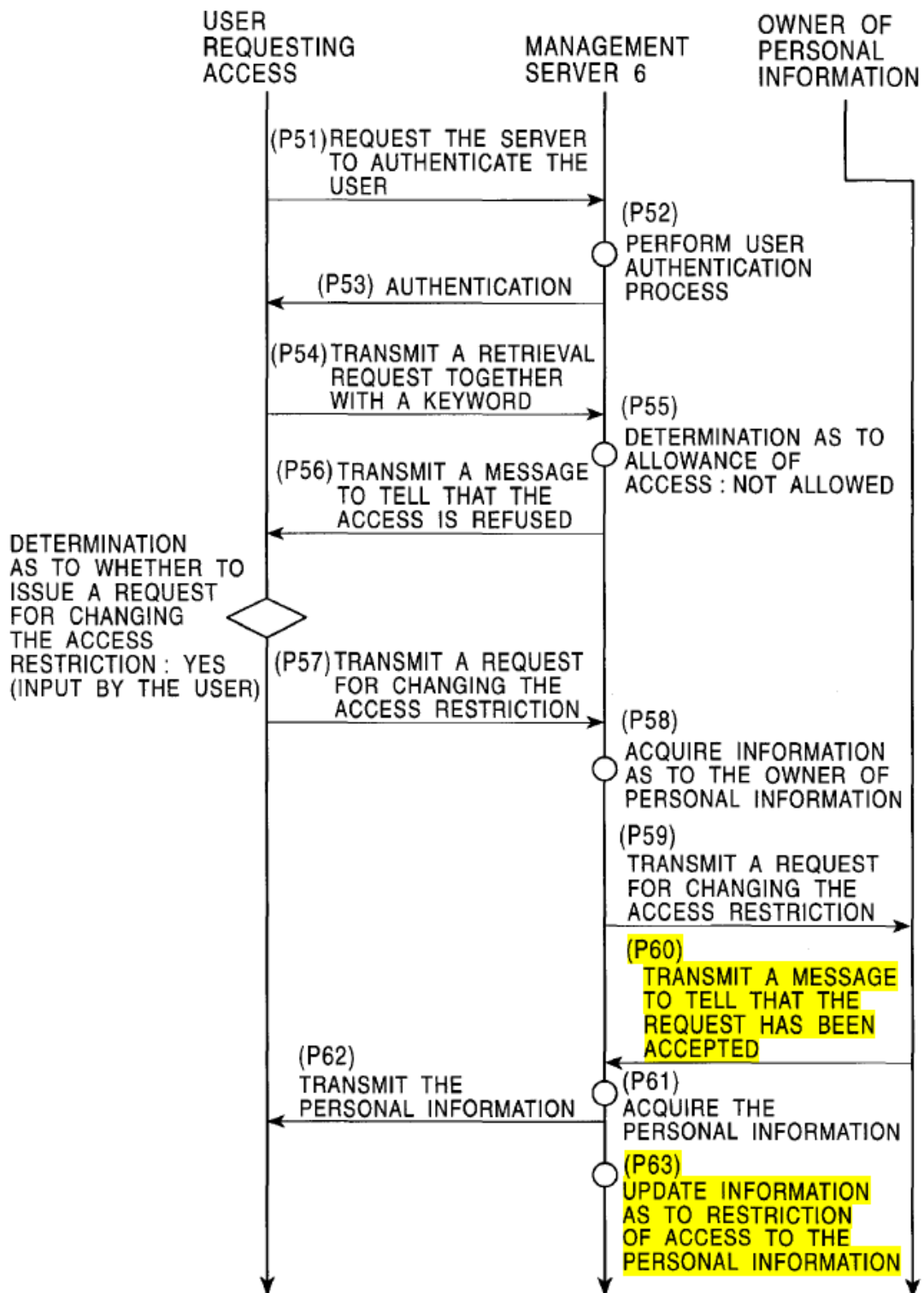
message, if he/she decides to give permission,...he/she transmits a message (restriction removal approval message)...to the management server” which then “changes the access restriction information” in the server’s database. Futagami, 16:25-58, FIG. 17 (which I have highlighted below); *see also id.*, 17:8-13, 19:60-20:7, FIG. 20 (which I highlighted below); Darling, 3:18-19 (“A request for permission may be communicated to the first user, preferably as a question, who may respond, preferably with a simple yes/no command.”).

FIG. 17



Futagami, FIG. 17 (highlighted)

FIG. 20

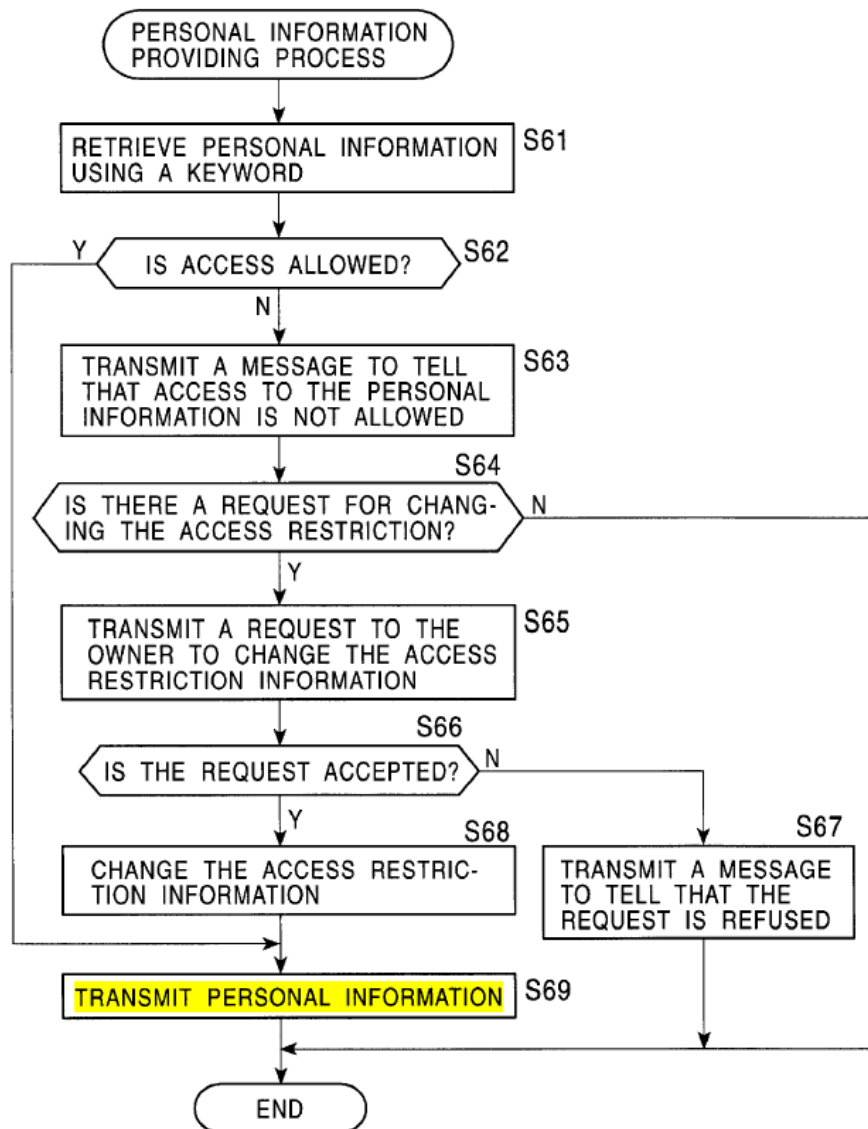


Futagami, FIG. 20 (highlighted)

[0153] Randall's "server recognis[es] Bob's device and determin[es] the database *access rights* which Alice has given him," and then "[o]nce authenticated, *the server passes to Bob's device the information it requests,*" which may be Alice's *location*. Randall, [0067], [0049], [0053], [0509] ("Bob" is Alice's "contact" and has "access" to Alice's "information"), [0512]. This "enabl[es] authorised people to track the location of the GPS wireless information device by polling the server" which has been "up-dated with the location of" Alice's device. Randall, p. 24 ("People tracking"). Thus, once Alice has assigned the *access rights* to Bob, Bob's *wireless telephone* can receive Alice's *second wireless device's location from said server dependent upon said access rights*.

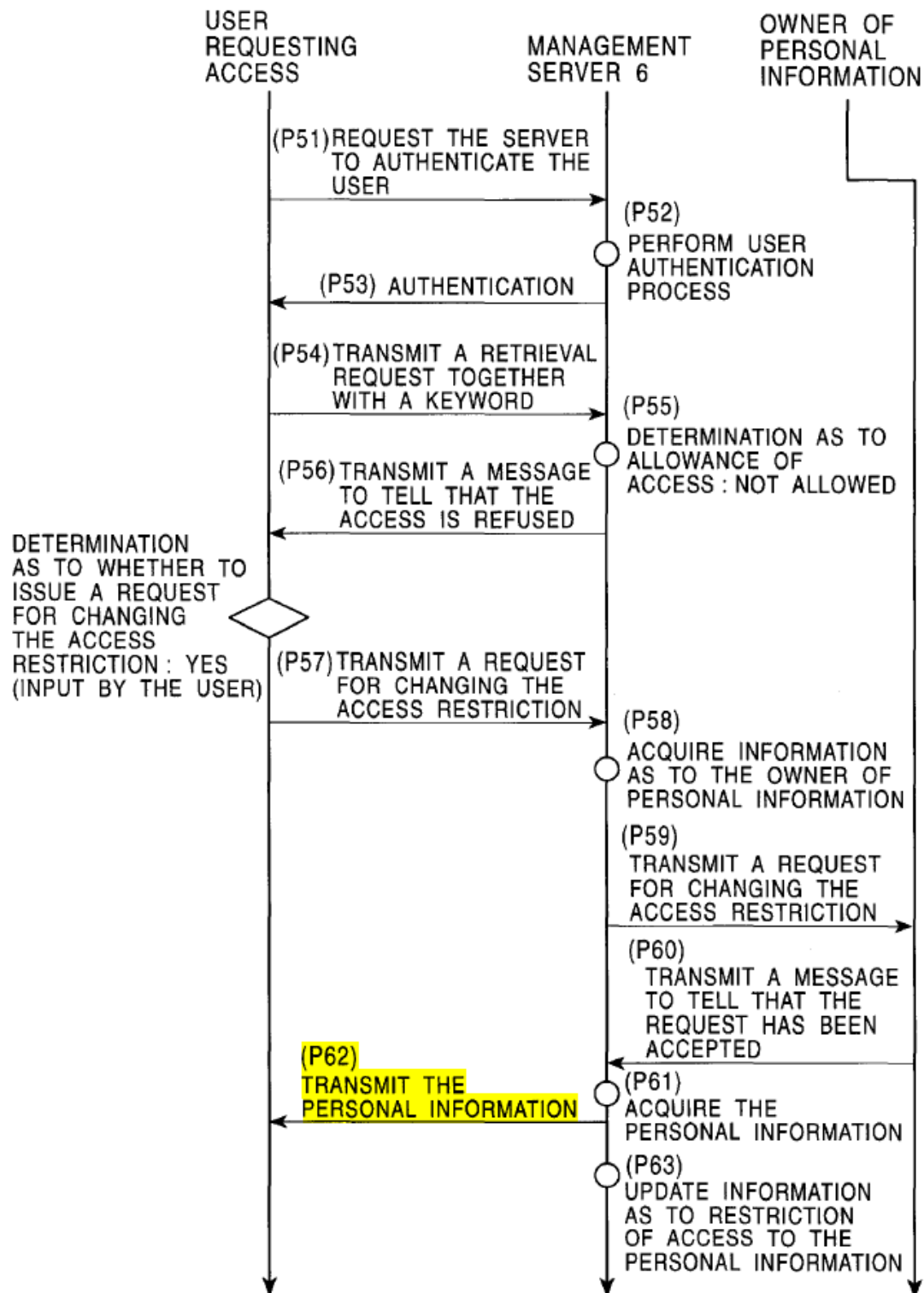
[0154] Further, Futagami teaches that "if it is determined...that the restriction removal approval message has been received," the server "transmit[s]" "the personal information...to the client terminal which has issued the retrieval request." Futagami, 16:49-61, 17:8-11, 19:66-20:7, FIGs. 17, 20 (highlighted below).

FIG. 17



Randall, FIG. 17 (highlighted)

FIG. 20



Randall, FIG. 20 (highlighted)

[0155] Because Bob previously did not have access rights (*supra* §VIII.A.5.a.vi (Element [42E])), POSAs would have understood that Randall-Darling-Futagami only provides Bob the requested information dependent upon on a determination that he now has access rights.

[0156] Thus, Randall-Darling-Futagami meets Element [42G].

b. Claim 43: The wireless telephone of claim 42, wherein said second wireless device is a second wireless telephone.

[0157] Randall’s “wireless information device[s]” can be “radio *telephones*” or “smart *phones*” that communicate over cellular networks (“GSM[, UMTS, CDMA and WCDMA”). Randall, [0002], [0491] (“Bob’s...mobile *phone*”), [0495] (“Alice’s *phone*”). POSAs would have understood that these are examples of *wireless telephones*. Thus, Alice’s “wireless information device” can be a “radio *telephone*[.]” or “smart *phone*[.]”—i.e., *a second wireless telephone*. Randall, [0002], [0495] (“Alice’s *phone*”).

[0158] Thus, Randall-Darling-Futagami meets claim 43.

c. Claim 44: The wireless telephone of claim 42, wherein said location access rights include the ability to obtain said location of said second wireless device, wherein said location is capable of being provided to said wireless telephone from said server even when said second wireless device is OFF.

[0159] As I discussed above (§VIII.A.5.a, claim 42), the *location access rights* in Randall’s system *include the ability to obtain Alice’s location*.

Because Bob's *wireless telephone* obtains Alice's location from the i-server where it is stored, POSAs would have understood that the i-server can *provide said location* to Bob's *wireless telephone even when Alice's second wireless device is OFF* when Bob accesses Alice's last-updated location. Darling confirms this understanding. Darling, 2:1-12 ("storing" a "first user['s]" "location information" "at a server" and "transmitting" it from the server "to the second user" "enable[s] a user to determine the location of another user...even...when their mobile telephone...is switched *off*").

[0160] Additionally, it was well-known and would have been obvious to provide this functionality by implementing the *second wireless device* to transmit its location to the server even when it is *OFF*. My opinion in this regard is corroborated by several references, as discussed in the paragraphs below.

[0161] Ryden (EX1009) and Ryden-Prov (EX1010) teach to program a wireless device's location reporting feature "to bypass the unit's ON-OFF switch" so the device "respond[s] with its...location G#" even "when the unit 10 is turned OFF," such as to "allow[] a stolen telephone unit" to be located. Ryden, 16:53-62; Ryden-Prov, 31:4-8.

[0162] Meadows (EX1018) teaches that making "the device continue[] to transmit" "even when the wireless device operator turns off the wireless device"

is “useful for monitoring other individuals” and “useful for tracking devices such as misplaced cellular telephones.” Meadows, 7:20-33.

[0163] Accordingly, Ryden and Meadows corroborate that it was well-known and would have been obvious to provide this functionality by implementing the *second wireless device* to transmit its location to the server even when it is *OFF*.

[0164] Thus, in my opinion, Randall-Darling-Futagami meets claim 44.

- d. **Claim 46: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display a location marker on a map on said wireless telephone.**

[0165] In Randall’s system, once Alice “has subscribed to the location service, then [Alice’s] friends[] [such as Bob] could add a ‘*map*’ application to their own devices, which could show their position on digital *maps* and...also show the position of the user [Alice].” Randall, [0021]. POSAs would have understood that “show[ing]” Alice’s “position” on the map (Randall, [0021]) involves using the *location* of Alice’s *second wireless device* to *display a location marker* on the *map*, because the position is a *location* and showing it would involve displaying a *marker*.

[0166] Alternatively, in my opinion it would have been an obvious implementation of this disclosure to POSAs to *display a location marker* at Alice’s

location *on the map*, because displaying a marker was well-known in POSAs' background knowledge as a beneficial and commonly used option for representing a location of interest (including a current location of a person's wireless device) on a digital map. My opinion regarding POSAs background knowledge in this regard is corroborated by the following references.

[0167] Wollrab (EX1014) describes "translat[ing] remote sensing location coordinates into a graphic map image, e.g. a .jpg or .gif file, depicting the relative locations of all members/PDA devices within a family." Wollrab, 3:28-31. For example, mobile devices like "PDA device 14-1 through 14-5 can display a map image via display device 15-5 through 15-5 depicting the relative locations of all members/PDA devices within a family. Wollrab, 4:43-58. The maps and location markers for different users displayed on a PDA device are illustrated, for example, in Wollrab's FIG. 4B (markers 44-2 through 44-5). *See also* Wollrab, FIGs. 1-4C.

[0168] Meadows (EX1018) describes "monitoring the geographical location of a subscriber's mobile cellular telephone, and for providing the location information to an authorized user through the world wide web." Meadows, 2:2-7. The authorized user can access the location information through various media including a "wireless handheld device 20b." Meadows, 3:59-67. Meadows describes the location information can be displayed on a map (Meadows, 5:48-57),

which shows location markers of various individuals being monitored, as shown in Figure 4B and Figure 5B.

[0169] Sheha (EX1005) discloses displaying a “map and address of the destination telephone number...on the mobile telephone,” and teaches that such a map can include a marker representative of a location of another wireless device, such as shown in Figure 5. Sheha, 4:52-58, 6:51-56 (“FIG. 5. illustrates an example of a Map Caller-ID indicator and a display window detailing a plurality of various possible features utilizing the position and/or address location information of the remote caller and local device or person that is called.”), 9:23-39 (map displays “map location 33 of the caller” and “map location 34 of the destination telephone number”), FIG. 5 (displaying markers representing locations 33 and 34 of both devices).

[0170] Grube (EX1017) describes displaying, on mobile devices (Grube, 4:38-57, 5:13-17), maps of tracked vehicles, and the maps displaying icons to represent the current locations of the tracked vehicles. Grube, 6:59-7:6, *see also* Grube, 6:14-27. Grube’s FIG. 2, for example, “shows an example map display that may be provided to a user of a communication unit” that shows the “the current location of” vehicles “by respective vehicle icons.” Grube, 6:59-65.

[0171] Thus, the above references corroborate my opinion that providing a location marker on a map on a wireless device was within a POSAs’

background knowledge and that a POSA's reasonable expectation of success in doing so in Randall-Darling-Futagami combination.

[0172] Thus, Randall-Darling-Futagami meets claim 46.

- e. **Claim 51: The wireless telephone of claim 42, wherein said programming is further capable of receiving a login and password from said wireless telephone to identify said wireless telephone.**

[0173] Randall teaches that “an entity seeking information,” such as Bob on his *wireless telephone* seeking Alice's location, must be “[a]uthenticat[ed] (i.e. *identified*)...” by “the server recognising Bob's *device*.” Randall, [0067]. “Recognising Bob's device can be achieved in several ways; for example, Bob's device could have a unique, secret ID number which it transmits to the server” for recognition. Randall, [0067]. “The authentication can use...a basic *WID* [*login*] and *password*/passphrase,” where the “WID[.]” identifies the “Wireless Information *Device*[.]” Randall, [0380], [0385]. Thus, Randall discloses *receiving a login and password from Bob's wireless telephone to identify said wireless telephone*.

[0174] Darling and Futagami both reinforce this teaching. Darling, 11:12-20 (“*Login*” with “Identifier Field” including “Mobile Phone Number” and “*Password* Field”), 19:11-14; Futagami, 8:62-67 (“when the management server 6 receives a retrieval request from a client terminal, the management server 6 may

request presentation of the user *identification* and the *password* of the user of that [requesting] client terminal so as to authenticate the user”).

[0175] Thus, Randall-Darling-Futagami meets claim 51.

- f. **Claim 52: The wireless telephone of claim 42, wherein said location of said second wireless device is requested by receiving input, in the form of a telephone number of said second wireless device, on said wireless telephone.**

[0176] Randall teaches that “[a] wireless information device...can access an entity’s database by sending to the server” a number “unique to that entity.” Randall, [0049]. “[I]f Bob is given Alice’s ordinary *telephone number*, but Alice is an ADS system user, then Bob can use the ordinary number to access a web database which can download Alice’s ADS Number directly to Bob’s device.” Randall, [0073]. “When Bob’s device sends Alice’s ADS Number to the server, then the server recognises Bob’s device and allows that device to read Alice’s information held on the database which is specified as being accessible to Bob.” Randall, [0049]. Thus, Randall teaches that the *location of Alice’s second wireless device is requested by receiving input, in the form of a telephone number of said second wireless device, on Bob’s wireless telephone.*

[0177] Darling reinforces this, by teaching to allow a user to “Find People” by inputting the target user’s “Mobile Number” as a “search field.” Darling, 34:22-35:33

[0178] Thus, Randall-Darling-Futagami meets claim 52.

- g. Claim 53: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone.**

[0179] 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.’ *Alice’s device* will report this to the server.” Randall, [0509]. Thus, Randall teaches Alice using her device *to modify rights of Bob’s wireless device to access her location* (e.g., if Alice has set the “friend” i-Group and not the ‘business’ i-Group to have access to her location). Williams-Decl., [0178]. POSAs would have understood this to be a generic example that is equally applicable to Bob as to Alice, whereby Bob can “change the level of access of a current contact” of his. Randall, [0509], [0067] (“Bob also has stored on the server his own personal information”), p. 24 (“People tracking”: any user can “enabl[e] authorised people to track the location of the[ir] GPS wireless information device”), [0053] (“Consider Alice...and Bob”—language introducing Alice and Bob as generic examples). That is 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 posing a hypothetical example in which Alice and Bob are arbitrary 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. That understanding is also consistent with Randall's claims (e.g., claim 1), which refer to a user operating a generic "wireless information device."

[0180] Even if Randall had not explicitly taught this, it would have been an obvious implementation option to POSAs to allow any wireless device users to subscribe to the same functionality (including contacts functionality and location functionality) in Randall's system, and to allow any user to include any other user in their contacts list. In my opinion, POSAs also would have found it obvious to implement Bob's disclosed ability *to modify rights of another wireless device to access the location of his wireless telephone by displaying an option* for him to do so.

[0181] Another way Randall meets claim 53 is by teaching that Bob can use Bob's *wireless telephone* to "switch location information on for a person or group of people" by "select[ing] the person and allow[ing] access...for a pre-defined period of time" that "should be easily extensible by the user." Randall, [0144].

[0182] Darling also teaches to *display an option* to "Add" and "Remove" contacts from the "List of individuals who have access to the Location Details." Darling, 33:16-34:3.

[0183] Thus, Randall-Darling-Futagami meets claim 53.

h. Claim 54: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to delete another wireless device's rights to access the location of said wireless telephone.

[0184] Randall teaches that Bob can "switch location information on for a person" (e.g., for Alice) for "a specific period of time," and "[a]t the end of the pre-defined period the location information" can "again *become invisible*." Randall, [0143]-[0144]. Thus, by pre-defining a period of time after which another user's access to Bob's location ends, Bob's *wireless telephone* can *delete another wireless device's rights to access the location of Bob's wireless telephone*. In my opinion, POSAs would have found it obvious to implement this ability to switch location access on and off by *displaying an option* to do so. Additionally, as I discussed above (§VIII.A.5.g, claim 53), Bob's device can "change the level of

access” of another user’s device by placing that user in an i-Group that does not have *rights to access the location* of his *wireless telephone*. Randall, [0509].

Darling also teaches to *display an option* to “Remove” contacts from the “List of individuals who have access to the Location Details.” Darling, 33:16-34:3

[0185] Thus, Randall-Darling-Futagami meets claim 54.

- i. **Claim 56: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list.**

[0186] 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” (which I have copied 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

[0187] As Table 2 shows, a user's Universe *displays an identifier list*, listing the user's contacts with identifiers such as "name."

[0188] Table 2 shows "Alice's Universe" as an example; Randall teaches or, at minimum, renders obvious that Bob similarly has his own "Universe" contacts list, and Bob and Alice can each be included as contacts displayed in each other's contacts lists. Randall, [0509]-[0510] ("Bob's details" are in "Alice's Universe" and "downloaded to Alice's mobile device," and likewise "Alice's contact" is provided to "Bob's device[]"), [0060] (Bob "view[s]" "Alice's contact information" on his device), p. 24 (Table 4 – "Data freshness": "visual indication" regarding "Alice's contact information can be shown on Bob's wireless information device").

[0189] Randall teaches that "[w]hen one of the people in [Alice's] list...looks at Alice[]...on their...wireless information device[]...in their contacts application" (i.e., when Bob selects Alice in his device's displayed contacts list), "they see a view onto Alice's personal data that is defined by Alice." Randall, [0512], [0049], [0053], [0067], [0509]. That view is of a subset of Alice's "Identity" information which contains data "objects" that are "information relating to an individual." Randall, [0180]-[0187], [0118], [0505]-[0508], [0021]. Bob's device can "*display* an icon or other shorthand" for such an object, and Bob can "*select[]* the icon or shorthand" to view "attributes of the object." Randall, [0022],

[0060] (“Bob’s device” can display “icon appearing next to Alice’s contact information”). A “user’s data object” in “a contacts application” can have a “location attribute” used to “show the position of the user.” Randall, [0021].

[0190] Thus, Randall teaches, or at minimum renders obvious, that an entry representing Alice and her *second wireless device*’s location can be *displayed* in Bob’s contacts list, and providing Bob *an option to select* that entry to view Alice’s location attribute. Randall, [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”). POSAs would have understood this to disclose *displaying an option to select Alice’s second wireless device from an identifier list*.

[0191] Additionally, it would have been obvious to implement Bob’s device to *display an option to select Alice’s second wireless device* from Bob’s contacts list (*identifier list*) to request Alice’s location information. Darling teaches to display a “Search for a friend” “Menu” that “Allows the user to scroll through the list of people that they are allowed to view locations for and find out where they are.” Darling, 41:2-5. Moreover, displaying an option to selecting another user from a contacts list was also well-known in POSAs’ background knowledge as a suitable option with reasonable expectation of success for

“look[ing] at [another user’s] ADS Number” to “see a view onto [that user’s] personal data” (Randall, [0512]) such as location.

[0192] My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below:

[0193] Smith discloses a system to provide a user interface for a cellphone, including contact list functionality that provides electronic business cards (“EBCs”). Smith, 5:15-18, 6:65-7:3, 7:41-49, 10:55-60; FIGs. 14-16. An example of this routine and conventional functionality is shown in Figure 15A:

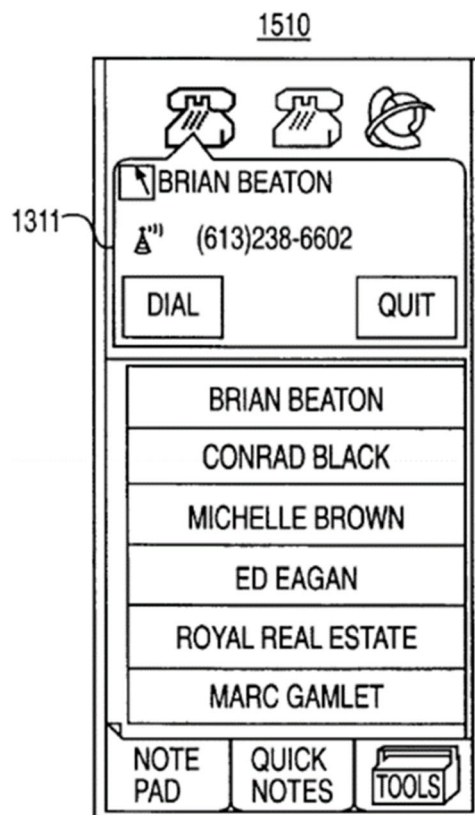
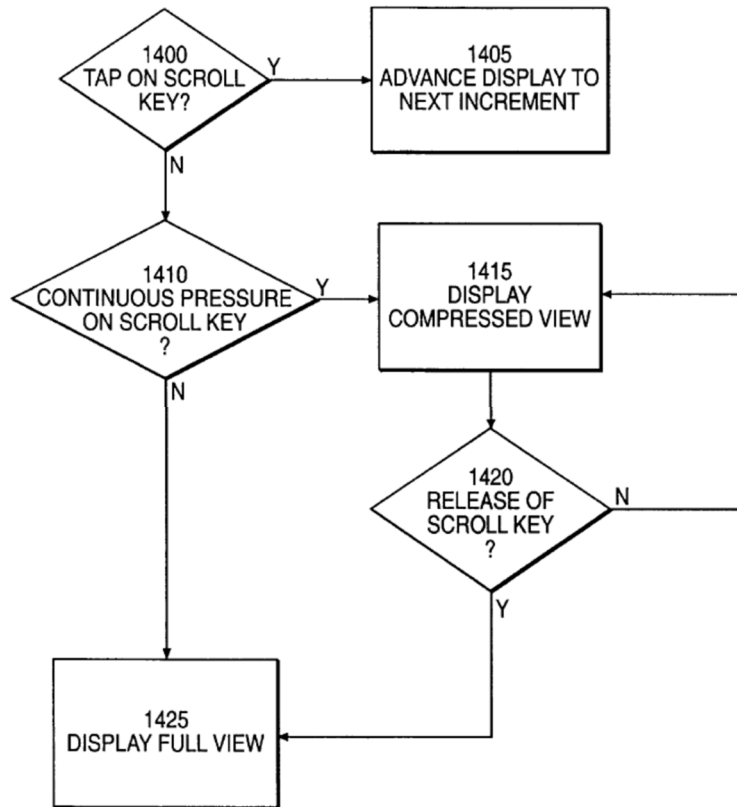


FIG. 15A

Smith, FIG. 15A

[0194] Smith 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, 7:41-9:61, 10:29-11:4. Smith describes various examples of input devices, including a keypad with buttons, an on-screen keyboard, or using handwriting recognition. Smith, 7:12-20. For example, Smith describes a process for scrolling through a contact list, shown in Figure 14 below. The flowchart illustrates a process that allows a user to scroll through the contact list using physical or graphical buttons. Smith, 9:42-61, 10:67-11:3, FIG. 14. The user can use the process to scroll to a desired contact and ultimately select a contact to call. Smith, 9:42-61, 10:67-11:3, FIG. 14.



Smith, FIG. 14

[0195] 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 displaying an option to selecting another user from a contacts list was within a POSAs’ background knowledge and that a POSA would have had a reasonable expectation of success doing so in the Randall-Darling-Futagami combination.

[0196] 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 displaying an option to selecting another user from a contacts list was within a POSAs’ background knowledge and that a POSA would have had a reasonable expectation of success doing so in the Randall-Darling-Futagami 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

[0197] Thus, Randall-Darling-Futagami meets claim 56.

- j. **Claim 57: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of telephone numbers.**

[0198] As Randall's Table 2 (which I have highlighted below) illustrates, Randall's *identifier list*, from which *an option to select said second wireless device is displayed* as I discussed above (§VIII.A.5.i, claim 56), *comprises a list of telephone numbers*. 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

[0199] Thus, Randall-Darling-Futagami meets claim 57.

- k. **Claim 58: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of user profiles.**

[0200] As Randall's Table 2 (which I have highlighted below) illustrates, Randall's *identifier list*, from which *an option to select said second*

wireless device is displayed as I discussed above (§VIII.A.5.i, claim 56), *comprises a list of user profiles* containing “details” on each user. 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

[0201] Thus, Randall-Darling-Futagami meets claim 58.

I. **Claim 59: The wireless telephone of claim 42, wherein said positioning system comprises a global positioning system.**

[0202] As I discussed above (§VIII.A.5.a.iii, Element [42B]),

Randall’s *positioning system* comprises “GPS” (*global positioning system*).

Randall, p. 24 (“People tracking”), p. 22 Table 1 (“GPS location”), p. 29 (“Route finder”). A POSA would have known that “GPS” stands for “***global positioning system***” and is a positioning system. The ’117 patent further admits this was prior-art “background” knowledge. EX1001, 1:19-32.

[0203] Thus, Randall-Darling-Futagami meets claim 59.

- m. **Claim 63: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone comprising allowing a user of said wireless telephone to allow said another wireless device to access the location of said wireless telephone for a specific period of time.**

[0204] Claim 63 recites “*The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone.*” Thus, Claim 63 repeats language from claim 53 that is met as I discussed above (§VIII.A.5.g). Randall further teaches that via Bob’s *wireless telephone*, Bob can make his “[l]ocation information” “[v]isible to specific people” (e.g., to *another wireless device*) “**for a specific period of time**” after which it “become[s] invisible.” Randall, [0136], [0143]-[0144].

[0205] Thus, Randall-Darling-Futagami meets claim 63.

- n. **Claim 65: The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.**

[0206] As I discussed above (§VIII.A.5.g, claim 53; §VIII.A.5.m, claim 63), Randall teaches that Bob’s *wireless telephone* can *instruct* the i-server to *allow* Alice’s *second wireless device* to *access* Bob’s *location* “for a pre-defined period of time.” Randall, [0144]. Randall teaches that Bob can “extend the

visibility period to ‘forever’”—i.e., to *an indefinite period of time*. Randall, [0144] (teaching that when a user “select[s] [a] person and allow[s] access” to “location information,” it may “only be visible for a pre-defined period of time,” but the user can “extend the visibility period to ‘forever’” (i.e., to an indefinite period of time)).

[0207] Thus, Randall-Darling-Futagami meets claim 65.

- o. Claim 66: The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for only a specific period of time.**

[0208] Randall teaches that Bob’s *wireless telephone* can *instruct* the i-server *to allow* Alice’s *second wireless device* *to access* Bob’s *location* *for only a specific period of time* as I discussed above (§VIII.A.5.g, claim 53; §VIII.A.5.m, claim 63). Randall, [0143]-[0144] (allowing location access for “*specific period of time*”).

[0209] Thus, Randall-Darling-Futagami meets claim 66.

- p. Claim 69: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a radio.**

[0210] Randall teaches that “wireless information device[s]” include “*radio* telephones,” and that each wireless information device can “track the location of” any other “GPS wireless information device” for which it is “authorised.” Randall, [0002], p. 24 (“People tracking”), [0021] (teaching

“show[ing] the position of” the tracked device “on digital maps”). Bob’s device can thus *receive and display a location of a radio*.

[0211] It is my opinion that, alternatively, it would have been obvious to *receive and display a location of* any type of location-transmitting *radio*, which were well-known in POSAs’ background knowledge. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed below.

[0212] Boling (EX1074) describes a “combination personal audio device and emergency phone” that is “an AM/FM radio” that can transmit its “GPS” location to a “private service” via “cellular communications.” Boling, Abstract, 4:5-18, 5:6-7, 7:13-26, 9:30-64. Thus, Boling corroborates that it was well known in POSAs’ background knowledge that a mobile device having position-reporting capability can be a radio.

[0213] Lelievre (EX1076) describes “a location-aware radio” that “transmits location information indicating its present location, to a location-based services provider.” Lelievre, Abstract, [0047], FIG. 5. Thus, Lelievre corroborates that it was well known in POSAs’ background knowledge that a mobile device having position-reporting capability can be a radio.

[0214] Thus, Randall-Darling-Futagami meets claim 69.

- q. **Claim 70: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a car.**

[0215] Randall teaches to provide a “Route finder” service “similar to GPS tracking in cars, but for mobile phones,” where “the phone...give[s] you step by step instructions on how to get” “where you want to go”—“eg. Turn left at the next lights. ...Go straight over the roundabout.” Randall, p. 29. It would have been apparent to POSAs from these teachings that a user may be using the mobile phone in *a car* when using this service, as users would benefit from such instructions while driving, and instructions to “[t]urn...at...lights” and how to navigate a “roundabout” are typical driving instructions. In this scenario, POSAs would have understood the mobile phone’s location to be *a location of a car*, which Bob’s device can *receive and display* if Bob is authorized by that user.

[0216] Additionally, POSAs would have understood that a typical implementation of a “radio telephone” as I discussed above (§VIII.A.5.p, claim 69) was a car phone, whose location is *a location of a car*. My opinion regarding POSAs’ background knowledge of a typical implementation of a “radio telephone[.]” for location-tracking was a car phone is corroborated by the following references.

[0217] EX1077 (“Aisaka”) discloses as “Background” that “[m]obile radio telephones are known as radio telephone apparatus and are used in vehicles

such as automobiles” where the radio “signals are transmitted from a transceiver unit, installed for example, in the trunk of the automobile, to a base station through which a communication link with a remote land line telephone or a remote radio telephone is established.” Aisaka, 1:14-23.

[0218] Similarly, EX1078 (“Kuge”) discloses that an example of “radio telephone apparatuses such as car telephones,” and describes as background information that “prior art radio telephone apparatus, for example, a car telephone comprises a transceiver unit and a control unit,” where “[t]he control unit is coupled to a party telephone set (an ordinary home telephone set or another car telephone) through an antenna, a radio circuit and a base station to form a talk path between the control unit and the party telephone set.” Kuge, 1:1-34.

[0219] Thus, Randall-Darling-Futagami meets claim 70.

- r. **Claim 72: The wireless telephone of claim 42, wherein said programming is further capable of downloading from a remote system associated with said server a phone book corresponding to a user of said wireless telephone.**

[0220] As I discussed above (§VIII.A.5.i, claim 56), Bob’s “Universe” is his “contacts database” which lists “all the entities known to” Bob with their contact information. Randall, [0511], Table 2, [0509]-[0510], [0060]. POSAs would have understood this to be *a phone book corresponding to Bob*. Randall, p. 25 (“your phone’s address book”). As I also discussed above (§VIII.A.5.i, claim

56), the “Universe” is stored in a “database” at the i-server (*remote system associated with said server*) and also may be “cached on” the user’s “wireless information device[.]” Randall, [0511], p. 23 Table 4 (“Auto-entering address book”), [0062]-[0063], [0069]. Thus, Bob’s device can *download* his “Universe” *phone book from a remote system associated with said server*.

[0221] Thus, Randall-Darling-Futagami meets claim 72.

B. Ground 2: Claims 45, 47-50, 55, 60-62, 64, 67-68, and 71 would have been obvious over Randall-Darling-Futagami in combinations with De-Vries, Wako, Degnbol, and Bechtolsheim

[0222] As explained in this section below, in my opinion claims 45, 47-50, 55, 60-62, 64, 67-68, and 71 of the ’117 patent would have been obvious to a POSA in view of the combined teachings of Randall (EX1007-EX1008), Darling (EX1022), Futagami (EX1030), De-Vries (EX1013), Wako (EX1025), Degnbol (EX1035), and Bechtolsheim (EX1075).

[0223] I provided discussions above of Randall (§VIII.A.1), Darling (§VIII.A.2), Futagami (§VIII.A.3), and the Randall-Darling-Futagami combination (§VIII.A.4).

1. Discussion of De-Vries (EX1013)

[0224] 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. A device’s

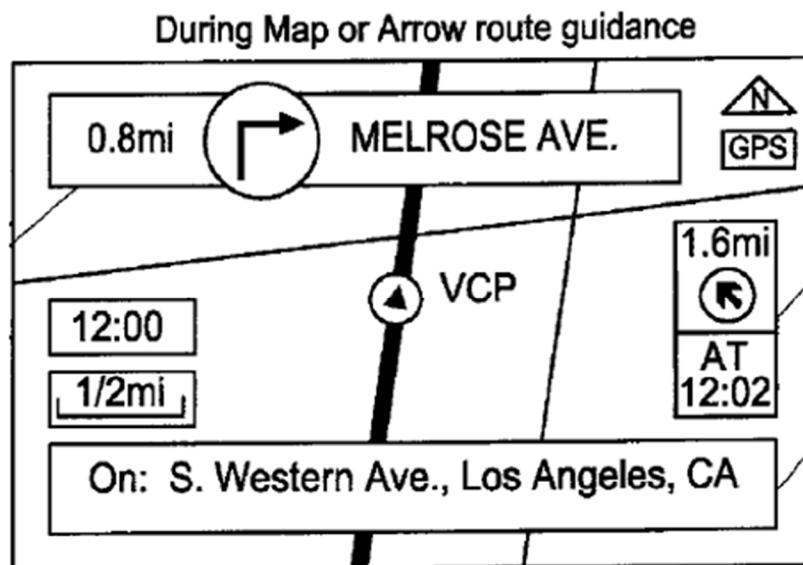
“user can set rules and/or parameters to control when notifications are generated”—“[f]or example, a user may set a proximity parameter designating that notifications are provided only when the other users on his or her buddy list are within a certain proximity.” De-Vries, 2:52-59. “This proximity parameter 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.

2. Discussion of Wako (EX1025)

[0225] Wako discusses “[a] display method...for [a] navigation system for displaying information necessary for guiding a driver of a vehicle.” Wako, Abstract. The vehicle’s position can be determined by GPS. Wako, 1:22-27, 6:43. Wako discusses that it was “Background” knowledge to “superpos[e] a mark representing the current location of the vehicle on a...map image,” with “information regarding the remaining distance to the final destination and an estimated time to reach the final destination” and “[o]ther information such as a

north pointer NP...illustrated on the display screen.” Wako, 1:11-22, 2:30-34, 2:1-8, FIG. 1B. The “route guidance display” is “accompanied by spoken instructions...such as ‘turn left at the next intersection[.]’” Wako, 2:12-34.

[0226] The following excerpt from Wako’s FIG. 7 shows an example route guidance screen:



Wako, 8:64-9:22.

3. Discussion of Degnbol (EX1035)

[0227] Degnbol describes notifying a user when another pre-selected user enters a pre-determined area or into proximity of a particular location.

Degnbol, Abstract, FIG. 1 (below). Users can establish various alert parameters, such as preferences 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” or “a direct distance.” Degnbol, 6:6-17.

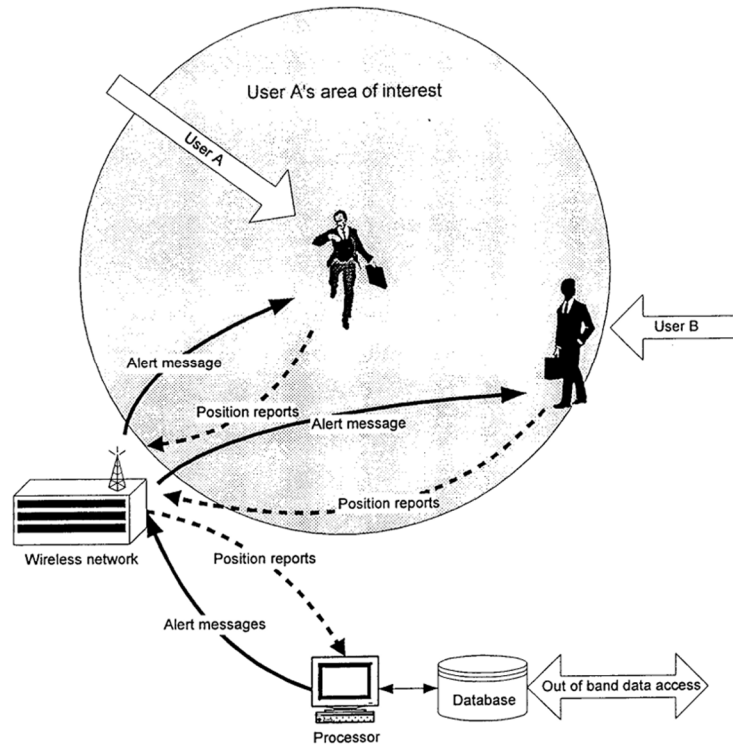


Fig. 1

Degnbol, FIG. 1

4. Discussion of Bechtolsheim (EX1075)

[0228] Bechtolsheim describes “improved navigation programming” that assumes the user will drive part of a route, “park[] his/her vehicle[,]. . . and

walk[] the remaining distance to the final destination.” Bechtolsheim, 1:6-10, 9:30-35, 5:66-6:3, 7:44-47, 11:57-61. The programming computes “the time to travel” each possible “combination driving/walking route” to select the best one. Bechtolsheim, 19:17-36. Additionally, the “program can provide...routes that use public transportation” and compare the “travel time” to that “using a private vehicle.” Bechtolsheim, 21:26-59. The navigation information can be provided “on hand-held computer devices, such as personal digital assistants, telephones,” etc. Bechtolsheim, 20:45-47.

5. Discussion of Combinations of Randall-Darling-Futagami with De-Vries, Wako, Degnbol, and Bechtolsheim

[0229] **Combination with De-Vries**: 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 location specificity is disclosed to particular other device users, a POSA would have been motivated to implement Randall’s service in the Randall-Darling-Futagami combination’s system (which I discussed above §VIII.A.4) that way based on De-

Vries's teachings. For example, De-Vries's techniques to provide the user with control over what alerts they receive and what location information they share, about/to whom, and in what circumstances. De-Vries, 2:52-3:15, 8:41-10:43. In my opinion, 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.

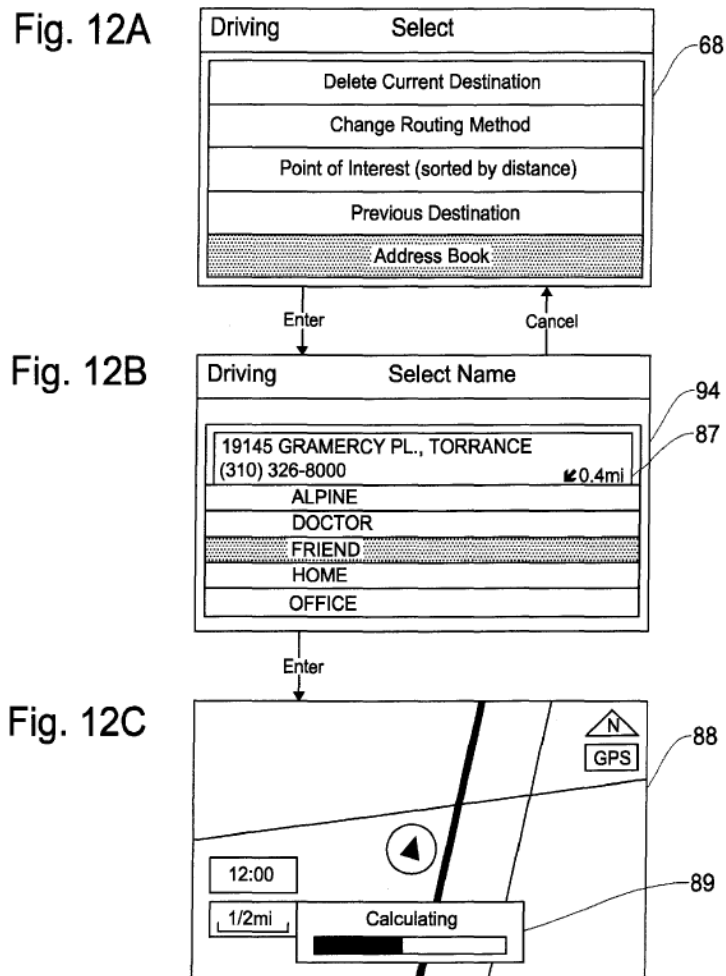
[0230] **Combination with Degnbol** Based on Degnbol's teachings regarding a similar system providing similar location-based alerts, POSAs would have been motivated and reasonably expected success to "inform[]" a user at his wireless telephone "that he has been the subject of an alert to another user," as well as to "determin[e] the position of" "communication units" including "wristwatches." Degnbol, 21:4-6, 18:27-31, 4:1-5:20, 6:22-7:17, 27:14-16.

[0231] **Combination with Wako and Bechtolsheim**: Randall provides a "Route finder" service, "similar to GPS tracking in cars, but for mobile phones. You identify where you want to go, the phone knows where you are already. It can therefore give you step by step instructions on how to get there (eg. Turn left at the next lights. Carry on 100 metres. Go straight over the roundabout)." Randall, p. 29.

[0232] POSAs would have recognized Wako's and Bechtolsheim's navigation techniques as the type of "GPS tracking in cars" techniques that

Randall’s “Route finder” is “similar to” (Randall, p. 29). POSAs would therefore have been motivated and reasonably expected success to use Wako’s and/or Bechtolsheim’s navigation information and display techniques when implementing Randall’s “Route finder” in Randall-Darling-Futagami. For example, POSAs would have been motivated to provide any of the routes Bechtolsheim discloses and any of the information Wako discloses (e.g., north pointer, directional arrows, travel time, etc.) on Randall’s wireless device to provide useful information to the user.

[0233] Further, Randall provides a “Rendezvous” service “on your mobile phone to help you meet friends and family” by “hav[ing] your location visible to others—so using your phones everyone in your group can tell precisely where the others are.” Randall, p. 29. Randall teaches that “your phone can display a map of the area you are standing in” (Randall, p. 29) and also “show [your] position” and “the position of [another] user” (Randall, [0021]). POSAs would have understood and found it obvious from these disclosures that another user’s position can be a destination “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). Wako reinforces this, teaching that a selected destination can be “friend[’s]” location in the user’s “address book.” Wako, FIGs. 12A-12C.



Wako, FIGs. 12A-12C

[0234] POSAs would therefore have been motivated and reasonably expected success to implement Wako's and Bechtolsheim's techniques in Randall's system to provide a useful informative display for navigating to another user's location.

6. **Mapping of claims 45, 47-50, 55, 60-62, 64, 67-68, and 71 to Combinations of Randall-Darling-Futagami with De-Vries, Wako, Degnbol, and Bechtolsheim**

- a. **Claim 45: The wireless telephone of claim 42, wherein said location access rights comprise a plurality of access levels.**

Claim 49: The wireless telephone of claim 42, wherein said location access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise the exact location of said second wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said second wireless device.

Claim 50: The wireless telephone of claim 42, wherein said access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise an approximate location of said second wireless device, and said approximate location comprises a city or state.

[0235] In my opinion, POSAs would have found claims 45 and 49-50 to have been obvious over Randall-Darling-Futagami-De-Vries (*supra* §VIII.B.5).

[0236] 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 the *location access rights* to Alice’s location can *comprise a plurality of access levels*—e.g., one level accessing her location in “approximate terms” (e.g., just the city) and another level accessing her exact location.

[0237] Additionally, De-Vries teaches to allow the *second wireless device* user (e.g., Alice) to control the granularity at which the “user discloses their location to others” (i.e., to *filter* the disclosed *information* about their *location*) 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.

[0238] Thus, POSAs would have been motivated and reasonably expected success to implement the Randall-Darling-Futagami-De-Vries combination such that *said location access rights comprise a plurality of access levels* (meeting claim 45)—e.g., an access level that provides the exact location and an access level that provides only an *approximate location* such as only the *city* (meeting claims 49-50)—in view of both Randall’s and De-Vries’s teachings of successfully doing so.

[0239] Thus, in my opinion, Randall-Darling-Futagami-De-Vries meets claims 45 and 49-50.

- b. Claim 47: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said second wireless device.**

[0240] In my opinion, POSAs would have found claim 47 to have been obvious over Randall-Darling-Futagami or Randall-Darling-Futagami-Wako (*supra* §§VIII.A.4, VIII.B.5).

[0241] As I discussed above (§VIII.B.5), in my opinion, it would have been apparent to POSAs from Randall’s disclosures that another user’s (e.g., Alice’s) *second wireless device location*, which is displayed on a map, may be a place “where you want to go” that Randall’s “Route finder” provides *directions* to (e.g., *displaying directions* on Bob’s *wireless telephone* to navigate from Bob’s device’s location to Alice’s location). Randall, [0021], p. 29. Additionally, as I also discussed above (§VIII.B.5), Wako teaches that a selected destination for *displayed* “route guidance” (*directions*) can be the location of a “friend” in the user’s “address book” (e.g., Alice’s location). Wako, 9:8-22, FIGs. 12A-12C, 12:35-13:14.

[0242] Thus, in my opinion, Randall-Darling-Futagami or Randall-Darling-Futagami-Wako meet claim 47.

- c. **Claim 48: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said location of said second wireless device and a travel time from said location of said wireless telephone to said location of said second wireless device.**

[0243] In my opinion, POSAs would have found claim 48 to have been obvious over Randall-Darling-Futagami-Wako (*supra* §VIII.B.5).

[0244] Claim 48’s language repeated from claim 47 is met as I discussed above (§VIII.B.6.b).

[0245] As to *travel time*, Wako teaches it was “Background” knowledge to *display* in the “route guidance screen” the “anticipated time to reach the final destination.” Wako, 9:18-22, 2:30-34 (“Background” section). Accordingly, it would have been obvious to use Alice’s *location* to *display a travel time on Bob’s wireless telephone* for reaching Alice’s location. *See supra* §VIII.B.5.

[0246] Thus, in my opinion, Randall-Darling-Futagami-Wako meets claim 48.

- d. **Claim 55: The wireless telephone of claim 42, wherein said programming is further capable of alerting said wireless telephone when said second wireless device is within a distance of said wireless telephone.**

[0247] In my opinion, POSAs would have found claim 55 to have been obvious over Randall-Darling-Futagami-De-Vries (*supra* §VIII.B.5).

[0248] Randall 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*.” Randall, p. 24. Thus, Randall discloses *alerting* Bob’s wireless telephone when Alice’s second wireless device is within a distance of Bob’s device.

[0249] De-Vries concerns the same type of proximity-based *alerting* 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 similarly teaches to *alert said wireless telephone when said second wireless device is within a distance of said wireless telephone*. De-Vries, 9:1-8 (A “parameter sets a proximity threshold within which people...are to be considered proximate to the user...for purposes of...providing notifications” as “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.”).

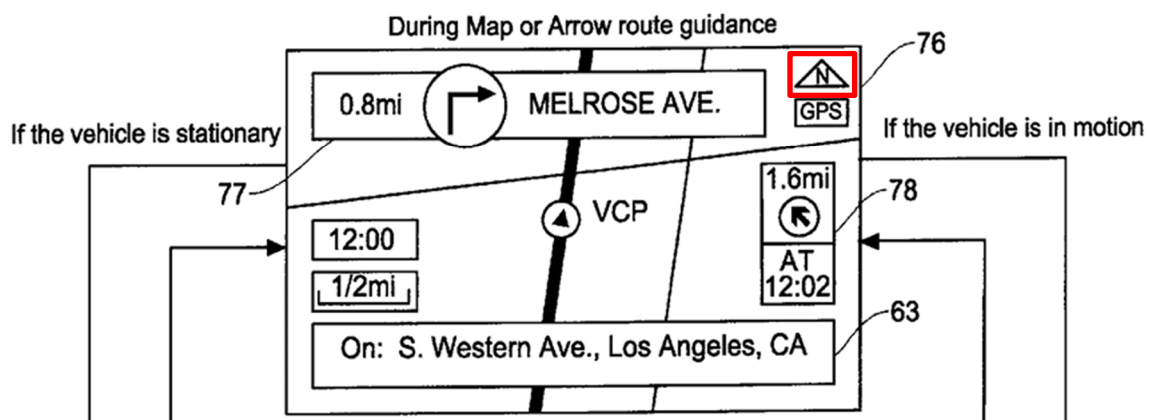
[0250] Thus, in my opinion, Randall-Darling-Futagami-De-Vries meets claim 55.

e. **Claim 60: The wireless telephone of claim 42, wherein said programming is further capable of displaying a compass.**

[0251] In my opinion, POSAs would have found claim 60 to have been obvious over Randall-Darling-Futagami-Wako (*supra* §VIII.B.5).

[0252] Wako teaches to *display* in GPS route guidance screen a “north pointer N” – which POSAs would have understood is a *compass* – and explains that this *compass* was “Background” knowledge. Wako, 7:31-34, 2:6-8 (“Background” section), FIG. 7 (excerpt annotated below).

Fig. 7

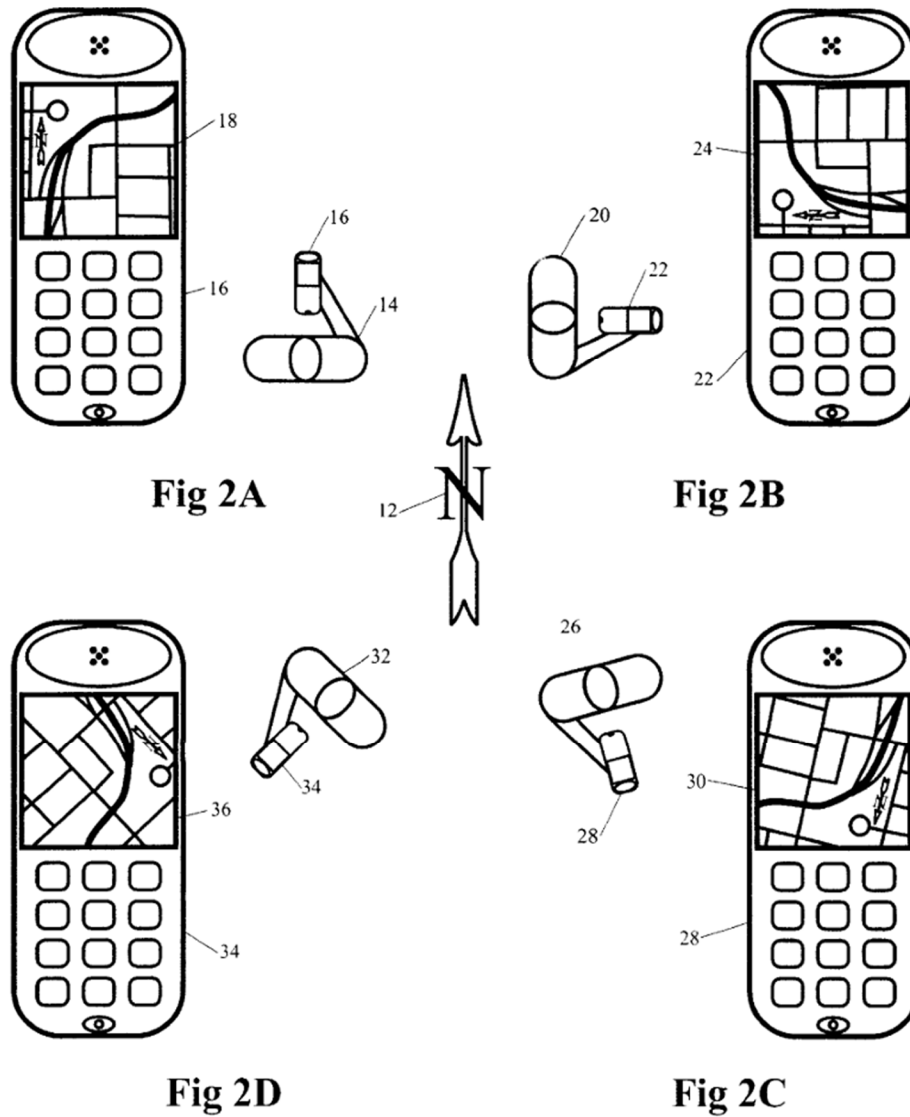


Wako, FIG. 7 (excerpted and annotated)

[0253] In my opinion, it would have been obvious to POSAs from their background knowledge to implement this by using *a compass* in Randall's displaying wireless device.

[0254] My testimony as to the POSA's background knowledge in this regard is corroborated by EX1072 ("Johnson"), which discloses an "apparatus for orienting a map display in a mobile or portable device," wherein "[a]n electronic compass is integrated" and "an electronic compass bearing is used to calculate an offset value" so the "map" can be "reoriented...to the direction of travel." Johnson, Abstract. Johnson corroborates that POSAs knew that "in a hand-held portable device" displaying a "map," the "user has a tightly interactive relationship with the map and the physical environment," and "[i]t is preferable in such situations that the map be reoriented to display on top, what is directly in front of the users rather than always having "north on top." Johnson, 1:41-53. Johnson's Figures 2A-2D (copied below) provides "a series of illustrations" where "the direction north is...indicated by north arrow 12," and the "mobile device 16 shows the map oriented consistent with the direction the user is facing." Johnson, 4:37-48; *see also* Johnson, 3:56-5:20. Johnson further discloses that "orientation measurement[s]" can be obtained using "an electronic compass to measure the instantaneous orientation of the mobile device with respect to the magnetic north pole," which were "know[n] in the art and generally output a signal indicative of

the compass heading of the device into which they are incorporated,” which “advantage[ously]” allows “a single reading [that] can determine the orientation of the device.” Johnson, 6:6-13.



Johnson, FIGs. 2A-2D

[0255] Thus, in my opinion, Randall-Darling-Futagami-Wako meets claim 60.

- f. **Claim 61: The wireless telephone of claim 42, wherein said programming is further capable of displaying a directional arrow indicative of a location of said second wireless device relative to said location of said second wireless telephone.**

[0256] In my opinion, POSAs would have found claim 61 to have been obvious over Randall-Darling-Futagami-Wako (*supra* §VIII.B.5).

[0257] Wako teaches to display “*a direction by an arrow*, and a distance to location of the name highlighted in the name list” when the user (e.g., Bob) selects the location of a “friend” (e.g., Alice) as the navigation destination. Wako, 12:60-63, FIG. 12B (which I have annotated below), FIGs. 12A, 12C.

Fig. 12A

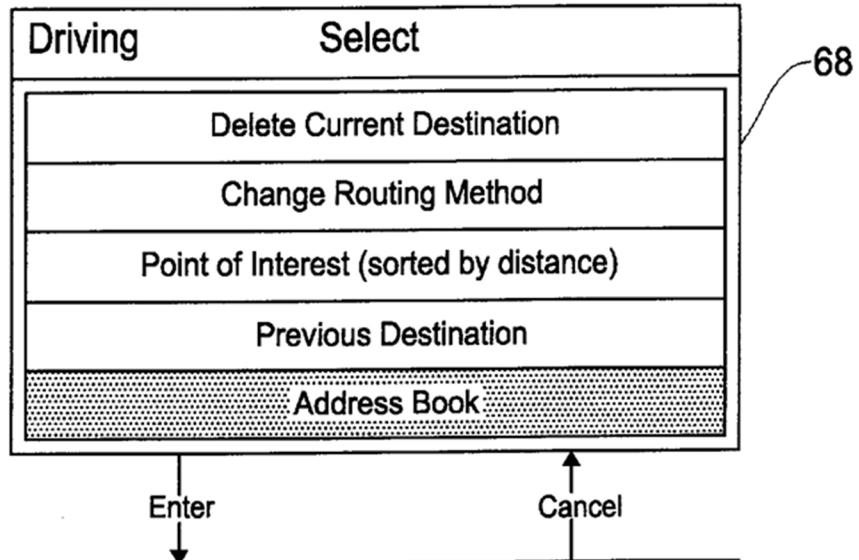


Fig. 12B

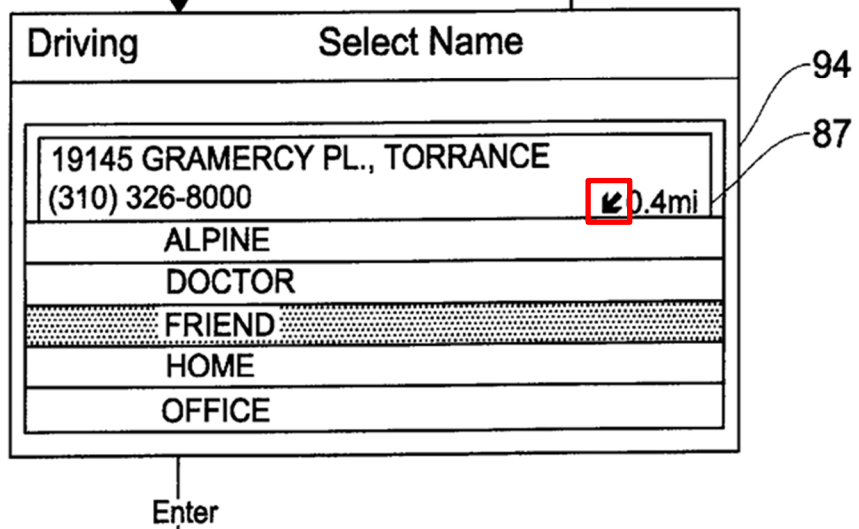
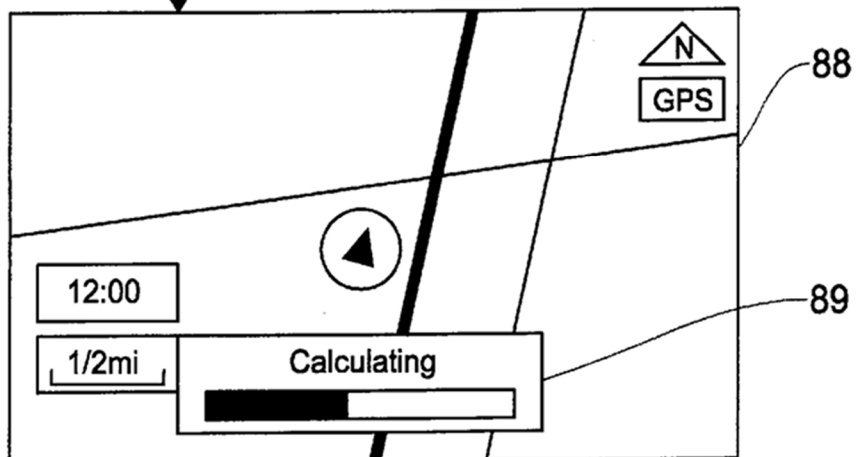


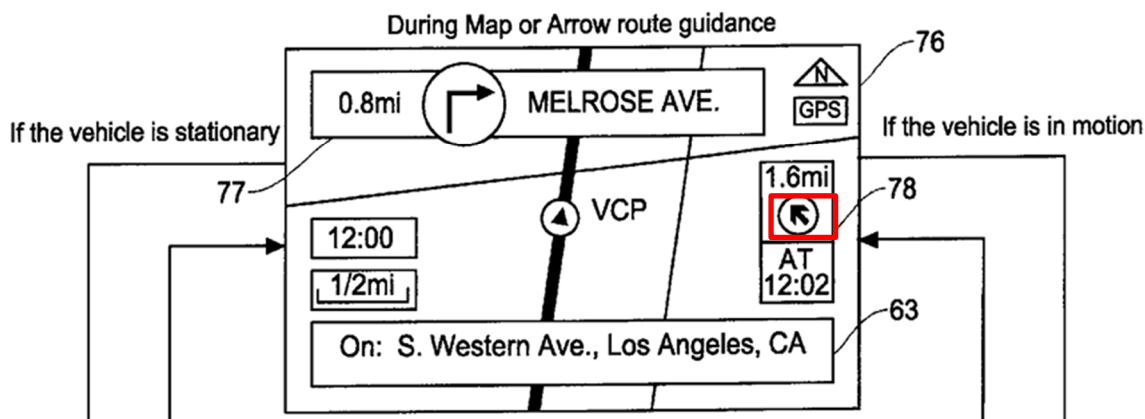
Fig. 12C



Wako, FIGs. 12A-12C

[0258] The *directional arrow* is also *displayed* in the “route guidance screen.” Wako, 9:18-21, FIG. 7 (excerpt annotated below).

Fig. 7



Wako, FIG. 7 (excerpted and annotated)

[0259] Accordingly, it would have been obvious to apply this teaching to *display a directional arrow indicative of a location of Alice’s second wireless device relative to Alice’s and Bob’s devices’ locations*. See *supra* §VIII.B.5.

[0260] Thus, in my opinion, Randall-Darling-Futagami-Wako meets claim 61.

- g. **Claim 62: The wireless telephone of claim 42, wherein said programming is further capable of setting location alerts associated with said second wireless device.**

[0261] In my opinion, POSAs would have found claim 62 to have been obvious over Randall-Darling-Futagami-De-Vries (*supra* §VIII.B.5).

[0262] As I discussed above (§VIII.B.6.d, claim 55), Randall, like De-Vries, provides *location alerts* on Bob’s *wireless telephone* when Alice’s *second wireless device* is nearby, including via Randall’s “Old buddy finder” service. To the extent that Randall does not specify that Bob can set the rules/parameters for receiving these location alerts on Bob’s *wireless telephone*, POSAs, in my opinion, 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 about whom. De-Vries, 2:52-59 (device “user can set rules and/or parameters to control when notifications are generated”— “[f]or example, a user may set a proximity parameter”), 3:5-14 (“[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.”). In my opinion, POSAs would have had a reasonable expectation of 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.

[0263] Thus, in my opinion, Randall-Darling-Futagami-De-Vries meets claim 62.

- h. Claim 64: The wireless telephone of claim 42, wherein said programming is further capable of providing an alert on said wireless telephone when said second wireless device enters a geographic area.**

[0264] In my opinion, POSAs would have found claim 64 to have been obvious over Randall-Darling-Futagami-De-Vries (*supra* §VIII.B.5).

[0265] As I discussed above (§VIII.B.6.d, claim 55), Randall’s “Old buddy finder” *provides an alert on Bob’s wireless telephone when Alice’s second wireless device enters a geographic area* (e.g., city). Randall, p. 24. De-Vries also teaches to *provide an alert on said wireless telephone when said second wireless device enters a geographic area*, as determined by “proximity parameters, such as same city/town/neighborhood.” De-Vries, 9:8-13.

[0266] Thus, in my opinion, Randall-Darling-Futagami-De-Vries meets claim 64.

- i. Claim 67: The wireless telephone of claim 42, wherein said programing is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.**

[0267] In my opinion, POSAs would have found claim 67 to have been obvious over Randall-Darling-Futagami-Degnbol (*supra* §VIII.B.5). Based on Degnbol’s teachings I discussed above (§VIII.B.5), it would have been obvious to *receive an alert at Bob’s wireless telephone* when “he has been the subject of an alert to another user” by which that user *locates Bob’s wireless telephone* as being

nearby. Degnbol, 21:4-6, 18:27-31; *see also* EX1001, 2:3-8 ('117 patent disclosing that an “alert may take the form of, for example, a display on Jen’s cell phone that communicates to Jen ‘Phil is in Pittsburgh’”).

[0268] In my opinion, it would alternatively have been obvious to *receive an alert* whenever another user requests Bob’s location in any way (whether or not as part of an alert), as this was a known useful option, even when the requesting entity already has location access rights.

[0269] My testimony in this regard is corroborated by Rice (EX1071), which describes providing a user an “option...to *receive* a notification on their wireless communications device whenever a location request is made by a client application” to access the user’s location. Rice, 9:26-35. Rice teaches that this is useful even where the requesting entity already has access rights. Rice, 7:40-49, 9:36-51, 12:20-33. Thus, Rice corroborates that a first user receiving an alert when a second user requests the first user’s location was well known in POSAs’ background knowledge.

[0270] Thus, in my opinion, Randall-Darling-Futagami-Degnbol meets claim 67.

j. Claim 68: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a watch.

[0271] In my opinion, POSAs would have found claim 68 to have been obvious over Randall-Darling-Futagami-Degnbol (*supra* §VIII.B.5).

[0272] Randall teaches that its “wireless information device[s]” can be “any kind of device with one or two way wireless information capabilities,” and teaches *receiving and displaying a location of* a wireless information device as I discussed above (§VIII.A.5.a.viii, Element [42G]; §VIII.A.5.d, Element claim 46). Randall, [0002], [0021].

[0273] Degnbol describes “determining the position of” “communication units,” which include “wireless telephone[s],” “personal digital assistants,” and “wristwatches.” Degnbol, 4:1-31, 6:22-7:17, 27:14-16. Degnbol teaches that any of these units are “communication units” and can receive information. Degnbol, 4:1-5:20, 6:22-7:17. POSAs would have understood Degnbol’s “wristwatches” to be a suitable wireless information device in Randall-Darling-Futagami; thus, it would have been obvious to POSAs to *receive and display the location of a watch* in Randall’s system.

[0274] Thus, in my opinion, Randall-Darling-Futagami-Degnbol meets claim 68.

- k. **Claim 71: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying information indicating time to reach said location from of said second wireless device from said location of said wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.**

[0275] In my opinion, POSAs would have found claim 71 to have been obvious over Randall-Darling-Futagami-Bechtolsheim or Randall-Darling-Futagami-Wako-Bechtolsheim (*supra* §VIII.B.5).

[0276] As I discussed above (§VIII.B.4), Bechtolsheim teaches to provide a route to the destination *according to two types of travel: walking and driving*, since the “user may not necessarily be able to park at the destination location” and will walk there from their parking spot. Bechtolsheim, 1:27-50. POSAs would therefore have been motivated to provide such routes in Randall’s system in Randall-Darling-Futagami and would have had a reasonable expectation of success based on Bechtolsheim’s teachings in a similar system providing navigation functionality on mobile devices. Bechtolsheim, 20:45-47.

[0277] As I discussed above (§VIII.B.6.c, claim 48), Randall-Darling-Futagami-Wako *displays information indicating time to reach the second wireless device’s location*. In the Randall-Darling-Futagami-Wako-Bechtolsheim combination (*supra* §VIII.B.5), this displayed *time to reach* the destination is the “summed” *driving* and *walking* time. Bechtolsheim, 19:30-36. Bechtolsheim

teaches to *receive* the *information* from a “remote location” where it is computed. Bechtolsheim, 5:16-19.

[0278] Alternatively, Bechtolsheim also teaches to “compare[]” the “travel time using public transportation” (which POSAs would have understood typically includes *subway*) “to the travel time using a private vehicle” (*driving*). Bechtolsheim, 21:53-56. In my opinion, POSAs would have been motivated and would have had a reasonable expectation of success to apply this teaching to allow the user to choose among transportation options. In my opinion, POSAs would have understood an obvious way to allow the user to “compare” the two travel times is to *receive and display* them, thereby meeting claim 71.

[0279] Thus, in my opinion, Randall-Darling-Futagami-Bechtolsheim or Randall-Darling-Futagami-Wako-Bechtolsheim meets claim 71.

C. Ground 3: Claims 42-44, 46-47, 51-54, 59-61, 63, 65-66, and 70 would have been obvious over Sheha in view of Darling and Futagami

[0280] As I explain in this section below, in my opinion claims 42-44, 46-47, 51-54, 59-61, 63, 65-66, and 70 of the ’117 patent would have been obvious to a POSA in view of the combined teachings of Sheha (EX1005), Darling (EX1022), and Futagami (EX1030).

[0281] I provided discussions above of Darling (§VIII.A.2) and Futagami (§VIII.A.3).

1. Discussion of Sheha (EX1005)

[0282] Generally, Sheha teaches systems and methods to provide real-time location information (e.g., GPS co-ordinates, routing, maps) of a target user's device (e.g., landline, cell phone, PDA, etc.) to an authorized requesting user via conventional telecommunications systems (e.g., telephone network, mobile communications network, computer network, GPS, etc.). Sheha, Abstract, 1:35-45, 2:60-64, 10:66-11:9. Location information can be exchanged in response to a telephone call being made, but location information can also be shared without a call. Sheha, 11:55-58.

[0283] Sheha describes telephone devices – both landline and mobile devices, such as cellphones or PDAs – that share location information with other authorized landline and mobile devices to enable functionality such as mapping, routing, and direction finding. Sheha, 2:60-4:18, 10:66-11:9, 11:55-65. Sheha discloses that the mobile devices may determine their positions, such as by using an integrated GPS receiver or network-assisted position information, and may provide their positions to an online database and application server (“ODAS”) which stores the positions remotely. Sheha, 10:5-16, 10:66-11:51, 7:19-23.

[0284] 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 (i.e. is authorized to) obtain their respective location information. Sheha, 11:55-12:1.

[0285] Sheha describes that the remote server (ODAS) periodically updates the requesting user with the target user's device location information based on the target user's associated privacy settings and what Sheha describes as authorization and authentication protocols. Sheha, 11:49-12:7. Sheha describes that the location information may include a map illustrating the location of one or both of the target and requesting users' mobile devices, route information, driving directions, and heading information that may be displayed to the requesting user. Sheha, 9:23-39.

[0286] For example, using Sheha's system, a mobile device may request the location of a target mobile device through a phone call (what I term Sheha's "mobile-to-mobile call embodiment") or "without having to initiate a telephone call" (what I term Sheha's "no-call embodiment") by "only specifying a telephone number." Sheha, 11:10-54, 11:55-58; *see also id.*, 12:1-7. If authorized, the requesting device receives the position from the ODAS, including displaying a map illustrating the location of one or both mobile devices and navigational information. Sheha, 9:23-39. Sheha's 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.

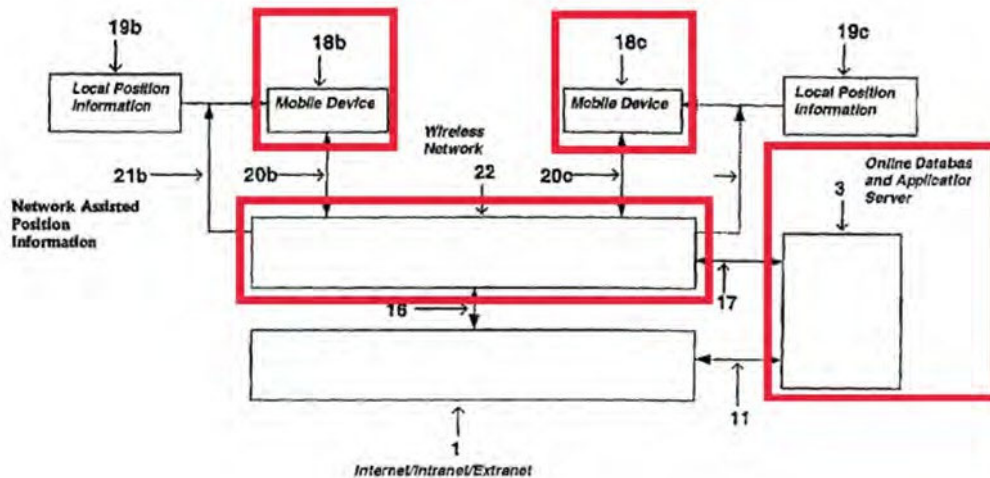


FIG. 3

Sheha, FIG. 3 (annotated)

[0287] FIG. 5 (below) illustrates a map displaying directions between the user's current location 34 and the target user's location 33, which can be displayed on mobile devices. Sheha, 4:52-58, 9:23-39.

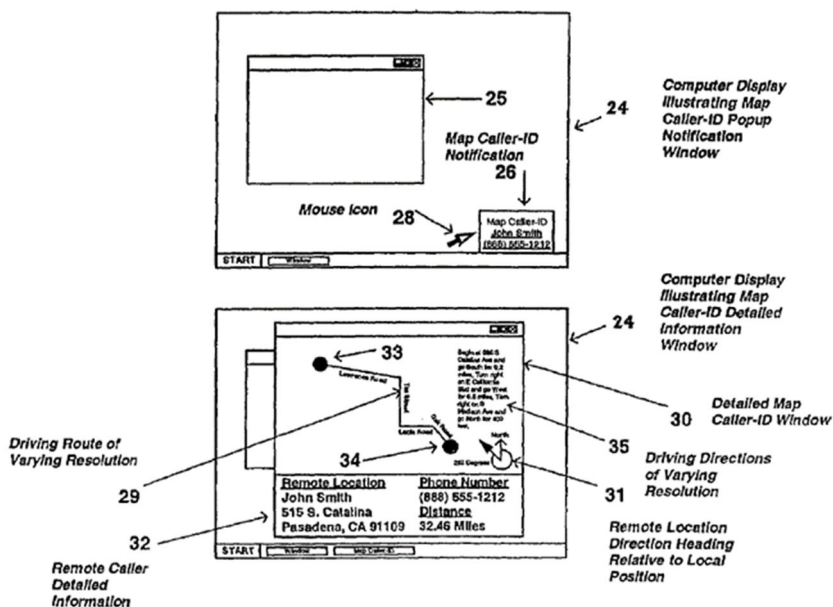


FIG. 5
Sheha, FIG. 5

2. Discussion of Sheha-Darling-Futagami combination

[0288] As I discuss below, Sheha, Darling, and Futagami describe highly overlapping techniques and use cases.

[0289] All three describe a system where a server stores potentially sensitive, private, personal information of client users of wireless devices; in both Sheha and Darling, this includes location information. Sheha, 11:3-8; Darling, 3:1-8, 21:19-22:17, 32:39-34:3; Futagami, 4:7-12.

[0290] All three references describe similar access control techniques, where each user specifies which other individual users or groups of users have access rights to specific items of the user's personal information. Sheha, 11:55-

12:7; Darling, 3:3-5, 22:37-23:13, 33:16-34:3; Futagami 13:33-67, 14:1-44, FIGs. 15-16.

[0291] In all three references, when a second user requests an item of a first user's personal information, the server determines whether the second user has access rights from the first user to that information, and only transmits the information to the other user if the receiving user has such access rights. Sheha, 12:1-7; Darling, 3:1-8; Futagami, 14:44-15:53, 18:26-19:27.

[0292] Therefore, a POSA implementing Sheha's system would have been motivated to incorporate teachings and techniques from Darling and Futagami, and would have reasonably expected success given the similarities among the described systems. For example, POSAs would have been motivated to include supplementing Sheha's access control techniques for location requests with aspects of both Darling's and Futagami's access control techniques, given that all three references discuss overlapping, complementary, and beneficial techniques for controlling access to personal information. Darling teaches that such personal information as Futagami's can include location information and that it was known to "request permission" for a "second user" who does not already have permission to access a "first user's...location information." Darling, 3:1-19, 21:19-23:13, 32:39-34:3 (teaching to apply same techniques for "Requests for Access to this

profile” to providing “access to My Location Details” as to providing “access to My Personal Details”).

[0293] As a specific example, for the above reasons, POSAs would have been motivated and would have had a reasonable expectation of success in applying, to location requests in Sheha’s system, Futagami’s teachings for how to proceed when the requesting user does not already have access to the requested information (i.e., do not have access rights), including providing the requesting user the option to have the server request access from the target user (or not). Futagami, 15:40-16:32, 18:62-20:67, FIGs. 19-20. POSAs would have understood Futagami’s technique to be desirable in Sheha’s system, for example, because it allows the requesting user to choose whether it makes sense to disturb the other user at that particular time with a request to obtain location access rights.

3. Mapping of claims 42-44, 46-47, 51-54, 59-61, 63, 65-66, and 70 to Sheha-Darling-Futagami combination

a. Claim 42

i. Preamble [42PRE]: A wireless telephone comprising:

[0294] Claim 42’s preamble recites “[a] wireless telephone comprising.” I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble.

[0295] Sheha discloses a mobile-to-mobile configuration illustrated in Figure 3 (which I annotated below): where mobile devices 18b-18c communicate with wireless network 22 via wireless connections 20b-20c. Sheha, 11:12-35. A type of “mobile” device can be “*a wireless telephone.*” Sheha, 4:43-47, 9:40-43.

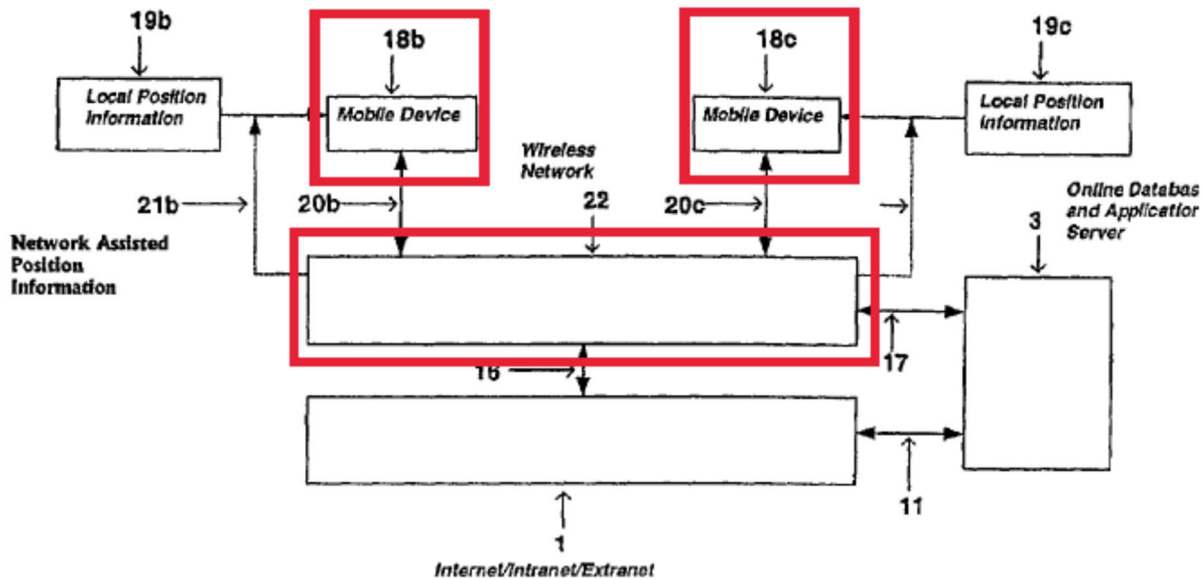


FIG. 3

Sheha, FIG. 3 (annotated)

[0296] Thus, Sheha meets the Preamble [42PRE].

ii. Element [42A]: a processor;

[0297] Sheha states, “current wireless phones...have...*processing* capability” and “memory.” Sheha, 5:53-57. Thus, the *wireless telephone* in Sheha includes *a processor* and memory. As I discussed above (§VIII.C.1), Sheha’s

wireless telephones perform tasks including requesting, receiving, interpreting, and displaying data, which POSAs would have understood typically, conventionally, and obviously would have been implemented via *a processor* executing programming stored in memory. My opinion regarding POSAs' background knowledge in this regard is corroborated by the references I cited above. *See supra* §VIII.A.5.a.ii (citing, e.g., corroborating EX1013 (“De-Vries”), 12:40-51, 4:60-65, FIG. 6; EX1056 (“Stewart”), 5:41-58, FIG. 2; EX1023 (“Smith”), 5:19-6:2)).

[0298] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42A].

iii. Element [42B]: a positioning system for determining a location of said wireless telephone; and

[0299] Sheha discloses that wireless devices can include *positioning systems* such as, e.g., GPS (“Global *Positioning System*”), *for determining their locations*. Sheha, 1:35-38, 10:5-16, 11:15-20.

[0300] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42B].

iv. Element [42C]: memory storing programming capable of:

[0301] As I discussed above (§VIII.C.3.a.ii, Element [42A]), Sheha states, “current wireless phones...have...processing capability” and “*memory*” (Sheha, 5:53-57); thus the *wireless telephone* in Sheha include *memory*. As I

discussed above (§VIII.C.1), Sheha’s *wireless telephones* perform tasks including requesting, receiving, interpreting, and displaying data, which POSAs would have understood typically, conventionally, and obviously would have been implemented via a processor executing *programming stored in memory*. My opinion regarding POSAs’ background knowledge in this regard is corroborated by the references I cited above. *See supra* §VIII.A.5.a.iv (citing, e.g., corroborating EX1013 (“De-Vries”), 12:40-51, 4:60-65, FIG. 6; EX1056 (“Stewart”), 5:41-58, FIG. 2; EX1023 (“Smith”), 5:19-6:2)).

[0302] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42C].

v. Element [42D]: requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;

[0303] Sheha discloses that its mobile devices (e.g., 18b-18c) wirelessly communicate with “online database and application *server* (ODAS) 3” via “wireless network” 22. Sheha, 7:21-23, 10:67-11:35, FIG. 3. Mobile devices can be “cellular telephone[s] or wireless voice-enabled PDA[s]” (i.e., *wireless telephones*). Sheha, 10:66-11:3. Sheha’s 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 (*wireless telephones*), and the ODAS, via a wireless network 22. Sheha, 10:66-11:35, FIG. 3.

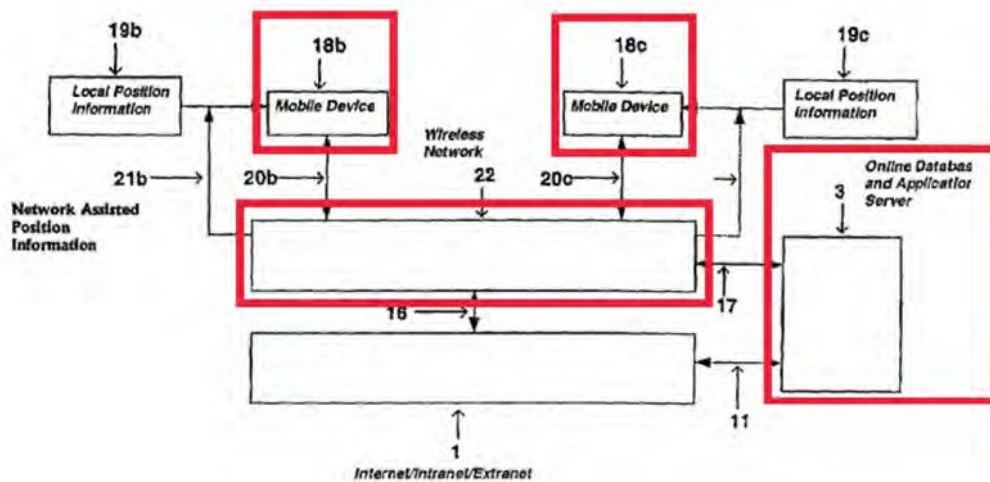


FIG. 3
Sheha, FIG. 3 (annotated)

Thus, Sheha's Figure 3 above shows that the ODAS 3 is a *server located remotely* from the mobile devices (*wireless telephones*).

[0304] Each mobile device supplies its position to the ODAS, from which another device can request it. Sheha, 10:5-16, 11:3-8, 11:15-20, 11:44-51.

"A mobile...device can...***request position information of another mobile...device*** by...specifying a telephone number," with or without placing a telephone call.

Sheha, 11:55-12:7, 10:66-11:54. For example, "[w]hen a mobile device 18b [*wireless telephone*] dials a telephone number," the "ODAS 3 requests position information from the destination mobile device 18c [*second wireless device*]" and "periodically updates each mobile device with the other's position information."

Sheha, 11:10-54.

[0305] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42D].

- vi. **Element [42E]: displaying on said wireless telephone an option to request location access rights from said second wireless device after it is determined that said wireless telephone does not have location access rights for said second wireless device;**

[0306] Sheha teaches that when “a mobile device user specifies a telephone number of another position-enabled mobile device, the system would query the remote mobile device and verify its privacy setting”—also called “permission settings”—by which the remote device can specify “allowance of position information transfers...*only* with the device owner’s permission.” Sheha, 4:59-5:46. Because the system shares the *second wireless device’s location* “only” with permission, Sheha teaches that there are scenarios where *it is determined that said wireless telephone does not have* permission to receive the location (i.e., *location access rights*) *for said second wireless device*. See also Sheha, 5:37-41 (device may “*prevent or limit* other calling devices from obtaining position information”).

[0307] The target mobile device’s privacy/permissions settings information can include “a group database and authorization and authentication protocols” by which the 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. Sheha’s ODAS (server) uses this privacy information to determine whether the target device has given the requesting device *location access rights* to obtain its location information. Sheha, 3:22-28, 5:21-46, 8:42-53; *see also id.*, 3:4-14, 4:8-18, 9:59-10-4.

[0308] I understand from counsel that in a previous IPR Mullen argued that Sheha’s “privacy settings” or “permission settings” are not described as targeting other specific devices or users. In my opinion, Mullen was incorrect. First, claim element [42E] does not require the *location access rights* to be exclusive to the *wireless telephone*. Instead, Element [42E]’s language encompasses *determining that said wireless telephone does not have location access rights for said second wireless device* for any reason—including, e.g., if the *second wireless device* is not giving *location access rights* to anybody.

[0309] Element [42E] also encompasses determining whether *location access rights* were provided to, e.g., a group of devices including the *wireless telephone*. *See* EX1001, 13:9-12, 3:23-25 (’117 patent discussing assigning access rights to “groups”). Additionally, providing *location access rights* to an individual device would have been obvious because “defin[ing] a group” of authorized users (Sheha, 11:63-65) can include defining a group having only one member, as Darling teaches. Darling, 41:20-42:2 (“A user defined group can be a single person.”). Alternatively, allowing permissions specific to individuals in addition to

groups would have been obvious as a well-known beneficial option with reasonable expectation of success. Darling, 3:3-5 (“Each user may specify that location information is available only to *specified users or groups*”). My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0310] 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* Randall, [0136] (“Visible to specific people (or groups)”), [0144]-[0146] (“The user must be able to switch location information on for a person or group of people... Creating Buddy Lists[:] Some users will be prepared to allow specific people access to more of their data than others. These specific people or groups of people with greater visibility are referred to as Buddies.”). 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 a system like Sheha’s where mobile device users are accessing each other’s locations.

[0311] Friedman 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, 12:60-13:21. 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 a system like Sheha’s.

[0312] Sheha describes device-local privacy filters and the requester-specific group database of permissions as complementary privacy/permission specification options that POSAs would have understood can all coexist within an embodiment, and that are interchangeably referred to as “privacy settings,” “permission settings,” “privacy configuration,” “position transfer permissions,” etc. Sheha, 4:35-42, 4:59-5:46 (discussing “privacy settings” interchangeably with “permission settings” as applicable to mobile or landline, call or no-call embodiments), 10:17-26, 10:44-11:9, 11:55-12:7 (describing the mobile no-call embodiment using “privacy settings” and the same “authorization and authentication protocols” as the landline no-call embodiment that “utiliz[es] a group database...to identify users that are permitted to access” position information). 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, 18:65-19:46 (*see* 19:9-15, 19:44-45).

[0313] Sheha thus discloses that mobile-to-mobile call and no-call embodiments may employ both device-local privacy filters and a remote group database specifying which users are authorized for access. Sheha, 4:59-5:20, 11:55-12:7 (mobile-to-mobile embodiments can use the same “privacy settings” and “authorization and authentication protocols...similarly to” landline embodiments). When both are employed, POSAs would have understood that a requesting user is only given access to a target device’s location if the requesting user has location access rights in the target device’s group database and to the extent the target device’s local privacy settings allow location sharing. Sheha, 4:59-5:20, 11:55-12:7. Sheha thus discloses that mobile-to-mobile embodiments can use the same “privacy settings” and “authorization and authentication protocols...similarly to” landline embodiments. Sheha, 12:4-7, 4:59-5:20, 8:42-53 (“ODAS 3 us[es] authentication and authorization protocols” to “verify the level of authority each user is granted”).

[0314] Alternatively, using mobile-to-mobile group permissions would have been obvious because allowing a mobile user to specify a group of mobile users who have permission to access the user’s location (or to provide access

permission on an individual-user basis) was well-known as a beneficial option with reasonable expectation of success in a system like Sheha's, as Darling teaches and other prior art corroborates. Darling describes "enabl[ing] a user to determine the location of another user...by means of mobile devices." Darling, 2:10-15. Darling describes that "the server stores permission information indicating whether the location information for the first user is available to the second user and the method preferably includes checking the permission information prior to the transmitting step." Darling, 3:1-15. "Each user may specify that location information...only to specified users or groups or categories of users or that the information is publicly available." Darling, 2:47-3:5; *see also* Darling, 32:39-33:32 ("17. Defining Access Right to Profile....18. 'People who have access to My Location Details', List of individuals who have access to the Location Details in a scrolling list.").

[0315] In another 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, 5:35-50. A user can also "limit the data exchange to a sub-group of users, such as friends, coworkers, and family" by "defining a distribution group in the user profile." Sandhu, 5:35-50. Sandhu therefore corroborates that it was within a POSA's background knowledge to use

group database permissions (or to provide access permission on an individual-user basis) in mobile-to-mobile embodiments and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's.

[0316] In yet another example, Randall (EX1007) describes a user of a mobile device that can track the location of other mobile devices. Randall, Table 4, p. 24 (“People tracking” application, “New buddy finder” application, “Old buddy finder” application). Randall’s system allows a user to assign access rights to individuals or groups. Randall, [0070] (“Access rights can be associated with individual entities, and can also be associated with groups of entities.”). Randall describes using a database for storage of such access rights. Randall, [0052] (“In ADS, a user can also specify the remote database access rights given to different people or groups: an arbitrary group of entities may be stored as an attribute which gives access permissions to data in the database.”); *see also* Randall, [0136], [0144]-[0148]. Further, Randall describes that users sharing their location can occur outside of a phone call. Randall, Table 4, p. 24 (“People tracking” application in which a user tracks the location of a user by polling a server). Randall therefore also corroborates that it was within a POSA’s background knowledge to use a group database in a mobile embodiment (or to provide access permission on an individual-user basis) and to exchange location information

between mobile devices without initiating a phone call and that a POSA would have had a reasonable expectation of success doing so in a system like Sheha's

[0317] Darling and Futagami further render obvious implementing Sheha's system to perform [42E]'s *determining*, in the manner I discussed above. *See supra* §VIII.A.5.a.vi (citing as corroboration, e.g., Darling, 3:1-9, 35:24-28; Futagami, 15:40-53, FIG. 17 (arrow "N" from S62), FIG. 19 (P45), FIG. 20 (P55)).

[0318] As I discussed above (§VIII.A.5.a.vii), Futagami teaches *displaying on said wireless telephone an option to request access rights* to sensitive personal information *after it is determined that said wireless telephone does not have the access rights for said second wireless device*. In Sheha-Darling-Futagami (*supra* §VIII.C.2, the requested personal information is the *second wireless device's* location, and the access rights are *location access rights*, meeting Element [42E]. As I discussed above (§VIII.C.2, POSAs would have been motivated to display this option to allow for obtaining location access rights while controlling whether to disturb the target user with an access request. In my opinion, POSAs would have reasonably expected success based on Futagami's teachings that I discussed above (*supra* §VIII.C.2).

[0319] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42E].

vii. Element [42F]: transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and

[0320] As I discussed above (§VIII.A.5.a.vii, Futagami teaches the *wireless telephone transmitting a request to said server that the access rights to the personal information be assigned for said wireless telephone by said second wireless device*. Darling reinforces that understanding, as I discussed above (§VIII.A.5.a.vii). Darling, 3:1-19. Sheha’s server can “quer[y] the remote party of the position request for permission on whether the position request can be granted,” to carry out this request in Sheha-Darling-Futagami. Sheha, 5:21-46.

[0321] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42F].

viii. Element [42G]: receiving said location of said second wireless device from said server dependent upon said access rights.

[0322] As I discussed above (§VIII.C.3.a.vi, Element [42E]), Sheha’s *second wireless device* may assign *said location access rights* to the *wireless telephone* by granting one-time permission, changing privacy settings, and/or making the *wireless telephone* user a member of a group defined as having access to the *second wireless device*’s location. Sheha, 5:29-34, 11:55-12:7. Sheha discloses that the *server* provides the target device’s *location* to the requesting device if it has been granted *location access rights*. Sheha, 5:2-7, 5:32-34, 10:66-

11:9, 11:44-51. Further, Futagami teaches providing the requested information once the *second wireless device* has provided *said access rights*, as I discussed above (§VIII.A.5.a.viii). Futagami, 16:49-61, 17:8-11, 19:66-20:7, FIGs. 17, 20.

[0323] Thus, in my opinion, Sheha-Darling-Futagami meets Element [42G].

b. Claim 43: The wireless telephone of claim 42, wherein said second wireless device is a second wireless telephone.

[0324] Sheha's requesting and target devices can be *wireless telephones*. Sheha, 10:66-11:3 ("mobile device 18b, such as a cellular telephone or wireless voice-enabled PDA").

[0325] Thus, in my opinion, Sheha-Darling-Futagami meets claim 43.

c. Claim 44: The wireless telephone of claim 42, wherein said location access rights include the ability to obtain said location of said second wireless device, wherein said location is capable of being provided to said wireless telephone from said server even when said second wireless device is OFF.

[0326] As I discussed above (§VIII.C.3.a, claim 42), Sheha's *location access rights include the ability to obtain said location of said second wireless device*. Because the *wireless telephone* obtains the *second wireless device's* location from Sheha's ODAS (remote server) where it is stored, POSAs would have understood that the ODAS can *provide said location to said wireless telephone even when said second wireless device is OFF*. Darling confirms this

understanding. Darling, 2:1-12 (disclosing a server that stores and transmits location information “even when that other user[’s]...mobile telephone or other device is switched off”).

[0327] Additionally, it was well-known and would have been obvious to provide this functionality by implementing the *second wireless device* to transmit its location to the server even when it is *OFF*. My opinion in this regard is corroborated by several references, as discussed in the paragraphs below.

[0328] Ryden (EX1009) and Ryden-Prov (EX1010) teach to program a wireless device’s location reporting feature “to bypass the unit’s ON-OFF switch” so the device “respond[s] with its...location G#” even “when the unit 10 is turned OFF,” such as to “allow[] a stolen telephone unit” to be located. Ryden, 16:53-62; Ryden-Prov, 31:4-8.

[0329] Meadows (EX1018) teaches that making “the device continue[] to transmit” “even when the wireless device operator turns off the wireless device” is “useful for monitoring other individuals” and “useful for tracking devices such as misplaced cellular telephones.” Meadows, 7:20-33.

[0330] Accordingly, Ryden and Meadows corroborate that it was well-known and would have been obvious to provide this functionality by implementing the *second wireless device* to transmit its location to the server even when it is *OFF*.

[0331] Thus, in my opinion, Sheha-Darling-Futagami meets claim 44.

- d. **Claim 46: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display a location marker on a map on said wireless telephone.**

[0332] In Sheha's Figure 5 (annotated below), Sheha discloses displaying a "Map Caller-ID" screen on the requesting wireless device, with *location markers* 33 and 34 representing current locations of both requesting and target devices. Sheha, 4:52-58, 9:23-28, 11:37-42.

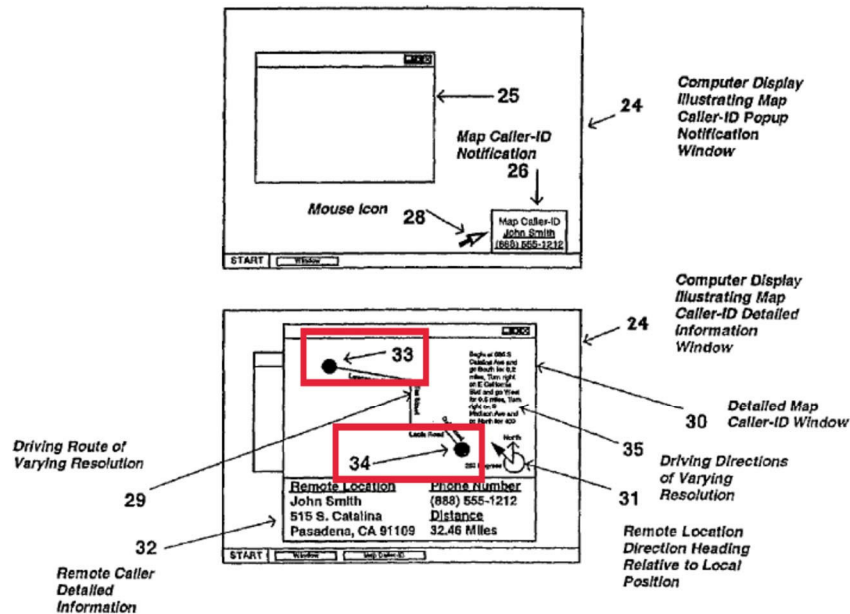


FIG. 5
Sheha, FIG. 5 (annotated)

[0333] Sheha discloses that such “a *map*...can be displayed on the mobile telephone.” Sheha, 4:43-58. While Figure 5 and 4:43-58 are presented in

the context of examples involving a landline, they equally apply in the mobile-to-mobile context, which Sheha explains is “similar to a landline-to-mobile application.” Sheha, 4:59-5:11, 4:13-18; *see also id.*, 4:52-58, 11:36-12:7. Sheha also discloses that both the target and the requesting device can display maps showing both devices’ locations. Sheha, 4:52-58, 11:10-51, *see also id.*, 11:42-44 (“both the originating and destination mobile device receive the Map Caller-ID”).

[0334] Alternatively, implementing Sheha to display the map, with the target device’s location, on either or both of the requesting and target wireless devices would have been obvious in view of POSAs’ background knowledge of the convenient option and reasonable expectation of success in doing so. My testimony regarding POSAs’ background knowledge in this regard is corroborated by several references, as discussed in the paragraphs below.

[0335] Randall (EX1007) describes an application for mobile devices (e.g., “radio telephones, smart phones,” Randall, [0002]) in which a user’s friends or parents can track the user by “add[ing] a ‘map’ application to their own devices, which could show their position on digital maps and also, by using the location attribute of the user’s data object, it could also show the position of the user.” Randall, [0021], p. 29.

[0336] Sandhu (EX1054) concerns mobile units (e.g., PDAs, wireless phones, mobile units, Sandhu, Abstract) and describes “provid[ing] user 14-i

[using mobile unit 10-i] with a map showing the location of user 14-2 relative to the location of user 14-i.” Sandhu, 6:22-50.

[0337] Wollrab (EX1014) describes “translat[ing] remote sensing location coordinates into a graphic map image, e.g. a .jpg or .gif file, depicting the relative locations of all members/PDA devices within a family.” Wollrab, 3:28-31. For example, mobile devices like “PDA device 14-1 through 14-5 can display a map image via display device 15-5 through 15-5 depicting the relative locations of all members/PDA devices within a family.” Wollrab, 4:43-58. The maps and location markers for different users displayed on a PDA device are illustrated, for example, in Wollrab’s FIG. 4B. *See also* Wollrab, FIGs. 1-4C.

[0338] Grube (EX1017) describes displaying, on mobile devices (Grube, 4:38-57, 5:13-17), maps of tracked vehicles, and the maps displaying icons to represent the current locations of the tracked vehicles. Grube, 6:59-7:6, *see also* Grube, 6:14-27. Grube’s FIG. 2, for example, “shows an example map display that may be provided to a user of a communication unit” that shows the “the current location of” vehicles “by respective vehicle icons.” Grube, 6:59-65.

[0339] Meadows (EX1018) describes “monitoring the geographical location of a subscriber’s mobile cellular telephone, and for providing the location information to an authorized user through the world wide web.” Meadows, 2:2-7. The authorized user can access the location information through various media

including a “wireless handheld device 20b.” Meadows, 3:59-67. Meadows describes the location information can be displayed on a map. Meadows, 5:48-57, FIG. 4B.

[0340] Thus, the above references corroborate my opinion that displaying a map on either or both of the requesting and target wireless devices with a marker representative of the location of the target wireless device was within a POSAs’ background knowledge and that a POSA’s reasonable expectation of success in doing so in Sheha-Darling-Futagami.

[0341] Thus, in my opinion, Sheha-Darling-Futagami meets claim 46.

- e. **Claim 47: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said second wireless device.**

[0342] Sheha discloses that if authorized, a target mobile device’s location can be used and *displayed* on a requesting device “to obtain driving *directions* to that device,” provided by the server. Sheha, 5:21-34, 11:44-51, FIG. 5 (directions 35 along route 29 annotated below).

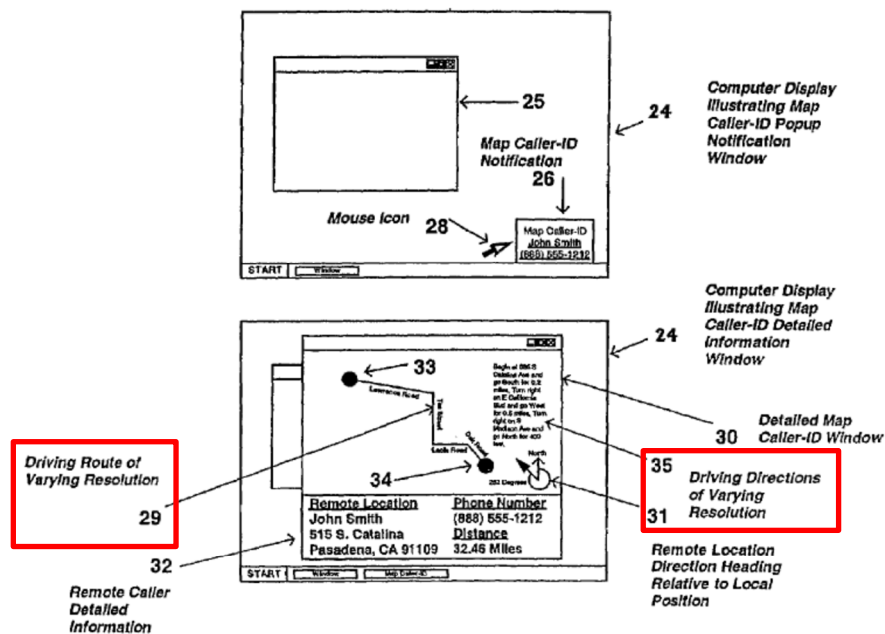


FIG. 5
Sheha, FIG. 5 (annotated)

[0343] Thus, in my opinion, Sheha-Darling-Futagami meets claim 47.

- f. **Claim 51: The wireless telephone of claim 42, wherein said programming is further capable of receiving a login and password from said wireless telephone to identify said wireless telephone.**

[0344] Sheha discloses the use of unique identification tokens for server “authentication and authorization procedures.” Sheha, 3:4-10, 5:26-29. Sheha further discloses that “every...user has a username [i.e., *login*] and *password*” as “user *identification* information,” which the requesting device provides for authentication and authorization procedures, in which the ODAS

determines “that a particular user is signed-on to the system on a *particular device*” and whether the “user is genuine.” Sheha, 8:38-53.

[0345] Darling and Futagami both reinforce this teaching to meet claim 13, as I discussed above (§VIII.A.5.e, Ground 1, claim 51). Darling, 11:12-20, 19:11-14; Futagami, 8:62-67.

[0346] Thus, in my opinion, Sheha-Darling-Futagami meets claim 51.

- g. **Claim 52: The wireless telephone of claim 42, wherein said location of said second wireless device is requested by receiving input, in the form of a telephone number of said second wireless device, on said wireless telephone.**

[0347] Sheha discloses requesting the location of the target wireless device by *receiving input in the form of a telephone number* of the target device on the requesting device. Sheha, Abstract, 10:66-11:23, 11:55-58 (“A mobile...device can...*request* position information of another mobile...device by...specifying *a telephone number*”). Darling reinforces this, by teaching to allow a user to “Find People” by inputting the target user’s “Mobile Number” as a “search field.” Darling, 34:22-35:33.

[0348] Thus, in my opinion, Sheha-Darling-Futagami meets claim 52.

- h. Claim 53: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone.**

[0349] As I discussed above (§VIII.C.3.a, claim 42), Sheha discloses that any of Sheha’s users (e.g., the target device’s user) can define a list of authorized users and can change their privacy settings at any time using their wireless device, thereby *modifying rights of another wireless device to access their location*. Sheha, 5:9-20; 11:61-12:7. POSAs would have found it obvious to implement this disclosed ability in Sheha by *displaying an option* to do so. Darling also teaches to *display an option* to allow the user to “Add” and “Remove” contacts from the “List of individuals who have access to the Location Details.” Darling, 33:16-34:3

[0350] Thus, in my opinion, Sheha-Darling-Futagami meets claim 53.

- i. Claim 54: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to delete another wireless device's rights to access the location of said wireless telephone.**

[0351] As I discussed above (§VIII.C.3.h, claim 53), Sheha discloses that a target device can modify a list of authorized users using the target device. That Sheha functionality includes terminating another user’s access rights “at anytime,” thereby deleting that user’s location access rights. Sheha, 5:12-14.

Darling also teaches to allow the user to “Remove” contacts from the “List of individuals who have access to the Location Details.” Darling, 33:16-34:3

[0352] Thus, in my opinion, Sheha-Darling-Futagami meets claim 54.

j. **Claim 59: The wireless telephone of claim 42, wherein said positioning system comprises a global positioning system.**

[0353] Sheha’s mobile device’s *positioning system* comprises a *global positioning system* (GPS), as I discussed above (§VIII.C.3.a.iii, Element [42B]).

[0354] Thus, in my opinion, Sheha-Darling-Futagami meets claim 59.

k. **Claim 60: The wireless telephone of claim 42, wherein said programming is further capable of displaying a compass.**

[0355] Sheha’s map *displays* a “North” arrow 31 in the Map Caller-ID illustrated in Sheha’s Figure 5 (annotated below), which POSAs would have understood is a *compass*. Sheha, 9:30-34.

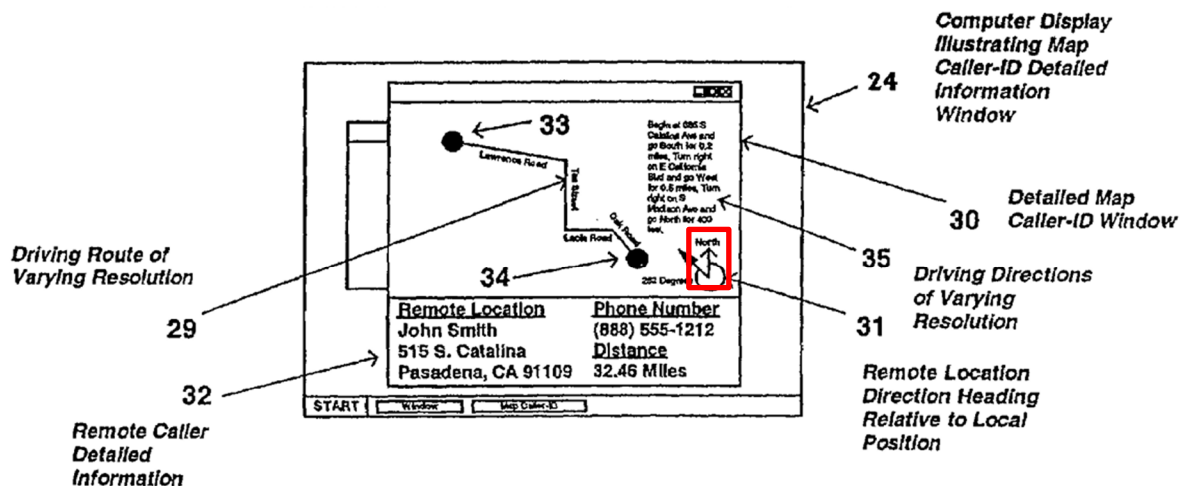


FIG. 5

Sheha, FIG. 5 (annotated)

[0356] In my opinion, POSAs would have found it obvious from their background knowledge to implement the above in Sheha by *providing a compass* in Sheha's displaying wireless device. My opinion in this regard is corroborated by EX1072 ("Johnson"), as I discussed above (§VIII.B.6.e, Ground 2, Claim 60 (citing corroborating EX1072, Abstract, FIGs. 2A-2D, 1:41-65, 3:56-5:20, 6:6-31)).

[0357] Thus, in my opinion, Sheha-Darling-Futagami meets claim 60.

- I. **Claim 61:** The wireless telephone of claim 42, wherein said programming is further capable of displaying a directional arrow indicative of a location of said second wireless device relative to said location of said second wireless telephone.

[0358] As shown in Sheha's Figure 5 (annotated below), Sheha displaying a directional arrow indicative of a location of the target device's location relative to the target and requesting devices' locations. Sheha, 9:30-34.

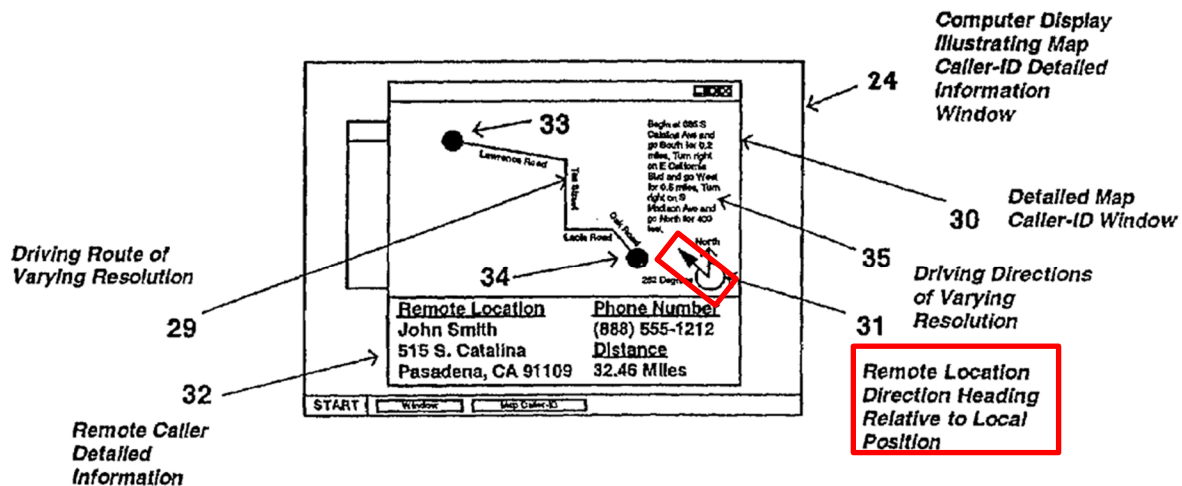


FIG. 5

Sheha, FIG. 5 (annotated)

[0359] Thus, in my opinion, Sheha-Darling-Futagami meets claim 61.

- m. **Claim 63: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone comprising allowing a user of said wireless telephone to allow said another wireless device to access the location of said wireless telephone for a specific period of time.**

[0360] Claim 63 repeats language from claim 53 that is met by Sheha-Darling-Futagami as I discussed above (§VIII.C.3.h). Sheha also discloses that any *wireless telephone* user can *allow another wireless device to access its location* for limited *periods of time*. Sheha, 3:10-13.

[0361] Thus, in my opinion, Sheha-Darling-Futagami meets claim 63.

- n. **Claim 65: The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.**

[0362] Sheha describes location access permissions, which can be provided by the wireless devices to the ODAS server. Sheha, 5:28-30, 11:65-12:1; Such location access permissions can be granted until “a user requests to terminate the transfer, either after a predefined time period ends or abruptly due to manual intervention.” Sheha, 5:31-46. In the latter embodiment, the user grants permission to obtain location information until it is revoked. Thus, in absence of revocation, Sheha’s system grants location access for an *indefinite* time period. A user can also “enable position transfer permissions...for...as long as the call is

active” (Sheha, 5:15-20), which is an *indefinite* time period because the length of the call may not be known *a priori*. Thus, Sheha discloses a wireless telephone *instructing* the *server* to *allow access* to its location until “terminate[d]” by “manual intervention” or for “as long as [a] call is active,” which are both *indefinite periods of time* because their length is not known *a priori*. Sheha, 5:15-46.

[0363] As I discussed above (§VIII.C.3.a.vi, Element [42E]), Sheha also teaches that a wireless-telephone user can *instruct* the *server* to allow “specific users [to] have access” to their location “without...a telephone call” (Sheha, 11:55-12:7), which POSAs would have understood allows access *for an indefinite period of time*, because the authorized user may access the location at any time, untethered to any call.

[0364] Thus, in my opinion, Sheha-Darling-Futagami meets claim 65.

- o. Claim 66: The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for only a specific period of time.**

[0365] Sheha’s mobile device’s “privacy settings” that the ODAS “quer[ies]” can “determine[] the *period* of the position transfer” which “can be set for...a *predetermined length of time*.” Sheha, 4:59-66, 5:9-14, 3:10-13.

[0366] Thus, in my opinion, Sheha-Darling-Futagami meets claim 66.

- p. **Claim 70: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a car.**

[0367] Sheha describes each “mobile device receiv[ing] the Map Caller-ID” that displays “the other’s position information” for “providing real-time driving directions,” where a mobile device can be located in “a motor vehicle” (e.g., *a car*) and connected to “an in-vehicle navigational device.” Sheha, 11:42-52, 4:52-58, 10:27-41, 12:8-41. In this scenario, the *received and displayed* location of the other mobile device is *a location of a car*.

[0368] Thus, in my opinion, Sheha-Darling-Futagami meets claim 70.

D. Ground 4: Claims 45, 48-50, 55-58, 62, 64, 67-69, and 71-72 would have been obvious over Sheha-Darling-Futagami in combinations with De-Vries, Wako, Smith, Degnbol, Boling, and Bechtolsheim

[0369] As I explain in this section below, in my opinion claims 45, 48-50, 55-58, 62, 64, 67-69, and 71-72 of the ’117 patent would have been obvious to a POSA in view of the Sheha (EX1005), Darling (EX1022), Futagami (EX1030), De-Vries (EX1013), Wako (EX1025), Smith (EX1023), Degnbol (EX1035), Boling (EX1074), and Bechtolsheim (EX1075).

[0370] I provided discussions above of Sheha (§VIII.C.1), Darling (§VIII.A.2), Futagami (§VIII.A.3), De-Vries (§VIII.B.1), Wako (§VIII.B.2), Degnbol (§VIII.B.3), Bechtolsheim (§VIII.B.4), and the Sheha-Darling-Futagami combination (§VIII.C.2).

1. Discussion of Smith (EX1023)

[0371] Smith describes displaying a contact list on a cellphone for selecting a contact of interest, including viewing contact location information.

Smith, 5:15-18, 6:53-7:3, 7:41-49, 10:29-11:4, FIG. 15B (below), FIG. 16.

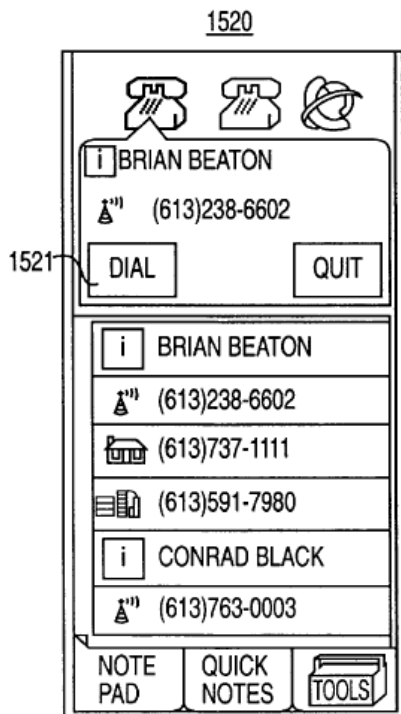


FIG. 15B

Smith, FIG. 15B

2. Discussion of Boling (EX1074)

[0372] Boling describes a “combination personal audio device and emergency phone” that is “an AM/FM radio” that can transmit its “GPS” location to a “private service” via “cellular communications.” Boling, Abstract, 4:5-18, 5:6-7, 7:13-26, 9:30-64.

3. Discussion of Combinations of Sheha-Darling-Futagami with De-Vries, Wako, Smith, Degnbol, Boling, and Bechtolsheim

[0373] **Combination with De-Vries:** In my opinion, POSAs would have been motivated by De-Vries’s teachings (as I discussed above, §VIII.B.1 §VIII.B.5)) to provide notifications via Sheha’s wireless devices in the Sheha-Darling-Futagami combination (which I discussed *supra* §VIII.C.2 when other users of interest are nearby, and to allow the users receiving these location alerts to set rules/parameters for receiving notifications, and the users whose locations are the subject of alerts to choose among various ways of defining what level of specificity/granularity of their location is disclosed to particular other device users.

[0374] In my opinion, POSAs would have found these techniques desirable to enable compatible mobile-device users to identify and navigate to each other. In my opinion, POSAs would have had a reasonable expectation of success based on De-Vries’s teachings of successfully implementing such functionality in a system similar to Sheha’s, where wireless device users are accessing each other’s locations (*see supra* §VIII.B.1).

[0375] **Combination with Wako:** In my opinion, POSAs would have been motivated to incorporate any of Wako’s teachings (*supra* §§VIII.B.2, VIII.B.5.a, VIII.C.2) into Sheha-Darling-Futagami to provide well-known navigation aids. Because Sheha “provide[s] typical navigational functionality” and device

locations, POSAs would have reasonably expected success. Sheha, 11:37-51, 12:8-31.

[0376] **Combination with Smith**: As Smith demonstrates, contact-list functionality for selecting and viewing information about contacts was typical in wireless devices like Sheha's. In my opinion, POSAs would therefore have been motivated and reasonably expected success incorporating such functionality into Sheha-Darling-Futagami.

[0377] **Combination with Degnbol**: In my opinion, POSAs would have been motivated to incorporate various location-based alerts to more effectively share location data in Sheha's system, which also provides location-related notifications. *See, e.g.*, Sheha, 11:40-51, FIG. 4. POSAs, when considering when to send a location-related notification, would have looked to Degnbol to identify such triggers. In my opinion, POSAs would have reasonably expected 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 minor software modifications.

[0378] **Combination with Boling**: In light of Sheha's teachings to share various mobile devices' locations (Sheha, 12:58-60, 19:41-46, 12:1-7), in my opinion, POSAs would have been motivated and reasonably expected success to

share any suitable mobile device's location, such as a location-transmitting radio per Boling, in Sheha-Darling-Futagami.

[0379] **Combination with Bechtolsheim**: Bechtolsheim teaches to provide a combination driving-and-walking route to the destination, since the “user may not necessarily be able to park at the destination location” and will walk there from their parking spot, and also to provide public-transportation route options that may save the user time. Bechtolsheim, 1:27-50, 21:53-56. POSAs would therefore have been motivated to provide such routes in Sheha-Darling-Futagami and would have reasonably expected success based on Bechtolsheim's teachings in a similar system providing navigation functionality on mobile devices. Bechtolsheim, 20:45-47.

4. Mapping of Combinations of Sheha-Darling-Futagami with De-Vries, Wako, Smith, Degnbol, Boling, and Bechtolsheim to claims 45, 48-50, 55-58, 62, 64, 67-69, and 71-72

a. Claims 45, 49-50, 55, 62, and 64

Claim 45: The wireless telephone of claim 42, wherein said location access rights comprise a plurality of access levels.

Claim 49: The wireless telephone of claim 42, wherein said location access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise the exact location of said second wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said second wireless device.

Claim 50: The wireless telephone of claim 42, wherein said access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise an approximate location of said second wireless device, and said approximate location comprises a city or state.

Claim 55: The wireless telephone of claim 42, wherein said programming is further capable of alerting said wireless telephone when said second wireless device is within a distance of said wireless telephone.

Claim 62: The wireless telephone of claim 42, wherein said programming is further capable of setting location alerts associated with said second wireless device.

Claim 64: The wireless telephone of claim 42, wherein said programming is further capable of providing an alert on said wireless telephone when said second wireless device enters a geographic area.

[0380] In my opinion, POSAs would have found claims 45, 49-50, 55, 62, and 64 to have been obvious over Sheha-Darling-Futagami-De-Vries (*supra* §VIII.D.3) based on the De-Vries’s teachings that meet the limitations added by these claims, as I discussed above in Randall-based combinations. *See supra* §§VIII.B.6.a, VIII.B.6.d, VIII.B.6.g, VIII.B.6.h. Thus, in my opinion, Sheha-Darling-Futagami-De-Vries meets claims 45, 49-50, 55, 62, and 64.

- b. Claim 48: The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said location of said second wireless device and a travel time from said location of said wireless telephone to said location of said second wireless device.**

[0381] In my opinion, POSAs would have found claim 48 to have been obvious over Sheha-Darling-Futagami-Wako (*supra* §VIII.D.3).

[0382] Sheha discloses *displaying* the claimed *directions* as I discussed above (§VIII.C.3.e (claim 47)).

[0383] Wako teaches that it was “Background” knowledge to display a travel time to the destination in a “route guidance screen” like Sheha’s. Wako, 2:30-34, 9:18-22; *supra* §VIII.B.6.c.

- c. **Claim 56: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list.**

[0384] In my opinion, POSAs would have found claim 56 to have been obvious over Sheha-Darling-Futagami-Smith (*supra* §VIII.D.3). Smith discloses manually dialing telephone numbers. Sheha, 11:12-15. The use of *identifier lists* such as digital phonebooks and *displayed* contact lists was well known the art, such as the list taught by Smith. Smith, 9:43-47, FIG. 15A (below).

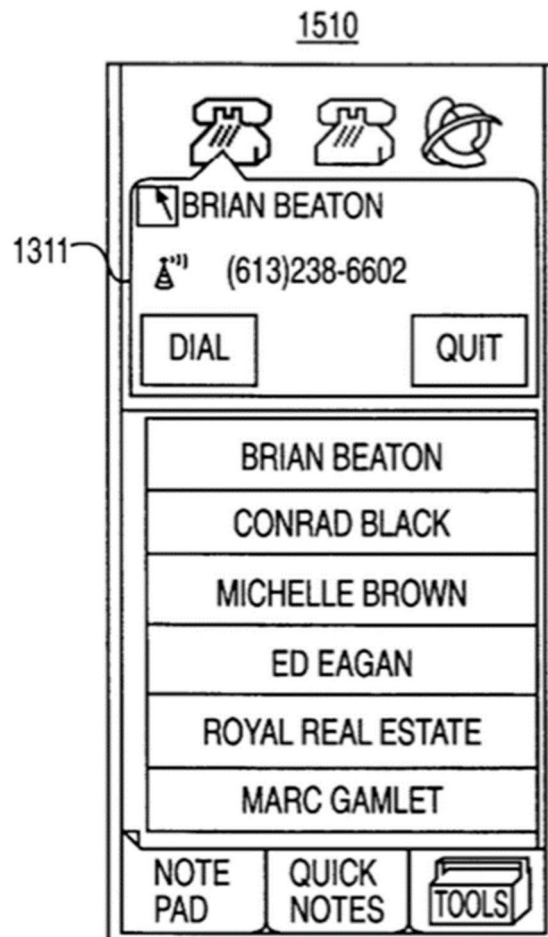


FIG. 15A

Smith, FIG. 15A

[0385] When the Smith identifier list is used in the Sheha-Darling-Futagami-Smith combination as I discussed above (§VIII.D.1, the user of the requesting device conveniently can *select* the target device (*said second wireless device*) from the provided *displayed option for an identifier list* as an alternative to manually dialing telephone numbers (Sheha, 11:12-15).

[0386] Thus, in my opinion, Sheha-Darling-Futagami-Smith meets claim 56.

- d. **Claim 57: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of telephone numbers.**

[0387] In my opinion, POSAs would have found claim 57 to have been obvious over Sheha-Darling-Futagami-Smith (*supra* §VIII.D.3). Smith teaches that the *displayed identifier list*, from which *an option to select said second wireless device* is *displayed*, *comprises a list of telephone numbers* for each contact; as a user scrolls through the compressed view, the telephone number of each name is *displayed*. Smith, 9:19-24, 9:50-57, FIGs. 15A-15B (below).

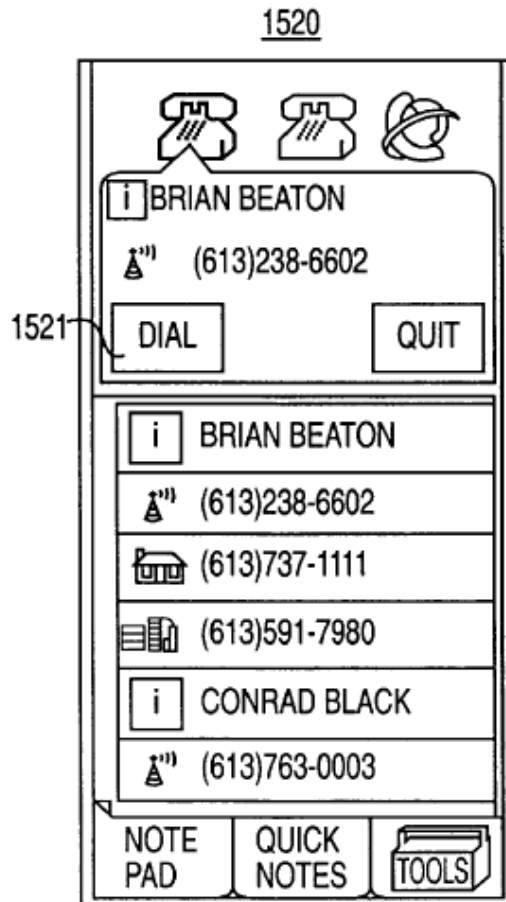


FIG. 15B

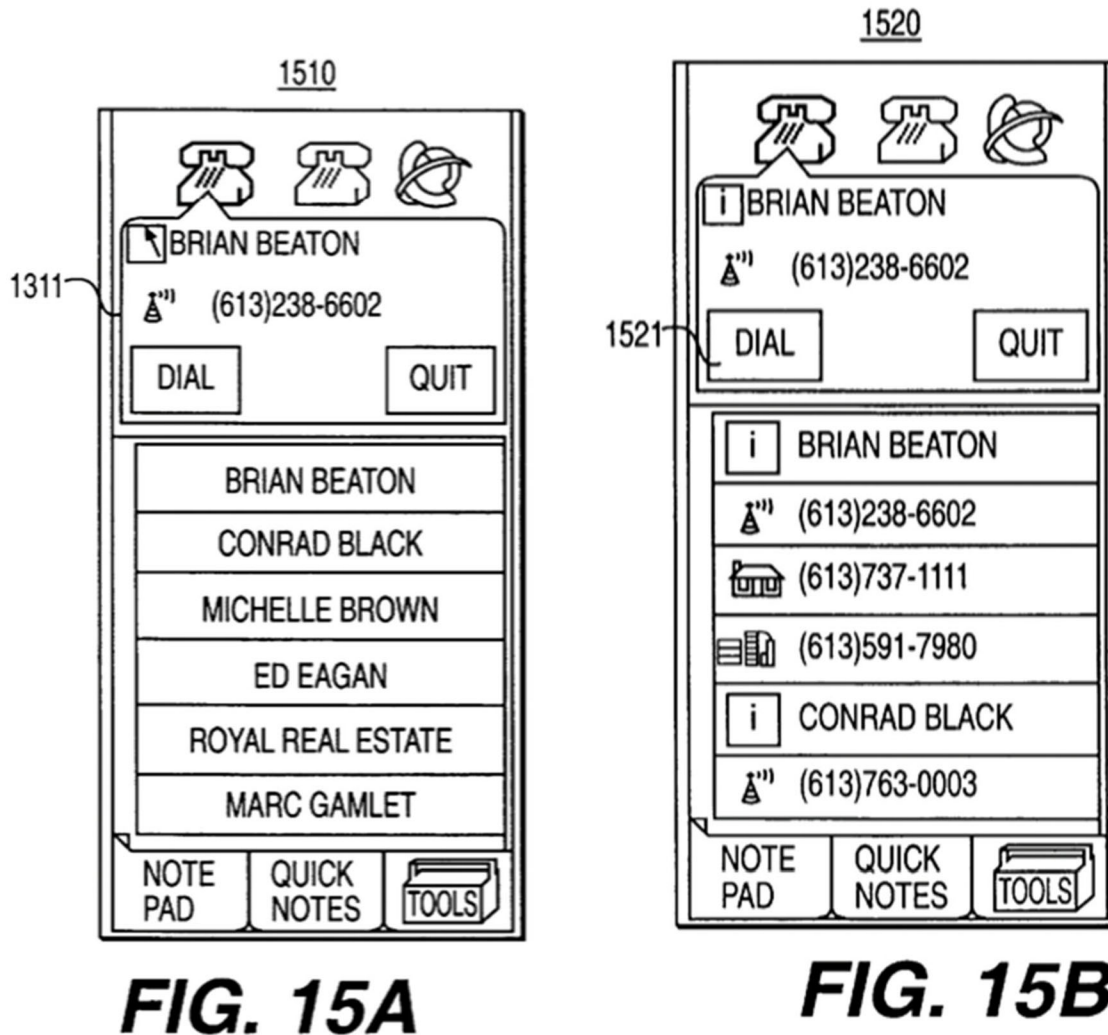
Smith, FIG. 15B

[0388] Thus, in my opinion, Sheha-Darling-Futagami-Smith meets claim 57.

- e. **Claim 58: The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of user profiles.**

[0389] In my opinion, POSAs would have found claim 58 to have been obvious over Sheha-Darling-Futagami-Smith (*supra* §VIII.D.3). Smith discloses

that each entry in the *displayed identifier list*, from which *an option to select said second wireless device is displayed*, represents a *user profile* including various information for that user. Smith, 6:65-7:3, 8:18-19, 9:43-55, FIGs. 15A-15B (below).



Smith, FIGs. 15A-15B

[0390] Thus, in my opinion, Sheha-Darling-Futagami-Smith meets claim 58.

- f. Claim 67: The wireless telephone of claim 42, wherein said programing is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.**

[0391] In my opinion, POSAs would have found claim 67 to have been obvious over Sheha-Darling-Futagami-Degnbol (*supra* §VIII.D.3), which incorporates Degnbol’s teaching to “inform[]” a user at his *wireless telephone* “that he has been the subject of an alert to another user” (i.e., when the other user *locates said wireless telephone*, e.g., by being informed that the user’s location is nearby the other user). Degnbol, 21:4-6, 18:27-31; *see also* EX1001, 2:3-8 (’117 patent disclosing that an “alert may take the form of, for example, a display on Jen’s cell phone that communicates to Jen ‘Phil is in Pittsburgh’”). It would alternatively have been obvious to *receive an alert* whenever another user requests to access the *wireless telephone’s* location in any way (whether or not as part of an alert), as this was a known useful option, even when the requesting entity already has location access rights.

[0392] My testimony in this regard is corroborated by Rice (EX1071), which describes providing a user an “option...to receive a notification on their wireless communications device whenever a location request is made by a client application” to access the user’s location. Rice, 9:26-35. Rice teaches that this is useful even where the requesting entity already has access rights. Rice, 7:40-49, 9:36-51, 12:20-33. Thus, Rice corroborates that a first user receiving an alert when

a second user requests the first user's location was well known in POSAs' background knowledge.

[0393] Thus, in my opinion, Sheha-Darling-Futagami-Degnbol meets claim 67.

g. Claim 68: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a watch.

[0394] In my opinion, POSAs would have found claim 68 to have been obvious over Sheha-Darling-Futagami-Degnbol (*supra* §VIII.D.3). Sheha lists various devices that can be located, including “cellular telephone or wireless voice-enabled PDA.” Sheha, 9:50-53. Degnbol describes “determining the position of” “communication units,” which include “wireless telephone[s],” “personal digital assistants,” and “*wristwatches*.” Degnbol, 4:1-31, 7:1-17, 6:22-23, 27:14-16. In light of Sheha's teachings *to receive and display the location of* various communication devices like those Degnbol lists (Sheha, 9:50-53), in my opinion POSAs would have found it obvious *to receive and display the location of* any suitable device, including *a watch*.

[0395] Thus, in my opinion, Sheha-Darling-Futagami-Degnbol meets claim 68.

h. Claim 69: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a radio.

[0396] In my opinion, POSAs would have found claim 69 to have been obvious over Sheha-Darling-Futagami-Boling (*supra* §VIII.D.3). Boling teaches, and it was background knowledge, that a mobile device having position-reporting capability can be a *radio*. Boling, Abstract, 4:5-18, 5:6-7, 7:13-26, 9:30-64; *supra* §VIII.D.2.

[0397] My opinion on the POSAs' background knowledge in this regard is corroborated by Lelievre (EX1076), which describes "a location-aware radio" that "transmits location information indicating its present location, to a location-based services provider." Lelievre, Abstract, [0047], FIG. 5. Thus, Lelievre corroborates that it was well known in POSAs' background knowledge that a mobile device having position-reporting capability can be a radio.

[0398] In light of Sheha's teachings to *receive and display* various mobile devices' *locations* (Sheha, 12:58-60, 19:41-46, 12:1-7), in my opinion, POSAs would have been motivated and reasonably expected success to *receive and display* any suitable mobile device's *location*, such as a *radio* per Boling. *Supra* §VIII.D.3.

[0399] Thus, in my opinion, Sheha-Darling-Futagami-Boling meets claim 69.

- i. **Claim 71: The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying information indicating time to reach said location from of said second wireless device from said location of said wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.**

[0400] In my opinion, POSAs would have found claim 71 to have been obvious over Sheha-Darling-Futagami-Bechtolsheim or Sheha-Darling-Futagami-Wako-Bechtolsheim (*supra* §VIII.D.3).

[0401] As I discussed above (§VIII.D.3), POSAs would have been motivated and would have reasonably expected success to incorporate in Sheha's system Bechtolsheim's teaching to provide a route to the destination *according to two types of travel: walking and driving*, since the "user may not necessarily be able to park at the destination location" and will walk there from their parking spot. Bechtolsheim, 1:27-50, 20:45-47.

[0402] As I discussed above (§VIII.D.4.b, (claim 48)), Sheha-Darling-Futagami-Wako *displays information indicating time to reach the second wireless device's location*. In the combination with Bechtolsheim, this displayed *time to reach* the destination (*said location*) is the "summed" *driving and walking* time. Bechtolsheim, 19:30-36. Bechtolsheim teaches to *receive the information* from a "remote location" where it is computed. Bechtolsheim, 5:16-19. Thus, in my opinion, Sheha-Darling-Futagami-Wako-Bechtolsheim meets claim 71.

[0403] Alternatively, Bechtolsheim also teaches to “compare[]” the “travel time using public transportation” (which POSAs would have understood to typically include *subway*) “to the travel time using a private vehicle” (*driving*). Bechtolsheim, 21:53-56. In my opinion, POSAs would have been motivated and would have had a reasonable expectation of success to apply this teaching from Bechtolsheim to Sheha’s system to allow the user to choose among transportation options. In my opinion, POSAs would have understood that would have been an obvious way to allow the user to “compare” the two travel times is to *receive and display* them, thereby meeting claim 71.

[0404] Thus, Sheha-Darling-Futagami-Bechtolsheim or Sheha-Darling-Futagami-Wako-Bechtolsheim meet claim 71.

- j. **Claim 72: The wireless telephone of claim 42, wherein said programming is further capable of downloading from a remote system associated with said server a phone book corresponding to a user of said wireless telephone.**

[0405] In my opinion, POSAs would have found claim 72 to have been obvious over Sheha-Darling-Futagami-Smith (*supra* §VIII.D.3).

[0406] Sheha teaches that the *wireless telephone* can “**download** a predefined set of data containing telephone numbers correlating to position-specific information” from a “database stored on the networked server,” allowing the device to “download a batch of information for a specific geographical region”

before “leaving for a destination.” Sheha, 3:50-4:2, 6:1-35, 12:57-13:44. POSAs would have understood this to be *downloading from a remote system* (database) *associated with said server a phone book*. The dataset *corresponds to the user* because its scope is determined by the geographic region the user is traveling through.

[0407] Smith teaches that a user’s contact list can contain EBC (Electronic Business Card) fields for each contact, including CLID (Calling Line Identification) information. Smith, 6:53-7:3, 1:32-34, 8:25-31. The CLID and EBC information can be “stored at a central server...from which third party users may *download* the EBCs.” Smith, 11:24-29, 6:46-52, 8:19-25. In my opinion, POSAs would have been motivated and would have had a reasonable expectation of success to implement Sheha-Darling-Futagami-Smith to allow the *wireless telephone user* to *download from a remote system associated with the ODAS a phone book corresponding to the user*—i.e., a set of EBCs/CLIDs of contacts of interest to create the user’s contact list on the *wireless telephone*.

[0408] Thus, in my opinion, Sheha-Darling-Futagami-Smith meets claim 72.

* * *

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: 12-30-2024



IX. APPENDIX: CLAIM LISTING

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

Claim 42
[42PRE] A wireless telephone comprising:
[42A] a processor;
[42B] a positioning system for determining a location of said wireless telephone; and
[42C] memory storing programming capable of:
[42D] requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;
[42E] displaying on said wireless telephone an option to request location access rights from said second wireless device after it is determined that said wireless telephone does not have location access rights for said second wireless device;
[42F] transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and
[42G] receiving said location of said second wireless device from said server dependent upon said access rights.
Claim 43
The wireless telephone of claim 42, wherein said second wireless device is a second wireless telephone.
Claim 44
The wireless telephone of claim 42, wherein said location access rights include the ability to obtain said location of said second wireless device, wherein said location is capable of being provided to said wireless telephone from said server even when said second wireless device is OFF.

Claim 45

The wireless telephone of claim 42, wherein said location access rights comprise a plurality of access levels.

Claim 46

The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display a location marker on a map on said wireless telephone.

Claim 47

The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said second wireless device.

Claim 48

The wireless telephone of claim 42, wherein said programming is further capable of using said location of said second wireless device to display directions from said location of said wireless telephone to said location of said second wireless device and a travel time from said location of said wireless telephone to said location of said second wireless device.

Claim 49

The wireless telephone of claim 42, wherein said location access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise the exact location of said second wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said second wireless device.

Claim 50

The wireless telephone of claim 42, wherein said access rights comprise a plurality of levels of access rights, at least one of said plurality of levels of access rights comprise an approximate location of said second wireless device, and said approximate location comprises a city or state.

Claim 51

The wireless telephone of claim 42, wherein said programming is further capable of receiving a login and password from said wireless telephone to identify said wireless telephone.

Claim 52

The wireless telephone of claim 42, wherein said location of said second wireless device is requested by receiving input, in the form of a telephone number of said second wireless device, on said wireless telephone.

Claim 53

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone.

Claim 54

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to delete another wireless device's rights to access the location of said wireless telephone.

Claim 55

The wireless telephone of claim 42, wherein said programming is further capable of alerting said wireless telephone when said second wireless device is within a distance of said wireless telephone.

Claim 56

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list.

Claim 57

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of telephone numbers.

Claim 58

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to select said second wireless device from an identifier list wherein said identifier list comprises a list of user profiles.

Claim 59

The wireless telephone of claim 42, wherein said positioning system comprises a global positioning system.

Claim 60

The wireless telephone of claim 42, wherein said programming is further capable of displaying a compass.

Claim 61

The wireless telephone of claim 42, wherein said programming is further capable of displaying a directional arrow indicative of a location of said second wireless device relative to said location of said second wireless telephone.

Claim 62

The wireless telephone of claim 42, wherein said programming is further capable of setting location alerts associated with said second wireless device.

Claim 63

The wireless telephone of claim 42, wherein said programming is further capable of displaying an option to modify rights of another wireless device to access the location of said wireless telephone comprising allowing a user of said wireless telephone to allow said another wireless device to access the location of said wireless telephone for a specific period of time.

Claim 64

The wireless telephone of claim 42, wherein said programming is further capable of providing an alert on said wireless telephone when said second wireless device enters a geographic area.

Claim 65

The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.

Claim 66

The wireless telephone of claim 42, wherein said programming is further capable of instructing said server to allow a user of said second wireless device to access said location of said wireless telephone for only a specific period of time.

Claim 67

The wireless telephone of claim 42, wherein said programing is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.

Claim 68

The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a watch.

Claim 69

The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a radio.

Claim 70

The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a car.

Claim 71

The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying information indicating time to reach said location from of said second wireless device from said location of said wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

Claim 72

The wireless telephone of claim 42, wherein said programming is further capable of downloading from a remote system associated with said server a phone book corresponding to a user of said wireless telephone.