UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.
Petitioner
v.

MULLEN INDUSTRIES LLC
Patent Owner

Inter Partes Review for
U.S. Patent Nos. 8,374,575; 9,204,283; 9,635,540; 11,096,039; 11,109,218; 11,122,418; 11,234,117; and 11,246,024
Filing Date: July 12, 2006
Issue Date: September 14, 2021

DECLARATION OF DAVID H. WILLIAMS

TABLE OF CONTENTS

I, David H. Williams, declare as follows:

I. Introduction

1. My name is David H. Williams. I am the President of E911-LBS Consulting. Herein, I give my opinions as to how a hypothetical person of ordinary skill in the art ("POSITA") would understand the scope of the claims and whether certain claims of U.S. Patent Nos. 8,374,575; 9,204,283; 9,635,540; 11,096,039; 11,109,218; 11,122,418; 11,234,117; and 11,246,024 are invalid. I provide technical bases for these opinions as appropriate.

2. I am an independent consultant. I am over eighteen years of age, and I would otherwise be competent to testify as to the matters set forth herein if I am called upon to do so.

3. I have prepared this Declaration for consideration by the Patent Trial and Appeal Board in the *Inter Partes* Review of U.S. Patent Nos. 8,374,575; 9,204,283; 9,635,540; 11,096,039; 11,109,218; 11,122,418; 11,234,117; and 11,246,024 (the "Challenged Patents").

4. I provide this Declaration at the request of Apple, Inc. in connection with the above-captioned *Inter Partes* Reviews. I have been informed and understand that Apple, Inc. contends that all claims of the Challenged Patents are invalid.

5. I have been asked to provide my opinions regarding whether the claims of the

Challenged Patents are unpatentable because they would have been either anticipated or obvious to a POSITA at the time of the alleged invention, in light of the prior art.

6. After careful analysis it is my opinion that all claims of the Challenged Patents are invalid over the prior art I considered during my analysis. The individual analysis of each of the Challenged Patents is set out in the exhibits to this Declaration.

7. This declaration contains statements of my opinions formed to date and the bases and reasons for those opinions. I may offer additional opinions based on further review of materials in this case, including opinions and/or testimony of other expert witnesses. I make this declaration based upon my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein. For my efforts in connection with the preparation of this declaration I have been compensated at my standard rate for consulting. My compensation is in no way contingent on the results of these or any other proceedings in relation to the above captioned patents.

8. I am being compensated at my standard hourly rate of $485 per hour. My compensation is not dependent on the outcome of, or any issue in relation to, the above captioned *Inter Partes* Reviews. I have no interest in either party.

9. In forming my opinions, I relied on my knowledge and experience in the field and on documents and information referenced in this Declaration.

10. My complete qualifications and professional experience are described in my *Curriculum Vitae*, a copy of which can be found in Exhibit 1008. The following is a brief summary of my relevant qualifications and professional experience.

11. I am not an attorney. As shown in my *curriculum vitae*, I have extensive industry experience with location based services. Specifically, I have over thirty years of industry experience in the field of location based services in general, including experience designing, implementing, and managing numerous location based service (LBS) applications for mobile social networking, family tracking, local search, and mobile resource management.

12. 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. I am an expert in all related aspects of LBS, including data privacy and security management.

13. I have particularly relevant qualifications and professional experience in the following:

- Providing geofencing accuracy compliance analysis for ride-sharing company;
- Providing technical guidance for mobile payments/wallet startup

utilizing RFID, NFC and other technologies as key location enablers;

- Managing the design, collection, and analysis of E911 infrastructure deployment of major wireless carrier;
- Leading the development, implementation, and marketing of numerous enterprise location-based services across all sales, marketing and operational channels; and,
- Developing the site map and primary content for the NAVTEQ (now HERE) Network for Developers (N4D) LBS web ecosystem.

II. Information Considered

14. I have considered the following documents:

a. Challenged Patents:

- U.S. Patent No. 8,374,575 ("the '575 Patent") (Ex. 1001)
- U.S. Patent No. 9,204,283 ("the '283 Patent") (Ex. 1002)
- U.S. Patent No. 9,635,540 ("the '540 Patent") (Ex. 1003)
- U.S. Patent No. 11,096,039 ("the '039 Patent") (Ex. 1004)
- U.S. Patent No. 11,109,218 ("the '218 Patent") (Ex. 1005)
- U.S. Patent No. 11,122,418 ("the '418 Patent") (Ex. 1006)
- U.S. Patent No. 11,234,117 ("the '117 Patent") (Ex. 1007)
- U.S. Patent No. 11,246,024 ("the '024 Patent") (Ex. 1008)

b. Prosecution Histories:

- Prosecution History for the ’575 Patent (Ex. 1011)
- Prosecution History for the ’283 Patent (Ex. 1012)
- Prosecution History for the ’540 Patent (Ex. 1013)
- Prosecution History for the ’039 Patent (Ex. 1014)
- Prosecution History for the ’218 Patent (Ex. 1015)
- Prosecution History for the ’418 Patent (Ex. 1016)
- Prosecution History for the ’117 Patent (Ex. 1017)
- Prosecution History for the ’024 Patent (Ex. 1018)

c. Prior Art:

- U.S. Patent No. 7,130,630 to Enzmann et al (“Enzmann”) (Ex. 1040);
- U.S. Patent No. 7,333,820 to Sheha et al (“Sheha”) (Ex. 1041);
- U.S. Provisional Patent Application 60/305,975 to Sheha et al (“Sheha Provisional”) (Ex. 1042);
- U.S. Patent No. 6,208,934 to Bectolsheim et al (“Bectolsheim”) (Ex. 1043);
- U.S. Patent Publication No. 2004/0260604 to Bedingfield (Ex. 1044);

- U.S. Patent No. 6,714,793 to Carey (Ex. 1045);
- U.S. Patent No. 6,636,801 to Curbow (Ex. 1046);
- WIPO Publication No. WO0022860 to Degnbol ("Degnbol") (Ex. 1047);
- U.S. Patent No. 6,993,658 to Engberg (Ex. 1048);
- U.S. Patent No. 7,013,148 to Ganesh ("Ganesh") (Ex. 1049);
- U.S. Patent No. 7,681,034 to Lee ("Lee") (Ex. 1050)
- U.S. Patent Publication No. 2003/0040272 to Lelievre ("Lelievre") (Ex. 1051)
- U.S. Patent No. 6,430,498 to Maruyama ("Maruyama") (Ex. 1052);
- U.S. Patent No. 6,813,499 ("McDonnell") (Ex. 1053)
- U.S. Patent No. 7,146,407 to McNulty (Ex. 1054);
- U.S. Patent No. 6,133,853 to Obradovich ("Obradovich") (Ex. 1055);
- U.S. Patent No. 6,236,652 to Preston ("Preston") (Ex. 1056);
- U.S. Patent No. 7,233,795 to Ryden ("Ryden") (Ex. 1057);
- U.S. Provisional Patent Application 60/277,117 to Ryden ("Ryden Provisional") (Ex. 1058);

- US 6,084,951 to Smith ("Smith") (Ex. 1059);
- U.S. Patent No. 6,819,919 to Tanaka ("Tanaka") (Ex. 1060);
- U.S. Patent Publication No. 2003/0074209 to Tobin ("Tobin") (Ex. 1061);
- U.S. Patent No. 6,415,224 to Wako ("Wako") (Ex. 1062);

15. In addition to the documents above, in forming the opinions expressed below, I have also considered:

a. My own knowledge and experience based upon my work in the fields of optics and photography, as described above and in my CV; and

b. The level of skill of a POSITA at the time of the alleged invention of the Challenged Patents.

III. Anticipation

16. I have been informed by counsel that a patent claim is deemed invalid as "anticipated" if every limitation in the claim is found, either expressly or inherently, in a single reference that is prior art to the claim. I have been informed by counsel that a claimed invention is anticipated if all of its limitations are in a single device or method that was publicly used, offered for sale, or sold in the United States more than one year before the patent application was filed, or described in a single

publication or patent more than one year before the patent application was filed. In addition, a claimed invention is anticipated if it was known or used by others in the United States or described in a publication or patent before the invention date. Further, a claimed invention is anticipated if it was described in a United States patent granted on an application for patent by another filed in the United States before the invention by the applicant for the patent under examination.

17. I have been informed by counsel that whether the single item of prior art anticipates every one of the elements is evaluated from the view of a person of ordinary skill in the art from his or her review of the particular piece of prior art. I have also been informed and understand that the description in the prior art reference does not have to be in the same words as the claim, but all the limitations must be present, either expressly or inherently, so that someone of ordinary skill in the art looking at the reference would have everything necessary to make and use the claimed invention. I also understand that something is inherent in an item of prior art if it is always present in the prior art, or always results from the practice of the prior art, and if a skilled person would understand that to be the case. A prior art reference without express reference to a claim limitation may nonetheless anticipate by inherency if the prior art necessarily functions in accordance with, or includes, the claim limitation, or if the missing element or feature would necessarily result

from what the single item of prior art teaches to persons of ordinary skill in the art.

18. I have been informed by counsel that a claim in a patent is invalid under 35 U.S.C. § 102(a) if the alleged invention defined by that claim was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before it was invented.

19. I have been informed by counsel that a patent claim is invalid under 35 U.S.C. § 102(b) if the alleged invention recited in that claim was publicly known or used in the United States more than one year before the United States patent application was filed. Private or secret knowledge, such as knowledge confidentially disclosed within a small group, is not enough to invalidate a patent claim, nor is something that is only publicly known outside of the United States. I further understand that a prior public use may anticipate a patent claim, even if the use was accidental or was not appreciated by the user.

20. I have also been informed by counsel that a patent claim is invalid under 35 U.S.C. § 102(b) if the alleged invention recited in that claim was sold or offered for sale in the United States more than one year prior to the filing date of the United States patent application (the so called "critical date"). I understand that this "on sale" bar is triggered if the invention is both (1) the subject of a commercial offer for sale not primarily for experimental purposes and (2) ready for patenting. I also

understand that the bar is triggered even if the sale or offer for sale is unknown to the public. I have been informed that factors relevant to determining whether a claimed invention was in public use include: the nature of the activity that occurred in public; public access to the use; confidentiality obligations imposed upon observers; commercial exploitation; and the circumstances surrounding any testing and experimentation. I also understand that the absence of affirmative steps to conceal the use of the invention is evidence of a public use. Secret use by a third party is not public, unless members of the public or employees of the third party have access to the invention. I understand that a claimed invention is ready for patenting when there is reason to believe it would work for its intended purpose. I further understand that an invention can be shown to be "ready for patenting" in at least two ways: (1) by proof of reduction to practice before the critical date; or (2) by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

21. I have been informed by counsel that a patent claim is also invalid under 35 U.S.C. § 102(b) if the alleged invention defined by that claim was patented or described in a printed publication in this or a foreign country more than one year prior to the critical date. To be anticipating prior art, a printed publication must be

reasonably accessible to those members of the public who would be interested in its contents. I understand that so long as the printed publication was available to the public, the form in which the information was recorded is unimportant. The information must, however, have been maintained in some permanent form, such as printed or typewritten pages, magnetic tape, microfilm, photographs, or photocopies.

22. I also have been informed by counsel that under 35 U.S.C. § 102(e) a patent claim is invalid if the alleged invention was described in an application for patent by another in the United States before the alleged invention by the applicant.

IV. Obviousness

23. I understand that a patent claim is deemed invalid as "obvious" if it would have been obvious to a person of ordinary skill in the art at the time the invention was made. I also understand that under 35 U.S.C. § 103, a patent is invalid if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Obviousness may be shown by considering more than one item of prior art in combination with others or based on a single prior art reference in combination with the general state of the art.

24. I understand that a conclusion of obviousness may be based upon a

combination of prior art references. However, I also understand that a patent composed of several elements may not be proved obvious merely by demonstrating that each of its elements was independently known in the art. I further understand that there must be an appropriate articulation of a reason to combine the elements from the prior art in the manner claimed, and obviousness cannot be based on a hindsight combination of components selected from the prior art using the patent claims as a roadmap.

25. In determining whether an invention is obvious, I understand that obviousness is determined from the perspective of a person of ordinary skill in the art of the invention. In undertaking this analysis, it is important to consider four issues: (1) the scope and content of the prior art, (2) the differences between the prior art and the claim under consideration, (3) the level of ordinary skill in the art, and (4) any "secondary considerations" of non-obviousness.

26. In evaluating the scope and content of the prior art, I understand that the inquiry is whether the prior art was reasonably relevant to the particular problem faced by the inventor(s) in making the invention covered by the patent claims. I understand that such relevant prior art includes prior art in the field of the invention and also prior art from other fields that a person of ordinary skill would look to when attempting to solve the problem. I further understand that, to determine obviousness,

the courts look to the interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art.

27. In determining the differences between the invention covered by the patent claims and the prior art, I understand that the prior art references are not looked at in isolation. Rather, the claimed invention as a whole must be considered, and it must be determined whether or not it would have been obvious in light of all of the prior art.

28. I further understand that obviousness is determined from the perspective of a person of ordinary skill in the art, and that such a person is presumed to know all prior art, not just what the inventor may have known. The person of ordinary skill faced with a problem is able to apply his or her experience and ability to solve the problem and also look to any available prior art to help solve the problem.

29. I understand that one rationale for determining obviousness of a claimed invention is that some reason within the prior art would have led one of ordinary skill to modify the prior art reference or to combine prior art teachings to arrive at the claimed invention. Such reasons include the following:

a. combining prior art elements according to known methods to yield predictable results;

b. simple substitution of one known element for another to obtain predictable results;

c. use of a known technique to improve similar devices (methods or products) in the same way;

d. applying a known technique to a known device (method or product) ready for improvement to yield predictable results;

e. "obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

f. 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 predicable to one of ordinary skill in the art; and

g. 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 teachings to arrive at the claimed invention.

30. In determining whether or not the invention would have been obvious to one of ordinary skill in the art at the time the invention was made, I understand that you must consider whether or not the combination is more than the predictable use of prior art elements according to their established functions. If a technique has been

used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique would have been obvious unless the actual application is beyond that person's skill. In answering this question, I understand that it will often be necessary to consider: any apparent reason to combine the known elements in the manner of the patent claims; teachings of multiple references; the effects of demands that were known to the community or that were present in the marketplace; and the background knowledge possessed by persons of ordinary skill in the art.

31. I understand that it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the invention does. Advances that would have occurred anyway in the ordinary course of development of the art may have been obvious, but consideration need not be limited to the same problem or same prior art elements, or same solution adopted by the inventor. I also understand that obviousness may not be shown if the proposed modification or combination would change the principle of operation of the prior art being modified, such as rendering the prior art unsatisfactory for its intended purpose.

32. I further understand that it is appropriate to consider the level of common sense and creativity of persons of ordinary skill in the art, that familiar items may have obvious uses beyond their primary purposes, and that a person of ordinary skill

in the art may be able to fit the teachings of multiple patents and/or references together like the pieces of a puzzle.

33. I further understand that in certain circumstances, the fact that a combination was obvious to try might show that it was obvious under § 103. For example, when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely, but not necessarily, the product not of innovation but of ordinary skill and common sense.

34. I understand that the reason to select and combine features, the predictability of the results of doing so, and a reasonable expectation of success may be found in the teachings of the prior art references themselves, in the nature of any need or problem in the field that was addressed by the patent, in the knowledge of persons having ordinary skill in the field at the time, as well as in common sense or the level of creativity exhibited by persons of ordinary skill in the art. I further understand that there need not be an express or explicit suggestion to combine references.

35. I further understand that if the combination of known elements yielded unexpected or unpredictable results, or if the prior art teaches away from combining the known elements, then this evidence would make it more likely that the claim that

successfully combined those elements was not obvious. I further understand that if a reference teaches away from the invention when it would have discouraged a person of ordinary skill in the art from practicing the claimed invention, or when such a person would be led in a different direction than practicing the claimed invention.

36. I understand that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. I further understand that, when considering a disclosure or reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw from the reference.

37. In addition, I understand that objective indications of non-obviousness must also be considered. The presence of any of these indications may suggest that the invention was not obvious. I understand that no factor alone is dispositive, and that the invention as a whole must be considered for obviousness or non-obviousness. I also understand that these objective indications are only relevant to obviousness if there is a connection, or nexus, between them and the invention of the patent claims. I understand that these objective indications include:

a. commercial success of the products or methods covered by the patent

claims;

b. a long-felt need for the invention;

c. failed attempts by others to make the invention;

d. copying of the invention by others in the field;

e. unexpected results achieved by the invention;

f. praise of the invention by the alleged infringer or others in the field;

g. the taking of licenses under the patent by others;

h. expressions of surprise by experts and those skilled in the art at the making of this invention; and

i. the patentee proceeded contrary to accepted wisdom of the prior art.

38. I have been informed by counsel that there must be a nexus or a connection between the evidence showing these factors and the inventions of the asserted claims, if this evidence is to be given weight in arriving at a conclusion on the obviousness issue; for example, if commercial success is due to market position, advertising, promotion, salesmanship, or the like, or is due to features of the products other than those described in the asserted claims, then any commercial success may have no relation to the issue of obviousness.

39. I have been informed by counsel that, in my determination of obviousness, I must consider whether the Patent Owner has demonstrated not only that such

secondary considerations exist, but also whether Patent Owner has proven that there is sufficient nexus between these considerations and the claimed invention – in other words whether the claimed inventions in the patent contributed to these secondary considerations rather than the considerations being due to other features of the allegedly accused products, or any other actions taken in producing and marketing the accused products.

40. I have been informed by counsel that Patent Owner has the burden of proving any secondary consideration by a preponderance of the evidence, i.e., that Patent Owner must produce evidence which, considered in the light of all the facts, leads one to believe that what Patent Owner claims is more likely true than not; but that I should keep in mind, that Apple continues to bear the ultimate burden of proving invalidity by a preponderance of the evidence.

V. Claim Construction

41. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

VI. Level of Skill in the Art

42. I am informed and understand that a person of ordinary skill in the art is a

hypothetical person presumed to have known the relevant art at the time of the alleged invention. I am informed and understand that factors that may be considered in determining the level of ordinary skill in the art may include: (A) the type of problems encountered in the art; (B) prior art solutions to those problems; (C) the rapidity with which innovations are made; (D) the sophistication of the technology; and (E) the educational level of active workers in the field.

43. Upon consideration, in my opinion, a person of ordinary skill in the art is someone with at least Bachelor of Science degree in computer science, computer engineering, electrical engineering or a similar degree with one or two years of industry experience in the fields of wireless networks and devices, as well as with GPS or location-related technology/services. Such a person would have had familiarity with devices, such as cell phones and personal digital assistants ("PDAs") as well as wireless positioning technologies such as GPS, triangulation, or trilateration.

44. Lack of work experience could have been remedied by additional education, and vice versa. Such academic and industry experience would be necessary to appreciate what was obvious and/or anticipated in the industry and what a POSITA would have thought and understood at the time.

45. I have been informed that the earliest priority date of the Challenged Patents

to which the Patent Owner is entitled is March 25, 2002. As of the relevant time frame for the Challenged Patents, I possessed at least such experience and knowledge of a POSITA; hence, I am qualified to opine on the Challenged Patents.

VII. Challenged Patents' Specification

46. The Challenged Patents share what is essentially a single specification with only minor additions for some of the patents. The Challenged Patents generally describe:

- Locating devices and the ability to remotely initiate, manage, and report the location information ("remote device location/display");
- The ability to share location information between users, including the use of security mechanisms and access rights for controlling that sharing ("access rights"); and
- The use of monitoring/tracking tools, alerts and notifications, and user interface mechanisms and enablers for interacting with and displaying location information ("alerts/selectable lists").

47. In describing the Challenged Patents' specification, I will cite the '418 Patent specification primarily, but this description applies to all the Challenged Patents. The specification of the Challenged Patents states in the background of the invention that the disclosure relates to systems and methods for remotely determining a

device's location. Ex. 1007, 1:18-20. The background mentions that while the Global Positioning System (GPS), which was developed to determine the location of a ground receiver from satellites, had been integrated into cell phones, it had been "minimally utilized" at the time of the alleged invention to determine a cell phone's location. Ex. 1007, 1:21-34. The Challenged Patents purportedly disclose systems and methods to "better utilize" location information by allowing a cell phone user to locate the position of another user's cell phone. Ex. 1007, 31-43.

48. Figure 1 shows that a device, such as "any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114." Ex. 1007, 4:27-30. And "every user may assign rights (e.g., govern the security) to whom may or may not locate him/her." Ex. 1007, 4:60-62.

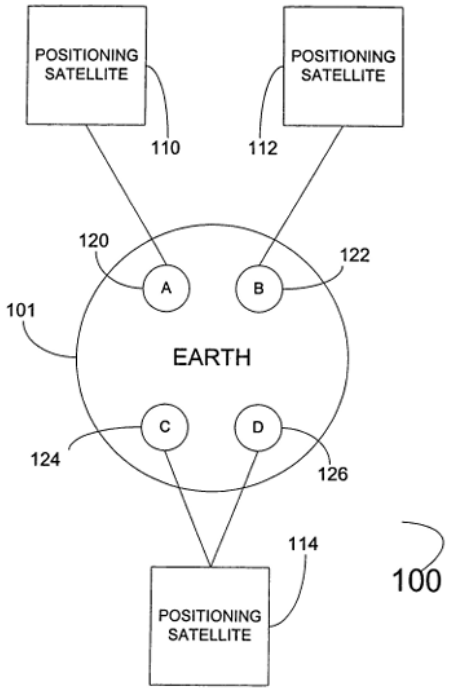


FIG. 1

Ex. 1007, Fig. 1.

49. Figure 2 shows a "flow chart 200 of a simplified locating feature constructed in accordance with the principles of the present invention." Ex. 1007, 4:52-54.

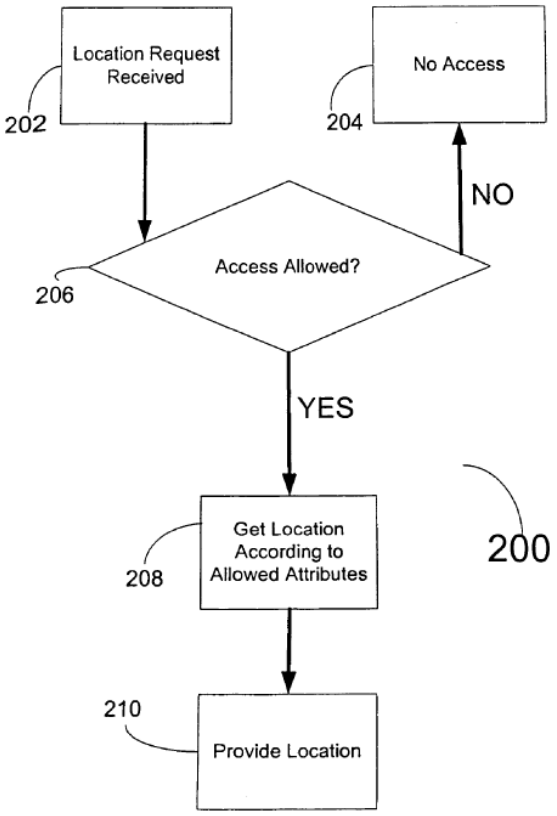


FIG. 2

Ex. 1007, Fig. 2.

50. Further, "[s]tep 202 initiates when a user requests the location of another user's cell phone. Step 206 evaluates if the user initiating the location request has the rights to access the location of the desired user. If no access rights for the requesting user have been granted then step 204 will preferably inform the requesting user that he/she has not been given access to the requested location. If access has been given by a particular user that allows for the requesting user to locate that particular user, step 208 is initiated and the allowed location information is

provided to the user in step 210." Ex. 1007, 4:54-5:2.

51. Figure 3 illustrates that a wireless device such as a cell phone "constructed in accordance with the principles of the present invention... preferably includes speaker 330, antenna 310, display screen 320, control keys 360, alpha-numeric keys 350, and microphone 340. Cell phone 300 also preferably may include, for example, a communications transmitter (not shown), communications receiver (not shown), memory (not shown), positioning device (not shown), and a microprocessor (not shown)." Ex. 1007, 6:20-28; *see also id.* at 10:22-26, Fig. 15. It also includes a locate button 380, which can initiate a locate feature, send a location signal to a remote storage area to manually update the user's location, or toggle the phone's locating features on and off. Ex. 1007, 6:22-33. The cell phone's position system 1530 may be "a GPS system or a similar positioning system." Ex. 1007, 10:18-19.

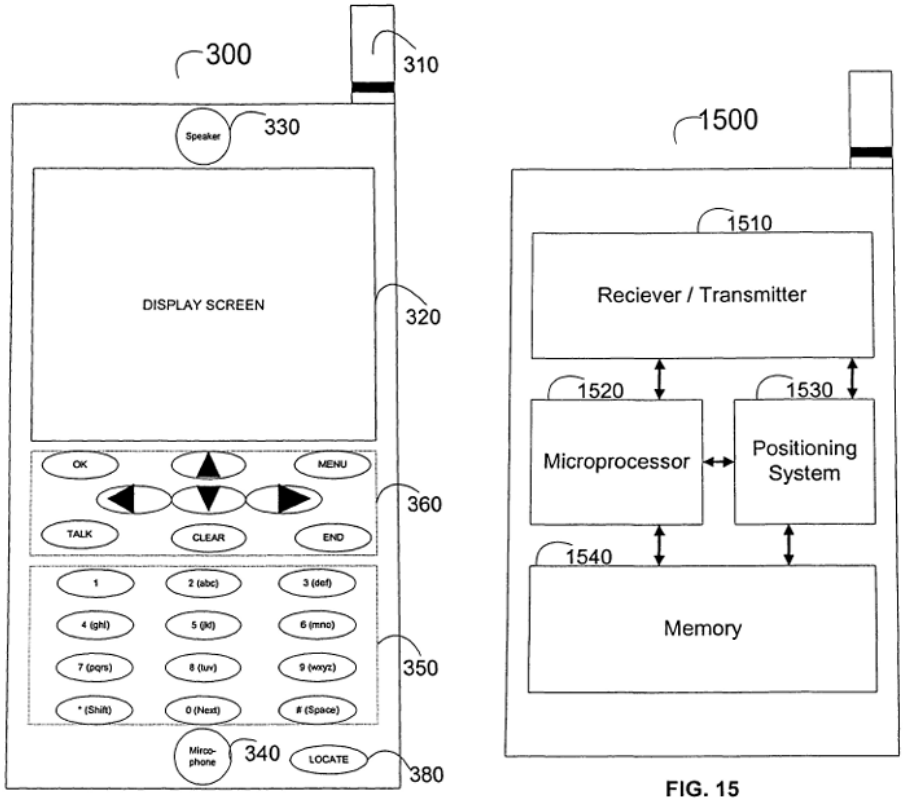


FIG. 3

FIG. 15

Ex. 1007, Figs. 3, 15.

52. Figure 6 illustrates that the location information for a requested user may be shown on a display screen 600 that displays location features, such as map, direction, distance, compass, etc., for the requested user. *See* Ex. 1007, 7:29-61.

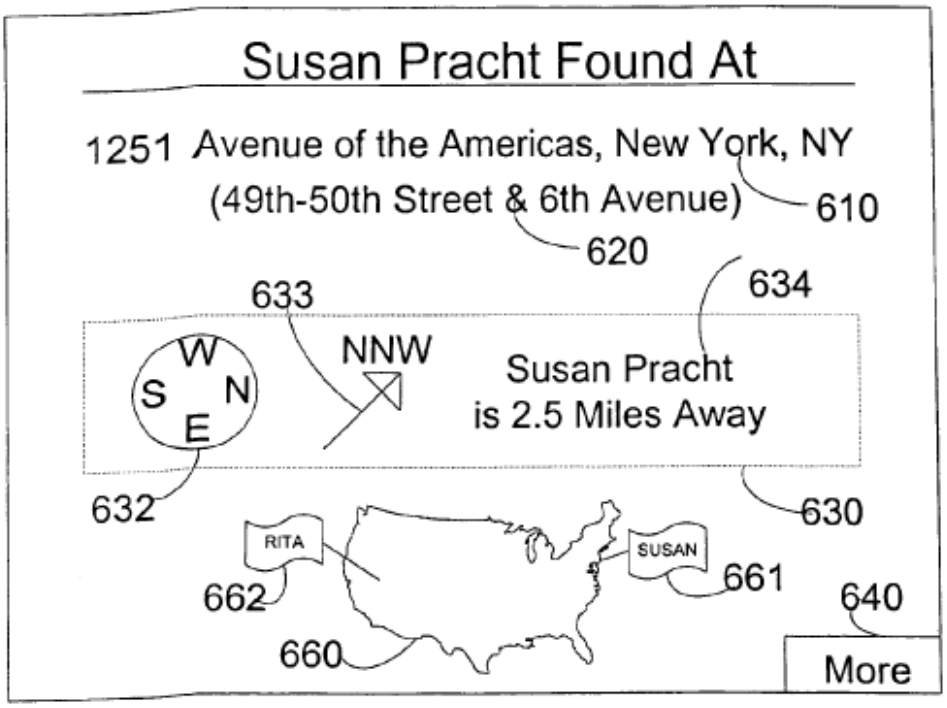


FIG. 6

Ex. 1007, Fig. 6.

53. Further, map 660 may be included to show locations of multiple users. *See* Ex. 1007, 8:42-51.

54. In addition, a user's cell phone location may be retrieved from "a remote database, facility, distribution center, or any other system," which "may periodically request the location of a cell phone user with a positioning system and store this information" or "obtain a user's locations when a request is made for that user's location, providing the requesting user has access to the requested user's location." Ex. 1007, 5:11-30.

55. Figure 16 illustrates the communications network topology.

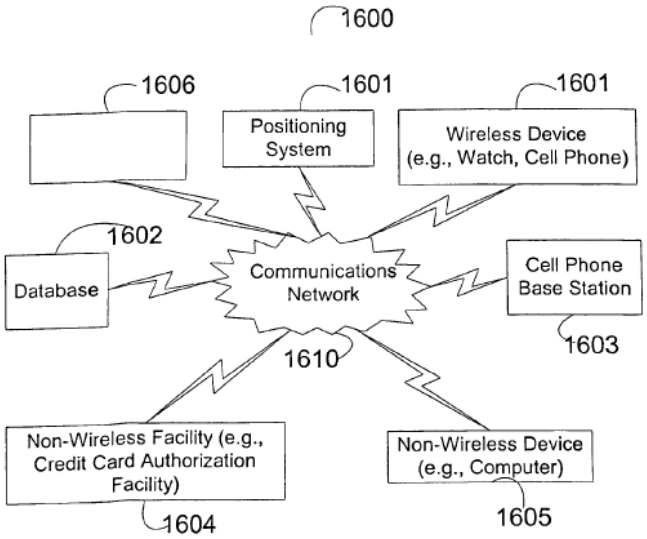


FIG. 16

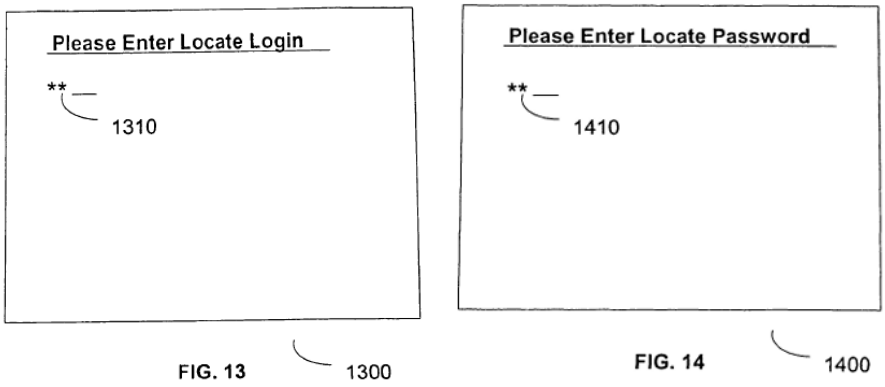
Ex. 1007, Fig. 16.

56. The Challenged Patents disclose the devices of topology 1600 use communication network 1610 to communicate with each other. Ex. 1007, 11:41-50. The communications network may include any type of communications technologies, including but not limited to technologies for routing, amplification, encryption, decryption, parsing, modulation, or demodulation. *Id.* For example, positioning system 1601 may communicate with mobile device 1601 (such as a watch, PDS, radio, car, cell phone) by sending multiple wireless positioning signals. Simultaneously, database 1602 may provide non-mobile devices 1605 with a device's location over conventional telephone wires. *Id.*

57. The ’418 Patent also notes that to access location information, a user may give or modify access to location rights to another user. *See* Ex. 1007, 9:10-26, Figs. 9-10. In particular, the user may select which users may access his or her location information. *See id*.

58. A user may also set up an alert for when he/she is within a distance of the requested user. That is, a user might receive an alert “if the requested user is in a specific city or the same city as the user of display 1100, is within a certain distance, or if a user located the user of display 1100.” Ex. 1007, 9:33-36, Fig. 12.

59. Figures 13 and 14 illustrate a login feature of a locating device, where a user may enter a login 1310 and a password 1410. Ex. 1007, 9:64-65.



Ex. 1007, Figs. 13, 14.

60. Additionally, “user profiles would be used as the locating identifier and the devices into which these profiles are logged into (recognized by) would allow for the user to be located.” Ex. 1007, 9:53-60. The login feature may also require a

password associated with a user's profile, identity, or cell phone functionality access. *See* Ex. 1007, 9:11-21, Fig. 14.

61. Further, "a user may use another user's location device (e.g., cell phone) to locate a user or may use, for example, the internet to locate a user" and "a user may change the device being located," such as using a car's GPS instead of GPS on the phone. Ex. 1007, 9:66-10:2.

62. Figure 17 is a flow chart illustrating the sequence of steps in the locating feature 1700 discussed in the '418 Patent.

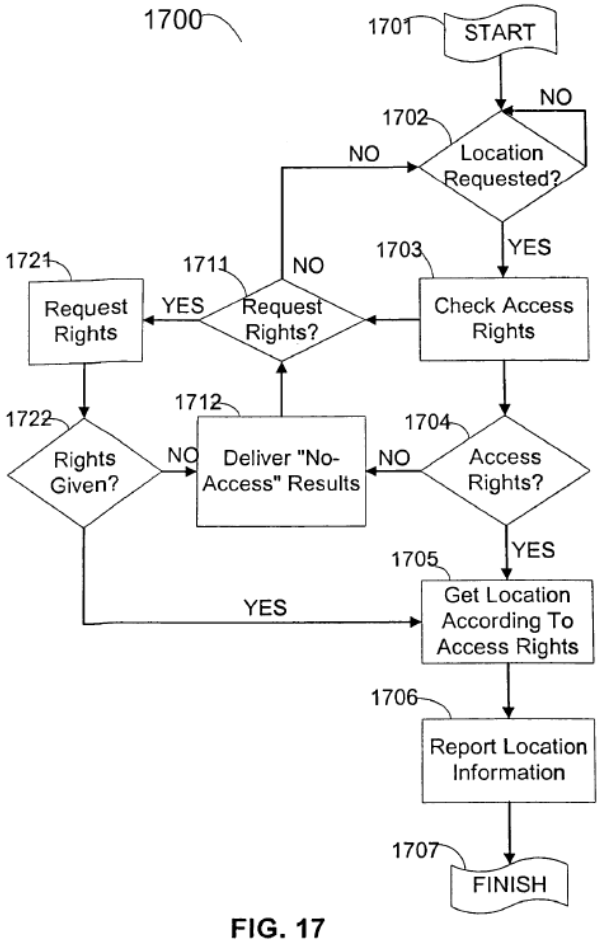


FIG. 17

Ex. 1007, Fig. 17.

63. The locating feature "starts at step 1701 and waits at step 1702 until a location is requested." Ex. 1007, 11:52-54. A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. Ex. 1007, 11:56-58. "Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." Ex. 1007, 11:58-60.

64. Next, access rights to the requested location for the requestor device and/or

user are checked at step 1703 by making "a call to a database storing a list of assigned access rights for the requested device/user and finding if any access rights were assigned to the requestor's identity" or "a direct call to the requested device/user." Ex. 1007, 11:63-12:4.

65. Then, step 1704 determines whether the requestor was assigned access rights to obtain the requested device/user's location. Ex. 1007, 12:5-13.

66. Further, if the requestor has access rights, location information is provided to the requestor via step 1705. Ex. 1007, 12:14-16. However, if the requestor does not have access rights, then the requestor is informed that he or she does not have access rights to obtain the location information via step 1712. Ex. 1007, 12:28-32.

67. After this notification, "step 1711 asks the requester if the requestor would like to request access rights." Ex. 1007, 12:34-35. If the requestor does not want to request access rights, the system may return to step 1702. Ex. 1007, 12:35-37. Otherwise, access rights may be requested at step 1721. Ex. 1007, 12:37-38. Then, if access rights are given step 1722, location information is provided to the requestor via step 1705. Ex. 1007, 12:38-40.

68. Finally, Figure 18 illustrates that a device or user's location information 1801 can be embedded in a cell phone burst between control and data signals. Ex. 1007, 12:42-45, Fig. 18.

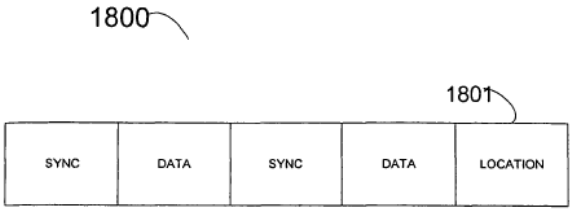


FIG. 18

Ex. 1007, Fig. 18

69. The Challenged Patents discuss "[a] cell phone tower or base information [sic] may then strip received signals 1800 of location information 1801, store location information 1801 into a database or other storage device, and deliver the received signals to its desired location." Ex. 1007, 12:49-53.

70. Further, "a user may refresh his/her location information every time that a cell phone base station receives or routes information for the user." Ex. 1007, 12:53-56.

VIII. Prior Art

A. Overview

71. It is my understanding that each of the references cited below are prior art. In my analysis, I primarily rely on the Sheha and Enzmann references because they disclose the vast majority of claimed features in each of the Challenged Patents. However, given the number of claims across the Challenged Patents and the specificity of some of the claim limitations, I also rely on additional references that

disclose individual aspects of some of the claims.

B. The '820 Patent to Sheha, et al. (Ex. 1041)

72. U.S. Patent No. 7,333,820 is entitled "System and method for providing routing, mapping, and relative position information to users of a communication network." I understand that Sheha is prior art to the Challenged Patents. In addition, I have reviewed the Sheha Provisional application and its disclosure is essentially identical to the Sheha patent. Ex. 1042.

73. Generally, Sheha teaches systems and methods to provide real-time location information (i.e. GPS co-ordinates, routing, maps) of a target user's device (landline, cell phone, PDA, etc.) to an authorized requesting user via conventional telecommunications systems (i.e. telephone network, mobile communications network, computer network, GPS, etc.) Ex. 1041, Abstract, 1:35-45. No call is necessary for this to occur. Ex. 1041, 11: 55-58.

74. Sheha discloses allowing both landline and mobile devices, such as cell phones or PDAs, to share location with other authorized devices using functionality such as mapping, routing and direction finding. Ex. 1041, 2:60-64, 10:66-9. Sheha also discloses that the mobile device's position may be determined using an integrated GPS receiver or network-assist position information and may be reported to an online database and application server ("ODAS") which stores the position

remotely. Ex. 1041, 10:5-16, 10:66-11:54.

75. Sheha further discloses that a first user, who is referred to as a "target user," may authorize other users and groups of users to receive the location of the first user's device. Ex. 1041, 11:51-12:7.

76. 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. Ex. 1041, 11:51-12:7. Sheha describes that the location information may include a map illustrating the location of the target and requesting users' mobile devices, route information, driving directions, and heading information that may be displayed to the requesting user. Ex. 1041, 9:23-39.

77. Figure 3 illustrates an exemplary mobile-to-mobile system, showing connections between two mobile devices 18b-c, such as cell phones or PDAs, and the ODAS, via a wireless network 22. Ex. 1041. 11:1-8, Fig. 3.

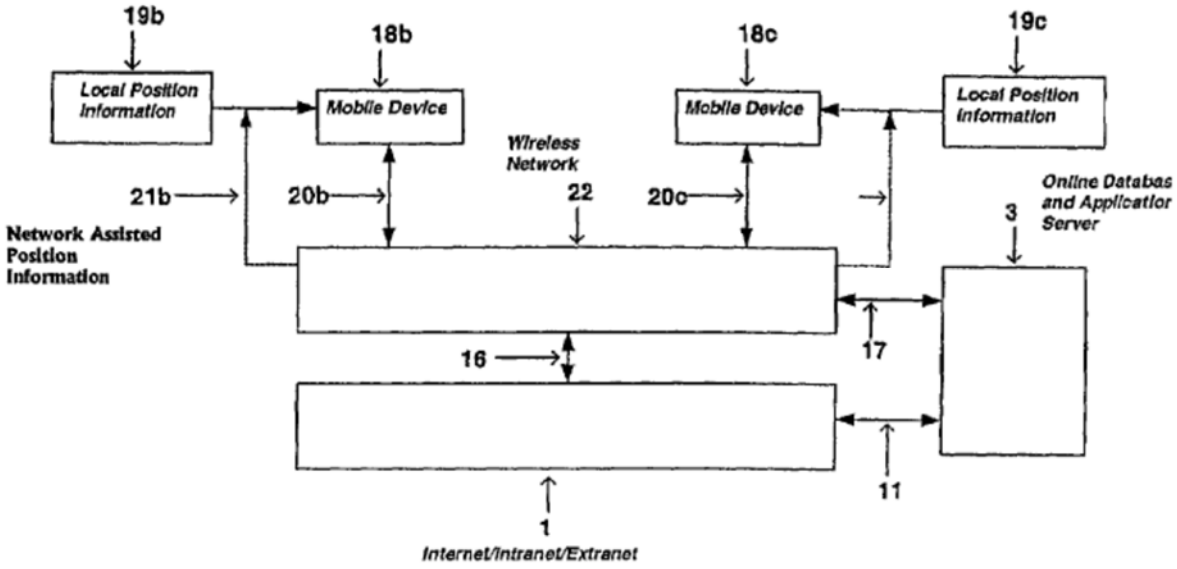


FIG. 3

Ex. 1041, Fig. 3.

C. The ’630 Patent to Enzmann et. al (Ex. 1040)

78. U.S. Patent No. 7,130,630 is entitled “Location query service for wireless networks.” Ex. 1040. I understand that Enzmann is prior art to the Challenged Patents.

79. Generally, Enzmann teaches “a location query service for use with a wireless network that tracks the location of network devices” and provides requestors with the location of a target network user’s wireless devices. Ex. 1040, Abstract.

80. Enzmann notes that “[a]lthough, in large part, wireless network providers

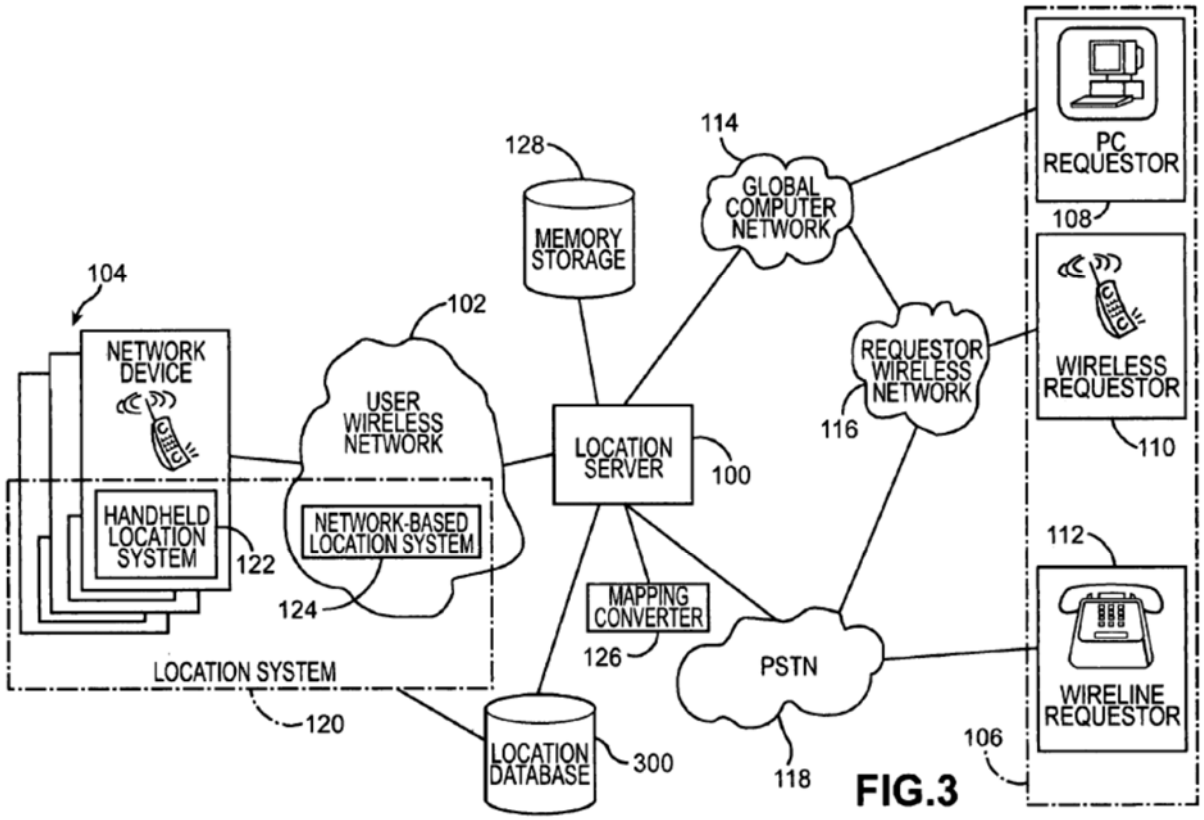
will implement the location tracking systems to comply with the FCC [wireless E911] standards, once completed, the providers will have the ability to offer other location-based services supported by the E911 infrastructure…[t]he service enables a requestor to obtain a network user's location without requiring communication with the user." Ex. 1040, 1:41-2:9.

81. Additionally, Enzmann discloses a system that tracks the location of wireless devices within a wireless network. Ex. 1040at Abstract. "The service receives a location query from a requestor, retrieves location information associated with the network user, and returns the location information to the requestor." *Id*. The location information can be provided in a "displayable" form, disclosing that the Enzmann devices display the received location information. Ex. 1040, 3:1-16, 4:46-50.

82. Enzmann also teaches differentiating between authorized and non-authorized users. "[T]he location server also confirms that the requestor is authorized to receive the user's location." *Id.*, 3:5-6. In relation to unauthorized users, Enzmann discloses, "the location query service prompts a network user each time an unauthorized requestor asks for location information." *Id.*, 2:43-45.

83. "FIG. 3 is a schematic diagram of a system architecture that provides the location query service according to an alternate preferred embodiment, in which a

device's location is periodically recorded in a location database 300." Ex. 1040, 3:40-43.



Ex. 1040, Fig. 3.

D. The '934 Patent to Bectolsheim (Ex. 1043)

84. U.S. Patent No. 6,208,934 is entitled "Method and system for providing walking instructions with route guidance in a navigation program." Ex. 1043. I understand that Bectolsheim is prior art to the Challenged Patents.

85. Bectolsheim describes systems and methods that provide route guidance for multiple different modes of transportation, such as walking and driving. Ex. 1043,

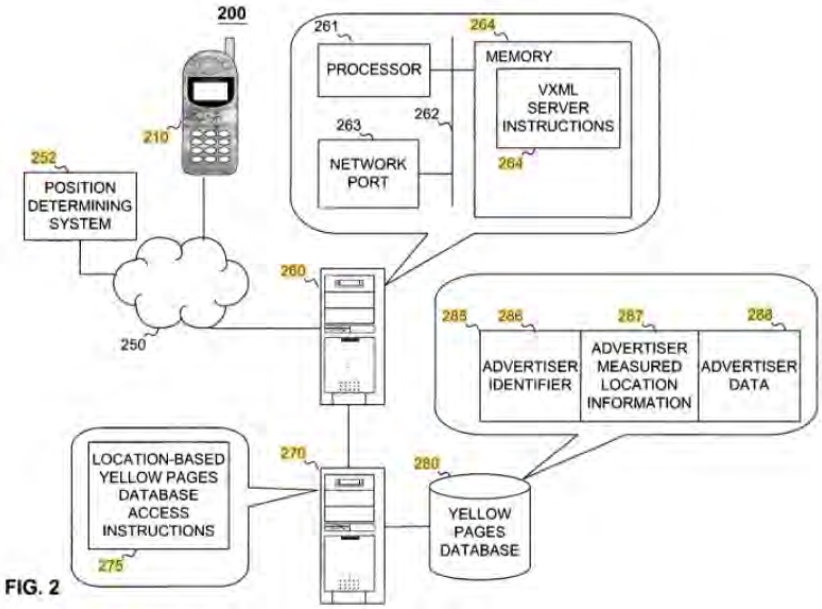
Abstract, 6:1-3, 8:12-16. A user provides a starting location and desired destination to its navigation program as well as other information, and may also indicate whether the user will be driving or walking, and provides a corresponding route. Ex. 1043, 5:59-21, 9:12-29. In addition, Bectolsheim describes determining travel times to a destination according to these different modes of transportation, disclosing "[w]hen public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle." Ex. 1043, 21:53-56. In addition, Bectolsheim describes "[t]he route calculation function 250 may attempt to find a solution route that takes the least time to travel, that covers the least distance, or that meets some other specifiable criteria." Ex. 1043, 6:18-21.

E. The '604 Publication to Bedingfield (Ex. 1044)

86. U.S. Patent Publication No. 2004/0260604 is entitled "Methods and systems for Location-Based Yellow Page Services." Ex. 1043. I understand that Bedingfield is prior art to the Challenged Patents.

87. Bedingfield discloses systems and methods for providing location-based information. Ex. 1028 at Abstract, Fig. 2. For example, advertiser entries are provided based on user request or measured location information. Ex. 1043, Abstract, claim 15, Fig. 2.

88. Bedingfield further discloses that location information, such as "an absolute distance . . . , fastest driving distance, shortest travel distance, a distance in time when driving, a distance in time when walking, a distance in time when bicycling, and so on[,]" can be provided to the user. Ex. 1043, ¶ 53.



Ex. 1043, Fig. 2.

F. The '793 Patent to Carey (Ex. 1045)

89. U.S. Patent No. 6,714,793 is entitled "Method and system for instant messaging across cellular networks and a public data network." Ex. 1045. I understand that Carey is prior art to the Challenged Patents.

90. Carey discloses an online service for "instant message communication in a wireless and non-wireless environment" that requires a user to log into their account

using a username and password. Ex. 1045, 1:62-63. More specifically, the Carey system allows a user to enter the "user's screen name 202 and password 204" and then access an "instant message name list window 220" to select the user who will receive the instant message. Ex. 1045, 8:2-3, 18-19.

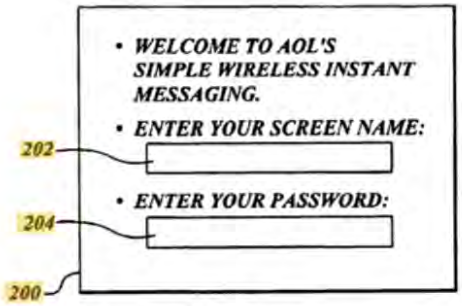


Fig. 8

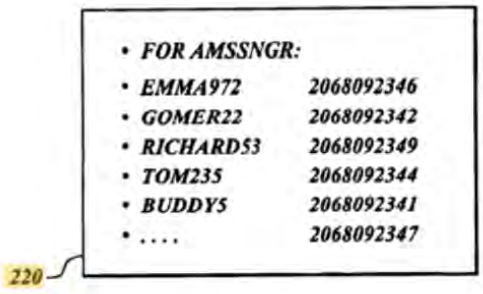


Fig. 9

Fig. 10

Fig. 14

Ex. 1045, Figs. 8, 9, 10, 14.

G. The '801 Patent to Curbow (Ex. 1046)

91. U.S. Patent No. 6,636,801 is entitled "Delivering Location-Dependent

Services to Automobiles." Ex. 1046. I understand that Curbow is prior art to the Challenged Patents.

92. Curbow discloses a system where a device, an automobile with GPS and computer on-board, provides the device's location information to a central server. Ex. 1046, Abstract. More specifically, after a user registers the device with a service provider and an identification number is associated with the registered device, the "central server obtains location information or geo-related information pertinent to the route taken by the automobile, filters the data according to certain criteria, and then delivers an audible version of the filtered data to an audio output device[.]" Ex. 1046, Abstract, 4:35-41.

H. The '860 Publication to Degnbol (Ex. 1047)

93. WO 00/22860 is entitled "A method and a system for transmitting data between units." Ex. 1047. I understand that Degnbol is prior art to the Challenged Patents.

94. Degnbol discloses a system and method that allows wireless users to request and receive alerts when other wireless users with particular attributes are nearby, or close to a specific location. For example, Degnbol discloses, "a method and a system wherein e.g. a user 'A' is automatically notified of the proximity of another user 'B' when a match is found between the Personal profiles of users 'A' and 'B'." Ex. 1047,

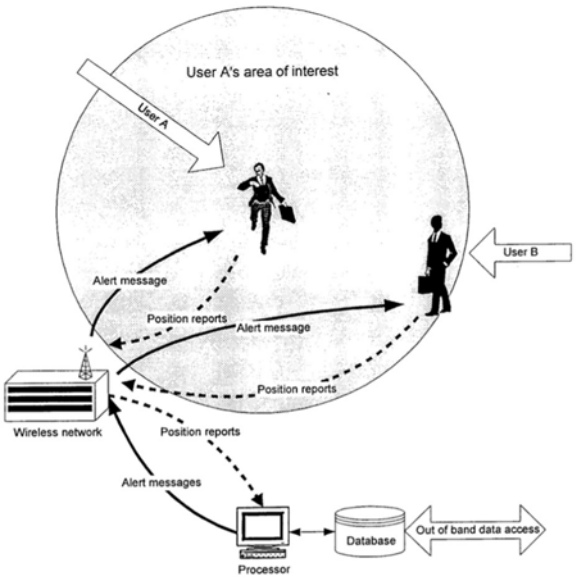
3:6-9.

95. Degnbbol also discloses a user-defined "Buddy List" that "is based upon a list of users whose location and/or movements the user wishes to be notified of." Ex. 1047, 9:32-33. That is, Degnbol's system "builds on mutual consent, requiring users who wish to be alerted of the location and/or movements of other users to obtain acceptance by the polled party." Ex. 1047, 11:16-18. For example:

> John [Joe] would like to add Jane to his Buddy List. He goes to an 'Add Buddy" menu on his handset and types in Jane's cellular phone number. This prompts the system to send out an SMS message asking Jane for her acceptance — "Joe Smith has asked for permission to add you to his Buddy List - do you accept?". This request is displayed on Jane's cellular phone, prompting her for a decision. If Jane consents, her affirmative response goes to the system, which in turn updates Joe's Buddy List. If not, Joe gets a "request declined" response.

Ex. 1047, 11:20-26.

96. Fig. 1 illustrates such alerts.



Ex. 1047, Fig. 1.

97. As one example, User A's profile "includes a desire to be alerted when user B is in his vicinity," and User B's profile "includes a permission to notify User A of his whereabouts." Ex. 1047, 20:23-32; *see also id.* at 11:5-11 ("For example, user 'A' may choose to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters."). Because User B has just entered User A's area of interest, the server generates an alert message and sends it to User A, while concurrently alerting User B that he has been the subject of an alert. *Id.* at 20:34-21:6.

I. The '658 Patent to Engberg (Ex. 1048)

98. U.S. Patent No. 6,993,658 is entitled "Use of personal communication devices for user authentication." Ex. 1048. I understand that Engberg is prior art to

the Challenged Patents.

99. Engberg is directed to an authentication system that allows a user to enter access credentials to access protected information. Ex. 1048, Abstract. For example, Engberg's system allows a user to enter a user ID and password, including a secret token, transmitted to the user's personal communication device Engberg discloses "a system through which user tokens required for user authentication are supplied through personal communication devices such as mobile telephones and pagers." *Id*. In addition, Engberg provides a variety of different graphical user interface ("GUI") elements to allow a user to enter their ID and password as shown below.

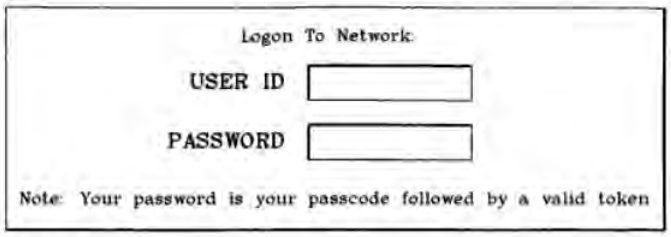


FIG. 2A

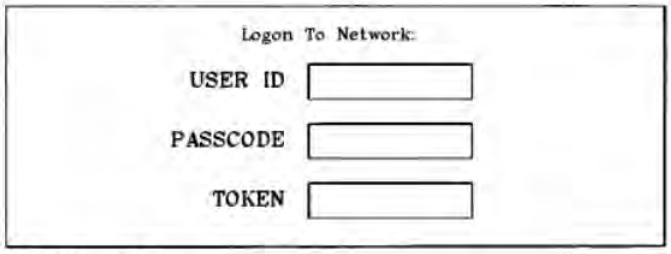


FIG. 2B

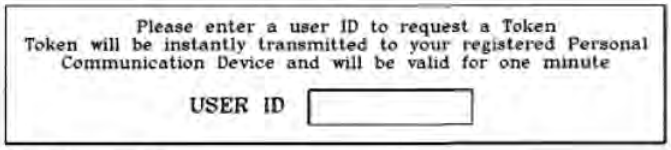


FIG. 2C

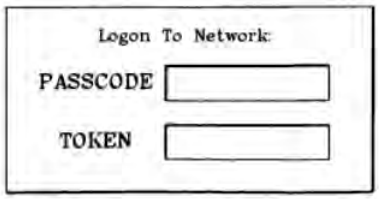


FIG. 2D

Ex. 1048, Figs. 2a-d.

J. The ’148 Patent to Ganesh (Ex. 1049)

100. U.S. Patent No. 7,013,148 is entitled “Method for providing a current location of a wireless communication device.” Ex. 1049. I understand that Ganesh is prior art to the Challenged Patents.

101. Ganesh discloses "[a] method (36) for providing a current location (35) of a wireless communication device (24) within a wireless communication network (20) calls for activating an automatic location identification (ALI) process in response to a request from an authorized requesting party." Ex. 1049, Abstract. Ganesh further discloses, "[a]n indicator (106) of the current location (35) is provided to the authorized requesting party via a map-enabled web page (100)." *Id.*

102. Specifically, Ganesh describes that the user accesses a "first web page, or a log-in web page." Ex. 1049, 5:1-3; Fig. 3. The user next accesses a "[c]urrent location request web page 66 includ[ing] a dialing number field 68 provided for the entry of a dialing number 72 of wireless communication device 24." Ex. 1049, 6: 4-7; Fig. 5.

103. Ganesh discloses that if the requestor is not an authorized party, they receive a third web page, the "[a]ccess denial web page 86 [that] may contain various possible explanations 88 describing why access to information location was denied." Ex. 1049, 6:33-54, Fig. 6.

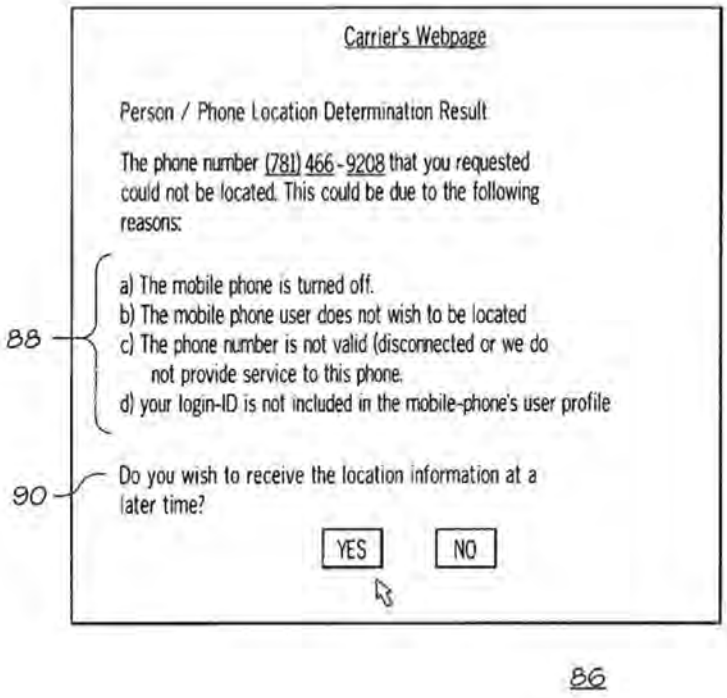


FIG. 6

104. Ganesh further discloses that if a requestor is authorized to receive location information, the system provides "a map web page 100, supplied by the service provider of a map 102 of a geographical area 104 having an indicator 106 of current location 35, in the form of a star, for wireless communication device 24 (FIG. 1) in response to the execution of current location provision process 36 (FIG. 2)." Ex. 1049, 8:7-12, Fig. 7.

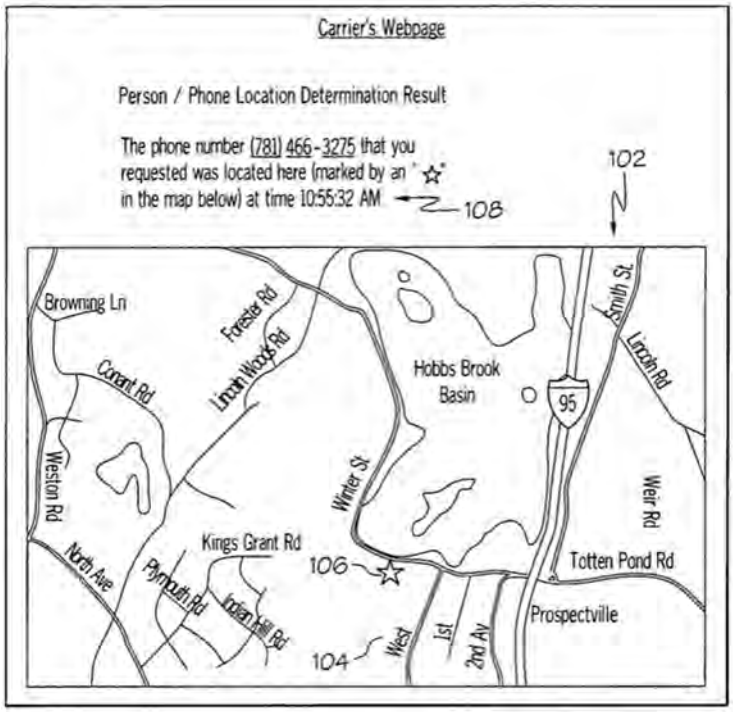


FIG. 7

Ex. 1049, Fig. 7.

105. In cases where a device is not online or connected to a wireless network, Ganesh discloses that call records may be accessed to determine a likely location of the device. For example, it describes that "the potential location area of wireless communication device 24 may be ascertained by accessing comprehensive call history database 34 (FIG. 1) and selecting a latest one of call records 32 in date and time of day that is associated with device 24." Ex. 1049, 7:3-20. This can enable determining the location of a device after it has been turned off or travelled outside

of a service area. Ex. 1049, 7:62-65.

K. The '034 Patent to Lee (Ex. 1050)

106. U.S. Patent No. 7,681,034 is entitled "Method and Apparatus for Securing Electronic Data." Ex. 1050. I understand that Lee is prior art to the Challenged Patents.

107. Lee discloses techniques for yielding access rights to electronic data. Ex. 1050, Abstract. Moreover, a user may utilize a graphic user interface (GUI) to establish or create access rules. *See id*. at 16:1-25, Fig. 2D. For example, Fig. 2D shows numerous user-selectable access rules.

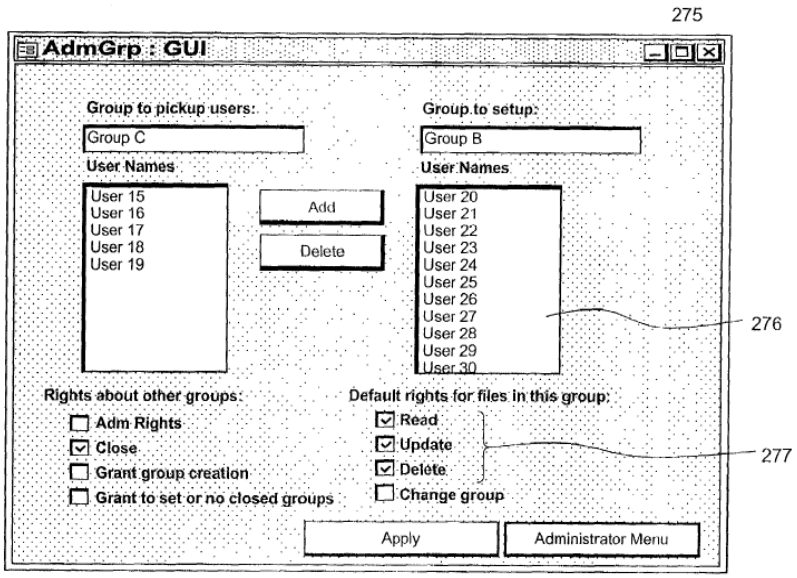


Fig. 2D

Ex. 1050, Fig. 2d.

L. The '272 Publication to Lelievre (Ex. 1051)

108. U.S. Patent Publication No. 2003/0040272 to Lelievre is entitled "Location-based selection of radio content sources." Ex. 1051. I understand that Lelievre is prior art to the Challenged Patents.

109. Lelievre describes a system that includes radios with integrated GPS receivers. Ex. 1051, ¶ 36. The location-aware radio can transmit its location information to a location-based services provider so that it can obtain information about radio stations that are within reception range. Ex. 1051, ¶¶ 32-33. A user can input information about desired radio stations and, if they are within range, the location-based services provider can instruct the radio to tune itself to a suitable radio station. Ex. 1051, ¶ 42.

M. The '498 Patent to Maruyama (Ex. 1052)

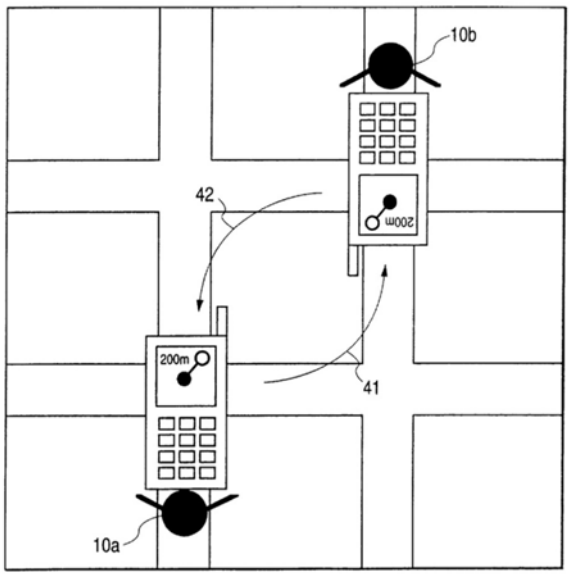
110. U.S. Patent No. 6,430,498 is entitled "Portable terminal with the function of walking navigation." Ex. 1052. I understand that Maruyama is prior art to the Challenged Patents.

111. Maruyama discloses "[a] portable terminal has a function of walking navigation." Ex. 1052, Abstract. The portable terminal can be a portable telephone, a Personal Handyphone System ("PHS"), or a PDA. *See, id.*, 1:6-9.

112. Maruyama includes a number of services, including: "Meeting by Appointment Guidance Service" ... used when meeting someone by appointment

so as to notify the partner of his/her present place and/or to confirm where the partner is now." Ex. 1052, 3:30-33.

FIG. 5



Ex. 1052, Fig. 5.

N. The '499 Patent to McDonnell (Ex. 1053)

113. U.S. Patent No. 6,813,499 is entitled "Providing location data about a mobile entity." Ex. 1053. I understand that McDonnell is prior art to the Challenged Patents.

114. McDonnell describes a system that allows a user of a mobile device to request location-based services from a third-party service provider. Ex. 1053, 8:30-36. However, McDonnell explains that the user may wish to provide more or less accurate location information to a particular service provider to help protect their privacy. *Id*. To accommodate this, the McDonnell system allows the user to limit the

accuracy of their location data that is provided to a particular service. Ex. 1053, 8:1-7.

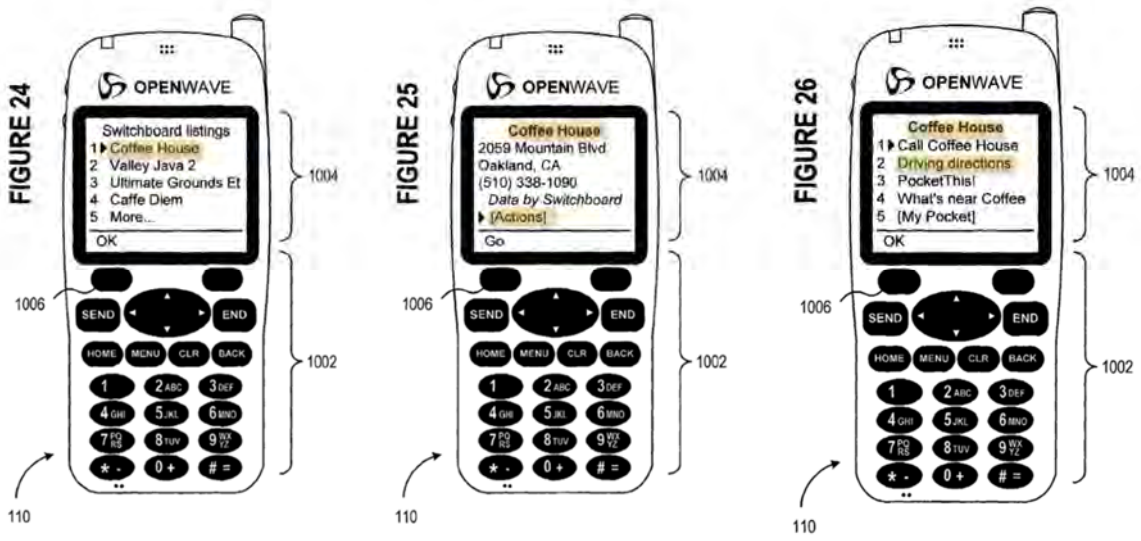
115. To limit the accuracy of the location information, location information is requested from a location server to be provided to a service provider. Ex. 1053, 8:1-15. The location server provides encrypted location information, which the mobile device provides to the identified service. Ex. 1053, 8:30-45. The service provider receives the encrypted location information and requests decryption from a decryption server. Ex. 1053, 8:46-59. The decryption server confirms authorization to provide the decrypted location data, but also checks to see whether the accuracy of the location information is more accurate than the user allows for this particular service provider. Ex. 1053, 8:60-9:19. If the location information is too accurate, the decryption server filters the location data to make it less accurate, such as by injecting randomized noise into the location data. Ex. 1053, 9:20-35. The reduced-accuracy location information may then be provided to the service provider. Ex. 1053, 9:36-39.

O. The ’407 Patent to McNulty (Ex. 1054)

116. U.S. Patent No. 7,146,407 is entitled “Data synchronization mechanism for information browsing systems.” Ex. 1054. I understand that McNulty is prior art to the Challenged Patents.

117. McNulty discloses a system that organizes information stored on a server system for access through a mobile device, such as a wireless telephone. Ex. 1054, 2:19-23. More specifically, the McNulty system provides a list of data objects that can be accessed through the mobile device. Ex. 1054, 2:38-44.

118. McNulty further discloses numerous display interfaces. Some of the display interfaces illustrate that upon selection of an item from a list, additional location information will display. Ex. 1054, Figs. 24-25; 16:44-56. More specifically, as an example, Fig. 24 shows a list of several switchboard listings for coffee shops that a user can select for additional location and other information; and Fig. 25 illustrates the address of the selected "Coffee House" with the ability to select further "Actions," including obtaining directions as depicted in Fig. 26. Ex. 1054, Figs. 24-26; 16:44-56.



Ex. 1054, Figs. 24-26 (emphasis added).

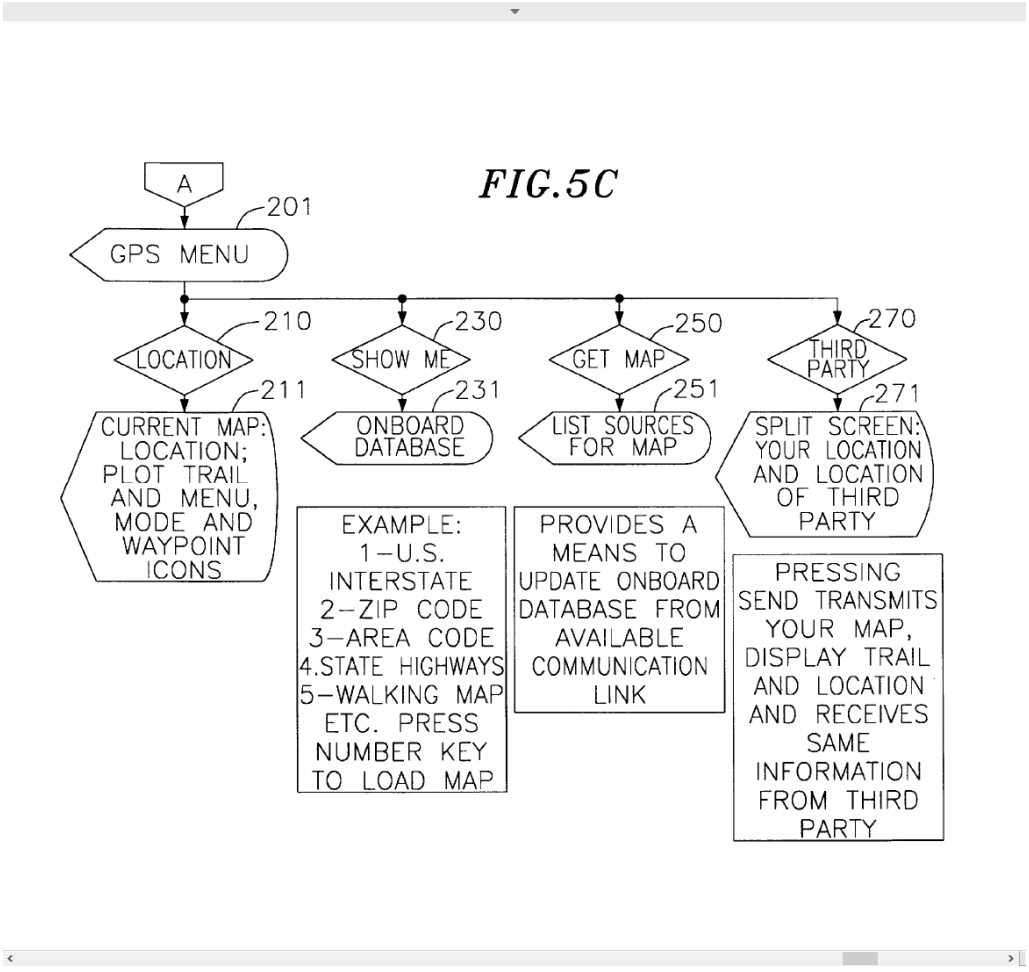
P. The '853 Patent to Obradovich (Ex. 1055)

119. U.S. Patent No. 6,133,853 is entitled "Personal communication and positioning system." Ex. 1055. I understand that the Obradovich Patent is prior art to the Challenged Patents.

120. Generally, Obradovich teaches "[a] personal communication device (PCD) with electromagnetic communication capability has a GPS receiver and a display. The PCD requests maps and location tagged data from data providers and other for display on the PCD." Ex. 1055, Abstract.

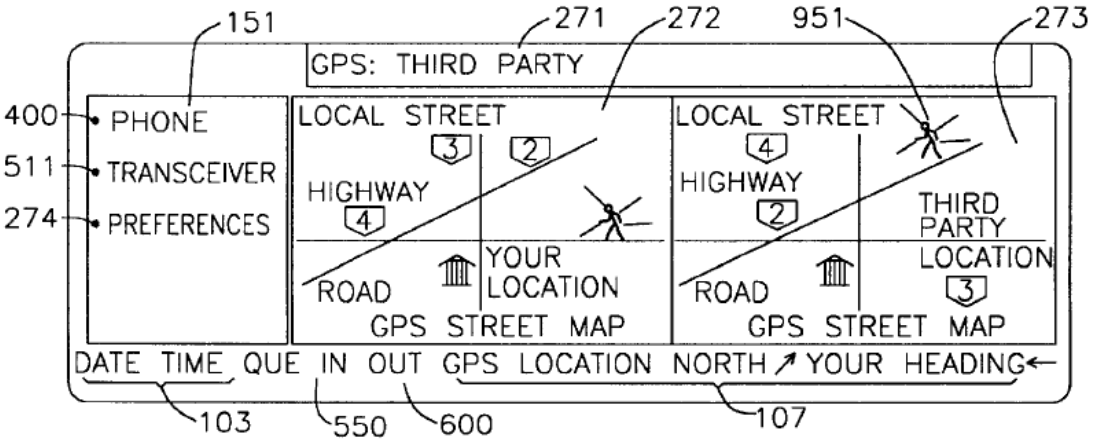
121. Obradovich also discloses "allow[ing] users to request detailed information relating to their present location as well as information related to distant locales." Ex. 1055, 3:45-47. In addition, "Remote and distant third parties could

communicate with each other and, by sending and receiving GPS encoded data, can meet or find each other in remote locations. Maps and other digital data may be transmitted/received by fax, beeper (receive only), computer, phone and radio." *Id.* at 4:1-5; Figs. 5C, 11.



Ex. 1055, Fig, 5C.

FIG. 11



Id., Fig, 11.

122. Further, Obradovich discloses the use of a security level index that allows the user to assign "security level indexes for each item of information. The user also identifies other individuals who may wish to contact the user, and indicates which security index level each such other individual should be provided." Ex. 1055, 26:29-36.

Q. The '652 Patent to Preston (Ex. 1056)

123. U.S. Patent No. 6,236,652 is entitled "Geo-spacial [sic] Internet protocol addressing." Ex. 1056. I understand that Preston is prior art to the Challenged Patents.

124. Preston discloses a dynamic location-based (geo-spatial) Internet addressing scheme that is backward compatible with existing Internet protocols and

architectures but provides improved data communications with large numbers of mobile devices. Ex. 1056, 1:10-14.

125. The Preston system assigns each mobile device its own IP address ("geoIP") that includes location information. Ex. 1056, 5:60-6:4.

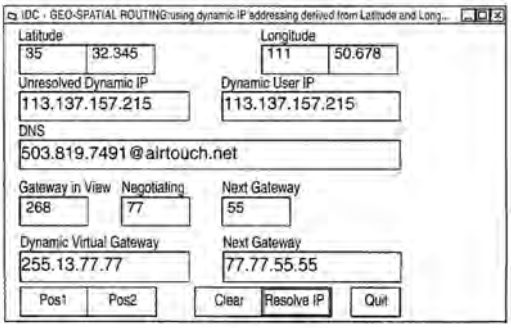


FIG. 4

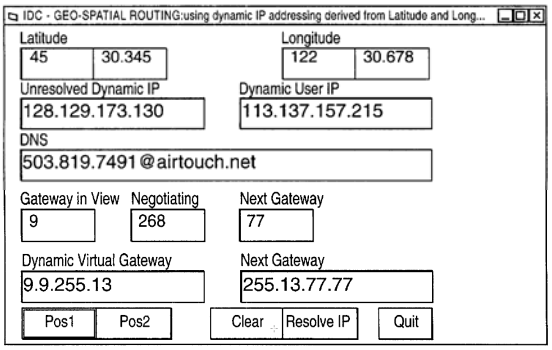


FIG. 5

Ex. 1056, Figs. 4,5.

126. Preston further discloses, [t]he dynamic ability to resolve a change in GeoIP satisfies numerous network management issues, such as where the call needs to go for an emergency call, as in 911." Ex. 1056, 7:61-63. "In addition to emergency applications, a UDIP resolved respond with a data exchange that is meaningful to the user, such as an advertised message." *Id.* at 7:66-8:2.

R. The '795 Patent to Ryden (Ex. 1057)

127. U.S. Patent No. 7,233,795 is entitled "Location based communications system." Ex. 1057. I understand that Ryden is prior art to the Challenged Patents. In addition, I have reviewed the Ryden Provisional application and believe it

provides all of the disclosure that I rely on in Ryden and provides support for claim 1 of the Ryden patent. Ex. 1058. In particular, I have prepared the following mapping of example disclosure from the provisional application to claim 1 of the Ryden patent. The mapping below is only intended to be illustrative and I have not listed all possible disclosure in the Ryden provisional that supports claim 1.

Claim	Limitation	Ryden Provisional
1pre	1. A communication system for communication between a first communications unit and at least one other communications unit, comprising:	Ex. 1058, 6:19-7:7, 13:7-12
1a	first communications unit, comprising:	Ex. 1058, 12:13-27
1a.1	radio-telephone means for sending and receiving messages by radio including means for initiating, maintaining and terminating said messages;	Ex. 1058, 12:13-27, 13:21-22, 16:3-20, 22:1-18, Figs. 2-3.
1a.2	means for receiving encoded earth locations of itself in at least two dimensions from a Position Locating Satellite;	Ex. 1058, 6:25-7:7, 7:14-18, 8:26-9:6, 13:22-29, 16:21-17:9, Fig. 2
1a.3	means for encodingly defining a selectable geographic zone having boundaries encoded in at least two dimensions to seek connection with a targeted communications unit;	Ex. 1058, 7:25-8:19, 13:29-14:26
1a.4	means for initiating a radio call in said selected geographic zone, said	Ex. 1058, 7:25-8:6

	radio call including a code of said selected zone; and	
1b	second communications unit, comprising:	See 1a
1b.1	radio-telephone means for sending and receiving messages by radio including means for initiating, maintaining and terminating said messages;	See 1a.1
1b.2	means for receiving encoded earth locations of itself in at least two dimensions from a Position Locating Satellite;	See 1a.2
1b.3	means for encodingly defining a selectable geographic zone having boundaries encoded in at least two dimensions to seek connection with a targeted communications unit;	See 1a.3
1b.4	means for comparing said geographic zone selected by said first communications unit with said encoded earth location of itself to determine agreement therewith, and	Ex. 1058, 30:23-31:8
1b.5	means for responding to said radio call when said encoded earth location of itself is encompassed by said selected geographic zone.	Ex. 1058, 30:23-31:8

128. Generally, Ryden teaches a location-based communication system in which "[e]mergency features enable the location based communication system to locate and notify the nearest and/or best equipped party for assistance in the event of an

emergency, issue warnings to all phones in a specific area of any size, calculate vehicle velocities and control traffic. Ex. 1058, Abstract. Ryden's system is able to obtain locations of mobile devices and enable them to identify other nearby local devices and, if desired, to communicate with them. Ex. 1058, 3:61-4:39. Each device in the system may have a conventional telephone number, but each may be contacted using a separate geographical number or "G#" associated with the target device based on its location. Ex. 1058, 4:40-5:24. For example, Ryden states that "[t]o initiate a call from a first telephone unit to 45 a second telephone unit, the geographic earth location (called G# herein) of the second telephone unit (more precisely, the PLS antenna of the unit) may be identified in the call initiating process." Ex. 1058, 4:44-48.

129. Ryden describes many different use cases for its system to enable communications with vehicles, such as aircraft, ships, or cars, that can be located, but whose identity is unknown. Ex. 1058, 13:50-14:40. In addition, Ryden describes determining certain navigational information about target wireless devices, such as their direction or speed of travel, which can be used to prevent collisions or to assist with routing or driving directions. Ex. 1058, 18:41-50, 19:34-47, 19:49-20:14.

S. The '951 Patent to Smith (Ex. 1059)

130. U.S. Patent No. 6,084,951 is entitled "Iconized name list." Ex. 1059. I

understand that Smith is prior art to the Challenged Patents.

131. Smith discloses a system to provide a user interface for a cellular telephone, including contact list functionality that provides electronic business cards ("EBCs"). Ex. 1059, 10:55-60. An example of this routine and conventional functionality is shown in Figure 15A:

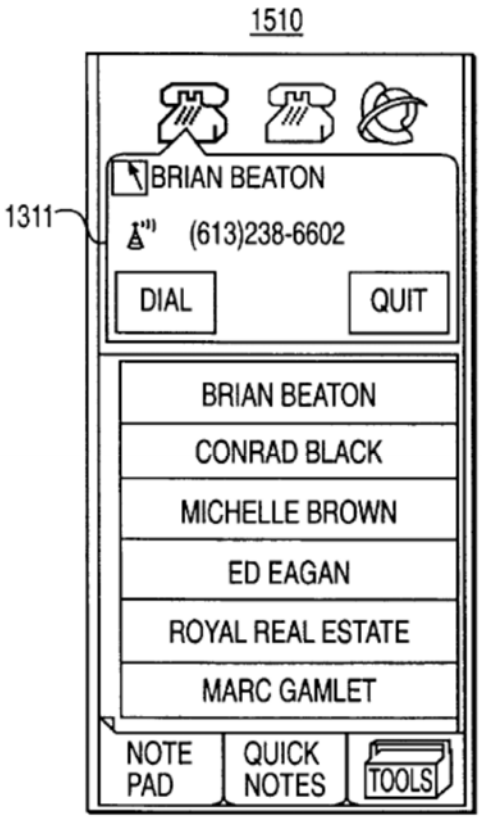


FIG. 15A

132. In addition. the user interface a location icon; "[t]he location icon provides visual assistance to the receiver in quickly determining the location or the type of device of the caller." *Id.*, 10:61-63. "[T]he user may be presented with more precise

GPS information about the caller's location by touching the location icon." *Id.*, 11:2-4.

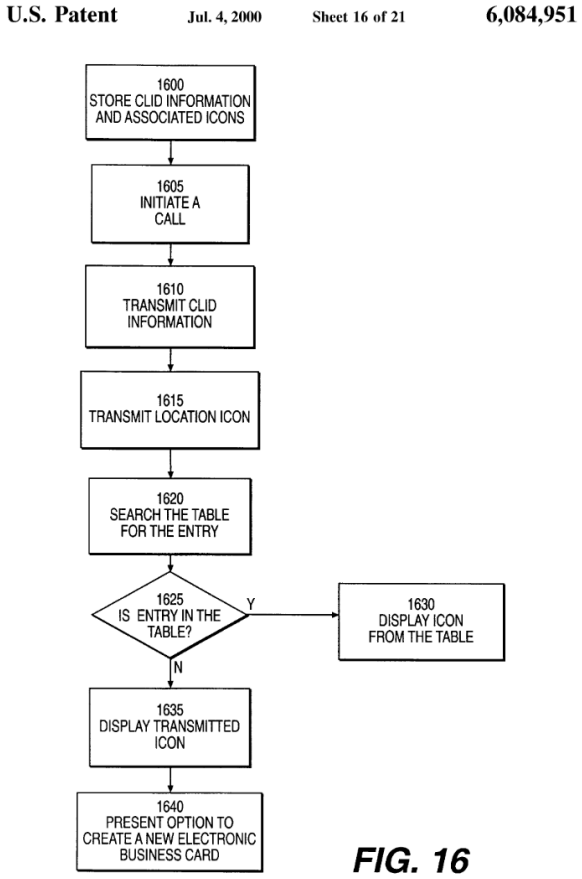


FIG. 16

Ex. 1059 at Fig. 16.

T. The '919 Patent to Tanaka (Ex. 1060)

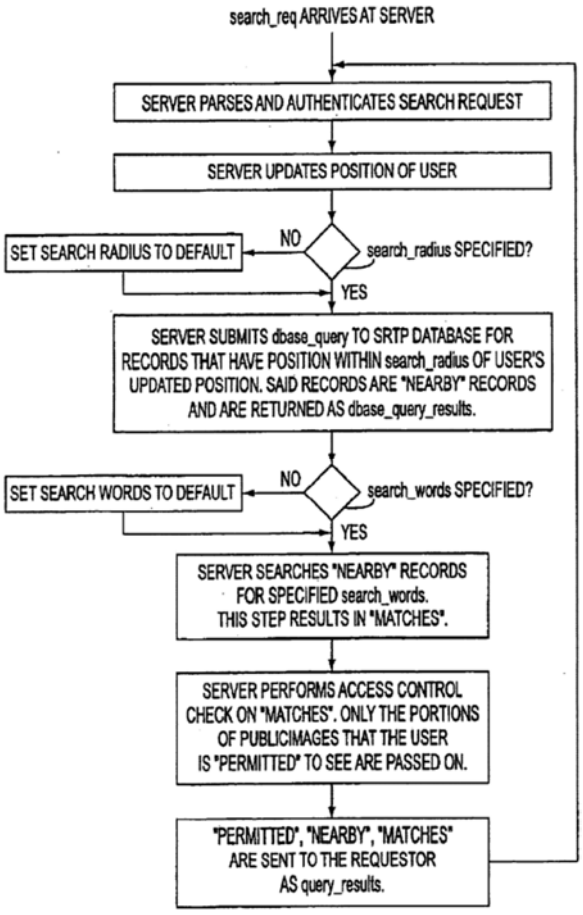
133. U.S. Patent No. 6,819,919 is entitled "Method for providing matching and introduction services to proximate mobile users and service providers." Ex. 1060. I understand that Tanaka is prior art to the Challenged Patents.

134. Tanaka discloses "[a] system enabling mobile wireless users to obtain information on other proximate users both fixed and wireless." EX. 1020, Abstract. More specifically, the Tanaka system discloses that a "first user is automatically notified if an additional user becomes proximate to said first user wherein said additional user meets criterion established in said search of said database." *Id.*, 7:61-64 (claim 10).

135. Tanaka also discloses users creating profiles with access control features to assign read/write privileges to other users or groups of users." Ex. 1060, at 5:66-67.

136. Tanaka further discloses a "first user submits a search_request to the system 10 using communications device 2 together with search criterion including keywords and geographic search radius." Ex. 1060, 6:10-12. "The user_profiles 8,9 that are both geographically close to said first user and contain some of the search_words specified by said first user, are examined for access control restrictions specified in said user_profiles 8,9" and those "that do not have any access control features enabled are relayed to said first user." *Id.*, 6:60-7:5.

137. Figure 4 is flowchart illustrating this process:



Ex. 1060, Fig. 4.

U. The '209 Publication to Tobin (Ex. 1061)

138. U.S. Patent Publication No. 2003/0074209 is entitled "User Device with Service Finding and Purchasing Functionality." Ex. 1061. I understand that Tobin is prior art to the Challenged Patents.

139. Tobin discloses a system where a user device is coupled to a position determining system to determine relative positions of the device and a service vendor. Ex. 1061, Abstract. More specifically, a display may be coupled to the

device to display the relative positions and other information on a map, such as distance and travel time information. Ex. 1061, ¶ 28, 35, Fig. 1c.

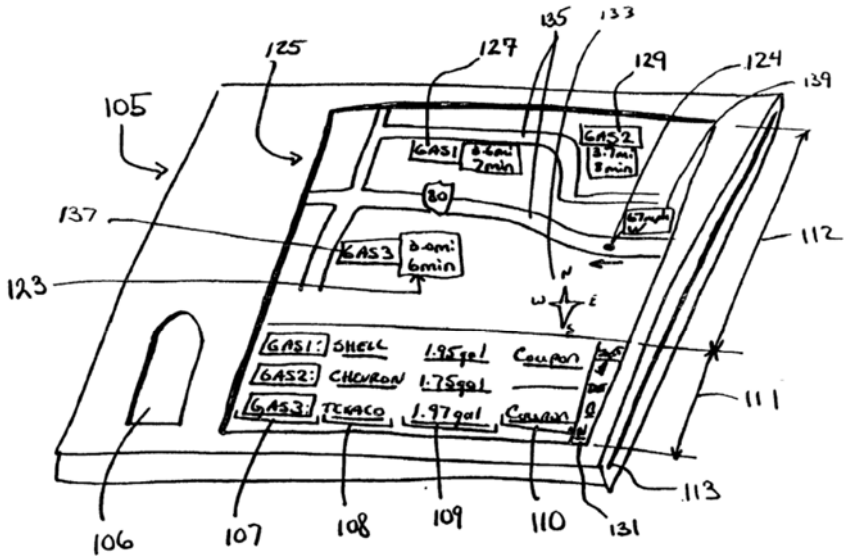


FIG. 1c

Ex. 1061, Fig. 1c.

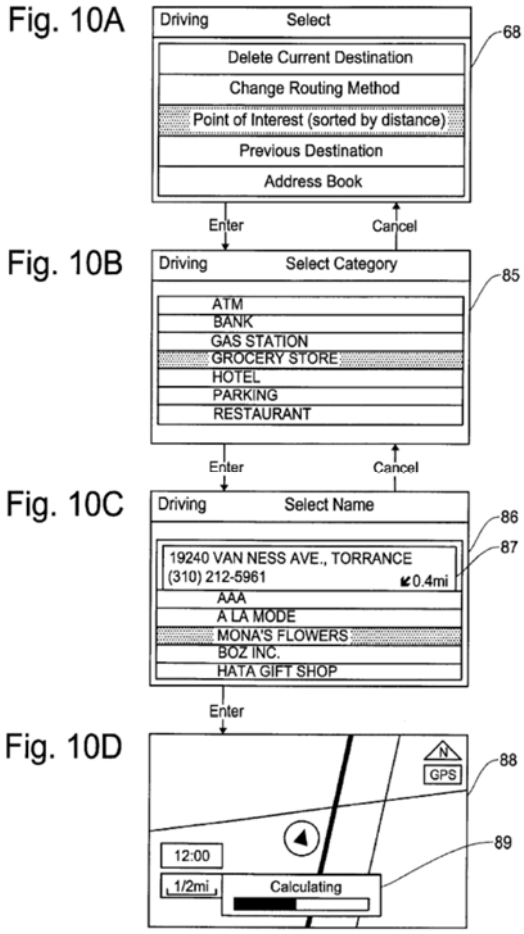
140. Tobin also describes "receiving an activate command from the user that selects a . . . map to display." Ex. 1061, ¶ 56. "When a driving directions icon or hyperlink is activated, the user device 105 retrieves the directions from the information database and displays them for the user." *Id.*, ¶ 36.

V. The '224 Patent to Wako (Ex. 1062)

141. U.S. Patent No. 6,415,224 is entitled "Display method and apparatus for navigation system." Ex. 1062. I understand that Wako is prior art to the Challenged Patents.

142. Wako discloses a navigation system for displaying information necessary for guiding a driver of a vehicle." Ex. 1062, Abstract.

143. The Wako system allows a user to select a desired destination in numerous ways, including by selecting predetermined points of interest or addresses saved in an address book. Ex. 1062, 10:28-13:14, Figs. 10a-d, 11a-c, 12a-c.



Ex. 1062, Figs. 10a-d.

IX. Motivation to Combine

A. Background

144. The Challenged Patents purport to have provided a variety of innovations, such as "locat[ing] the position of a different user's cellular phone (e.g., a requested user) based upon requestor assigned access rights[,]" Ex. 1001, 1:41-43, and more broadly, "provid[ing] systems and methods which better utilize the information about a device's location." Ex. 1001, 1:31-33.

145. It is my opinion that not only were the purported inventions known 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.

146. It is my understanding 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 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.

147. The 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 year 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. Accessed June 12, 2022. 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]

148. Thus, well before Mr. Mullen purportedly invented the ideas described in the Challenged Patents, the U.S. E911 mandate requiring the locating devices and sharing that location with other systems (and in turn other users) had been in existence for several years, where much of the wireless industry (particularly wireless carriers and their suppliers) had been actively working for years to meet

[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. Source: https://transition.fcc.gov/pshs/services/911-services/enhanced911/archives/factsheet_requirements_012001.pdf

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. See, e.g. Ex. 1014, 1:41-2:9; Ex. 1015, 1:56-2:12; Ex. 1016, 2:60-67, 13:10-23; Ex. 1017, 1:34-2:33.

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

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

[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

transfer, construction, recreation and emergency response.

https://clintonwhitehouse4.archives.gov/WH/New/html/20000501_2.html (emphasis added).

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

151. For example, a Google Patent search for "location services" and "sharing" prior to March 25, 2002 yields over 136,000 results.[4] Over 129,000 of those results

[4] https://patents.google.com/?q=location+services&q=sharing&q=cost+reduction,improve+efficiencies&before=priority:20020325&after=priority:20000501https://patents.google.com/?q=location+services&q=sharing&before=priority:20020325. Conducted 9/4/2002.

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 98,000 results remain when further filtered by adding "cost reduction" or "improved efficiencies."[5] Similarly, a search for "location services" and "sharing" and "new revenue" yielded over 15,000 results.[6] Replacing the search of "new revenue" with "improved user interface" yielded over 85,000 results,[7] and "navigation" instead of "new revenue" yielded over 21,000 results.[8] 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

---

[5] https://patents.google.com/?q=location+services&q=sharing&q=cost+reduction,improve+efficiencies&before=priority:20020325&after=priority:20000501

[6] https://patents.google.com/?q=location+services&q=sharing&q=new+revenue&before=priority:20020325&after=priority:20000501

[7] https://patents.google.com/?q=location+services&q=sharing&q=improved+user+interface&before=priority:20020325&after=priority:20000501

[8] https://patents.google.com/?q=location+services&q=sharing&q=navigation&before=priority:20020325&after=priority:20000501

interface capabilities. For example, prior art Bectolsheim, U.S. Patent No. 6,208,934 entitled "Method and system for providing walking instructions with route guidance in a navigation program," describes both enhanced navigation functionality and an enhanced user interface and user experience. Ex. 1031. In addition, a POSITA 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

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

B. Motivation to Combine Sheha and Enzmann with Bectolsheim, Bedingfield, Carey, Degnbol, Engberg, Enzmann, Ganesh, Lee, Lelievre, McDonnell, McNulty, Obradovich, Preston, Ryden, Smith, Tanaka, Tobin, Von Scheele, and Wako

153. It is my opinion that a POSITA would have been motivated to combine the teachings of Sheha or Enzmann and any other reference discussed in Section VIII for at least the reasons I discuss below. In addition, a POSITA would have had a

reasonable expectation of success in incorporating teachings from the other references into the Sheha or Enzmann systems.

154. As detailed above, it is my opinion that by 2002 it was well known for a POSITA to augment a mobile device's location-based functionality with other well-known functionality for a variety of reasons. Furthermore, carriers themselves and in turn associated developers, because of the federal mandates I discuss above, would have been motivated to enhance a mobile device's location-based functionality both to eliminate the possibility of fines and to potentially monetize their heavy investments in the federally mandated E911-related location technology. Moreover, by 2002, many LBS apps were being launched by wireless carriers or in cooperation with those carriers. In addition, while Sheha describes a system that enables location sharing to authorized users and some navigation functionality, it does not fully explore the types of navigation, authorization, or user interface functionality that would enhance/enable additional functionality and usability/user friendliness, and their associated benefits, that were well-known or routine and conventional prior to 2002. A POSITA looking to improve and/or provide new location-related functionality would thus in my opinion readily recognize the existence of such location-related art and accordingly look to such art to improve upon Sheha (and Enzmann).

155. As demonstrated above, determining the location of wireless devices had been well known to a POSITA prior to 2002. Sheha and Enzmann and as well as the other references—Bectolsheim, Bedingfield, Degnbol, Ganesh, Lee, Lelievre, McDonnell, Obradovich, Preston, Ryden, Tanaka, Tobin, and Wako—discussed in this section relate to location-based functionality. Such location-based services include locating a mobile device's own location, establishing access controls to restrict access to a mobile device's own location, requesting the location of other devices, or providing navigational functionality from an initial location to a destination, as well as related navigational information. *See*, *e.g.*, Ex. 1040, Abstract, 3:53-61; Ex. 1041, Abstract, 2:60-64; Ex. 1043, 6:1-3, 8:12-19, claim 15; Ex. 1044, Abstract, Fig. 2, ¶ 53; Ex. 1046, Abstract, 4:35-41; Ex. 1047, 10:5-15; Ex. 1049, 1:14-18, 1:56-2:12; Ex. 1050, 27:16-52; Ex. 1051, ⁋⁋ 33, 47; Ex. 1053, 6:47-55, 8:30-45; Ex. 1055, Abstract, 1:16-17, 4:1-5; Ex. 1056, 1:7-14, 5:60-6:4; Ex. 1057, 3:61-4:39, 18:41-50, 19:34-47, 19:49-20:14; Ex. 1060, Abstract, 2:15-18; Ex. 1061, Abstract; Ex. 1062, Abstract. It would have been obvious to combine Sheha or Enzmann with any of these references as discussed in more detail below, either individually or in combination with any other of the references discussed herein.

156. In addition, some references describe user interface functionality that was generally routine and conventional prior to 2002, such as prompts to enter usernames

and passwords, contact lists, and display screens indicating progress or completion of a requested task. Sheha provides significant details about its location sharing and navigational functionality, while Enzmann provides detailed discussion about its location sharing functionality. However, these two references devote less discussion to other functionality, such as the manner in which a user might interact with their mobile device. However, a POSITA would have been motivated to use the well-known or routine and conventional functionality described in these additional references, which were claimed in the Challenged Patents, to enhance the Sheha and Enzmann systems. These additional references provide examples that would have immediately commended themselves to a POSITA before 2002 as way to enable users to interact with mobile devices within the Sheha and Enzmann systems. Ex. 1045, 3:18-34, 4:6-33; 5:5-28, 7:65-8:16, Figs. 8-14; Ex. 1048, Abstract, Figs. 2A-2D; Ex. 1054, 16:44-56, Fig. 26; Ex. 1050, 7:41-49, 9:42-61, 10:7-16, Figs. 14, 15A; Ex. 1061, Figs. 1B, 1C, ⁋⁋ 23-28; Ex. 1062, Figs. 12b-c. It would have been obvious to combine Sheha or Enzmann with any of these references as discussed in more detail below, either individually or in combination with any other of the references discussed herein.

1. Bectolsheim

157. A POSITA at the time of the Challenged Patents' priority date would have

been motivated to incorporate the functionality described in Bectolsheim into the Sheha system. Similar to Sheha, Bectolsheim describes a system to provide "walking instructions with route guidance in a navigation program." Ex. 1043, Title. Its navigation system provides navigation information for users attempting to walk to a destination, but can also determine driving route information. Ex. 1043, 6:1-3, 8:12-19, claim 15. As discussed above in Section VIII.B, Sheha describes a system that can provide navigation and route information. Sheha specifically mentions driving directions, but a POSITA would have been aware that people carrying mobile devices may take many different modes of travel, including walking, and would likely need navigational information that accommodates other modes of travel. For example, routes suitable for driving may not be suitable for walking, and vice versa. Thus, to provide useful navigation functionality for these other modes of travel, a POSITA would have looked to a system like Bechtolsheim that provides navigational information for people using different modes of travel. Ex. 1041, 3:29-36.

158. Similarly, Enzmann describes a system that allows a user to obtain the remote location of another wireless device. Ex. 1040, Abstract. A routine use of remote location information was to navigate to that remote location and a POSITA would have sought to improve the Enzmann system to not only provide location

information but also navigational functionality as well, such as described in Bechtolsheim. But different modes of travel may have required different navigational considerations, such as pedestrians avoiding highways and drivers avoiding walking paths. So a POSITA who was looking to address the needs of users who use various modes of travel that would otherwise like to use the Enzmann system would have been motivated to incorporate navigation functionality into it, such as described in Bectolsheim. In addition, a POSITA would have had a reasonable expectation of success of modifying Sheha or Enzmann to incorporate Bectolsheim. Sheha's system already supports navigation and expanding that functionality to provide navigation directions for different modes of travel would have been a straightforward addition of constraints to the navigation algorithms already built into the Sheha system or additional navigational algorithms or the different modes of travel.

159. Similarly, Enzmann already provides location information and adding navigational functionality to Enzmann, such as a part of its mapping converter or location server, would have involved a straightforward addition of an existing navigation system into the Enzmann system. Because the Enzmann system already maintains location information, adding an interface to a navigation system like Bechtolsheim's to provide that location information and receive a suitable route

would have involved conventional software development well within the knowledge of a POSITA.

2. Bedingfield

160. A POSITA at the time of the Challenged Patents' priority date would have been motivated to incorporate the functionality described in Bedingfield into the Sheha system. As I discussed above with respect to Sheha in Section VIII.B, Sheha's system can provide route and driving directions to the user of a wireless device. Ex. 1041, 3:29-36. In the same vein, Bedingfield can determine routes and travel time information along those routes to a destination, which was conventional navigational information that a user would have been interested in. Ex. 1044, ¶¶ 53-54. Determining travel time has been an integral part of navigation for as long as people have been traveling. And while Sheha does not attempt to describe all possible navigational information, a POSITA would have been motivated to add travel time determination to Sheha to allow Sheha's users to understand the length of a potential trip.

161. In addition, Bedingfield can provide routes according to different modes of travel that a person might take, such as walking, bicycling, or driving. *Id*. As I discussed above with respect to Bechtolsheim, a POSITA would have recognized that users of the Sheha system would likely need travel directions for modes of travel

beyond driving a car. Thus, the POSITA would have been motivated to include this functionality into the Sheha system to provide a system with multiple options for navigation and to provide additional conventional navigational information, such as travel time. Because determining travel time was a well-known process, such as described in Bedingfield, the POSITA would have had a reasonable expectation of success to incorporate such related functionality into the Sheha system. Further, for the same reasons as discussed above with respect to Bechtolsheim, a POSITA would have had a reasonable expectation of success in incorporating constraints on Sheha's existing navigational functionality for other modes of travel, or to introduce alternate algorithms for those other modes of travel.

162. As discussed above with respect to Bectolsheim in Section IX.B.1 above, Enzmann describes a system that allows a user to obtain the remote location of another wireless device. Ex. 1040, Abstract. A routine use of remote location information was to navigate to that remote location, and a POSITA would have sought to expand the functionality for users of the Enzmann system to not only provide location information but also navigational functionality, such as described in Bedingfield. Thus, as I discussed above with respect to Bechtolsheim, a POSITA considering how to enhance the Enzmann system would have been motivated to incorporate navigation functionality like alternate routes into it, such as described in

Bedingfield. In addition, because travel time is so fundamental to navigation, a POSITA would have expected Enzmann's users to want to know travel time for a route and would have sought to incorporate determining travel time into the Enzmann system.

163. A POSITA would have had a reasonable expectation of success of modifying Sheha and Enzmann to incorporate Bedingfield's navigational functionality. Sheha's system already supports navigation and determining travel time would have been a straightforward programming task for the POSITA. In addition, adding functionality to determine routes for other modes of travel would have involved either the insertion of pre-existing navigation algorithms for those other modes of travel, or adding additional constraints on the existing Sheha navigational functionality to accommodate other modes of travel.

164. Similarly, Enzmann already provides location information and adding navigational functionality to Enzmann, such as a part of its mapping converter or location server, would have been similarly straightforward. As I discussed above with respect to Bechtolsheim, because the Enzmann system already maintains location information, adding an interface to a navigation system like Bedingfield's to provide that location information and receive a suitable route would have involved conventional software development. Moreover, because Bedingfield already

provides travel time, incorporating its navigational system would have also imported its travel time functionality.

3. Carey

165. As I discussed above in Section VIII.F, Carey provides conventional ways for a user to sign-in to an online service using a wireless device, such as a cellular phone. In particular, Carey describes how a user can sign into an instant messaging service by entering a username and password. Ex. 1045, 3:18-34, 4:6-33; 5:5-28, 7:65-8:16, Figs. 8-14. Such login functionality was conventional before the priority date of the Challenged Patents, but Carey illustrates some example implementations.

166. A POSITA would have been motivated to incorporate such login functionality into the Sheha and Enzmann systems. Both Sheha and Enzmann can require a user to provide login to their online services with a username and password, which the user would need some way to provide. Ex. 1041, 8:40-53; Ex. 1040, 6:41-50. It would have been obvious for a POSITA to incorporate functionality to enable a user to enter such login and password information, as described in Carey, and there are only a limited number of ways to obtain that information from a user of a mobile device. Thus, a POSITA would have been motivated to combine Sheha and Enzmann with Carey. And because such functionality was routine and conventional at the time and would have required minimal software development to request and

receive that information from a user, a POSITA would have had a reasonable expectation of success.

4. Curbow

167. Enzmann describes a system that can obtain the location of a wireless device connected to its system. And while Enzmann describes examples, such as cellular phones and pagers, it would have been obvious to apply the Enzmann disclosures to any device with wireless communication capabilities. Ex. 1040, 5:39-41. Such devices with wireless communication capabilities including vehicles such as the cars described in Curbow. Curbow describes a system for a car that can obtain its position using GPS, like the wireless devices in Enzmann, and report the obtained position to a central server, similar to Enzmann's location server. Ex. 1046, 1:64-2:14. Users of a location system like Enzmann would want to be able to obtain the locations of other users in as many contexts as possible. For example, parents may have wanted to know where their children are going on a night out, or emergency services may have wanted to know the location of a person needing assistance. Thus, a POSITA would have been motivated to extend the Enzmann system to receive location from any type of device that is mobile, i.e., whose location can frequently change, and has wireless capabilities, like cars. This would allow Enzmann users to obtain and provide their locations to its location server in a wider variety of contexts. Further,

a POSITA would have had a reasonable expectation of success because the Enzmann system is already configured to obtain and store location information from remote devices, and it would have been a straightforward modification of Enzmann's existing software to obtain and support location information from cars.

5. Degnbol

168. A POSITA would have been motivated to combine Sheha or Enzmann with Degnbol. Degnbol describes a system that can provide alerts to users when another user or device, such as a wristwatch, enters a location or comes into proximity. Ex. 1047, 10:17-23. In addition, Degnbol allows a user to store and transfer buddy lists as well as matchmaking with other users. Ex. 1047, 10:5-15. Users of the Sheha or Enzmann systems would have wanted a way to keep tabs on friends, family members, employees, or others without needing to constantly and manually request location information from each person of interest. In addition, as I discussed above with respect to Curbow, a POSITA would have wanted to modify Enzmann to support as many different types of mobile devices as possible. See Section IX.B.4. With respect to Sheha, Sheha already describes integrating its system with a motor vehicle, which provides further motivation to consider other types of mobile devices to integrate into its location system. Ex. 1041, Fig. 6. Thus, a POSITA would have been motivated to incorporate such functionality into the Sheha and Enzmann

systems to enhance each of these systems to provide these kinds of location alerts.

169. Both Sheha and Enzmann enable a user to obtain the location of other users, such as a user's contacts. As discussed above, natural use of such location information would be the added convenience in alerting a user when another user from its contact list comes into proximity of them based on that remote user's obtained location. This would remove the burden on the user from repeatedly requesting locations for other users. Similarly, a POSITA would have known that any device that can obtain its location, such as the wristwatches in Degnbol, could be located by the Sheha and Enzmann systems. Ex. 1047, 7:14-19. Moreover, a POSITA would have been motivated to incorporate Degnbol's alert functionality to enhance Sheha's and Enzmann's location services to enable a user to find and meet new people that may be of interest, such as based on buddy information as described in Degnbol. Ex. 1047, 12:25-29, 13:10-30. In addition, a POSITA would have had a reasonable expectation of success because Degnbol is related to shared location services, like both Sheha and Enzmann, and incorporating functionality from one such system into another similar system would have involved only ordinary software development efforts, which would have been within the capabilities of the POSITA.

6. Engberg

170. As discussed above in Section VIII.I, Engberg describes an authentication

system that allows a user to enter login data, like a username and password, to access protected information. As I discussed above with respect to Carey in Section IX.B.3, entering username and password information was routine and conventional functionality before the priority date of the Challenged Patents. In addition, the manner of entering such information, such as all on one display screen or across multiple display screens, as illustrated in Engberg, was one of many different routine and conventional ways an application on a mobile device would request that information. Ex. 1048, Figs. 2c-d. Moreover, such functionality would improve the convenience to the user along with providing the requisite access controls.

171. Both Sheha and Enzmann can require a user to provide login information, such as a username and password to access location information. Thus, a POSITA would have needed a way to allow a user of either the Sheha or Enzmann systems to enter username and password information. Thus, the POSITA would have been motivated to use the multi-screen approach described in Engberg, such as due to limited screen sizes on a wireless device or to ensure a valid username was entered before a password is requested. Moreover, the POSITA would have had a reasonable expectation of success given the routine nature of requesting username and password information before the priority dates of the Challenged Patents and the relatively simple programming effort to provide prompts for that information and receive the

user's input.

7. Enzmann

172. A POSITA would have been motivated to combine the Sheha system with functionality described in Enzmann, such as specific network location-determination techniques like triangulation that were well known prior to 2002, but were not specifically mentioned in Sheha. Like Sheha, Enzmann teaches real-time sharing of mobile devices' locations with authorized users. Ex. 1040, 2:16-41; *see also* Section VIII.C, *supra*. And while both Sheha and Enzmann disclose the use of GPS as well as network-based location techniques, a POSITA would have understood Sheha to teach using any suitable technique to determine the locations of mobile device, including network-assisted techniques. Ex. 1041, 10:5-16. Because triangulation was a routine and conventional network-based location determination technique, a POSITA would have been motivated to use such a technique in the Sheha system. Ex. 1040, 5:13-20. Further, it is my opinion that a POSITA would have had a reasonable expectation of success using a technique like triangulation because it was one of the well-known network-assisted techniques that was usable with both the Sheha and Enzmann systems to locate mobile devices in a wireless network and would have required only straightforward changes to the Sheha and Enzmann systems.

8. Ganesh

173. A POSITA considering additional user needs for the Sheha or Enzmann systems would have considered other well-known functionality in the location and navigation technologies, such as those described in Ganesh. As I discussed above in Section VIII.J, Ganesh describes a system that can determine and provide the location of a mobile device to an authorized requesting party, similar to Sheha and Enzmann. Ex. 1049, Abstract, 1:14-18. Users of the Sheha and Enzmann systems would have wanted an option to locate other users at any time, irrespective of whether their mobile device was turned on or off. For example, a parent would want to know where their child was at any time of day or night. Similarly, emergency services attempting to respond to a person needing assistance would need to know their location, even if the person's mobile device was off, such as due to running out of batteries.

174. Ganesh describes several functionalities that a POSITA would have been motivated to combine with Sheha or Enzmann, including storing a history of a mobile device's calls and locations, which can allow the mobile device to be located when it is turned off or otherwise outside of a service area. This would allow other users to locate the mobile device, such as based on its apparent movement over time based on the history information, even if it is experiencing communication

difficulties or has lost power. It also provides the advantage of providing levels of access to users requesting the location of a wireless device, such as approximate location information when a wireless device is powered off or out of a service area, and more precise location information when the wireless device is on and connected to its wireless service.

175. In addition, Ganesh describes a technique similar to one described in Enzmann, but not in Sheha, that allows a user to request authorization to access another mobile device's location. Ex. 1049, Figs. 2, 5, 7. Enzmann allows a user to decide whether an unauthorized user, who has requested the user's location, can receive the location information or not. Ex. 1040, 2:42-51, 7:39-58. Users of the Sheha system would likely want the same option to request authorization to access a user's location, if they do not already have it. While this could be done through a manual process of contacting the other user and asking they authorize access, it would have been obvious to incorporate the automated process described in Ganesh to allow a user to use their mobile device to send a request for authorization. And while Enzmann does not specifically describe that the requesting user can submit a request for authorization, it would be obvious for these same reasons to allow a user to requested authorization and make use of Enzmann's existing functionality to notify the requesting user that they lack permission to access a particular device's

location, but that they can request authorization.

176. In addition to these functionalities, Ganesh provides further examples of routine and conventional map displays that could be used with both the Sheha and Enzmann systems. For example, with respect to Enzmann, Ganesh shows various mapping capabilities, including the ability to show the location of the target device on a map. Ex. 1049, Fig. 7 (106). Enzmann already describes providing the target device's location in a displayable form. A POSITA would have recognized that users that receive a location in a displayable form would likely want to view that location on a map. Thus, a POSITA would have sought ways to provide visual map capabilities within the Enzmann system and would have sought to incorporate Ganesh's map display capabilities into the Enzmann system.

177. A POSITA would have had a reasonable expectation of success in incorporating any of these or other functionalities in Ganesh into the Sheha or Enzmann systems. Each of these references is directed to very similar subject matter, including determining and sharing the location of a wireless device, and the functionality to be incorporated into the Sheha or Enzmann systems would have been straightforward modifications of those systems such that a POSITA would have had a reasonable expectation of success. For example, Sheha and Enzmann already are configured to store location information. Thus, storing the call history and

corresponding location information would have involved straightforward modifications to the Sheha and Enzmann systems to store that additional data. Further, because both Sheha and Enzmann provide stored location information, they would already be capable of providing that information irrespective of whether the target device was turned on or off.

178. With respect to allowing dynamic requests for authorization, both Sheha and Enzmann already check to determine if a user is authorized to receive location information. To add the step of allowing a user to request and receive authorization would require only straightforward software development efforts since the underlying authorization functionality is already provided.

179. In addition, while Enzmann does not explicitly describe providing displayable maps, adding an existing system to provide such maps based on the location information already being provided by the Enzmann system would have involved only routine software development efforts to integrate the Enzmann location information with a system to display that location on a map.

9. Lee

180. As I discussed above in Section IX.B, the Sheha and Enzmann references recognize that users may not receive location information for other devices unless they are authorized to do so. *See*, *e.g.*, Ex. 1041, 5:21-46; Ex. 1040, 2:16-40. While

they do not discuss all of the wide variety of authorization schemes that would have been known to a POSITA and usable with those systems, a POSITA would have been motivated to consider various approaches to restricting or limiting access to location information because while users may wish to entirely block access to their location to some people, they may be willing to share less precise information to others. For example, a user may wish to allow a friend to know they are in town, but not that they are staying at a particular hotel or eating at a particular restaurant. To allow users the flexibility to provide as much or as little location information as they would like, a POSITA would have considered allowing different levels of access to a user's location, such as by restricting the precision of the location information provided to the requesting user. Further, a POSITA would have recognized that a user would need a way to specify which people are provided with what level of authorization, which would involve providing a user interface to enable a user to make appropriate selections, such as described in Lee.

181. As discussed above in Section VIII.K, Lee describes techniques for securing electronic data, such as data that may be provided over a network. Ex. 1050, 2:43-51. To assign access rights to a particular user, Lee describes a graphical user interface that allows a user to select users to associate with available access rights. Ex. 1050, Fig. 2D. Lee's access groups relate to specific file-based access rights, but

a POSITA would have understood that any suitable type of access rights could have been used, including location-based rights, like levels of precision for location information. Thus, a POSITA looking to allow users to provide more or less precise location information in the Sheha and Enzmann systems would have sought to use a GUI-based selection interface as described in Lee. Because GUIs and other visual interfaces to allow users to make selections and assignments like those disclosed in Lee were known to be standard interface functionalities requiring only straightforward programming efforts to implement before the earliest priority date of the Challenged Patents, a POSITA would have had a reasonable expectation of success in incorporating such functionality into the Sheha and Enzmann systems.

10. Lelievre

182. As I have discussed in multiple sections above, a POSITA would have been motivated to look for different uses for location sharing to expand the functionalities described in Sheha and Enzmann. In addition, a POSITA would have been motivated to identify other types of devices and/or form factors that might benefit from location sharing. For example, while a user may wish to learn the location of another user's wireless telephonic device, they may also wish to learn the location of other types of devices. Before the earliest priority date of the Challenged Patents, all manner of devices were capable of determining their own location, including wristwatches (as

discussed above in Section 4) and radio devices. Such devices may be co-located with one or more people and thus may serve as a proxy for those people's locations, even if they are not carrying a wireless telephone. Thus, as I discussed above with respect to Curbow, a POSITA would have been motivated to allow the Sheha and Enzmann systems to locate any type of device with wireless communication capabilities that may be associated with a person of interest, such as friends or family members.

183. Lelievre describes radios that are capable of determining their own location and report that location to a location-based service to obtain information about radio stations that may be within reception range. Ex. 1051, ⁋⁋ 33, 47. Such radios could easily be incorporated into both the Sheha and Enzmann systems as another type of device that could be associated with a user of the Sheha or Enzmann system and provide its location, which could then be made available to one or more requesting users. In addition, because radios tend to be co-located with their owners—for example, before the priority date of the Challenged Patents, people conventionally had radios in their cars, in their homes, or even portable radios they carried on their person, such as a Sony Walkman®—they are a type of device that would provide useful location information about a user. Since users of the Sheha and Enzmann systems are interested in determining the locations of other people, allowing other

wireless devices to report their positions to the Sheha and Enzmann systems would provide additional location information to be available to users of those systems. Thus, a POSITA would have been motivated to incorporate other types of devices, such as Lelievre's radios, into the Sheha and Enzmann systems. And because the Lelievre radios are already configured to communicate with a location-aware service, like those described by Sheha and Enzmann, a POSITA would have a reasonable expectation of success of receiving location information from the Lelievre radios in both of the Sheha and Enzmann systems.

11. Maruyama

184. As I discussed above in Section VIII.C, Enzmann describes a location-sharing system, which can obtain the location of a remote device. This type of location information was commonly used with navigation systems to obtain driving directions or route information. Thus, it would have been obvious to a POSITA to enhance Enzmann's system with navigation functionality. While Enzmann focuses on a system to share locations, it does not discuss all of the obvious uses of location information. For example, traveling to a location is one obvious way to use obtained location information, which involves determining a route to that location. Users of the Enzmann system would be interested in having the option to obtain directions to a received location.

185. To do so, a POSITA would have looked to existing navigation systems that could be added to Enzmann's location system. Adding navigation functionality to the Enzmann system would involve providing any suitable navigation information, such as directional and distance information or displaying the location on a map as described in Maruyama. Ex. 1052, 3:12-20, 6:44-51, 8:39-43, Fig. 5. For example, basic navigational functionality includes determining a distance and a direction to a location and finding the location on a map. Thus, a POSITA adding navigation functionality to Enzmann would predictably include such basic functionality.

186. Further, a POSITA would have had a reasonable expectation of success because such information was known to be routine navigation information that would be of interest to a user attempting to travel to a destination, and navigation systems at the time determined and provided such information before the priority dates of the Challenged Patents as evidenced by Maruyama. As I have discussed above with respect to Bechtolsheim, Bedingfield, and others, and it would have been straightforward to incorporate navigation functionality into the Enzmann system. It would have required routine software development efforts to integrate a navigation system to use the location information stored and available within the Enzmann system.

12. McDonnell

187. Both Sheha and Enzmann describe systems to allow a requesting user to obtain the location of another user, if they have been authorized. See Sections VIII.C. A POSITA before the priority date of the Challenged Patents would have been aware that there are many ways to protect a user's privacy without entirely denying access to their location information. For example, a user may authorize another user to obtain their location information, but may not wish to provide the exact location. Instead, the user may only wish to give a general idea about where they are, such as within a particular city or country.

188. To enable a user to have more fine-grained control over sharing their location, a POSITA would have been motivated to use the functionality described in McDonnell to filter a user's location to reduce its precision by introducing randomized noise. Ex. 1053, 6:47-55. McDonnell describes a system that allows a user to request location-aware services, but establish different limits on the accuracy of location information provided to those services. Ex. 1053, Abstract, 6:47-55, 8:30-45. Further, because both the Sheha and Enzmann systems are configured to receive location information from wireless devices, a POSITA would have had a reasonable expectation of success of implementing the location obscuring functionality described in McDonnell.

13. McNulty

189. As I have discussed above in Section IX.B, Sheha and Enzmann describe various features of their systems, including that user account information, such as username and passwords, may be used to access these systems. A POSITA would have known that a user would need to interact with a user interface on the mobile devices to provide this information, which was commonly provided on mobile devices well before the priority date of the Challenged Patents. For example, McNulty provides descriptions of certain types of functionalities that would be obvious to incorporate into Sheha and Enzmann to allow these interactions.

190. As I discussed above in Section VIII.O, McNulty describes ways for a mobile device to access data and user interfaces to facilitate those interactions. Such user interface functionality for wireless devices were routine and conventional before the priority date of the Challenged Patents, including using manual input to provide various data, making selections, and displaying available options and selections. *See*, *e.g.*, Ex. 1054, Figs. 24-25, 16:26-56. Each of these types of user interface functionalities would have been needed to enable a user to make use of the Sheha and Enzmann systems, though they are not discussed in any real detail in those references. Further, because such user interface functionalities were routine and conventional, a POSITA would have had a reasonable expectation of success of incorporating such functionality into the Sheha and Enzmann systems.

14. Obradovich

191. Obradovich describes different types of functionality that would have been useful to include in the Sheha and Enzmann systems and that a POSITA would have viewed as obvious extensions of the functionality already provided by those systems. For example, a standard use of location information is to provide travel directions or route information to that location. Sheha describes some route and navigation functionality, while Enzmann obtains location information and can provide it in a displayable form. Improving the navigational functionality of Sheha or adding navigational functionality to Enzmann would have been desirable and motivated a POSITA to modify each of these systems based on Obradovich's functionality.

192. For example, a POSITA would have sought to incorporate navigational information expressly discussed in Obradovich, but not in Sheha, like travel time to a location. Ex. 1055, 22:47-54. Sheha discloses providing graphical maps to its users that include some navigation information, like distance to a destination, and a user would have also liked to have known how long it would take to reach the destination. Similarly, a POSITA would have sought to modify Enzmann's system to provide navigational functionality as described in Obradovich. This would provide an improved set of navigation functionality and user interface capabilities and overall improve Sheha's or Enzmann's overall user experience. In both cases, a POSITA

would have had a reasonable expectation of success of incorporating such additional functionality into Sheha and Enzmann. Adding travel time, as discussed in Obradovich, to Sheha would have been a simple programming effort. Further, as I have discussed above with respect to multiple references, including Bechtolsheim and Bedingfield, a POSITA would have expected only routine software development effort to be needed to integrate navigation onto Enzmann's location service.

193. Further, as I discussed above with respect to Lelievre, a POSITA would have sought to increase the types of devices that can be located using the Sheha and Enzmann systems. While Degnbol discusses locating wristwatches and Lelievre describes locating radios, other types of devices would have been of interest as well, such as vehicles and credit card authorization systems described in Obradovich. Ex. 1055, 4:59-65, 24:51-25:30. Sheha describes that tracking various devices is of interest, thus obtaining the location of a vehicle or a payment terminal would be of interest to a user of Sheha's system. Ex. 1041, 2:16-56. Similarly, Enzmann describes that tracking the location of network devices or equipment as being a goal of its system. Ex. 1040, 1:7-9. Thus, locating vehicles or credit card authorization systems would have been obvious to track using both Sheha and Enzmann. Further, modifying Sheha and Enzmann to receive location information from these additional types of devices would have been a straightforward task for a POSITA because the

systems are both already configured to receive and store location information from wireless devices. Thus, the POSITA would have had a reasonable expectation of success in adding that functionality.

194. As I discussed above with respect to Ganesh and Lee in Sections 8 and 9, Sheha and Enzmann describe restricting access to a user's location information, but do not describe the wide variety of authorization that would have been well-known to a POSITA and usable with those systems. I also discussed the desirability of including such functionality into Enzmann and Sheha above. See, e.g., Section IX.B.9. Thus, a POSITA would have been motivated to look to Obradovich and its disclosure of establishing different access levels for location information. Obradovich provides differentiated access levels and corresponding location information of varying precision, such as latitude/longitude, street addresses, or site names. Ex. 1055, 6:33-36, 22:45-50, 26:29-36. Further, as I discussed with respect to Lee, a POSITA would have looked for such functionality to improve the privacy capabilities provided by both Sheha and Enzmann. Further, because Sheha and Enzmann already provide some access controls, a POSITA would have had a reasonable expectation of success to incorporate additional access control features into each of these systems.

195. Finally, Obradovich provides routine and conventional user interface

functionality, such as how to enter a username and password via a graphical user interface. Sheha and Enzmann both can require a user to provide login information to access those systems. Sheha discusses authorization in terms of privacy, while Enzmann describes "authorized" requesters. See Sections VIII.B-C. As I discussed above with respect to Carey and Engberg, such functionality was well-known before the priority dates of the Challenged Patents, and a POSITA would have been motivated to incorporate it into the Sheha and Enzmann systems. Moreover, the POSITA would have had a reasonable expectation of success in doing so, even without resort to Obradovich's teachings. See Sections IX.B.3 and IX.B.6.

15. Preston

196. Both Sheha and Enzmann describe different techniques for locating a wireless telephonic device; however, they do not limit their systems to only the disclosed techniques. Instead, each generally references the use of a "location system" (in Enzmann) or "onboard positioning information device" or "network-assisted position" (in Sheha) however determined. Ex. 1040, 4:15-23; Ex. 1041, 10:5-16. Like the use of triangulation discussed above in Section 7, a POSITA would have been motivated to use any type of network-assisted location technique based on particular needs. For example, some networks may provide radio-based location techniques like triangulation or trilateration. Others may employ may not have such

capabilities or they may be unavailable due to a wireless device being inside a building, but may instead make use of other information transmitted by those devices. For example, wireless network devices commonly used the internet protocol ("IP") before the priority date of the Challenged Patents. Thus, for a POSITA considering the available options to obtain location information from available techniques the POSITA would have considered an IP-address-based location technique, which have been well-known before the priority dates of the Challenged Patents. Specifically, Preston explains that an IP address can be used to obtain a geographical location of a device. Ex. 1056, 7:24-41, 7:46-49. Thus, to accommodate situations where the device is unable to determine its location using GPS or other network techniques may not be in use, a POSITA would have been motivated to incorporate such functionality to provide an alternate approach to obtaining a location of an IP-based wireless telephone device. A POSITA would have had a reasonable expectation of success of incorporating such functionality into Sheha and Enzmann because each already employs network communications and the IP and GeoIP protocols are simply additional known network protocols that could be added to these systems.

16. Ryden

197. As I have discussed above with respect to several references, such as

Obradovich, Sheha describes route and navigation functionality, such as providing driving directions, and Enzmann obtains location information and can provide it in a displayable form. Users of the Sheha system would have wanted to have typical navigational information available to them, such as the speed and direction they are travelling in, the speed of a device they are attempting to meet, as well as visual navigational aids, such as a compass. Further, as I have discussed above with respect to multiple references, adding navigational functionality to Enzmann would have been desirable to users of the Enzmann system. See, e.g., Sections IX.B.1, IX.B.2, IX.B.11. Thus, a POSITA would have looked to a reference like Ryden to determine how to incorporate those kinds of navigation information. As discussed above in Section VIII.R, Ryden teaches describes determining certain navigational information, such as speed, direction, travel time, approximate location, speed of the target device, or providing a compass. Ex. 1057, 7:25-31, 15:29-56, 18:41-50, 19:34-67.

198. Such information complements and enhances the navigational features disclosed in Sheha and improve navigational functionality, so that not only may it be useful in an emergency, as discussed in Ryden, but also to people on cell phones who are meeting up with each other. Ex. 1057, 18:41-50. Such users of the Sheha or Enzmann systems would want functionality to allow them to know the others'

movements, such as the others' heading or speed, how long it will take to arrive, etc. so that they could more quickly and efficiently meet each other.

199. A POSITA would have had a reasonable expectation of success of incorporating Ryden's navigational functionality into each of Sheha and Enzmann because Sheha already provides navigational capabilities that could be modified to provide the additional data. In addition, and as I discussed above with respect to multiple different references, a POSITA would expect only a straightforward software integration effort to employ location information obtained by Enzmann's system into an existing navigation system, such as provided by Ryden.

200. In addition to these navigational features, a POSITA would have looked to Ryden to improve location availability, such as discussed above with respect to Ganesh, when the target device is turned off. See Section IX.B.8. The ability to provide location information for a phone that is turned off would have been an obvious enhancement for both the Sheha and Enzmann systems to provide more full-featured location-sharing or tracking capabilities. Ryden describes that such functionality can be used for purpose, such as monitoring the location of a stolen device without alerting the thief. Ex. 1057, 5:4-14, 16:53-62. Moreover, a POSITA would have had a reasonable expectation of success of incorporating such functionality, since both Sheha and Enzmann store location information at their

respective servers, making it available irrespective of whether the wireless device is powered on or not.

17. Sheha

201. The Enzmann system describes that it can receive and provide displayable location information to its users Ex. 1040, 3:1-16. One common way to provide displayable location information was to display a map and identify the received location on that map. Thus, a POSITA would be motivated to incorporate location display capability, such as Sheha's mapping functionality, into the wireless devices of the Enzmann system. Sheha's wireless devices can display a map and address of the target device and since the Enzmann wireless devices are equivalent devices, a POSITA would both be motivated to incorporate such display functionality into the Enzmann devices and have a reasonable expectation of success in doing so. Ex. 1041, 4:52-58.

18. Smith

202. With respect to Smith, a POSITA would have understood that the mobile devices in the Sheha and Enzmann include wireless telephones that would have included common features such as contact lists and manual input devices such as buttons to interact with a contact list. These features were typically found in wireless telephones before the priority date of the Challenged Patents, such as those discussed

in Smith. Ex. 1059, 7:41-49, 9:42-61, 10:7-16, Figs. 14, 15A. In addition, because such functionalities were already typically provided in the kinds of wireless devices used in the Sheha and Enzmann systems, a POSITA would have had a reasonable expectation of success in incorporating such functionality into the Sheha wireless devices.

19. Tanaka

203. While the Sheha and Enzmann systems provide robust systems for sharing locations of wireless devices, users of the Sheha and Enzmann systems would have wanted a way to be notified about the locations of other users of interested without needing to repeatedly manually request and receive their locations. In addition, users of those systems would also like to have had a way to identify other people of interest that may be nearby for them to meet. Thus, a POSITA would have looked for ways to use the location-sharing features of these systems to provide that additional functionality, such as by automatically obtaining location information for other users, looking for potential matches between the user and those other users, or providing alerts based on locations of those other users.

204. For example, a POSITA would have looked to Tanaka, which describes a system that allows a wireless user to establish alerts for other wireless users and then notify the user when one or more of the other wireless users is nearby. Ex. 1060,

Abstract, claim 20. This type of functionality was well-known before the priority dates of the Challenged Patents, which I also note above with respect to Degnbol in Section IX.B.5. A POSITA would have sought to incorporate Tanaka's alerting functionality so that users of the Sheha and Enzmann systems do not need to repeatedly manually check the location of another user. Since the location information for the user and others who have authorized the user to obtain their locations is already available to the Sheha and Enzmann systems, a POSITA would have had a reasonable expectation of success in adding functionality to establish alerts based on proximity between two known locations. In addition, Tanaka provides some specific examples in the case of users who might be good matches, but might not ordinarily be geographically close to each other—one user lives in New York and another in Moscow—might become geographically close due to the New Yorker travelling to Moscow. Ex. 1060, 1:44-66.

205. Tanaka also allows users to establish search parameters for users that may be in proximity to them to locate people of interest. Ex. 1060, 6:10-7:1. For example, users may establish a profile for themselves with various information, such as interests or dating preferences. Ex. 1060, 5:56-6:3. The users can then perform search queries for other users based on information stored in the other users' profiles and be notified of any matches that are nearby. Ex. 1060, 6:60-7:5. As discussed

above, users of the Sheha and Enzmann systems would have desired such functionality as an easy way to meet new people in their area. Further, because the Tanaka system can automatically check for such people without continued manual intervention from the users, a POSITA would have found Tanaka's functionality to be suitable to meet the needs of Sheha's and Enzmann's users.

206. Moreover, because Sheha and Enzmann both allow users to establish accounts with their systems, which at least include a login and password, a POSITA would have a reasonable expectation of success in allowing users to provide more information for those accounts, such as in the form of a user profile, which were commonly used before the priority date of the Challenged Patents, and perform queries based on the information in those accounts and the location information that Sheha and Enzmann already receive and store. It would have been a relatively straightforward programming effort to store additional user profile information in the Sheha and Enzmann systems and to add the search functionality described in Tanaka.

207. In addition to the alert and searching functionality, a person would have been motivated to incorporate related user interface functionality described in Tanaka into Sheha and Enzmann to allow a user to easily manually enter data for a user profile, alerts or searches. Users of the Sheha and Enzmann systems would have wanted easy

and intuitive ways to send location commands or request location information, such as to update the user's location with the Sheha or Enzmann server. Thus, a POSITA would have been motivated to add user interface options to streamline the location process, such as Tanaka's disclosure of simply tapping on a map or a location in a table to send the user's location to the server. Ex. 1060, 3:7-12, 6:17-24, claims 7, 17, 28. For each of these user interface features, a POSITA would have had a reasonable expectation of success because user interface functionality was necessary to allow users to interact with the Sheha and Enzmann systems, and the types of functionality discussed in Tanaka and the Challenged Patents were typical types of user interface controls in use before the priority dates of the Challenged Patents.

20. Tobin

208. As I discussed above with respect to multiple references, while both Sheha and Enzmann provide detailed descriptions of their location capabilities, they provide less explicit disclosure about what information may be presented to the user. While Sheha shows an example map with certain location and navigational information presented on it, users of the Sheha system would expect to see typical navigation information, such as travel time or options to see different maps. To accommodate these needs, a POSITA would have been motivated to provide a travel time and within Sheha's available map display or to allow users to select among

options for available maps for a location.

209. With respect to Enzmann and as I have discussed above, Enzmann describes that it can receive and provide displayable location information to its users. Ex. 1040, 3:1-16. One common way to do so was to display a map and identify the received location on that map. Thus, a POSITA would have been motivated to incorporate map displays into the wireless devices of the Enzmann system, including the capability to display maps with location information, to allow them to provide visual location information to the user. Further, and as I have described above with respect to multiple different references, a POSITA would have been motivated to add navigation functionality to the Enzmann system. See, e.g., Sections IX.B.1, IX.B.2, IX.B.11. When incorporating such navigation functionality, a POSITA would have considered the same user needs as discussed above with respect to Sheha, including user expectations to have travel time to a destination, to view location markers on map displays, to view a compass or other heading information on a map display, and to select options to see different maps of a location as described in Tobin. Ex. 1061, Fig. 1B, ¶¶ 23-28.

210. Because the functionality described in Tobin and discussed above was typical navigational and mapping functionality before the priority dates of the Challenged Patents, and because Sheha and Enzmann already provide location determination

and sharing capabilities, a POSITA would have had a reasonable expectation of success to modify Sheha and Enzmann to provide the navigational information and mapping options described in Tobin. In the context of Sheha, adding the navigational information and additional mapping options would have been a straightforward programming effort for a POSITA because Sheha already provides some navigation information and mapping capabilities. With respect to Enzmann, as I have discussed above, it would have been a straightforward integration effort to interface Enzmann's location capabilities with an existing navigation system. See, e.g., Sections IX.B.1, IX.B.2, IX.B.11. Thus, a POSITA would have had a reasonable expectation of success in combining Sheha and Enzmann with Tobin.

21. Wako

211. Sheha and Enzmann each allow a user to submit requests for location information and receive a response, thus each would have included a user interface including display screens to provide requests for information to the user and output any responses. In addition, other user interface features were typical before the priority dates of the Challenged Patents. For example, it was (and remains) common practice to provide a display screen while a request is pending to inform the user that a request is being processed. This can ensure that the user is aware that action is being taken, but has not yet completed. A POSITA familiar with Wako would have

been motivated to incorporate display screens from Wako that show a route being calculated and to adapt them to indicate that a mobile device is being located. See, e.g., Ex. 1062, Fig. 12c.

212. Similarly, users of the Sheha and Enzmann systems would have expected typical GUI options to make selections of functionality provided by those systems. Thus, a POSITA would have been motivated to provide GUI options in the Sheha and Enzmann systems, such as those shown in Wako, to allow a user to select an option to obtain a route to a received location. *See*, *e.g.*, Ex. 1062, Figure 12b. Sheha already provides navigational capabilities. *See*, *e.g.*, Ex. 1041, 3:29-49. Thus, after requesting another wireless device's location, a user would need an option to obtain a route to reach that location to make use of the Sheha navigational functionality. And as I have discussed above with respect to multiple different references, it would have been obvious to a POSITA to integrate such navigation functionality into Enzmann's system. See, e.g., Sections IX.B.1, IX.B.2, IX.B.11. As with Sheha, a user of such a system would expect to have a user interface option to obtain a route to a requested location, such as shown in Wako. Moreover, a POSITA would have had a reasonable expectation of success in adding such an option because it would have been a typical user interface option in a navigation system to request a route to a specified location and a relatively simple programming task to add.

X. Analysis and Identification of How the Claims are Unpatentable

A. Appendix 1 - U.S. Patent No. 8,374,575 to Mullen

B. Appendix 2 - U.S. Patent No. 9,204,283 to Mullen

C. Appendix 3 - U.S. Patent No. 9,635,540 to Mullen

D. Appendix 4 - U.S. Patent No. 11,096,039 to Mullen

E. Appendix 5 - U.S. Patent No. 11,109,218 to Mullen

F. Appendix 6 - U.S. Patent No. 11,122,418 to Mullen

G. Appendix 7 - U.S. Patent No. 11,234,117 to Mullen

H. Appendix 8 - U.S. Patent No. 11,246,024 to Mullen

I hereby declare that statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. Should further information become available to me as this matter proceeds, I may revise my opinions accordingly as necessary. I declare under penalty of perjury that the foregoing Declaration is true and correct.

Dated: October 19, 2022

David H. Williams

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 1

TABLE OF CONTENTS

I. U.S. Patent No. 8,374,575

1. I have been informed that the earliest priority date to which the Patent Owner may claim the '575 Patent is entitled to is March 25, 2002.

A. Summary of the '575 Patent

2. Generally, the '575 Patent relates to systems and methods for remotely determining a device's location, such as via the Global Positioning System ("GPS"). Ex. 1001, 1:18-27. It alleges that device locationing is rarely used, and so it purports to provide functionality to allow one cellphone to obtain location information from another user's cellphone. Ex. 1001, 1:31-33, 1:38-43.

3. To allow location sharing, the '575 Patent describes that cellphones can share their locations with a remote system, from which other users can obtain the locations. Ex. 1001, 5:11-30. However, the '575 Patent allows a user to restrict access to their location by identifying authorized users. *Id*. Thus, users may specify which other users may obtain their location information. *Id.*, 3:22-30.

4. Figure 2 depicts a method to obtain another user's location, which generally includes sending a request for a location, determining whether the user is authorized, and, if so, providing the location to the requestor.

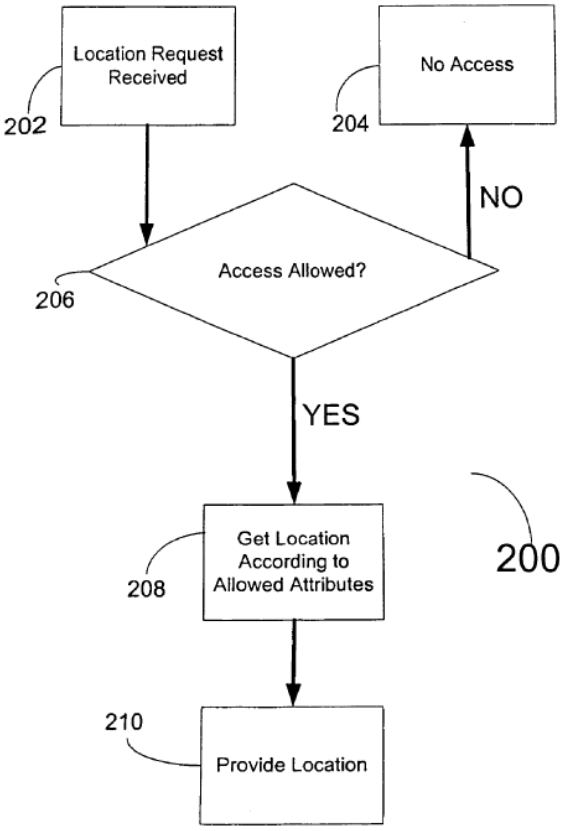

Location Request Received
202
No Access
204
NO
Access Allowed?
206
YES
Get Location According to Allowed Attributes
208
200
210
Provide Location

FIG. 2

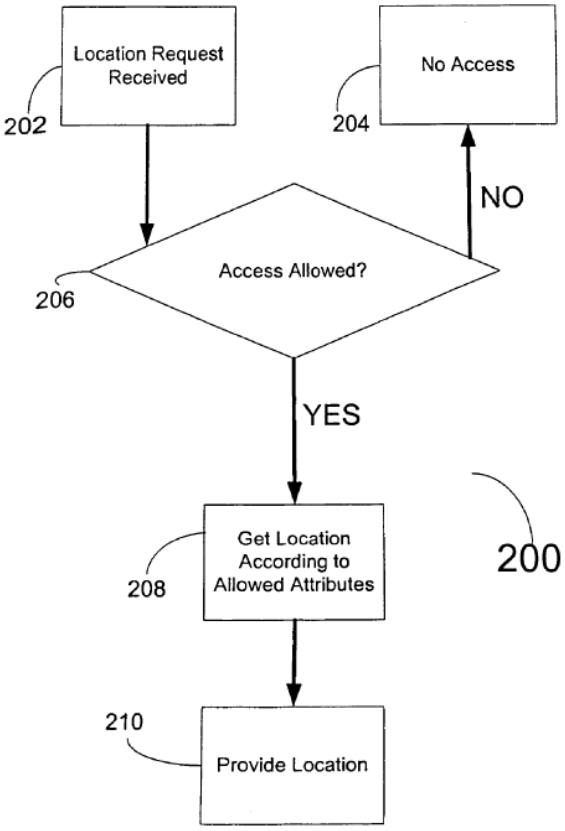

Location Request Received
202
No Access
204
NO
Access Allowed?
206
YES
Get Location According to Allowed Attributes
208
200
210
Provide Location

FIG. 2

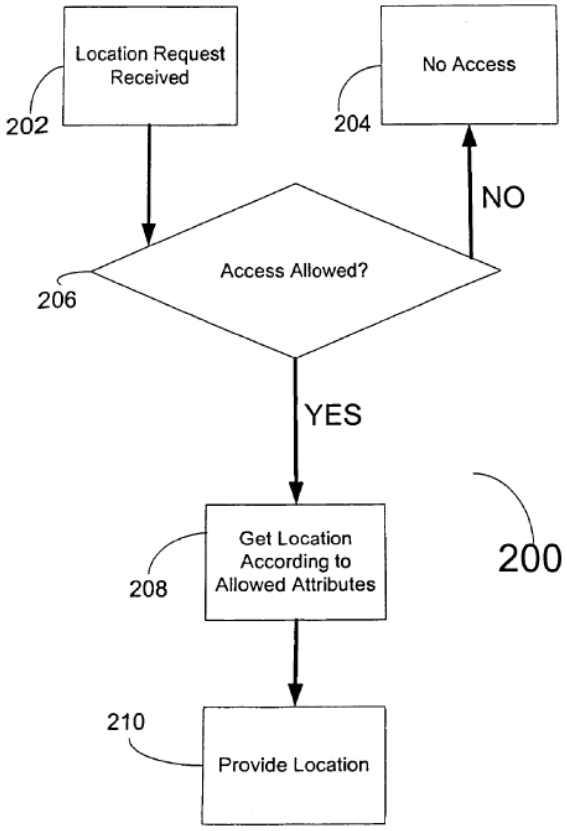


FIG. 2

5. To perform this functionality, the ’575 Patent describes that a user may be required to manually enter a login and password, which may then be used to identify the user and establish whether they are authorized to obtain the requested location information. Ex. 1001, 9:63-10:6. After supplying the login and password as well as the request, the device may provide a screen to indicate the request is being processed and then may provide a further display screen once the location information has been received. Ex. 1001, 7:14-25 Fig. 5-6.

6. The ’575 Patent describes that location information retrieved for a target

user may be displayed on a display screen, as shown in Figure 6 below. Ex. 1001, 7:25-29. This location information can include directional information indicating the direction the user is facing in, as well as arrows indicating the location of the target user relative to the requesting user. Ex. 1001, 7:41-50.

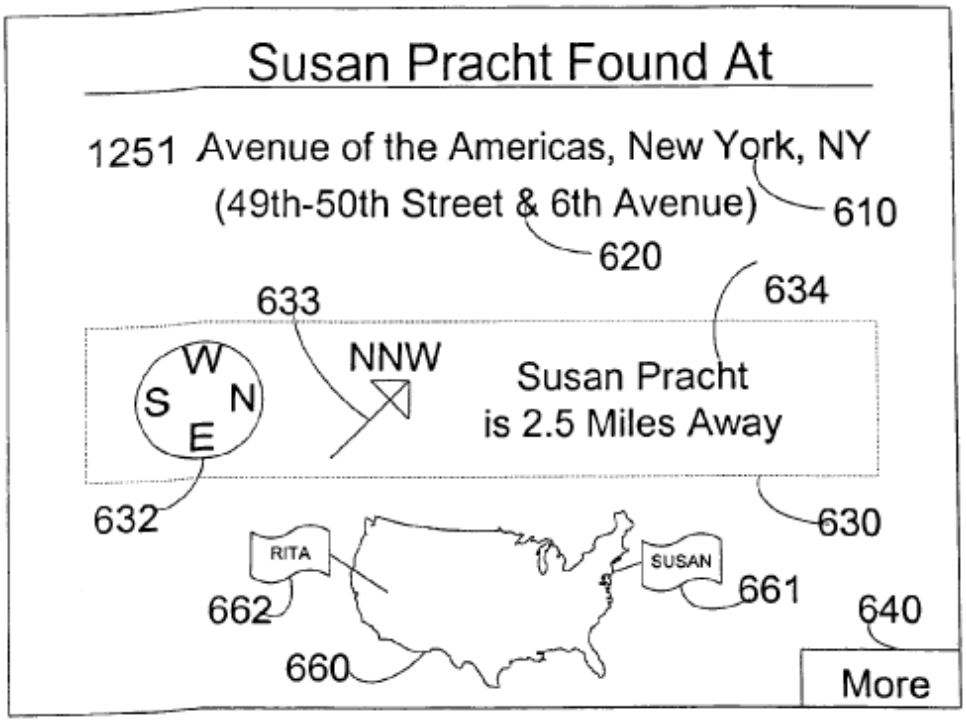

Susan Pracht Found At
1251 Avenue of the Americas, New York, NY
(49th-50th Street & 6th Avenue)
610
620
633
634
W
S
N
E
NNW
Susan Pracht
is 2.5 Miles Away
632
630
RITA
SUSAN
662
661
640
660
More
600

FIG. 6

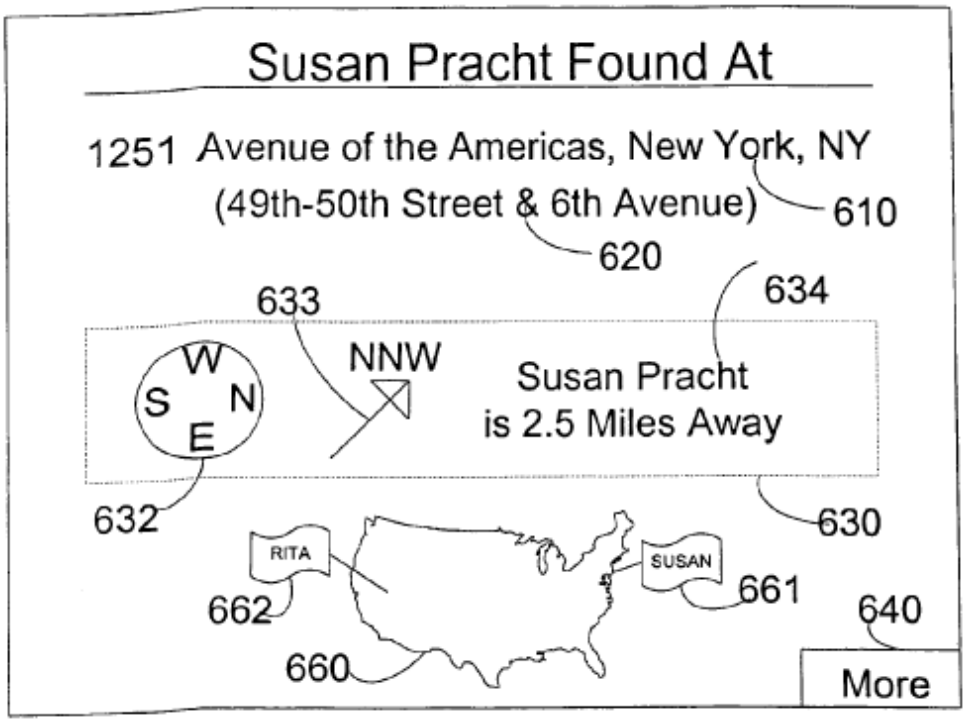

Susan Pracht Found At
1251 Avenue of the Americas, New York, NY
(49th-50th Street & 6th Avenue)
610
620
633
634
W
S
N
E
NNW
Susan Pracht
is 2.5 Miles Away
632
630
RITA
SUSAN
662
661
640
660
More
600

FIG. 6

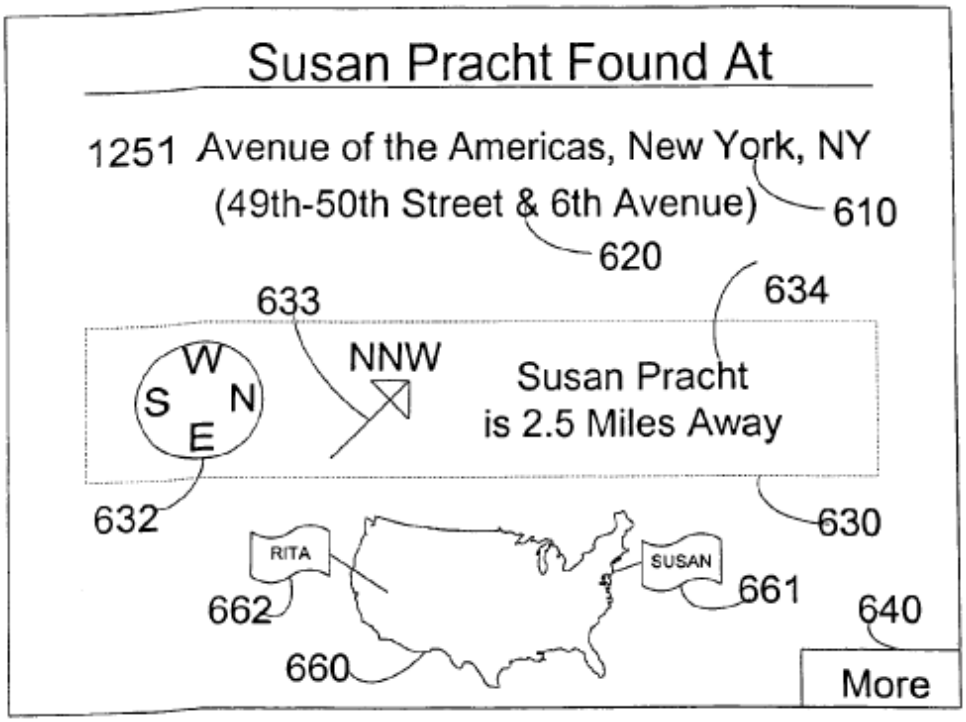


FIG. 6

B. Relevant Prosecution History of the ’575 Patent

7. During its prosecution, U.S. Patent Application No. 11/387,384 which issued as the ’575 Patent, was rejected seven times, including three final rejections, before ultimately being allowed. The Applicant amended its claims to require a step of “changing, at the direction of said first wireless telephone” the list of users allowed to access location information. Ex. 1002, 161-172. The Applicant asserted that that the prior art taught only passively “maintaining” a list of users, not allowing the wireless telephone to change it. Ex. 1002, 174. The Applicant also argued that the prior art did not disclose transmitting location data from the first

wireless telephone to a remote server. Ex. 1002, 348-350.

8. Despite these amendments, Applicant was unable to persuade the examiner that any claims were allowable until a June 20, 2011 interview, where the Applicant agreed to add "determining a second location associated with one of said plurality of wireless telephones" and "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location" to pending independent claim 3, and similar limitations to the other pending independent claims. Ex. 1002, 369-377. No reasons for allowance, however, were provided.

II. Claims

1. A method comprising:

obtaining a location of a first wireless telephone;

transmitting said location from said first wireless telephone to a remote server;

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

transmitting said location from said remote server to at least one of said users of said list of users;

determining a second location associated with one of said plurality of wireless telephones; and

providing directional information to said one of said plurality of wireless telephones,

wherein said directional information is representative of directions between said location and said second location.

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

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

4. The method of claim 1, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users.

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

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

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

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

9. The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location.

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

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

location to said device.

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

13. A method comprising:

determining a location of a first wireless telephone;

transmitting said location from said first wireless telephone to a remote server;

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

transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;

determining a second location associated with said wireless telephone associated with said one user; and

providing directional information to said wireless telephone associated with said user,

wherein said directional information is representative of directions between said location and said second location.

14. A method comprising:

obtaining a location of a first wireless telephone;

transmitting said location from said first wireless telephone to a remote server;

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

transmitting said location from said remote server to at least one of said users of said list of users;

receiving manual input for a second location;

determining an identity of a second user for a device by way of a login; and transmitting said location to said device,

wherein said second user is associated with said manually input second location.

15. A method comprising:

obtaining a location of said first wireless telephone;

transmitting said location from said first wireless telephone to a remote server;

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

transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;

determining a second location associated with said wireless telephone associated with said one user; and

providing directional information to said wireless telephone associated with said user,

wherein said directional information is representative of directions between said location and said second location.

16. The method of claim 15, wherein said changing comprises adding an additional user to said list of users.

17. The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users.

18. The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.

19. The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user.

20. The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user.

21. The method of claim 15, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.

22. The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.

23. The method of claim 13, wherein said changing comprises adding an additional user to said list of users.

24. The method of claim 13, further comprising transmitting the address of said location to at least one of said users of said list of users.

25. The method of claim 13, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.

26. The method of claim 13, further comprising determining a third location associated with said wireless telephone associated with said user.

27. The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user.

28. The method of claim 13, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.

29. The method of claim 13, further comprising: receiving said location by

said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.

30. A method comprising:

obtaining a location of said first wireless telephone;

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

transmitting said location from said remote server to at least one of said users of said list of users; determining a second location associated with one of said plurality of wireless telephones; and

providing directional information to said one of said plurality of wireless telephones,

wherein said directional information is representative of directions between said location and said second location.

31. The method of claim 30, wherein said changing comprises adding an additional user to said list of users.

32. The method of claim 30, further comprising transmitting the address of said location to said at least one of said users of said list of users.

33. The method of claim 30, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users.

34. The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones.

35. The method of claim 30, further comprising determining a third location associated with one of said plurality of wireless telephones.

36. The method of claim 30, further comprising: receiving said location by

at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones.

37. The method of claim 30, further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.

38. A method comprising:

obtaining a location of said first wireless telephone; changing a list of users on a remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users when said user is within a certain distance of said location;

determining a second location associated with said wireless telephone associated with said one user; and providing directional information to said wireless telephone associated with said user,

wherein said directional information is representative of directions between said location and said second location.

39. The method of claim 38, wherein said changing comprises adding an additional user to said list of users.

40. The method of claim 38, further comprising transmitting the address of said location to at least one of said users of said list of users.

41. The method of claim 38, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users.

42. The method of claim 38, further comprising determining a third location associated with said wireless telephone associated with said user.

43. The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of

said location on said wireless telephone associated with said user.

44. The method of claim 38, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user.

45. The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location.

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

III. **Claim Construction**

9. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

10. In my opinion the claims of the ’575 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of how the Claims of the '575 Patent are Unpatentable

A. Ground 1: Sheha alone or in combination with Tanaka and/or Preston anticipates or renders claims 1-46 obvious under 35 U.S.C. §§ 102, 103.

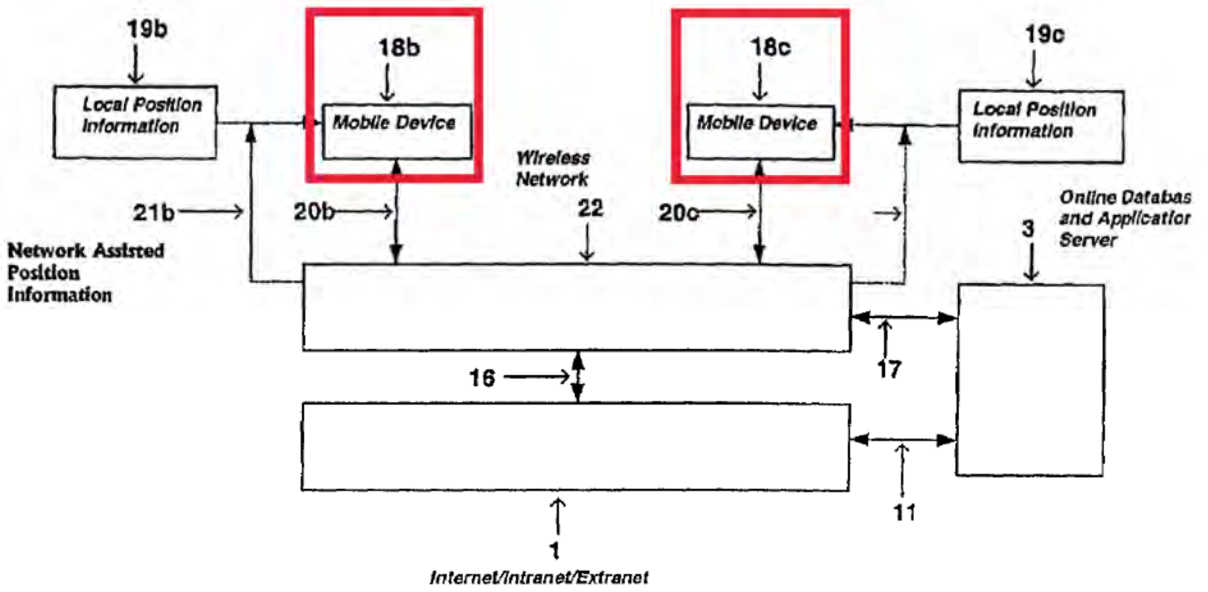
11. Sheha anticipates independent claims 1, 14, and 30. Sheha in view of Tanaka renders obvious independent claims 13, 15, and 38. It is my opinion that a POSITA would be motivated to combine Sheha with Tanaka. *See* Ex. 1021, Section IX. Sheha discloses all but one of the elements of a system as recited in claims 13, 14, 15, and 38, including determining the locations of first and second wireless devices, and providing directional information to the first wireless device. Tanaka discloses the remaining element of "transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location." Sheha, alone or in view of Tanaka also discloses most of the elements recited in the various dependent claims. Preston discloses all remaining elements, and it is my opinion that a POSITA would be motivated to combine these references. *See* Ex. 1021, Section IX. Thus, it is my opinion that Sheha alone or in combination with Tanaka and/or Preston anticipates or renders obvious claims 1-35.

1. Claim 1: "The method comprising:"

12. Claim 1's preamble simply recites "[a] method of mobile-to-mobile locating, said method comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble, and Sheha anticipates claim 1. Sheha describes a "method" for "providing real-time position information of one party to another party by utilizing … a mobile telecommunications network." Ex. 1041, Abstract.

2. Claim 1a: "obtaining a location of a first wireless telephone"

13. Sheha discloses this limitation. As one example, Sheha describes that its system can "determine either or both of the local and remote devices' position information." Ex. 1041, 4:13-18. A mobile-to-mobile configuration is illustrated in Figure 3, where both mobile devices 18b-c wirelessly communicate 20b-c with the wireless network 22. Ex. 1041, 10:67-11:35, Fig. 3.



14. The mobile devices 18b-c pictured can be cellular telephones. Ex. 1041, 10:66-11:3. Sheha also discloses that the mobile devices can determine their own positions. Ex. 1041, 10:5-16, 11:15-20. After a mobile device determines its position, Sheha discloses that the position is stored in an online database and application server, ODAS 3. Ex. 1041, 11:3-8, 11:44-51, Figure 3. Thus, it is my opinion that Sheha discloses claim element 1a, and Sheha anticipates claim 1.

3. Claim 1b: "transmitting said location from said first wireless telephone to a remote server"

15. Sheha discloses transmitting the location from the mobile device to a remote server. In its system, after a mobile device determines its position, it "forwards its current position information back to the [remote server] ODAS 3." Ex. 1041, 11:3-8, 11:12-15, 11:33-37. Thus, it is my opinion that Sheha discloses claim element

1b, and Sheha anticipates claim 1.

4. Claim 1c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

16. Sheha discloses changing at the direction of the first wireless telephone a list of users stored on a remote server that are allowed to access location information, where each user in the list is representative of one of a plurality of wireless telephones. Sheha discloses that each device may have privacy settings that "allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:38-46, 11:63-12:4. Such privacy settings are stored at the system server or at the mobile device, and can be changed at the direction of the first wireless device. Ex. 1041, 12:1-4. Specifically, Sheha discloses that "users can define a group of specific users that have access to this information…by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:61-12:1. Sheha references defining a list of "users" and "calling devices" interchangeably; thus each identified user is representative of one of a plurality of wireless telephones. Ex. 1041, 5:38-46, 11:63-12:4.

17. Sheha describes such functionality in conjunction with a landline-to-landline position request, and also discloses that the same approach can be used in the

mobile-to-mobile scenario. Ex. 1041, 12:4-7. In addition, because Sheha discloses that the user of a first wireless telephone has the authority to "define" a list of users who are allowed to access their location, and further discloses that the user may change these privacy settings to "enable position transfer permissions at anytime and for any period of time," it is my opinion that Sheha discloses that the list may be changed at the direction of the first wireless telephone. Ex. 1041, 5:9-20, 11:61-12:1. Thus, it is my opinion that Sheha discloses claim element 1c, and Sheha anticipates claim 1.

5. Claim 1d: "transmitting said location from said remote server to at least one of said users of said list of users"

18. Sheha discloses transmitting the location from the remote server to at least one of the remote users. As I discussed above in relation to claim 1a, a mobile device can request the location of another mobile device. Sheha discloses that "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." Ex. 1041, 12:1-7; *see also id.*, 4:59-5:1-2. Therefore, Sheha discloses transmitting the location of the target device from the server to the requesting device. Thus, it is my opinion that Sheha discloses claim element 1d, and Sheha anticipates claim 1.

6. Claim 1e: "determining a second location associated with one of said plurality of wireless telephones"

19. Sheha discloses determining a second location that is associated with one of the other mobile devices. As I discussed above in relation to claim 1a, Sheha discloses a system where both the local and remote devices determine their locations. Ex. 1041, 4:13-18, Fig. 3. In particular, Sheha discloses that mobile device 18 b determines its position and updates its reported position in the ODAS prior to initiating a call with mobile device 18 c. Ex. 1041, 10:66-11:9, 11:15-20 (explaining the "position information is calculated" by mobile device 18 b). Thus, it is my opinion that Sheha discloses claim element 1e, and Sheha anticipates claim 1.

7. Claim 1f: "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location."

20. Sheha also discloses providing directional information. Sheha discloses that its system allows a first and a second wireless phone to be provided with directional information representative of directions between their respective locations. Ex. 1041, Abstract, 5:21-26. Sheha discloses using a remote mobile device's location "to obtain driving directions to that device," and that if both wireless telephones grant access to their respective position information, this "can be used for real-time driving directions or collaboration purposes." Ex. 1041, 5:21-26, 5:32-34. Sheha discloses that the server, ODAS, can calculate and provide this

directional information. Ex. 1041, 12:32-37.

21. This functionality is illustrated in Sheha Figure 5, which shows a "Map Caller-ID" screen with directional information representative of directions, driving route 29 and driving directions 35 between the location 34 of the remote mobile device 34 and location 33 of the user's mobile device. Ex. 1041, 9:23-28.

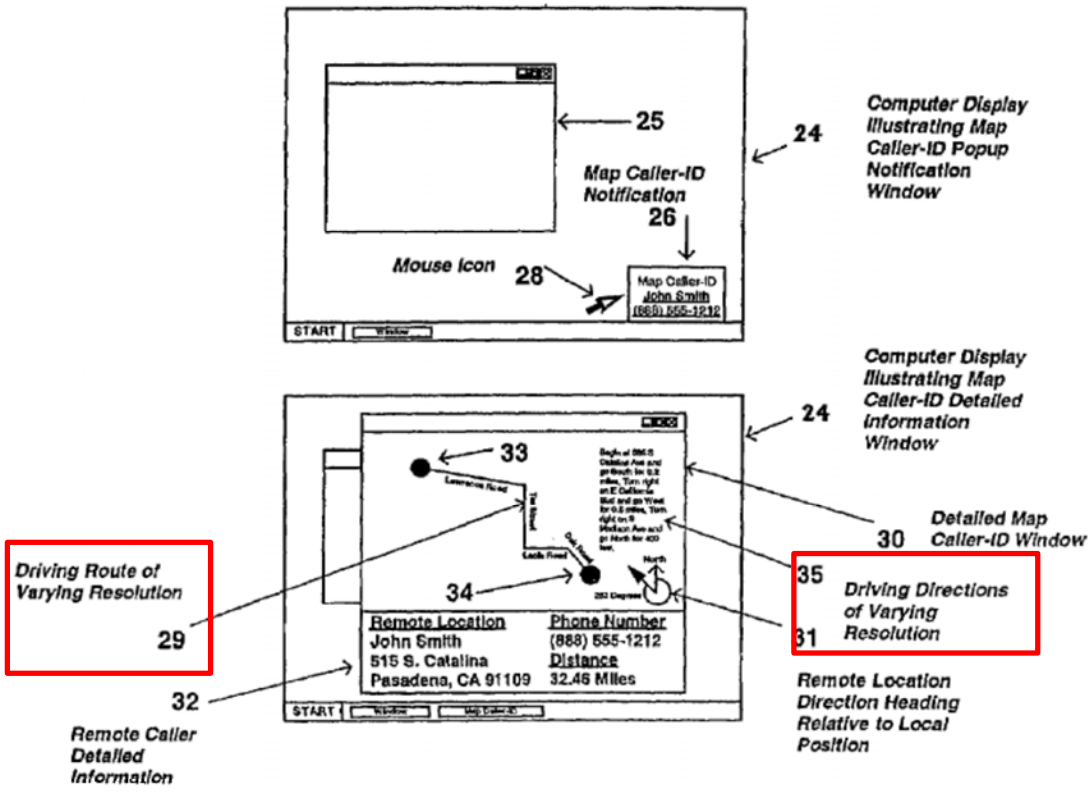


FIG. 5

Thus, it is my opinion that Sheha discloses claim element 1f, and Sheha anticipates claim 1.

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

22. As I described above regarding claim 1c, Sheha discloses that a first wireless telephone can direct the server to change a list of users allowed to access location information which is stored on the remote server. This "changing" operation includes adding an additional user to said list of users, as users are added to the list in order to define or create the list. Ex. 1041, 5:38-46. In addition, Sheha discloses that the server can query the wireless telephone whether to grant permission when another device submits a request to access its location information. Ex. 1041, 5:29-34. Sheha discloses that through privacy settings, the user may grant permission to any requesting remote device for "any specified amount of time." Ex. 1041, 5:41-46. Because any such requesting user would need to be on the access list for the specified quantity of time, granting this permission comprises adding an additional user to the list of authorized users. Thus, Sheha discloses claim 2, and Sheha anticipates claim 2.

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

As I discussed above in relation to claim 1f, Sheha discloses displaying a Map Caller-ID screen in Figure 5, which includes directional information transmitted between two mobile devices.

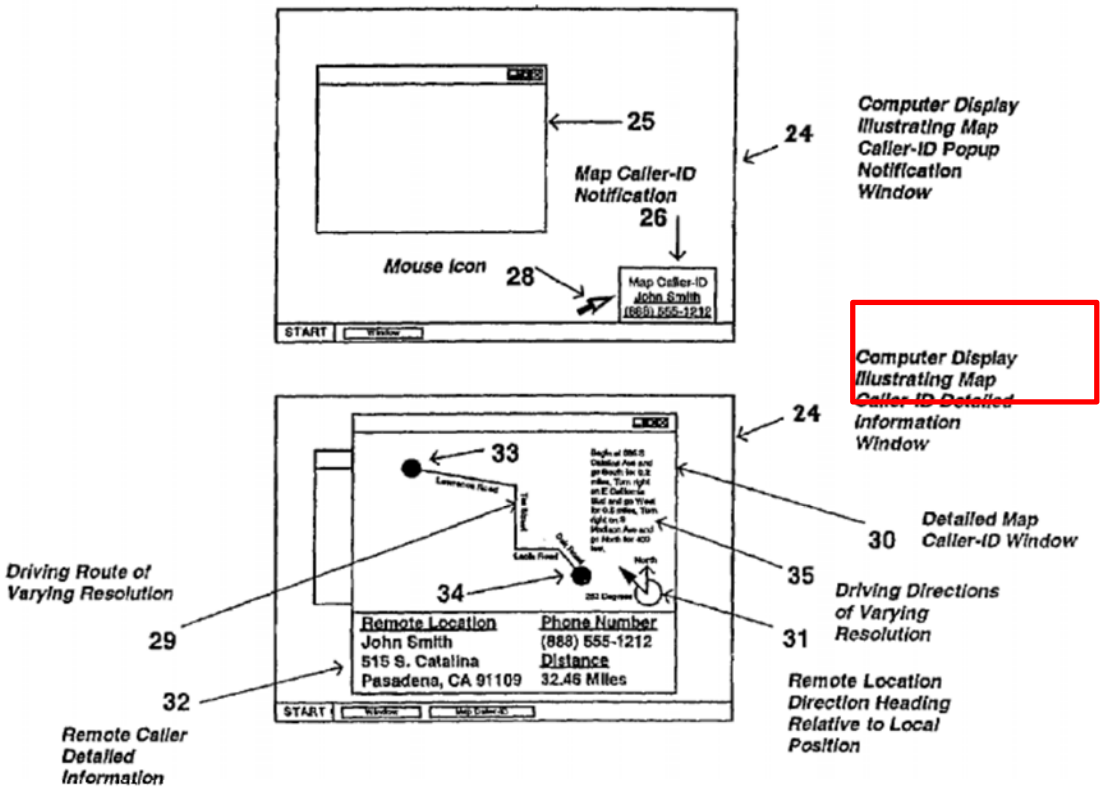


FIG. 5

23. Sheha discloses the Map Caller-ID screen "may include local address position information." Ex. 1041, 7:27-31; *see also id.*, 3:50-55, claim 7. Sheha also discloses that Map Caller-ID information is regularly requested by the ODAS

server and transmitted to each mobile device to provide real-time driving directions and route information. Ex. 1041, 11:44-51. The Map Caller-ID information provided in a mobile-to-mobile context discloses providing address information to each mobile device user. Thus, it is my opinion that Sheha discloses this limitation, and Sheha anticipates claim 3.

10. Claim 4: "The method of claim 1, further comprising obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users."

24. Sheha discloses claim 4 or at least renders it obvious. Sheha discloses transmitting the address of said location to said at least one of said users of said list of users for at least the same reasons stated above in relation to claim 3. Sheha also discloses obtaining the address of said location from a remote information provider, the ODAS, which obtains addresses before transmitting them. Ex. 1041, 7:51-55, 8:54-9:3. As seen in Figure 1 below, the ODAS is located remotely from wireless network 22 and mobile devices 18a and 18b, such that wireless network 22 "sends the position information, obtained from the ODAS 3, in the form of a Map Caller-ID" to the mobile devices. Ex. 1041, 11:37-41, Fig. 3.

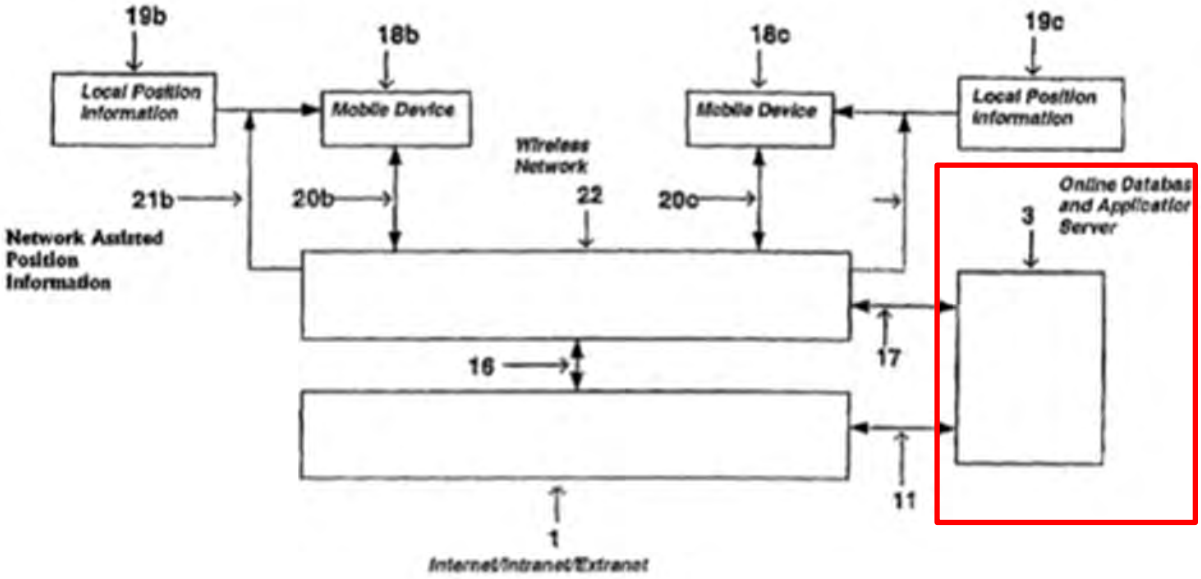

19b
18b
18c
19c
Local Position Information
Mobile Device
Mobile Device
Local Position Information
Wireless Network
21b
20b
22
20c
Online Database and Application Server
3
Network Assisted Position Information
16
17
11
1
Internet/Intranet/Extranet

FIG. 3

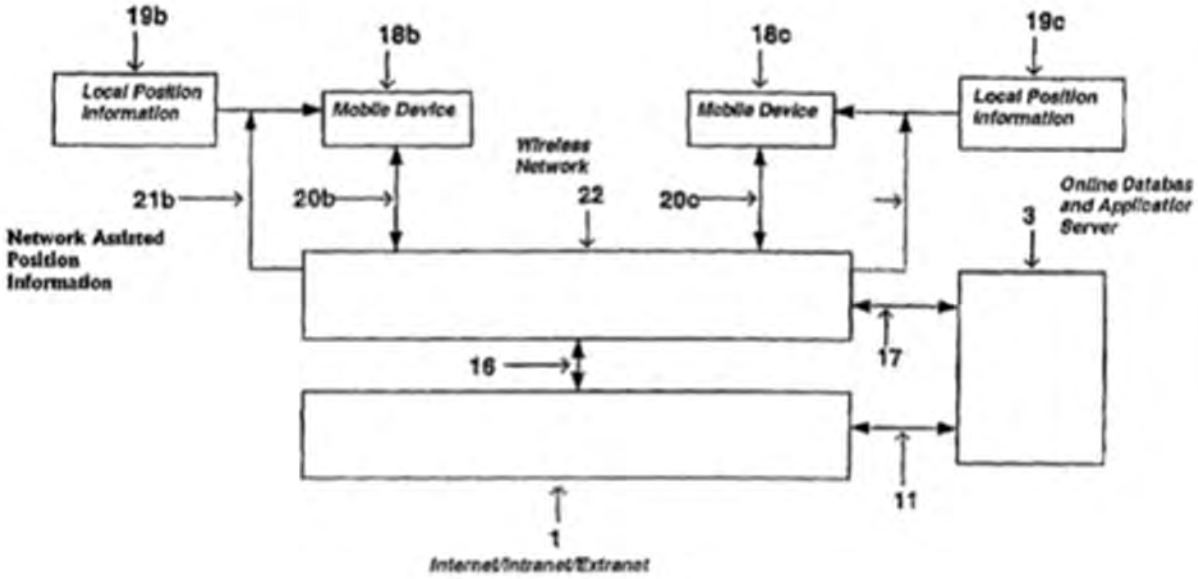

19b
18b
18c
19c
Local Position Information
Mobile Device
Mobile Device
Local Position Information
Wireless Network
21b
20b
22
20c
3
Online Database and Application Server
Network Assisted Position Information
16
17
11
1
Internet/Intranet/Extranet

FIG. 3

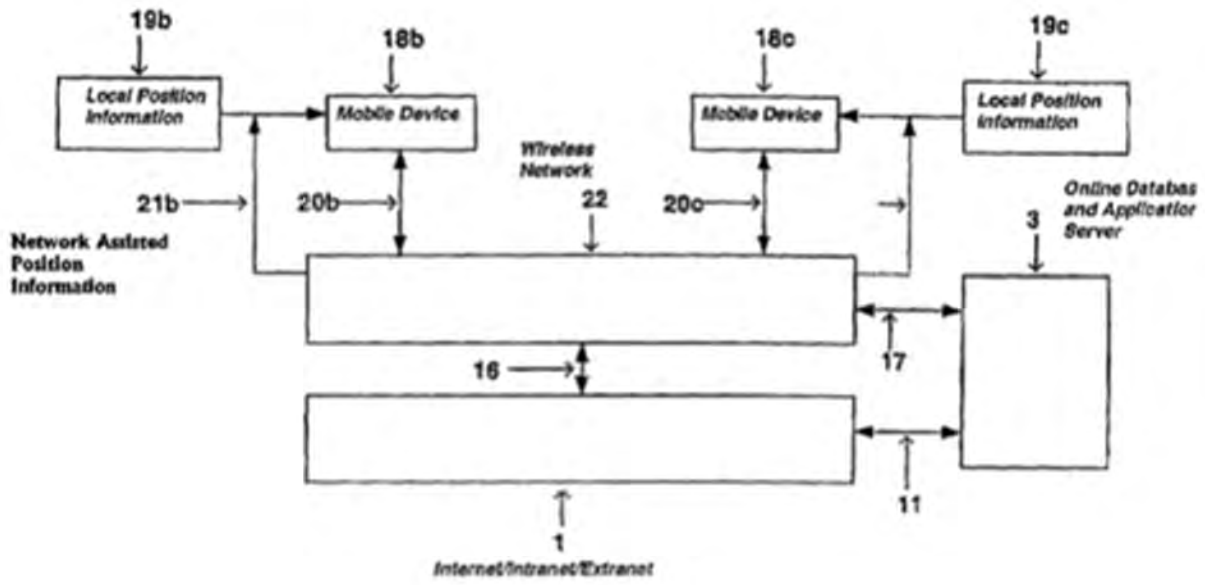


FIG. 3

25. Sheha discloses that with the ODAS is a remote information provider that can obtain the address of a landline phone by "performing a reverse telephone number lookup, thus retrieving both geographical and *address* information of the called telephone." Ex. 1041, 7:51-55. It is my opinion that this capability would also allow the ODAS to look up address information based on position information provided by a mobile phone, such as latitude and longitude. Ex. 1041, 10:5-16 (describing position information calculated by a mobile phone). A POSITA would have been motivated to use Sheha's ODAS address retrieval functionality with mobile devices because it would have been desirable to transmit address

information in addition to other position information to assist in navigation and routing between two mobile devices. Thus, it is my opinion that Sheha discloses or makes obvious this limitation, and anticipates or renders obvious claim 4.

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

26. Sheha discloses receiving the location from a mobile device and displaying it. As I discussed above in relation to claim 1f, Sheha discloses displaying a Map Caller-ID screen in Figure 5, which displays location information of a remote wireless phone. Sheha expressly discloses that this location information can be displayed directly on a mobile phone, explaining that "a map and address of the destination telephone number can be *displayed on the mobile telephone*." Ex. 1041, 4:52-58 (emphasis added). Thus, Sheha discloses that position information for the requesting and target devices may be displayed on at least one of a plurality of wireless telephones. Thus, it is my opinion that Sheha discloses this limitation, and anticipates claim 5.

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

27. Sheha discloses claim 6 or at least renders it obvious. As I discussed above in claims 1a and 1e, Sheha discloses determination of a first and second location.

Sheha also discloses determining a third location associated with one of said plurality of wireless telephones.

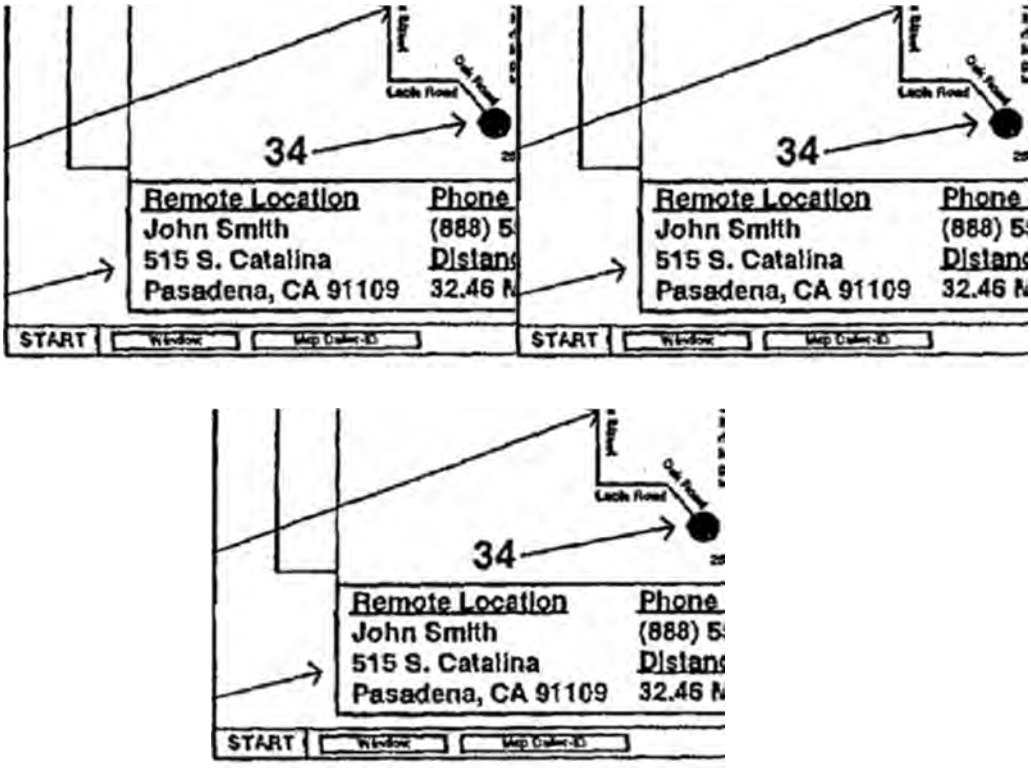
28. Sheha discloses two ways of determining a third location. First, Sheha discloses that for two mobile devices in motion, each device continuously determines and sends its updated position to the ODAS 3 and to the other mobile device. Ex. 1041, 11:37-51. Since a mobile device in motion will have moved some distance from the initial location determination, each position update by a mobile device requires determining a third location associated with one of the plurality of wireless telephones. Second, Sheha discloses that a mobile device can request another device's position information without having to initiate a telephone call. Ex. 1041, 11:55-58. Thus, while mobile phone A is on a call and sharing location information with a mobile device B, Sheha discloses that it can also request the location of mobile device C, such that mobile device C determines a third location. Thus, it is my opinion that Sheha discloses this limitation, and anticipates claim 6.

13. Claim 7: "The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones.

29. Sheha discloses receiving a location and displaying a name of the location on the mobile device. As I discussed above in relation to claim 5, Sheha discloses

receiving said location by at least one of said plurality of wireless telephones, and displaying map information on a wireless telephone.

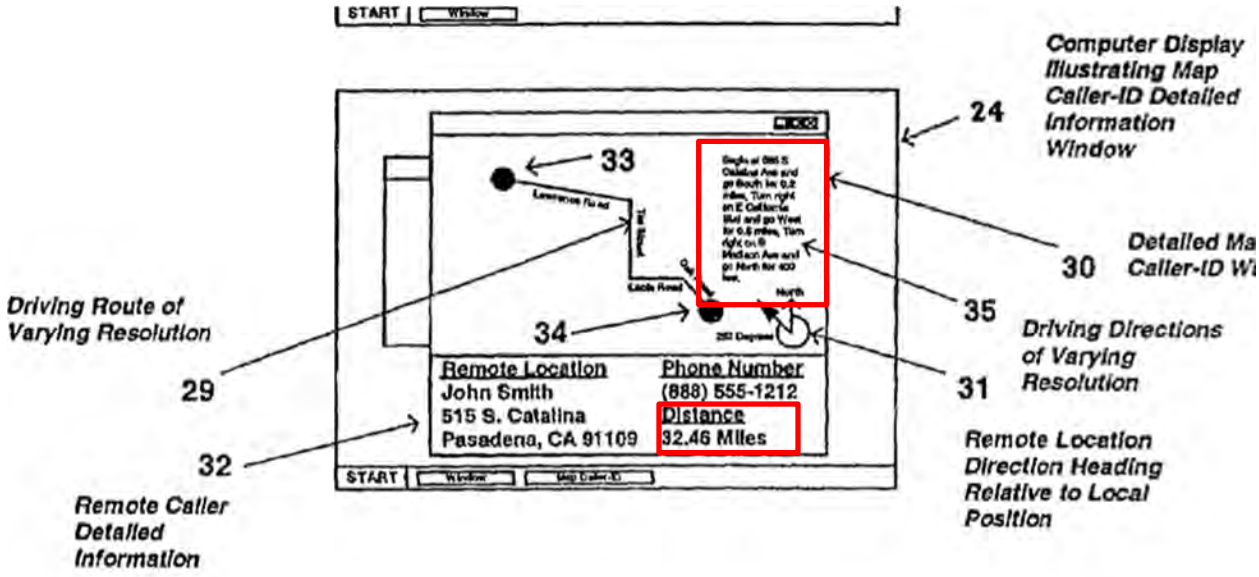
30. Sheha also discloses displaying the name of said location of one of said plurality of wireless telephones. As I discussed above in claim 5, Sheha discloses displaying a Map Caller-ID screen on a wireless phone, which can display "identification information 32" of the location of a wireless phone. Ex. 1041, 9:23-36. As seen in Figure 5 excerpted below, Sheha shows a screen displaying at least two "names," i.e., the caller's name "John Smith," and the city name "Pasadena, CA." Ex. 1041, Fig. 5; *see also* Ex. 1041, 7:44-48 (emphasis added); Ex. 1001, 8:2-6 ('575 Patent specification broadly referencing "information about the surrounding area (e.g. area names, store names, etc.)."). Thus, it is my opinion that Sheha discloses this limitation, and anticipates claim 7.

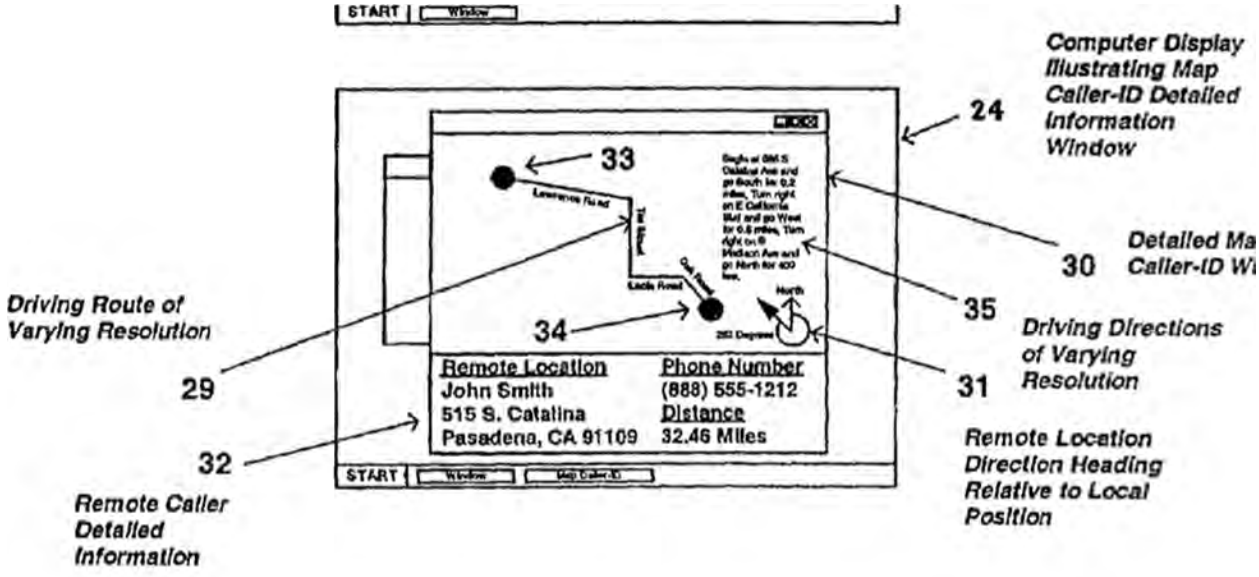


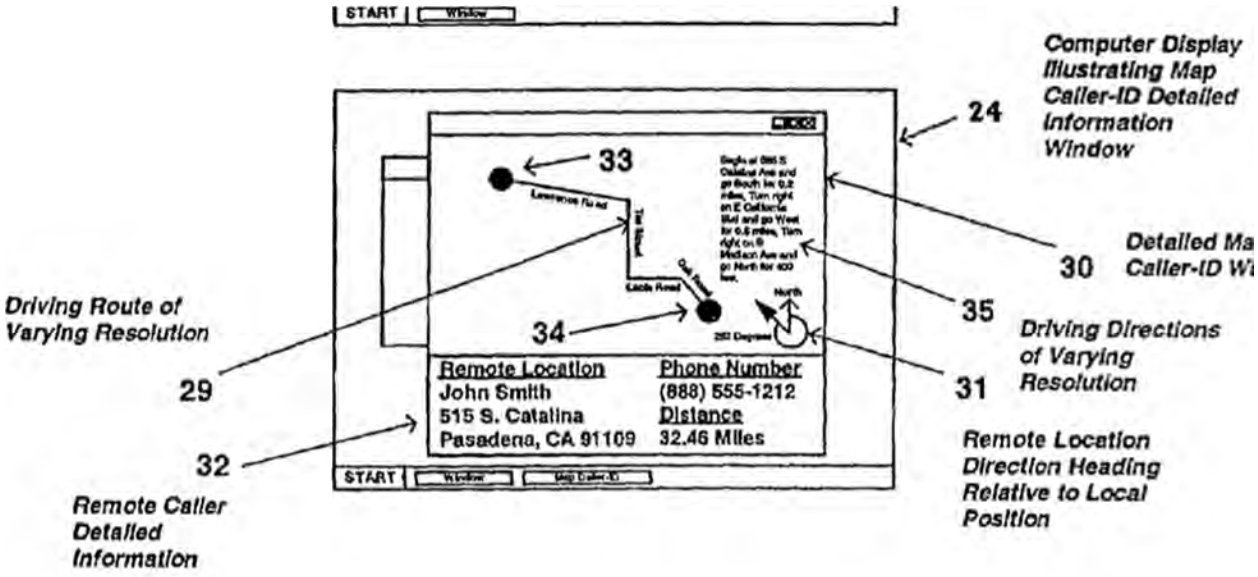
14. Claim 8: "The method of claim 1, further comprising: determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones."

31. Sheha discloses determining a distance between two mobile devices. Sheha discloses determining several different measures of distance between a first and second wireless telephone. First, Sheha discloses providing "line-of-sight (LOS) distance, and curved earth LOS distance measurements between the local and remote positions." Ex. 1041, 3:29-34, 9:30-34. In addition, in Figure 5, Sheha shows the total driving distance between two locations, including distances to travel in miles or feet on each road, in driving directions 35. Ex. 1041, 9:30-34, Fig. 5. Thus, it is my opinion that Sheha discloses this limitation, and anticipates

claim 8.


START
Computer Display Illustrating Map Caller-ID Detailed Information Window
24
33
Detailed Ma
Caller-ID Wi
30
35
Driving Directions of Varying Resolution
Driving Route of Varying Resolution
34
31
29
Remote Location
John Smith
515 S. Catalina
Pasadena, CA 91109
Phone Number
(888) 555-1212
Distance
32.46 Miles
32
Remote Location Direction Heading Relative to Local Position
Remote Caller Detailed Information
START

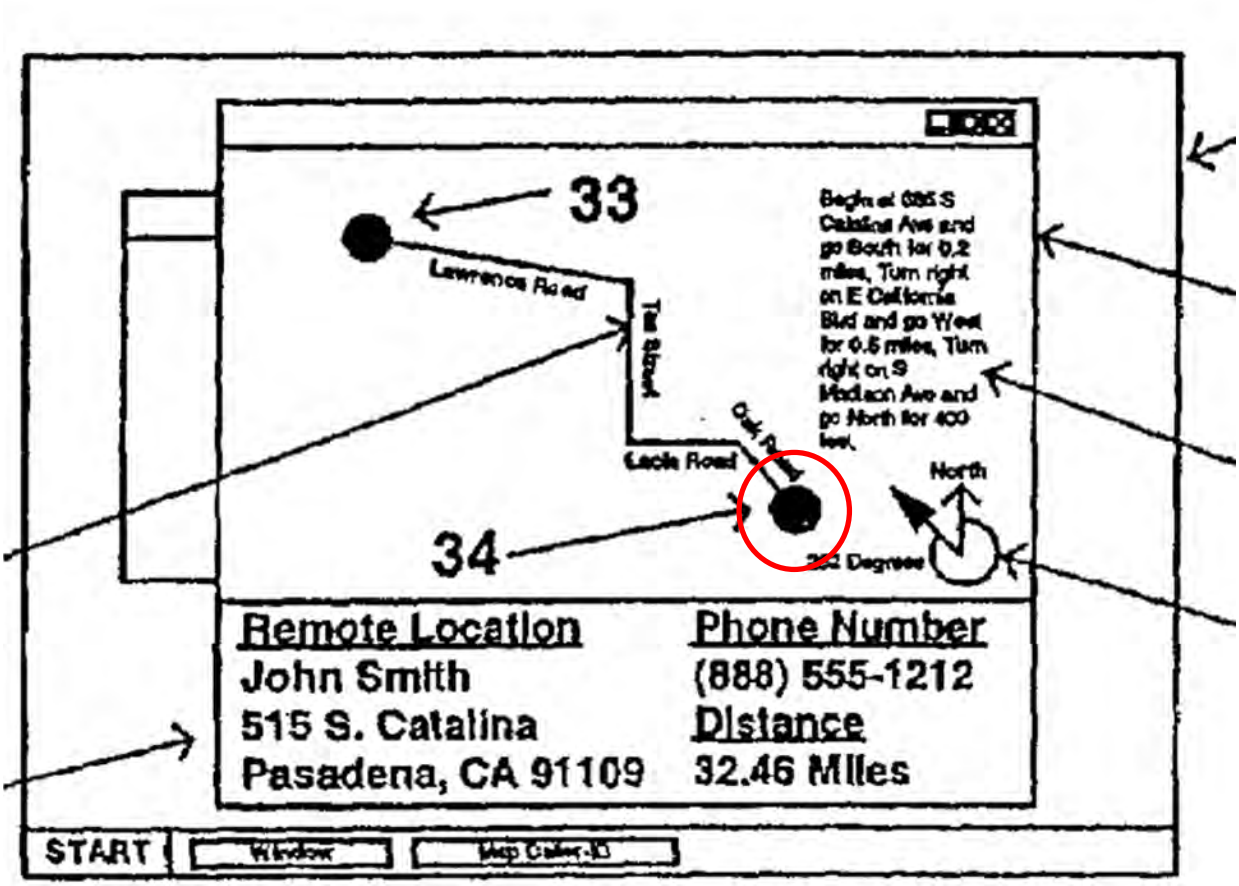

START
Computer Display Illustrating Map Caller-ID Detailed Information Window
24
33
Detailed Ma
Caller-ID Wi
30
35
Driving Directions of Varying Resolution
Driving Route of Varying Resolution
34
31
29
Remote Location
John Smith
515 S. Catalina
Pasadena, CA 91109
Phone Number
(888) 555-1212
Distance
32.46 Miles
32
Remote Location Direction Heading Relative to Local Position
Remote Caller Detailed Information
START

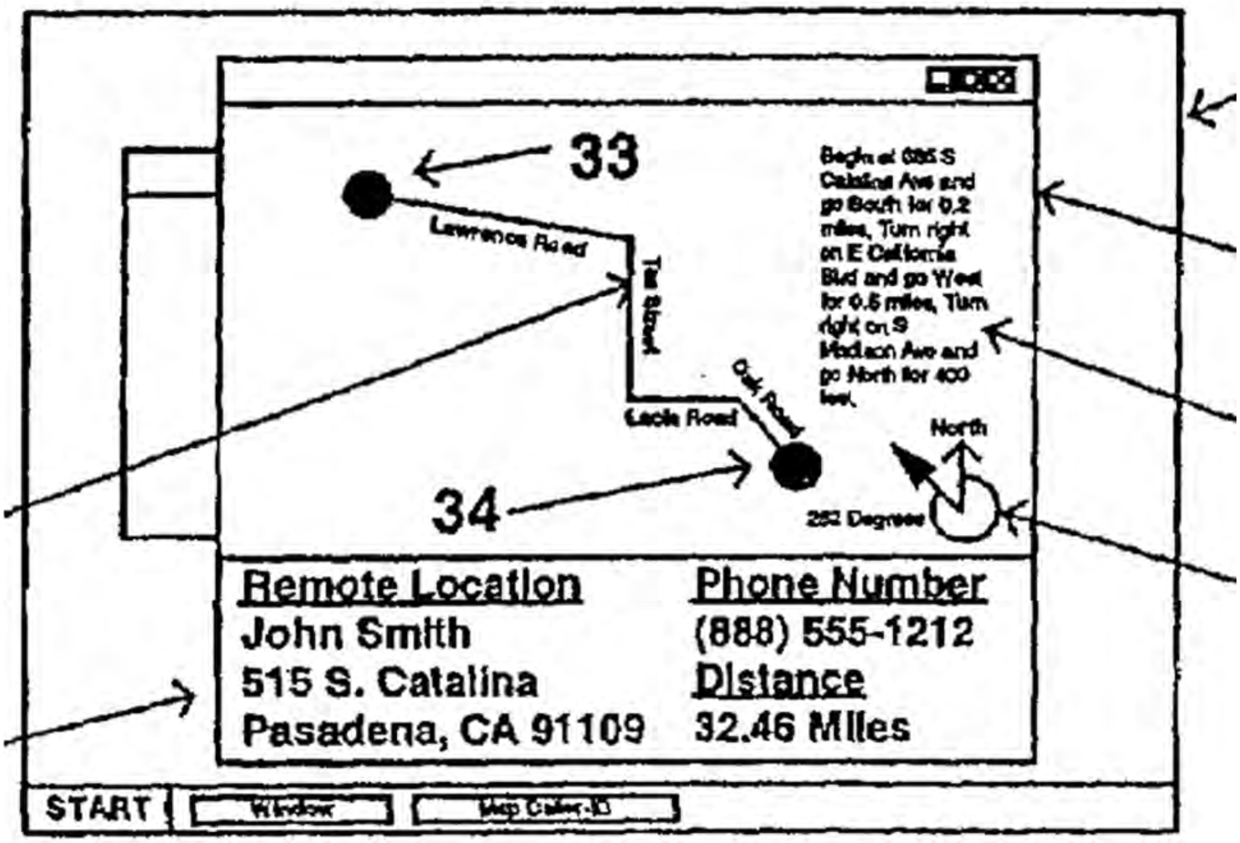


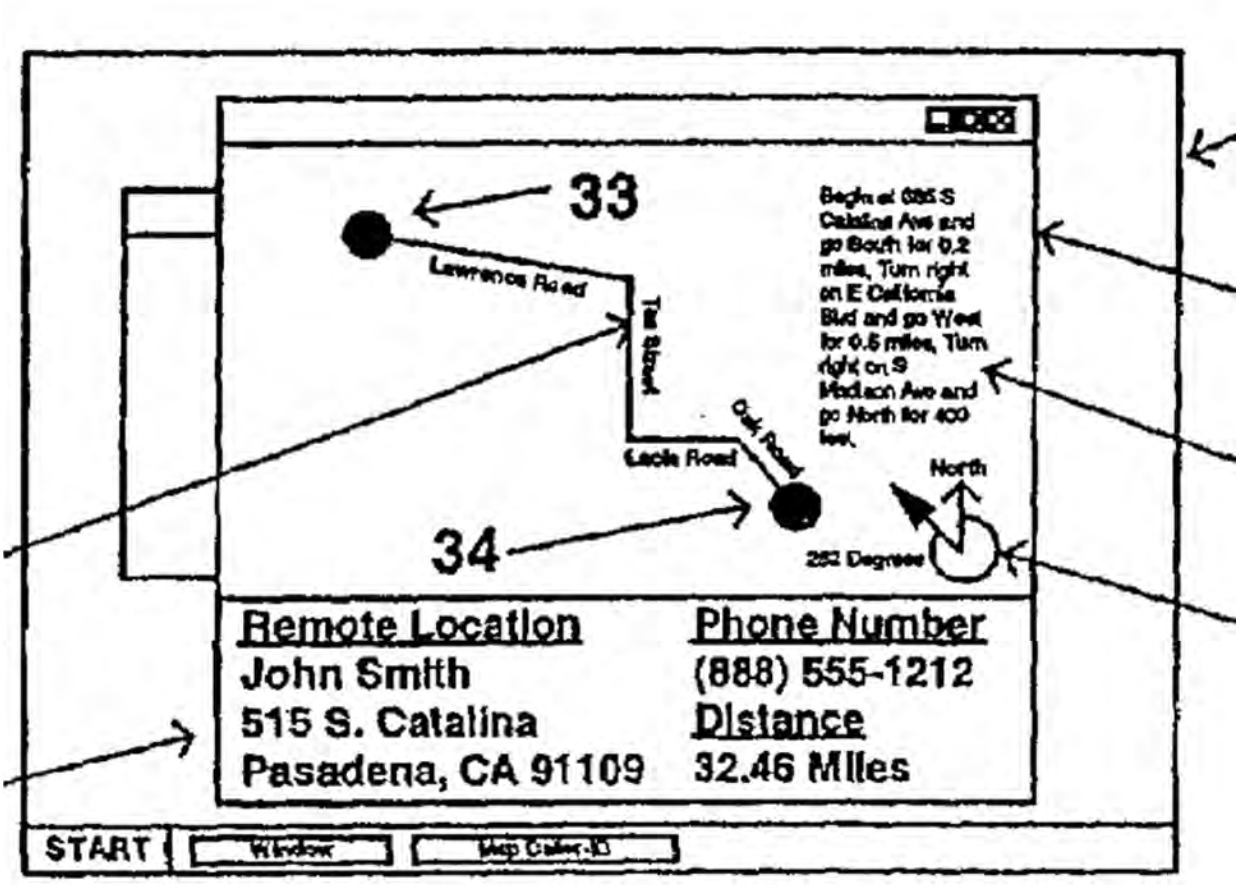
15. Claim 9: "The method of claim 1, further comprising receiving said location by at least one of said plurality of wireless telephones; and displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location."

32. Sheha discloses receiving a location and displaying a map. As I discussed above in relation to claim 5, Sheha discloses receiving said location by at least one of said plurality of wireless telephones, and displaying map information on a wireless telephone, such as the Map Caller-ID screen in Figure 5. Sheha also discloses displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location. Specifically, Sheha discloses that Map Caller-ID window displays both the caller's location 33 and "the [remote] user's location position information, *such as a map location 34 of the destination telephone number*," which is a circular marker in excerpted Figure 5

below. Ex. 1041, 9:23-28. Although the destination device at location 34 is a landline device in Figure 5, Sheha discloses that the network sends Map Caller-ID information to both devices in situations involving two mobile devices. Ex. 1041, 11:37-42 ("[B]oth the originating and destination mobile device receive the Map Caller-ID information."). Thus, it is my opinion that Sheha discloses this limitation, and anticipates claim 9.


33
Lawrence Road
Begin at 555 S Catalina Ave and go South for 0.2 miles, Turn right on E California Blvd and go West for 0.5 miles, Turn right on S Madison Ave and go North for 400 feet.
Lacie Road
North
34
Remote Location
John Smith
515 S. Catalina
Pasadena, CA 91109
Phone Number
(888) 555-1212
Distance
32.46 Miles
START


33
Lawrence Road
Tel Street
Lacie Road
Oak Road
34
North
252 Degrees
Remote Location
John Smith
515 S. Catalina
Pasadena, CA 91109
Phone Number
(888) 555-1212
Distance
32.46 Miles
START
Window



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

33. As I discussed above in claim 1a, Sheha discloses obtaining the location of a first wireless telephone. It is my opinion that the use of physical buttons or touchscreens on wireless telephones to send commands (e.g., SEND and END), was well known in the art, and Sheha and Tanaka each disclose such functionality. Sheha discloses obtaining the location by way of manual input of multiple keystrokes, disclosing that when a user manually inputs a telephone number of

another mobile device, the user can obtain the location of the other device in advance of placing a call. This manual input operation also results in obtaining and updating the location of user's own device. Ex. 1041, 10:66-11:8 ("In the mobile-to-mobile example … a user … *dials or inputs a telephone number of another mobile device 18 c*.") (emphasis added), 11:10-23; *see also* Ex. 1001, Fig. 3, 6:18-35 ('575 Patent specification example of obtaining a location by pressing button 380).

34. Tanaka teaches obtaining location by way of a single manual input. Like Sheha, Tanaka discloses a system related to location sharing. Ex. 1060, Abstract. As discussed in my declaration, Ex. 1021 ¶¶203-207, a POSITA would have been motivated to incorporate Tanaka's teachings into Sheha's system. Tanaka teaches that a user may manually input their location on a mobile device, "either by typing on a keypad or keyboard, or by *using a stylus and tapping a map or location in a table*." Ex. 1060, 3:7-12 (emphasis added); *see also* Ex. 1060, 6:17-24, claims 7, 17, 28. Once the user presses the display, the user's location is obtained and sent to the server. Ex. 1060, 6:23-26, 6:30-34. Thus, it is my opinion that Sheha in view of Tanaka renders this limitation obvious, and that Sheha in view of Tanaka renders claim 10 obvious.

17. Claim 11: "The method of claim 1, further comprising: determining a third location of a device based on the IP

address of said device; and transmitting said location to said device."

35. As I discussed above in relation to claim 6 and claim 1d, Sheha discloses determining a third location of a device, and transmitting said location to said device. Sheha also discloses determining a third location of a device based on the IP address of said device, explaining that IP addresses are commonly used for purposes of real-time location information and direction finding. Ex. 1041, 1:16-22, 2:49-55. Sheha discloses the use of unique identification tokens such as IP addresses to initiate a location request. Ex. 1041, 5:21-26. Thus, Sheha discloses determining a third location of a device based on the IP address of said device.

36. To the extent this claim requires directly deriving a device's location from its IP address, Preston teaches this functionality using a Universal Dynamic IP Address. Ex. 1056, 7:24-41, 7:46-49. Thus, Preston teaches determining a third location of a device based on its reported IP address. As I discussed in my declaration, Ex. 1021 ¶¶196, a POSITA would have been motivated to incorporate Preston's teachings into Sheha's system. Thus, it is my opinion that Sheha alone discloses this limitation, or renders it obvious in view of Preston, and thus Sheha anticipates claim 11 or makes it obvious when Sheha is combined with Preston.

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

37. As I discussed above in relation to claims 6 and 10, Sheha discloses determining a third location of a device, and receiving a manual input for a location respectively. Sheha discloses that the location of a mobile user, including a third user[1], can be obtained by manual input of the mobile device's telephone number. Ex. 1041, 10:66-11:8. Thus, it is my opinion that Sheha discloses this limitation, and that Sheha anticipates claim 12.

19. Claim 13: "A method comprising:"

38. Sheha discloses a method. Ex. 1041, Abstract.

20. Claim 13a: "determining a location of a first wireless telephone"

39. See claim 1a.

21. Claim 13b: "transmitting said location from said first wireless telephone to a remote server"

40. See claim 1b.

22. Claim 13c: "changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

41. See claim 1c.

23. Claim 13d: "transmitting an alert message, comprising information associated with said location, from said remote

[1] I understand for purposes of this proceeding "said third user" is "[a] third user."

server to a user of said list of users wherein said user is within a certain distance of said location"

42. Sheha in view of Tanaka discloses transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location. Tanaka teaches that a user of a mobile device can submit a search request for other users of mobile devices that are geographically close and that match search terms in the search requests, and be automatically notified if an additional user becomes proximate to said first user wherein said additional user meets criterion established in said search." Ex. 1060, Abstract, claims 10, 20, 31; Because Tanaka teaches that the remote server is responsible for "return[ing] search results to said first user," the alert message is likewise transmitted from the remote server to the first user. Ex. 1060, claim 1. Thus, it is my opinion that Sheha alone discloses, or in view of Tanaka renders obvious claim 13d, and Sheha in view of Tanaka renders claim 13 obvious.

24. Claim 13e: "determining a second location associated with said wireless telephone associated with said one user; and"

43. See claim 1e.

25. Claim 13f: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

44. See claim 1f. Thus, it is my opinion that Sheha in view of Tanaka renders claim 13 obvious.

26. Claim 14: "A method comprising"

45. Sheha discloses a method. Ex. 1041, Abstract.

27. Claim 14a: "obtaining a location of a first wireless telephone"

46. See claim 1a.

28. Claim 14b: "transmitting said location from said first wireless telephone to a remote server"

47. See claim 1b.

29. Claim 14c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

48. See claim 1c.

30. Claim 14d: "transmitting said location from said remote server to at least one of said users of said list of users"

49. See claim 1d.

31. Claim 14e: "receiving manual input for a second location"

50. Sheha, and Sheha in view of Tanaka each disclose receiving manual input for a second location. As I discussed above in relation to claim 10, Sheha discloses receiving manual input for a second location in the form of a typed-in phone number, whereas Sheha in view of Tanaka discloses a manual input for a second

location through typing or stylus input. Thus, it is my opinion that Sheha discloses claim 14e or renders it obvious in view of Tanaka, and Sheha anticipates claim 14 or renders it obvious in view of Tanaka.

32. Claim 14f: "determining an identity of a second user for a device by way of a login"

51. Sheha discloses the use of a login to determine the identity of a second user for a device. Specifically, Sheha discloses the use of unique identification tokens "that can be used on a networked server system utilizing authentication and authorization procedures." Ex. 1041, 3:4-10. Sheha also discloses that "every telephone account user has a username and password for the ODAS 3," i.e., a login and a password, and that the "ODAS 3 correlates both the origin and destination telephone users' identifications to verify if the user is signed-on to the ODAS 3 using authentication and authorization protocols." Ex. 1041, 8:38-46. Thus, it is my opinion that Sheha discloses claim 14f, and Sheha anticipates claim 14 or renders it obvious in view of Tanaka.

33. Claim 14g: "transmitting said location to said device, wherein said second user is associated with said manually input second location"

52. As I discussed above in relation to claim 14e, Sheha, as well as Sheha in view of Tanaka disclose regarding a manual input for a second location, which is associated with the second user who made the manual input. Sheha discloses that

the server ODAS 3 transmits the location of each device to the other upon initiation of a phone call, which is initiated when one user "dials or inputs a telephone number of another mobile device." Ex. 1041, 10:66-11:3, 11:37-51. Thus, it is my opinion that Sheha alone discloses claim 14g, and Sheha anticipates claim 14 or renders it obvious in view of Tanaka.

34. Claim 15: "A method comprising"

53. Sheha discloses a method. Ex. 1041, Abstract.

35. Claim 15a: "obtaining a location of a first wireless telephone"

54. See claim 1a.

36. Claim 15b: "transmitting said location from said first wireless telephone to a remote server"

55. See claim 1b.

37. Claim 15c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

56. See claim 1c.

38. Claim 15d: "transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location"

57. See claim 13d.

39. Claim 15e: "determining a second location associated with said wireless telephone associated with said one user; and"

58. See claim 1e.

40. Claim 15f: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

59. See claim 1f. Thus, it is my opinion that Sheha in view of Tanaka renders claim 15 obvious.

41. Claim 16: "The method of claim 15, wherein said changing comprises adding an additional user to said list of users"

60. See claim 2.

42. Claim 17: "The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users"

61. See claim 3.

43. Claim 18: "The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users"

62. See claim 4.

44. Claim 19: "The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user"

63. See claim 6.

45. Claim 20: "The method of claim 15, further comprising: receiving said location by said wireless telephone associated

with said user; and displaying the name of said location on said wireless telephone associated with said user"

64. See claim 7.

46. Claim 21: "The method of claim 15, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user."

65. See claim 8.

47. Claim 22: "The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

66. See claim 9.

48. Claim 23: "The method of claim 15, wherein said changing comprises adding an additional user to said list of users"

67. See claim 2.

49. Claim 24: "The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users"

68. See claim 3.

50. Claim 25: "The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users"

69. See claim 4.

51. Claim 26: "The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user"

70. See claim 6.

52. Claim 27: "The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user"

71. See claim 5.

53. Claim 28: "The method of claim 13, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user"

72. See claim 8.

54. Claim 29: "The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

73. See claim 9.

55. Claim 30: "A method comprising"

74. Sheha discloses a method. Ex. 1041, Abstract.

56. Claim 30a: "obtaining a location of a first wireless telephone"

75. See claim 1a.

57. Claim 30b: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile

associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

76. See claim 1c.

58. Claim 30c: "transmitting said location from said remote server to at least one of said users of said list of users"

77. See claim 1d.

59. Claim 30d: "determining a second location associated with one of said plurality of wireless telephones"

78. See claim 1e.

60. Claim 30e: "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location"

79. See claim 1f.

61. Claim 31: "The method of claim 30, wherein said changing comprises adding an additional user to said list of users."

80. See claim 2.

62. Claim 32: "The method of claim 30, further comprising transmitting the address of said location to said at least one of said users of said list of users"

81. See claim 3.

63. Claim 33: "The method of claim 30, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users"

82. See claim 4.

64. Claim 34: "The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones"

83. See claim 5.

65. Claim 35: "The method of claim 30, further comprising determining a third location associated with one of said plurality of wireless telephones"

84. See claim 6.

66. Claim 36: "The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones"

85. See claim 7.

67. Claim 37: "The method of claim 30, further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones"

86. See claim 8.

68. Claim 38: "A method comprising"

87. Sheha discloses a method. Ex. 1041, Abstract.

69. Claim 38a: "obtaining a location of a first wireless telephone"

88. See claim 1a.

70. Claim 38b: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed

to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

89. See claim 1c.

71. Claim 38c: "transmitting an alert message, comprising information associated with said location from said remote server to a user of said list of users when said user is within a certain distance of said location"

90. See claim 13d.

72. Claim 38d: "determining a second location associated with said wireless telephone associated with said one user"

91. See claim 13e.

73. Claim 38e: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

92. See claim 13f. Thus, it is my opinion that Sheha in view of Tanaka renders claim 38 obvious.

74. Claim 39: "The method of claim 38, wherein said changing comprises adding an additional user to said list of users"

93. See claim 2.

75. Claim 40: "The method of claim 38, further comprising transmitting the address of said location to at least one of said users of said list of users"

94. See claim 3.

76. Claim 41: "The method of claim 38, further comprising: obtaining the address of said location from a remote

information provider; and transmitting the address of said location to at least one of said users of said list of users"

95. See claim 4.

77. Claim 42: "The method of claim 38, further comprising determining a third location associated with said wireless telephone associated with said user"

96. See claim 6.

78. Claim 43: "The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said use"

97. See claim 5.

79. Claim 44: "The method of claim 38, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user"

98. See claim 8.

80. Claim 45: "The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

99. See claim 9.

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

100. See claim 10.

B. Ground 2: Enzmann in combination with Maruyama, Tanaka, and Preston anticipates or renders obvious claims 1-46 under 35 U.S.C. §§ 102, 103.

101. Enzmann anticipates independent claim 14. Enzmann in view of Maruyama renders obvious independent claims 1 and 30, whereas Enzmann in view of Maruyama and Tanaka renders obvious independent claims 13, 15, and 38. It is my opinion that a POSITA would be motivated to combine Enzmann with Maruyama and Tanaka. *See* Ex. 1021, Section IX. Enzmann discloses all but one of the elements of a system as recited in the independent claims, including determining the locations of first and second wireless devices and transmitting location information to authorized requestors. Maruyama discloses the element of "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location," recited in claims 1 and 30, whereas Tanaka discloses the element of "transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location" recited in claim 14. Enzmann, alone or in view of Maruyama and Tanaka also discloses most of the elements recited in the various dependent claims. Preston discloses all remaining elements, and it is my opinion that a POSITA would be motivated to combine these references. *See* Ex. 1021, Section IX. Thus,

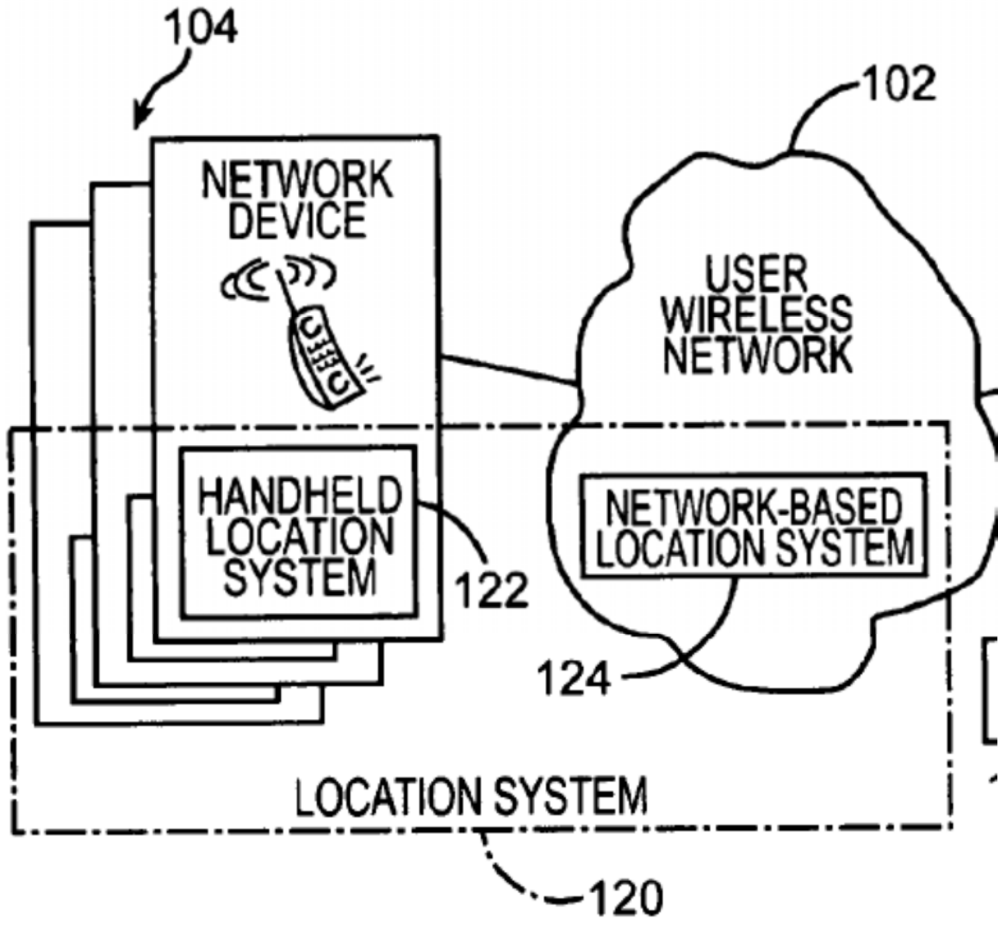
it is my opinion that Enzmann alone or in combination with Tanaka and/or Preston anticipates or renders obvious claims 1-46.

1. Claim 1: "The method comprising:"

102. Enzmann describes a "method for providing a location query service for use with a wireless network that tracks locations of network users." Ex. 1040, claim 1. Thus, it is my opinion that Enzmann in view of Maruyama renders claim 1 obvious.

2. Claim 1a: "obtaining a location of a first wireless telephone"

103. Enzmann discloses that its system provides a location query service for users of wireless handheld devices, including cellular telephones. Ex. 1040, 3:53-61, 5:39-41. The Enzmann system determines the locations of the wireless devices using either location systems incorporated into the wireless devices themselves or using a network-based location system. Ex. 1040, 5:41-50, Fig. 1. Upon receiving a location request from an authorized requester, Enzmann's system obtains the location of the wireless phone in question. Ex. 1040, 2:6-8, 5:2-7, 7:51-57. Thus, it is my opinion that Enzmann discloses claim 1a, and Enzmann in view of Maruyama renders claim 1 obvious.



3. Claim 1b: "transmitting said location from said first wireless telephone to a remote server"

104. Enzmann discloses that after a mobile device determines its position, it transmits its position information to a location server 100. Ex. 1040, 5:2-7, 7:63-8:15. Thus, it is my opinion that Enzmann discloses claim 1b, and Enzmann in view of Maruyama renders claim 1 obvious.

4. Claim 1c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed

to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

105. Enzmann's system allows users to control who is permitted to access their locations by providing a list of authorized requestors to the system. Ex. 1040, 2:35-41. Enzmann discloses that this list of authorized requestors is stored in a memory storage 128 or any network location accessible to location server 100. Ex. 1040, 5:28-34, 7:17-34. Enzmann also discloses that the user of the target device can grant or deny location access rights for requestors who are not on the list of authorized requestors. Ex. 1040, 7:26-58. Although Enzmann does not specify the target user's device that modifies the list, the only device Enzmann associates with the target user is the wireless device. Therefore, in my opinion, to the extent Enzmann does not expressly disclose using said first wireless device to modify location access rights for a requesting device, a POSITA would have found it obvious to do so. Thus, it is my opinion that Enzmann discloses or renders obvious claim 1c, and Enzmann in view of Maruyama renders claim 1 obvious.

5. Claim 1d: "transmitting said location from said remote server to at least one of said users of said list of users"

106. As I discussed above in relation to claim 1a, a mobile device can request the location of another mobile device. Enzmann discloses that if the request is authorized, the system transmits the target device location information to the requester. Ex. 1040, 2:39-41, 5:2-7, 8:65-67. Thus, it is my opinion that Enzmann

discloses claim 1d, and Enzmann in view of Maruyama renders claim 1 obvious.

6. Claim 1e: "determining a second location associated with one of said plurality of wireless telephones"

107. As I discussed above in claim 1a, Enzmann discloses that locations of mobile devices may be obtained. Because Enzmann discloses a system with multiple wireless users on the same system, the system determines a second location whenever a second location request is received, such as if the target device requested – and was authorized to obtain – the location of the requesting device. Ex. 1040, 2:52-60. Thus, it is my opinion that Enzmann discloses claim 1e, and Enzmann in view of Maruyama renders claim 1 obvious.

7. Claim 1f: "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location."

108. Like Enzmann, Maruyama discloses a system related to location sharing. Ex. 1052, Abstract. As I discussed in my declaration, a POSITA would have been motivated to incorporate Maruyama's teachings into Enzmann's system. Ex. 1021, ¶¶184-186. Enzmann discloses providing location information for two wireless telephones. Maruyama discloses displaying directional information representative of directions between the locations of two mobile devices. Ex. 1052, 3:12-20, 6:44-51, 8:39-43. In Figure 5 below, Maruyama shows two users with directional information representative of directions between the locations of the two users,

showing the heading and distance from the location of one user to the other. Ex. 1052, 8:39-43. Thus, it is my opinion that Enzmann in view of Maruyama renders obvious claim 1f, and Enzmann in view of Maruyama renders claim 1 obvious.

FIG. 5

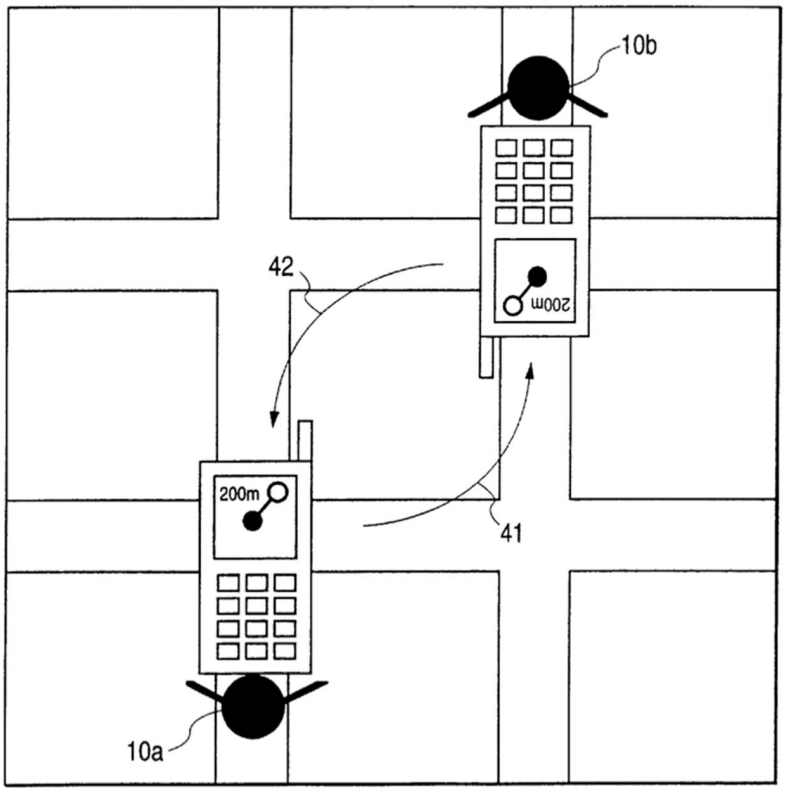


FIG. 5

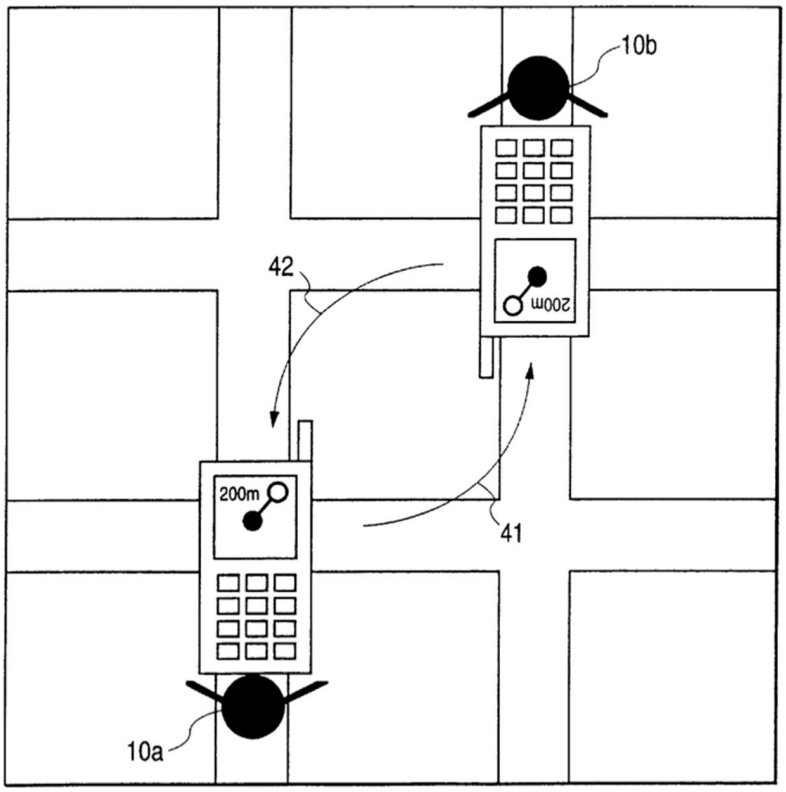
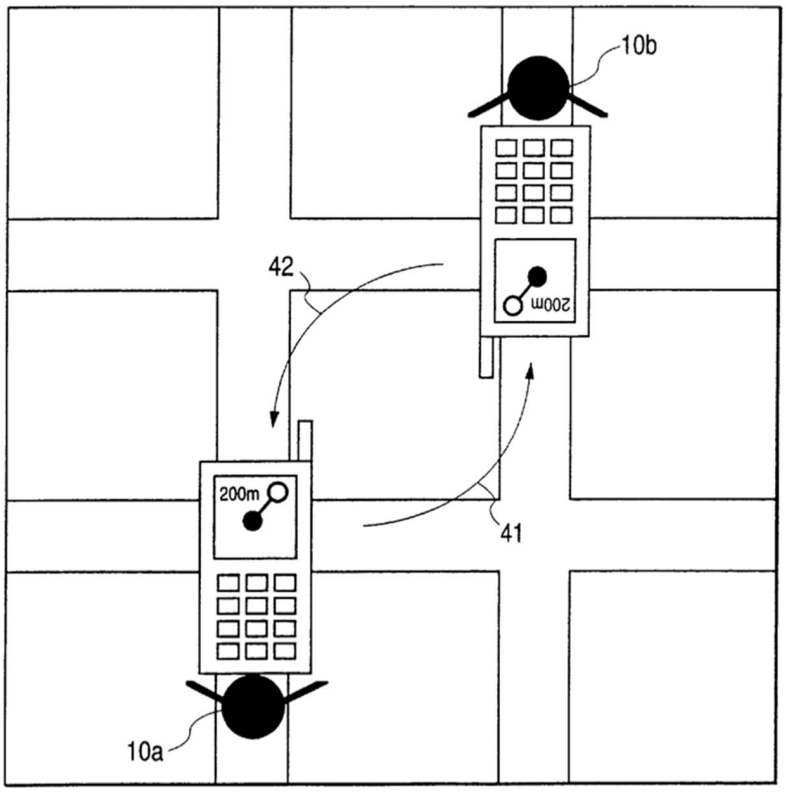


FIG. 5



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

109. Enzmann discloses that a first wireless telephone can direct the server to change a list of users allowed to access location information which is stored on the remote server, as described above in claim 1c. This "changing" operation necessarily includes adding an additional user to said list of users, as users must be added to the list in order to define the list. Thus, it is my opinion that Enzmann discloses this limitation, and that Enzmann in view of Maruyama renders claim 2 obvious.

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

110. Enzmann discloses that mapping converter 126 can "translate raw location information into displayable location information," including a street address. Ex. 1040, 4:39-56, 3:6-13. Enzmann also discloses that mapping converter 126 can be a component connected to location server 100, such that the address is transmitted from the server to the wireless phone user. Ex. 1040, 4:57-66. Thus, it is my opinion that Enzmann discloses this limitation, and Enzmann in view of Maruyama renders claim 3 obvious.

10. Claim 4: "The method of claim 1, further comprising obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users."

111. Enzmann discloses transmitting the address of said location to said at least one of said users of said list of users for at least the same reasons that I stated above in relation to claim 3. Enzmann also discloses obtaining the address of said location from a remote information provider, mapping converter 126, which can be connected to location server 100, as shown in Figure 1 of Ex. 1040, excerpted below. Ex. 1040, 4:57-5:2. Thus, it is my opinion that Enzmann discloses this limitation, and Enzmann in view of Maruyama renders claim 4 obvious.

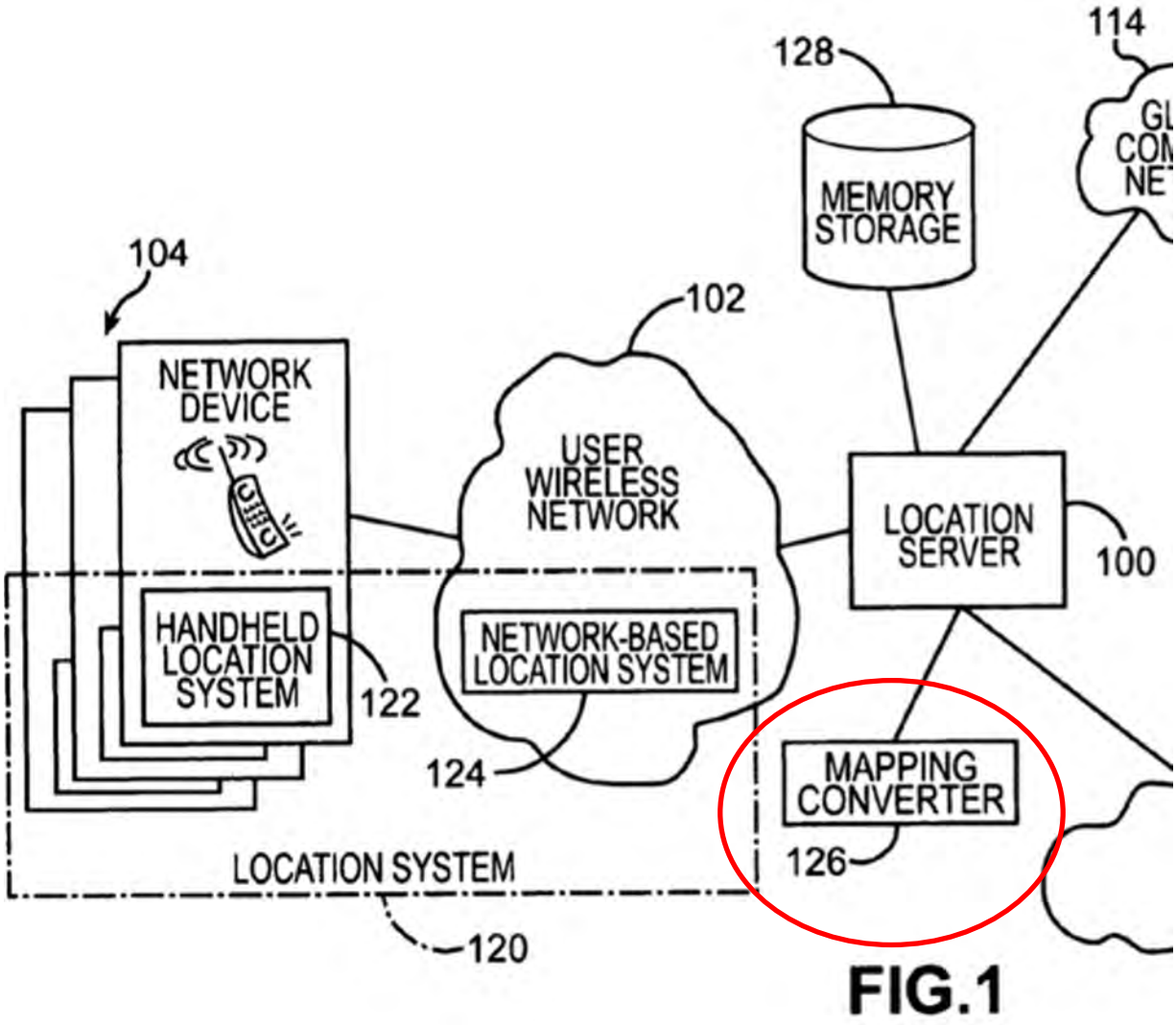

114
128
MEMORY STORAGE
104
102
NETWORK DEVICE
USER WIRELESS NETWORK
LOCATION SERVER
100
HANDHELD LOCATION SYSTEM
122
NETWORK-BASED LOCATION SYSTEM
124
MAPPING CONVERTER
126
LOCATION SYSTEM
120

FIG.1

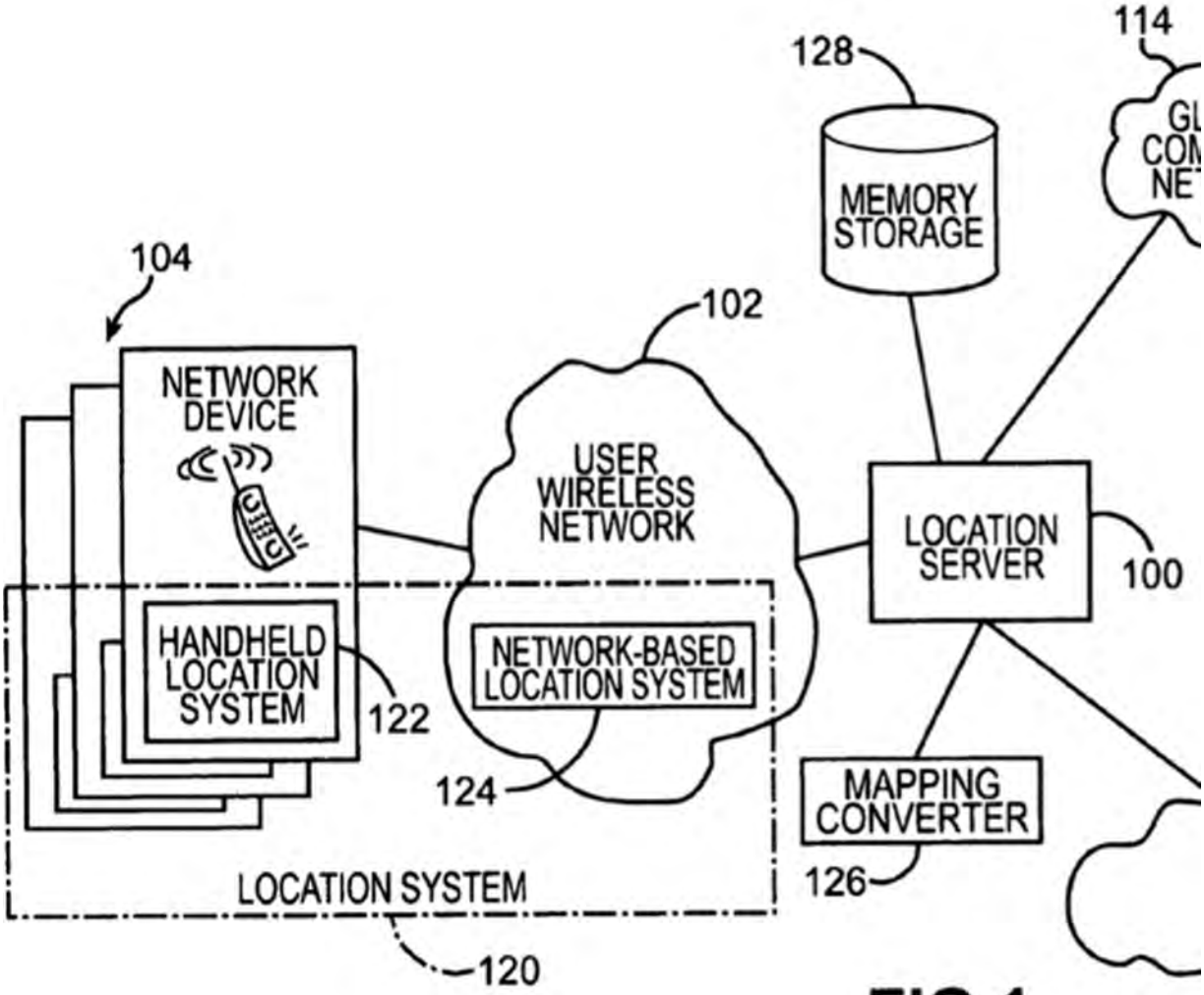

114
128
MEMORY STORAGE
104
102
NETWORK DEVICE
USER WIRELESS NETWORK
LOCATION SERVER
100
HANDHELD LOCATION SYSTEM
122
NETWORK-BASED LOCATION SYSTEM
124
MAPPING CONVERTER
126
LOCATION SYSTEM
120

FIG.1

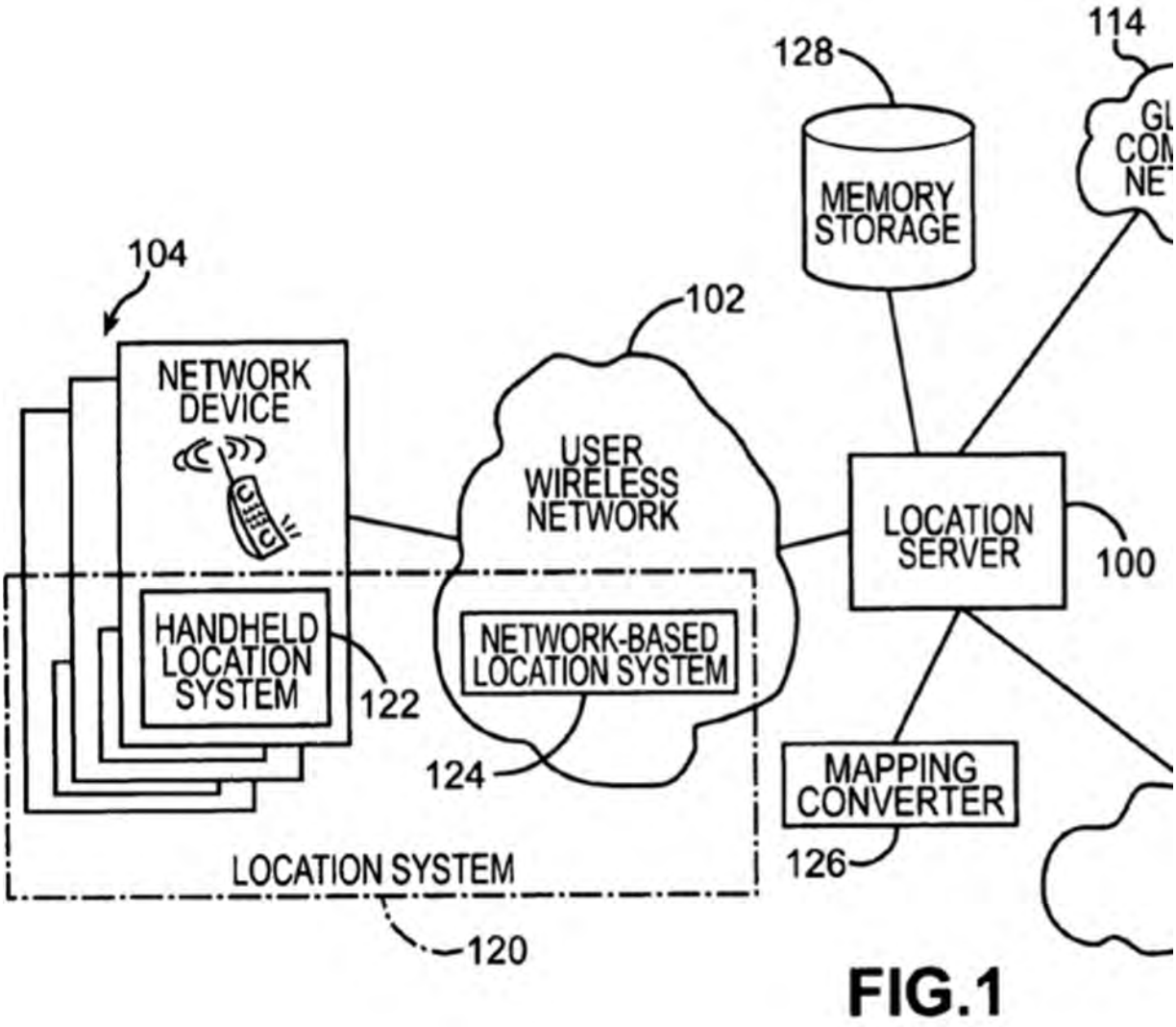


FIG.1

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

112. Enzmann in view of Maruyama discloses receiving and displaying said location on the requesting device. Enzmann discloses that the wireless telephones

receive "displayable" location information. Ex. 1040, 4:67-5:2. As Enzmann explains, "'[d]isplayable' refers to location information easily understood by a typical network user" and includes visual representations of a location. Ex. 1040, 4:46-56. And in Figure 5, Maruyama shows the requesting device displaying the location of the remote device on its screen. Ex. 1052, 8:39-43, Fig. 5. Thus, it is my opinion that Enzmann in view of Maruyama renders this limitation obvious, and Enzmann in view of Maruyama renders claim 5 obvious.

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

113. As I discussed above in claims 1a and 1e, Ex. 1040, Enzmann in view of Maruyama discloses determination of a first and second location. Enzmann also discloses determining a third location associated with one of said plurality of wireless telephones.

114. Enzmann discloses that mobile devices can provide a third location because each mobile device continuously updates its location information, thereby determining a third location associated with one of the plurality of wireless telephones with each update. Ex. 1040, 8:14-19. In addition, Enzmann discloses an embodiment where the server determines and updates the location of a wireless phone, thereby determining a third location associated with that wireless telephone. Ex. 1040, 8:20-36. Thus, it is my opinion that Enzmann discloses this limitation,

and Enzmann in view of Maruyama renders claim 6 obvious.

13. Claim 7: "The method of claim 1, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones.

115. As I discussed above in relation to claim 5, Enzmann discloses receiving said location by at least one of said plurality of wireless telephones as "displayable" location information. Enzmann also discloses that "displayable" location information may include a "building name[] or area name." Ex. 1040, 3:6-12. Thus, it is my opinion that Enzmann discloses this limitation, and Enzmann in view of Maruyama renders claim 7 obvious.

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

116. Maruyama discloses determining the distance between mobile phone users 10a and 10b, shown as 200 meters in Figure 5. Ex. 1052, 6:44-51, 8:39-43. Thus, it is my opinion that Enzmann in view of Maruyama renders this limitation obvious, and Enzmann in view of Maruyama renders claim 8 obvious.

FIG. 5

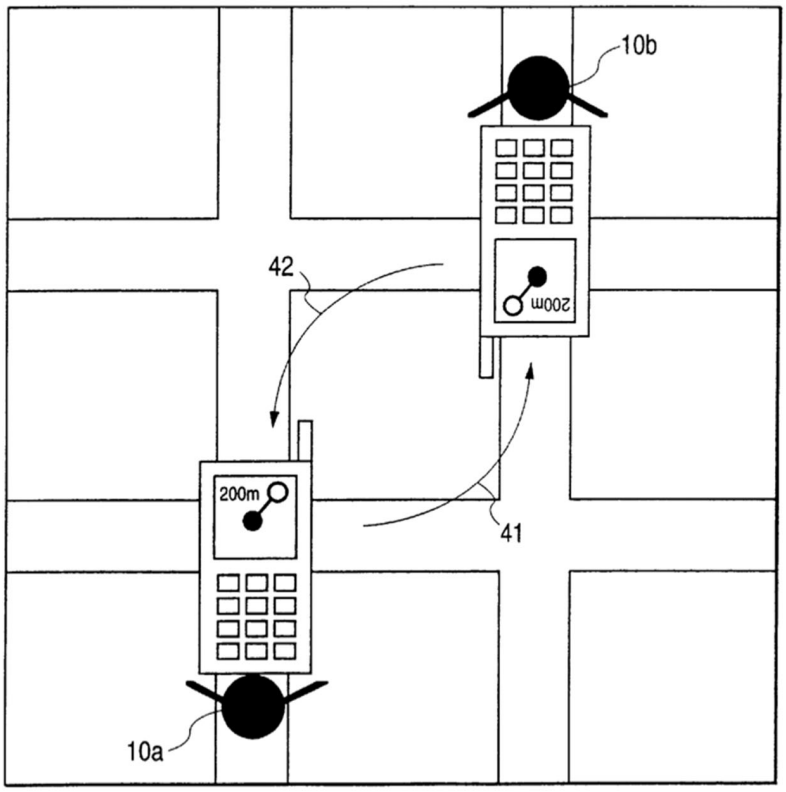


FIG. 5

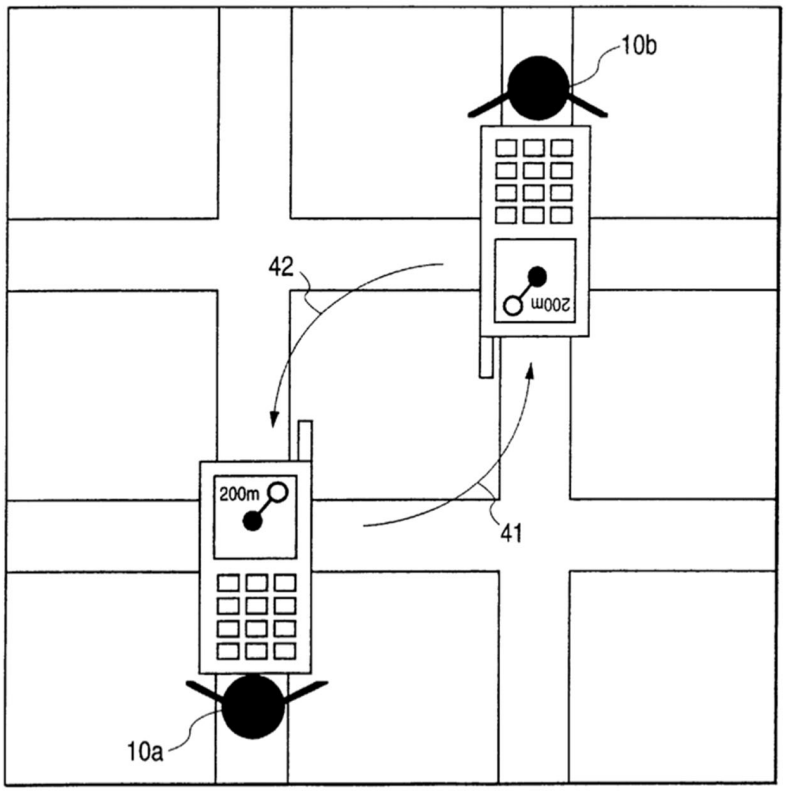
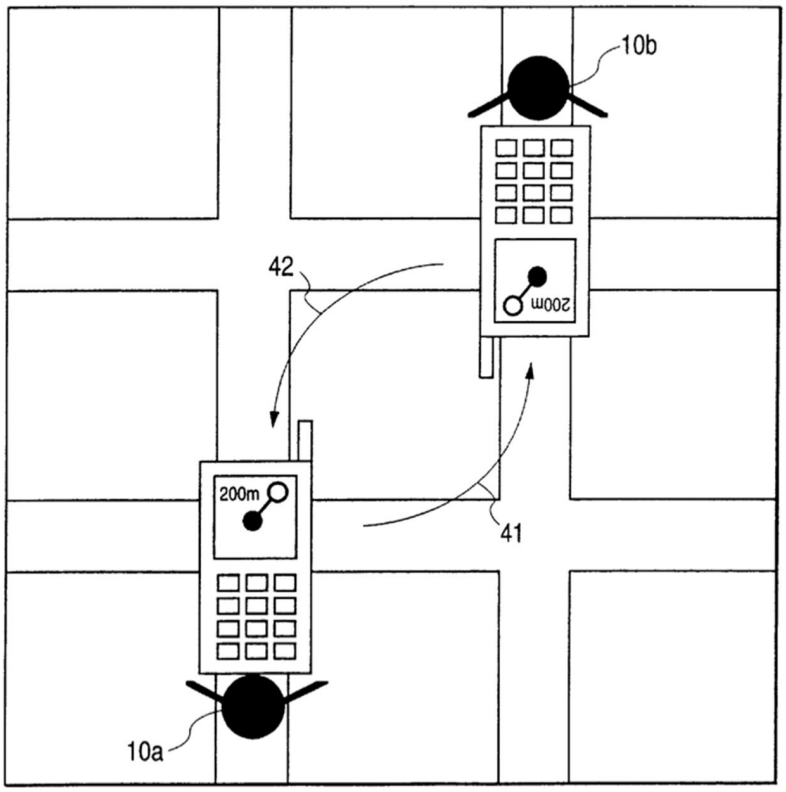


FIG. 5



15. Claim 9: "The method of claim 1, further comprising receiving said location by at least one of said plurality of wireless telephones; and displaying a map on said at least one of said plurality of wireless telephones with a marker representative of said location."

117. As I discussed above in relation to claim 5, Enzmann in view of Maruyama discloses receiving said location by at least one of said plurality of wireless telephones, and displaying map information on a wireless telephone. Maruyama further teaches the map displayed on a wireless telephone can include markers in the form of black and white circles. Ex. 1052, 8:39-43, Fig. 5. Maruyama also teaches that these markers are representative of the location of a wireless

telephone. Ex. 1052, 8:39-43, Fig. 5. Thus, it is my opinion that Enzmann in view of Maruyama renders this limitation obvious, and Enzmann in view of Maruyama renders claim 9 obvious.

FIG. 5

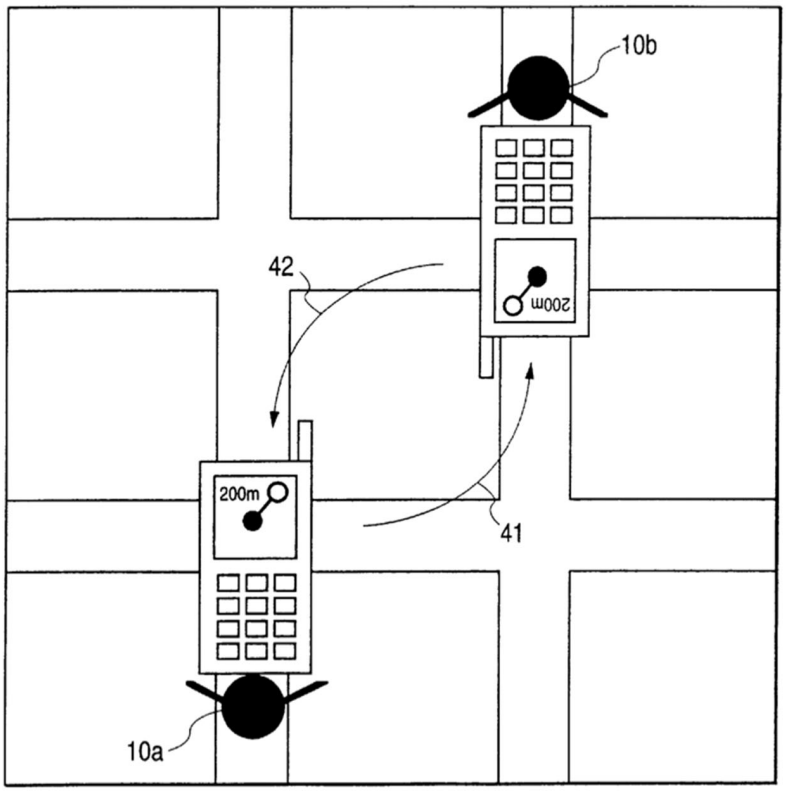


FIG. 5

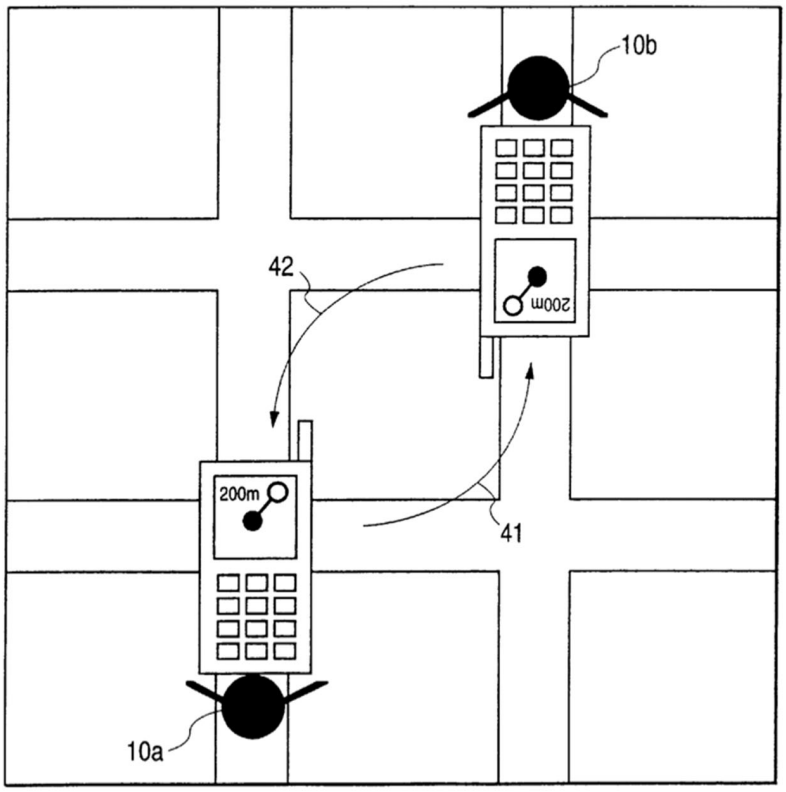
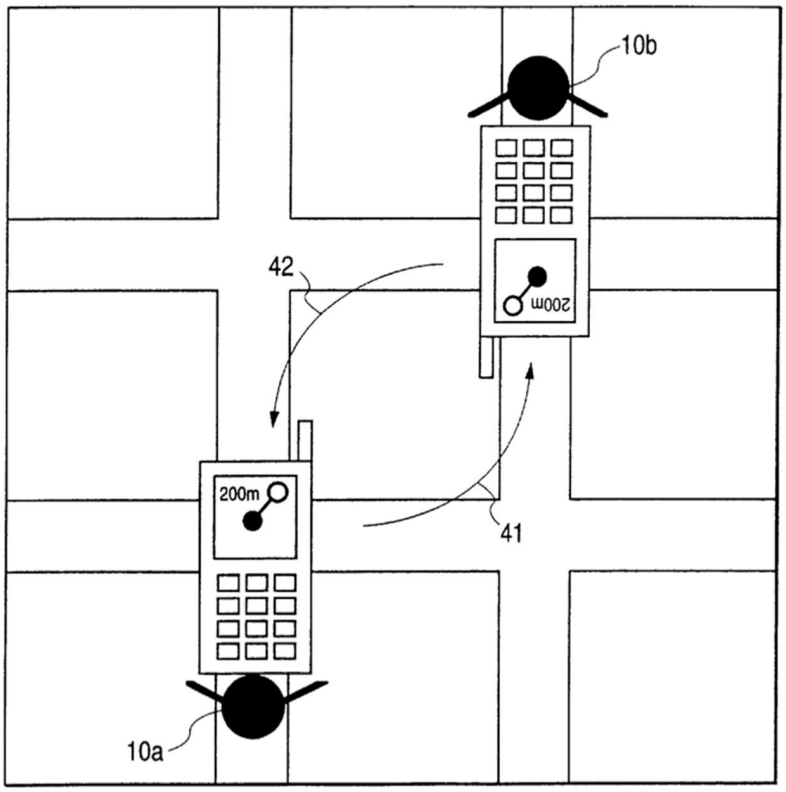


FIG. 5



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

118. As I discussed above in claim 1a, Enzmann discloses obtaining the location of a first wireless telephone. Enzmann additionally discloses that a user may obtain a location by way of manual input on a mobile device. Ex. 1040, 6:57-62. Tanaka also discloses obtaining a location by way of manual input on a mobile device. Like Enzmann, Tanaka discloses a system related to location sharing. Ex. 1060, Abstract. As discussed in my declaration, Ex. 1021 ¶¶203-207, a POSITA would

have been motivated to incorporate Tanaka's teachings into Enzmann's system. As I discussed above in Ground 1 claim 10, Tanaka teaches a variety of ways a user may manually input their location on a mobile device with a single input, including by using a stylus or tapping a map. Ex. 1060, 3:7-12. Ex. 1060, 3:7-12, 6:17-24, 6:23-26. As I discussed above, it would have been obvious to include Tanaka's functionality with Enzmann's system. Section VI.B, *supra*. Thus, it is my opinion that Enzmann in view of Tanaka renders this limitation obvious, and Enzmann in view of Maruyama and Tanaka renders claim 10 obvious.

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

119. As I discussed above in claim 6 and claim 1d, Enzmann in view of Maruyama discloses determining a third location of a device, and transmitting said location to said device. Enzmann also discloses determining a third location of a device based on the IP address of said device. Ex. 1040, 2:23-36.

120. To the extent this claim requires directly deriving a device's location from its IP address, Preston teaches this functionality for reasons discussed above in Ground 1 claim 11. As I discussed in my declaration, Ex. 1021 ¶¶196, a POSITA would have been motivated to incorporate Preston's teachings into Enzmann's system. Thus, it is my opinion that Enzmann in view of Maruyama and/or Preston

renders this limitation obvious, and Enzmann in view of Maruyama and/or Preston renders claim 11 obvious.

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

121. As I discussed above in relation to claim 6, Enzmann in view of Maruyama discloses determining a third location of a device. As I discussed above in claim 10, Enzmann in view of Maruyama, and Enzmann in view of Maruyama and Tanaka each disclose receiving a manual input for a location. Enzmann discloses that the location of a given mobile user, including a third user, can be obtained by manual input of the mobile device's telephone number. Ex. 1060, 10:66-11:8. Thus, it is my opinion that Enzmann in view of Maruyama and/or Tanaka renders this limitation obvious, and Enzmann in view of Maruyama and/or Tanaka renders claim 12 obvious.

19. Claim 13: "A method comprising:"

122. Enzmann discloses a method. Ex. 1041, Abstract.

20. Claim 13a: "determining a location of a first wireless telephone"

123. See claim 1a.

21. Claim 13b: "transmitting said location from said first wireless telephone to a remote server"

124. See claim 1b.

22. Claim 13c: "changing a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

125. See claim 1c.

23. Claim 13d: "transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location"

126. Enzmann discloses that a user could configure an instant messaging screen "to display only the friends of that user who are in the same city as the user." Ex. 1040, 9:15-19. A friend's appearance on the instant messaging screen would constitute an "alert message" comprising information associated with said location and informing the user that the friend was within a certain distance of said location, i.e., within the same city.

127. To the extent Enzmann does not expressly teach an "alert message," Tanaka teaches an alert message transmitted from the remote server As I discussed above in Ground 1, claim 13d. Ex. 1060, claims 10, 20, 31. Thus, Enzmann discloses this limitation or makes it obvious in view of Tanaka. Thus, it is my opinion that Enzmann alone discloses claim 13d, or Enzmann in view of Tanaka renders claim 13d obvious, and Enzmann in view of Maruyama and/or Tanaka renders claim 13 obvious.

24. Claim 13e: "determining a second location associated with said wireless telephone associated with said one user; and"

See claim 1e.

25. Claim 13f: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

128. See claim 1f (discussing how Enzmann and Maruyama render this limitation obvious). Thus, it is my opinion that Enzmann in view of Maruyama and/or Tanaka renders claim 13 obvious.

26. Claim 14: "A method comprising"

129. Enzmann discloses a method. Ex. 1041, Abstract.

27. Claim 14a: "obtaining a location of a first wireless telephone"

130. See claim 1a.

28. Claim 14b: "transmitting said location from said first wireless telephone to a remote server"

131. See claim 1b.

29. Claim 14c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

132. See claim 1c.

30. Claim 14d: "transmitting said location from said remote server to at least one of said users of said list of users"

133. See claim 1d.

31. Claim 14e: "receiving manual input for a second location"

134. As I discussed above in claim 10, Enzmann, and Enzmann in view of Tanaka each disclose receiving manual input for a second location. Thus, it is my opinion that Enzmann alone discloses claim 14e, or renders it obvious in view of Tanaka renders, and Enzmann anticipates claim 14 or renders it obvious in view of Tanaka.

32. Claim 14f: "determining an identity of a second user for a device by way of a login"

135. Enzmann discloses the use of a login to determine the identity of a second user for a device. Specifically, Enzmann discloses that a requestor's query includes "includes at least an identification of the requestor." Ex. 1040, 6:42-50. Enzmann also discloses that such an identification could be "a name … or electronic mail (email) address." Ex. 1040, 2:24-27. Because such forms of identification, particularly names and email addresses, such as in conjunction with passwords, were regularly used as login information in March 2002, Enzmann discloses determining an identity of a second user for a device by way of a login. Thus, it is my opinion that Enzmann discloses claim 14f, and that Enzmann anticipates claim 14 or renders it obvious in view of Tanaka.

33. Claim 14g: "transmitting said location to said device, wherein said second user is associated with said manually input second location"

136. Enzmann discloses transmitting location information to the requestor's device once the location server determines the requestor's user is authorized to receive the location information. Ex. 1040, 3:17-23, 8:65-67. Thus, it is my opinion that Enzmann discloses claim 14g, and that Enzmann anticipates claim 14 or renders it obvious in view of Tanaka.

34. Claim 15: "A method comprising"

137. Enzmann discloses a method. Ex. 1041, Abstract.

35. Claim 15a: "obtaining a location of a first wireless telephone"

138. See claim 1a.

36. Claim 15b: "transmitting said location from said first wireless telephone to a remote server"

139. See claim 1b.

37. Claim 15c: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

140. See claim 1c.

38. Claim 15d: "transmitting an alert message, comprising information associated with said location, from said remote server to a user of said list of users wherein said user is within a certain distance of said location"

141. See claim 13d.

39. Claim 15e: "determining a second location associated with said wireless telephone associated with said one user; and"

142. See claim 1e.

40. Claim 15f: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

143. See claim 1f. Thus, it is my opinion that Enzmann in view of Maruyama and/or Tanaka renders claim 15 obvious.

41. Claim 16: "The method of claim 15, wherein said changing comprises adding an additional user to said list of users"

144. See claim 2.

42. Claim 17: "The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users"

145. See claim 3.

43. Claim 18: "The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users"

146. See claim 4.

44. Claim 19: "The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user"

147. See claim 6.

45. Claim 20: "The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user"

148. See claim 7.

46. Claim 21: "The method of claim 15, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user."

149. See claim 8.

47. Claim 22: "The method of claim 15, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

150. See claim 9.

48. Claim 23: "The method of claim 15, wherein said changing comprises adding an additional user to said list of users"

151. See claim 2.

49. Claim 24: "The method of claim 15, further comprising transmitting the address of said location to at least one of said users of said list of users"

152. See claim 3.

50. Claim 25: "The method of claim 15, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to at least one of said users of said list of users"

153. See claim 4.

51. Claim 26: "The method of claim 15, further comprising determining a third location associated with said wireless telephone associated with said user"

154. See claim 6.

52. Claim 27: "The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said user"

155. See claim 5.

53. Claim 28: "The method of claim 13, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user"

156. See claim 8.

54. Claim 29: "The method of claim 13, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

157. See claim 9.

55. Claim 30: "A method comprising"

158. Enzmann discloses a method. Ex. 1041, Abstract.

56. Claim 30a: "obtaining a location of a first wireless telephone"

159. See claim 1a.

57. Claim 30b: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile

associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

160. See claim 1c.

58. Claim 30c: "transmitting said location from said remote server to at least one of said users of said list of users"

161. See claim 1d.

59. Claim 30d: "determining a second location associated with one of said plurality of wireless telephones"

162. See claim 1e.

60. Claim 30e: "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and said second location"

163. See claim 1f.

61. Claim 31: "The method of claim 30, wherein said changing comprises adding an additional user to said list of users."

164. See claim 2.

62. Claim 32: "The method of claim 30, further comprising transmitting the address of said location to said at least one of said users of said list of users"

165. See claim 3.

63. Claim 33: "The method of claim 30, further comprising: obtaining the address of said location from a remote information provider; and transmitting the address of said location to said at least one of said users of said list of users"

166. See claim 4.

64. Claim 34: "The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying said location on said at least one of said plurality of wireless telephones"

167. See claim 5.

65. Claim 35: "The method of claim 30, further comprising determining a third location associated with one of said plurality of wireless telephones"

168. See claim 6.

66. Claim 36: "The method of claim 30, further comprising: receiving said location by at least one of said plurality of wireless telephones; and displaying the name of said location on said at least one of said plurality of wireless telephones"

169. See claim 7.

67. Claim 37: "The method of claim 30, further comprising determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones"

170. See claim 8.

68. Claim 38: "A method comprising"

171. Enzmann discloses a method. Ex. 1041, Abstract.

69. Claim 38a: "obtaining a location of a first wireless telephone"

172. See claim 1a.

70. Claim 38b: "changing, at the direction of said first wireless telephone, a list of users on said remote server for a profile associated with said first wireless telephone that are allowed

to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"

173. See claim 1c.

71. Claim 38c: "transmitting an alert message, comprising information associated with said location from said remote server to a user of said list of users when said user is within a certain distance of said location"

174. See claim 13d.

72. Claim 38d: "determining a second location associated with said wireless telephone associated with said one user"

175. See claim 13e.

73. Claim 38e: "providing directional information to said wireless telephone associated with said user, wherein said directional information is representative of directions between said location and said second location"

176. See claim 13f. Thus, it is my opinion that Enzmann in view of Maruyama and/or Tanaka renders claim 38 obvious.

74. Claim 39: "The method of claim 38, wherein said changing comprises adding an additional user to said list of users"

177. See claim 2.

75. Claim 40: "The method of claim 38, further comprising transmitting the address of said location to at least one of said users of said list of users"

178. See claim 3.

76. Claim 41: "The method of claim 38, further comprising: obtaining the address of said location from a remote

information provider; and transmitting the address of said location to at least one of said users of said list of users"

179. See claim 4.

77. Claim 42: "The method of claim 38, further comprising determining a third location associated with said wireless telephone associated with said user"

180. See claim 6.

78. Claim 43: "The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying the name of said location on said wireless telephone associated with said use"

181. See claim 5.

79. Claim 44: "The method of claim 38, further comprising determining the distance between said first wireless telephone and said wireless telephones associated with said user"

182. See claim 8.

80. Claim 45: "The method of claim 38, further comprising: receiving said location by said wireless telephone associated with said user; and displaying a map on said wireless telephone associated with said user, wherein a marker is displayed on said map that is representative of said location"

183. See claim 9.

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

184. See claim 10.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 2

TABLE OF CONTENTS

I. U.S. Patent No. 9,204,283

A. Summary of the ’283 Patent

1. Generally, the description of the ’283 Patent addresses determining and sharing a location of a wireless device, such as via the Global Positioning System (“GPS”). Ex.1002, 1:18-28. It alleges that device locationing is rarely used, and so it purports to provide functionality to allow one cellphone to obtain location information from another user’s cellphone. Ex.1002, 1:31-33, 1:38-43.

2. To allow location sharing, the ’283 Patent describes that cellphones can share their locations with a remote system, from which other users can obtain the locations. Ex.1002, 5:11-30. However, the ’283 Patent allows a user to restrict access to their location by identifying authorized users. *Id*. Thus, users may specify which other users may obtain their location information. Ex.1002, 3:22-30.

3. Figure 2 depicts a method to obtain another user’s location, which generally includes sending a request for a location, determining whether the user is authorized, and, if so, providing the location to the requestor.

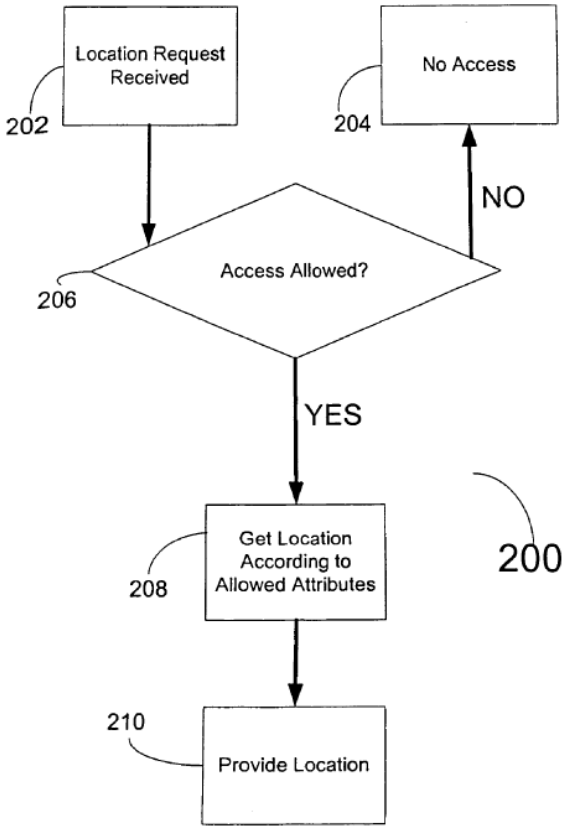


FIG. 2

4. To perform this functionality, the ’283 Patent describes that a user may be required to manually enter a login and password, which may then be used to identify the user and establish whether they are authorized to obtain the requested location information. Ex.1002, 9:63-10:6. After supplying the login and password as well as the request, the device may provide a screen to indicate the request is being processed and then may provide a further display screen once the location information has been received. Ex.1002, 7:14-25 Fig. 5-6.

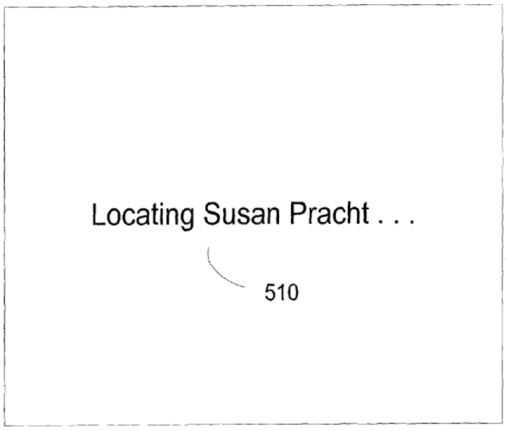


FIG. 5

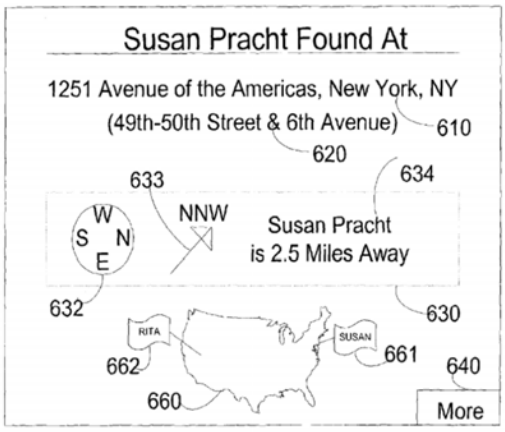


FIG. 6

B. Relevant Prosecution History of the ’283 Patent

5. During the extended prosecution of the ’283 Patent over 7 office actions through 5 years of prosecution, the applicant predominantly argued for patentability based on claimed functionality that the Examiner found to be well-known and conventional, such as displaying lists of users and manual logins, passwords, and selections of users. See, e.g., Ex.1012, pp. 124-127, 161-165, 201-204, 244-247, 314-316 (Applicant’s remarks); Ex.1012, pp. 136-137, 175, 215-

216, 260-261, 288, and 326-329 (Examiner remarks). After making minor amendments to rearrange claim limitations or to specify that logins and passwords are manually input, the applicant amended the independent claims to include most of the recitations found in claim element 1e, quoted above, and subsequently agreed to an Examiner's amendment adding claim element 1f. Ex.1012, pp. 368-371, 427-428. The Examiner subsequently allowed the application without comment, other than to say that the allowed independent claims "possess a unique combination of limitations that is not sufficiently taught or suggested by the prior art." Ex.1012, p. 371. However, it is my opinion that prior art not considered by the examiner renders all claims invalid.

II. Claims of the '283 Patent

1. A method comprising:

displaying on a first wireless telephonic device a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephonic devices;

receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users;

receiving on said first wireless telephonic device an input in a form of a login and a second manual input in a form of a password;

determining whether to allow access of location information for said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users, wherein said determination includes identifying said user of said first wireless telephonic device from said plurality of users using said login and determining said password is associated with said login and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephonic device, and said first wireless telephonic device is operable to assign location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device;

transmitting said location information from a server to said first wireless telephonic device; and

displaying said location information on said first wireless device.

2. The method of claim 1, wherein a positioning system is utilized to provide said location information.

3. The method of claim 1, wherein said selection occurs on a first display screen and a second display screen is provided on said first wireless telephonic device during said determination.

4. The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device.

5. The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device, and a fourth display screen is provided that includes an option to obtain directions from said first wireless telephonic device to said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users.

6. The method of claim 1, further comprising receiving a third manual input, wherein said first wireless telephonic device assigned location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device and said third manual input modifies said location access rights.

7. The method of claim 1, wherein a triangulation process is utilized to provide said location information.

8. A method comprising:

displaying on a wireless device a first name associated to a first wireless telephonic device and a second name associated to a second wireless telephonic device;

accepting a selection of said first name on said wireless device;

receiving manual input entered into said wireless device that includes a login and a password;

determining whether to transmit location information associated to said first wireless telephonic device from a server to said wireless device, wherein said determining includes performing an identification process based, at least in part, on said manual input to identify the user of said wireless device and determining whether said first wireless telephonic device has provided access rights for said location information for said identified user and said server is located remotely from said wireless device, said first wireless telephonic device, and said second wireless telephonic device, and said wireless device is operable to assign location access rights to said first wireless telephonic device for obtaining a location of said wireless device;

transmitting said location information to said wireless device based on said determination; and

displaying said location information on said wireless device.

9. The method of claim 8, wherein a positioning system is utilized to provide said location information.

10. The method of claim 8, wherein said selection occurs on a first display screen and a second display screen is provided on said wireless device during said determination.

11. The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, and a third display screen is provided on said wireless device after said location information is transmitted to said wireless device.

12. The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, a third display screen is provided on said wireless device after said location information is transmitted to said wireless device, and a fourth display screen is provided that includes an option to obtain directions from said wireless telephonic device to said first wireless telephonic device.

13. The method of claim 8, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device and said third manual input modifies said location access rights.

14. The method of claim 3, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device, said third manual input modifies said location access rights, and determining a travel time between said wireless device and said first wireless telephonic device.

15. A method comprising:

accepting on a first wireless device a manual selection representative of a second wireless device from a list representative of a plurality of wireless devices;

locating said second wireless device;

determining on a server whether said second wireless device has provided permission for said first wireless device to locate said second wireless device based, at least in part, on an identification of a login, that identifies the user of said first wireless device from a plurality of users, and password received by said first wireless device that is associated with said login and determining whether said user is associated with said permission, and said first wireless device is operable to assign a second permission to said second wireless device for obtaining second location information of said first wireless device;

providing location information to said first wireless device based on said determination; and

displaying a map on said first wireless device with a marker representative of the location of said second wireless device.

16. The method of claim 15, wherein a positioning system is utilized to provide said location information.

17. The method of claim 15, wherein said password is received on a first display screen.

18. The method of claim 15, wherein said password is received on a first display screen and said login is received on a second display screen.

19. The method of claim 15, wherein said manual selection occurs on a first display screen and a second display screen is provided on said first wireless device during said determination.

20. The method of claim 15, wherein said manual selection occurs on a first display screen, a second display screen is provided on said first wireless device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless device.

III. Claim Construction

6. I have been informed and understand that in an *inter partes* review

claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

7. In my opinion the claims of the ’283 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of how the Claims are Unpatentable

8. It is my opinion that each of the claims of the ’283 Patent are invalid based on my analysis below. Each of the claims recites functionality that was well-known by the March 25, 2002 priority date for the ’283 Patent. The Sheha and Enzmann references specifically discuss the vast majority of the claim limitation, but even where they do not, the claims recite functionality that was well-known in the art and would have been naturally identified by a POSITA to enhance the functionality described by Sheha and Enzmann.

A. Ground 1: Claims 1-20 are unpatentable as obvious over Sheha in view of Smith, Carey, Wako, Enzmann, and Engberg

9. The Sheha patent discloses a system as recited in claim 1, including a mobile device that user can use to enter a login and password and to access location information for other wireless devices. It also discloses most of the

elements recited in the various dependent claims. However, Smith, Carey, Wako, Enzmann, and Engberg disclose these features. It is my opinion that the combination of Sheha and Smith, Carey, Wako, Enzmann, and/or Engberg renders claims 1-20 obvious.

1. Independent claim 1

10. Claim 1's preamble simply recites "A method comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses methods to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices. As I will discuss below, it is my opinion that Sheha in view of Smith and Carey render claim 1 obvious.

a. *Claim 1a – displaying on a first wireless telephonic device a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephonic devices.*

11. It is my opinion that Sheha discloses a system with mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex.1041, Abstract. In addition, Sheha describes that one mobile wireless device 18b, 18c can request the location of another mobile wireless device 18b, 18c via a wireless network. Ex.1041, 10:66-11:51. Figure 3 shows this type of

a configuration of the Sheha system: it includes two mobile devices, which are identified as mobile devices 18b and 18c, that communicate with Sheha's Online Database and Application Server, or the "ODAS" 3, via a wireless network, labeled as wireless network 22.

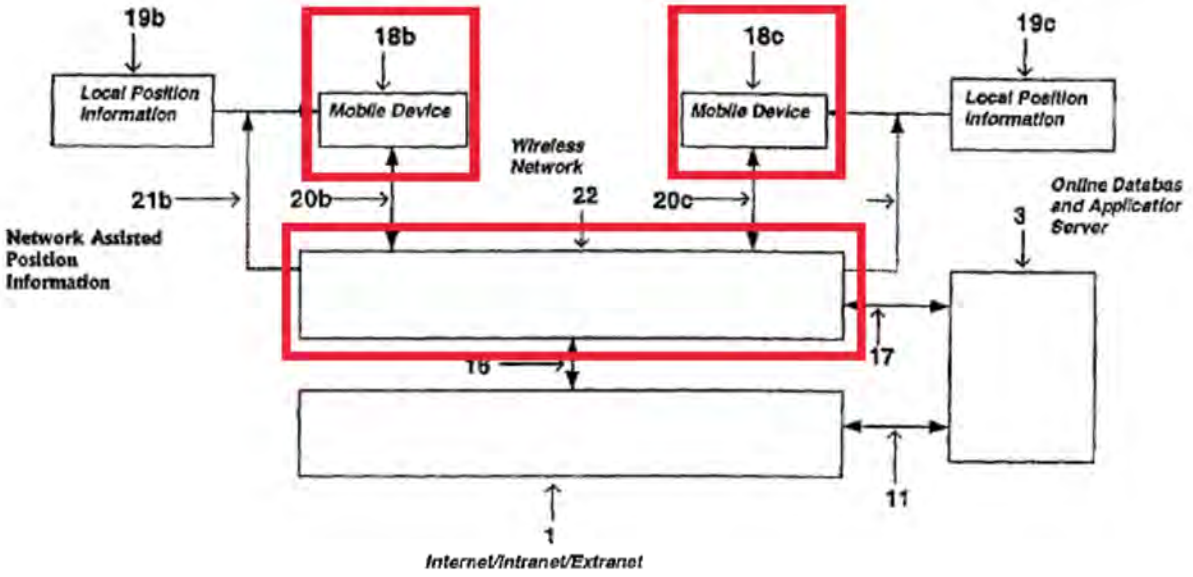


FIG. 3

12. Because Sheha describes that a user can request the location of another mobile device, it also includes functionality to select that other mobile device. One way Sheha describes to do so is to input or dial a telephone number. Ex.1041, 10:66-11:9, 11:55-12:8.

13. Another way to select another mobile device that was well-known in

the art before the priority date of the Challenged Patents was to access a list of contacts stored in the user's mobile device and scroll through the available contacts to a desired contact. This functionality was standard on mobile wireless devices, such as cellular telephones, before the priority date for the '283 Patent. For example, I note that the Smith reference provides an example of one kind of contact list that can be displayed by a mobile wireless device, such as those in Sheha. Ex.1059, Fig. 15A.

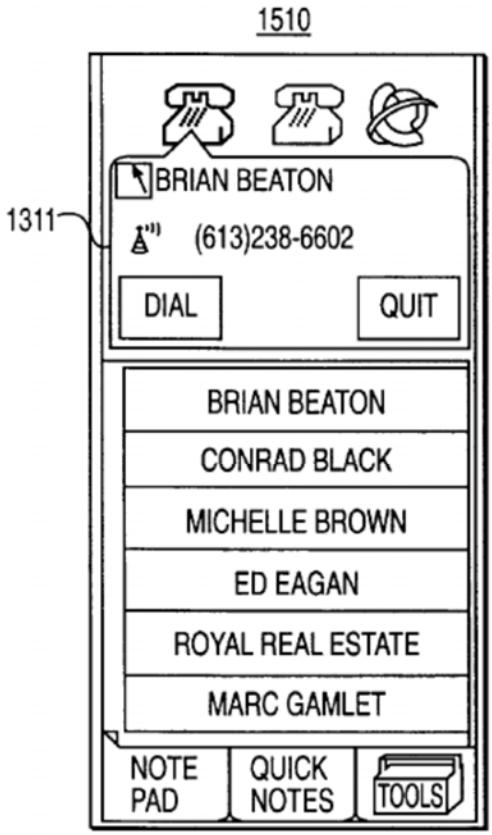


FIG. 15A

14. Smith describes that a user can scroll through the contact list to

identify a particular person's contact card, which it calls an "electronic business card" or "EBC." Ex.1059, 6:53-7:3, 9:42-61. The user can scroll through the EBCs stored in their mobile device to find a contact of interest and their contact information, such as a telephone number. An example of how this would be presented to the user is shown above in Figure 15A.

15. It would have been obvious to a POSITA to incorporate a contact list, like the one shown in Smith, into the mobile devices in the Sheha system to allow users to easily identify a contact to locate. Further, as I mentioned above, user interfaces in a mobile wireless device, like a cellular telephone, to allow selection of a contact were entirely conventional before the priority date of the '283 Patent. Ex.1021, ¶ 202.

16. Thus, it is my opinion that claim 1a is obvious based on Sheha in view of Smith.

b. ***Claim 1b - receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users***

17. Sheha explains that its wireless devices have input devices to allow a user to enter telephone numbers, such as by using numeric or alphanumeric input devices. Ex.1041, 2:64-3:3. It is my opinion that these numeric or alphanumeric input devices are likely physical buttons provided on the devices. In addition, these types of input devices were entirely standard features of telephone devices before

the priority date of the ’283 Patent, including on mobile wireless devices, like cellular telephones.

18. As I mentioned above, mobile wireless devices conventionally included contact list functionality, like that described in Smith. In addition, input devices were included to allow a user to view different contacts and select a contact of interest. These input devices were typically physical buttons and may have been dedicated buttons to navigate information, like a contact list, or they may have been the numeric or alphanumeric buttons used to dial phone numbers. Smith describes different examples of input devices, including a keypad with buttons, an on-screen keyboard, or using handwriting recognition. Ex.1059, 7:12-20. And it would have been obvious to use the numeric or alphanumeric keys described by Sheha to navigate a contact list and select a contact, as discussed in Smith.

19. In addition, Smith describes a process for scrolling through a contact list, shown in Figure 14. The flowchart illustrates a process that allows a user to scroll through the contact list using physical or graphical buttons. Ex.1059, 9:42-61. The user can use the process to scroll to a desired contact and ultimately select a contact to call. *Id.* A person of skill in the art incorporating such scrolling functionality would have also included an option for a user to select a contact to locate to take advantage of Sheha’s ability to request location. Ex.1021, ¶ 202.

20. Thus, it is my opinion that claim 1b is obvious based on Sheha in view of Smith.

c. *Claim 1c – receiving on said first wireless telephonic device an input in a form of a login and a second manual input in a form of a password*

21. Sheha describes that users may have accounts established with the ODAS 3 discussed above with respect to Figure 3 that include a username and password. Ex.1041, 8:40-53, 11:55-12:7. The example discussed in column 8 relates to a wireline telephone, however, it refers to the ODAS, which is also shown in the wireless embodiment of Figure 3. In addition, the ODAS is capable of operating with any of the different combinations of wireline and wireless devices discussed in Sheha. Ex.1041, Figs. 1-3 (each showing the same ODAS 3). Sheha also explains that authorization and authentication protocols can be used in the mobile context in the same way they are used in the landline context. Ex.1041, 12:4-7; *see also* Ex.1041, 8:25-53. Thus, it is clear that Sheha expects a user to provide a username and password to access the location functionality provided by the ODAS, and this would have been a necessary step for the user to access their account and make use of the ODAS location functionality, for which a user would have used the numeric or alphanumeric buttons that Sheha describes. Ex.1041, 2:64-3:3.

22. To illustrate this process, the Carey reference shows an example GUI

that allows a user to enter a screen name, i.e., a username, and password to access instant messaging functionality provided by a remote service. Ex.1045, Fig. 8, 7:67-8:10. By entering their username and password, a user would gain access to their account in Carey in the same way that a user would enter their username and password to access Sheha's ODAS. One of skill in the art would have immediately appreciated the need to enter username and password information on Sheha's wireless devices as a way to access the location services provided by the ODAS. In addition, the POSITA would have known to use the available input devices, e.g., the numeric or alphanumeric buttons, in the same way as described in Carey. Ex.1021, ¶¶ 165-166.

23. Thus, it is my opinion that claim 1c would have been obvious based on Sheha alone or in combination with Carey.

d. *Claim 1d – determining whether to allow access of location information for said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users*

24. Sheha describes a system where one user can request the location of another user's wireless device, so long as the requesting user has permission to receive the location. Ex.1041, 4:58-5:20. In particular, the ODAS determines whether a user has permission to access the location of another user. Ex.1041, 10:66-11:9. Permissions can be established by the mobile devices' privacy settings

or a group database can be used, in conjunction with authentication and authorization protocols, to determine whether a user is authorized to receive the location for the target device. Ex.1041, 4:58-5:20; 11:55-12-7; *see also* Ex.1041, 3:4-14, 3:22-28; 4:8-18; 5:21-46; 8:42-53; 9:59-10-4. Because Sheha describes that a wireless device's position will be sent based on established permissions, it is my opinion that Sheha discloses "determining whether to allow access of location information for said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users."

25. Thus, it is my opinion that Sheha discloses claim 1d.

e. ***Claim 1e – wherein said determination includes identifying said user of said first wireless telephonic device from said plurality of users using said login and determining said password is associated with said login and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephonic device***

26. This claim element essentially describes a login process using a login and password. After the user is logged in, the system can then determine whether the person they are attempting to locate has granted access to their location information. As I discussed above with respect to claims 1c and 1d, Sheha describes that a user provides a username and password to access location services provided by the ODAS of the Sheha system, which involves determining whether

the username and password are correct. Section IV.A.1.c, IV.A.1.d. The Sheha system can use the authentication and authorization protocols discussed with respect to claim 1d to determine that the user is authorized to access the system and has permission to access the requested location information. Ex.1041, 8:40-53, 12:1-7.

27. After determining that a user has entered the correct username and password, the ODAS determines whether the user is permitted to access the target device's location information. Section IV.A.1.c, IV.A.1.d, Ex.1041, 5:21-46, 12:1-7.

28. Thus, it is my opinion that Sheha discloses claim 1e.

f. ***Claim 1f – said first wireless telephonic device is operable to assign location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device***

29. As I have discussed above with respect to claims 1d and 1e, Sheha allows users to establish which other users and devices may access their location information. Section IV.A.1.d, IV.A.1.e, Ex.1041, 5:38-46. While this claim recites that it is the device requesting the location of another device that is able to establish location access rights, Sheha is agnostic as to whether it is a requesting device or a target device that can establish permission rights – any device that can

provide its location to the ODAS can establish location access rights. Sheha discloses that it is the users that can configure their mobile devices with the desired privacy settings. Ex.1041, 10:17-26.

30. For example, Sheha describes that in the case of a one device calling another device, the called device can request location permission of the calling device and the calling device's location can be provided, "based on permission settings of the calling local mobile device." Ex.1041, 5:3-9. In another example, Sheha describes two mobile devices continuously exchanging location in real-time. Ex.1041, 11:10-54. In addition, Sheha also explains that its users can establish groups of specific users that can have access to position information. Ex.1041, 11:55-12:7. Because the Sheha system employs privacy settings established by the wireless devices themselves, it is my opinion that Sheha discloses that a user can use their wireless device to establish location access rights for other wireless devices, including a particular wireless device selected from a contact list, as discussed above.

31. Therefore, it is my opinion that Sheha discloses claim 1f.

g. ***Claim 1g – transmitting said location information from a server to said first wireless telephonic device***

32. Sheha describes that when a wireless device requests the location of another wireless device, the ODAS—the online database and application server—

provides the location to the requesting wireless device. Ex.1041, 7:22-23 (defining the "ODAS" acronym), Fig. 3. For example, the ODAS can request the location from the target wireless device before relaying it to the requesting wireless device, or the wireless devices can update the ODAS with their positions. Ex.1041, 11:10-51.

33. Therefore, it is my opinion that Sheha discloses claim 1g.

h. *Claim 1h - displaying said location information on said first wireless device.*

34. Sheha discloses that its mobile devices can provide or display a map with the location of the target wireless device displayed on that map: "If the mobile telephone is connected to a position determination system, the mobile telephone would be able to provide navigational information, such as route information in the form of real-time driving directions, or else a map and address of the destination telephone number can be displayed on the mobile telephone." Ex.1041, 4:22-26, 4:52-58, 9:23-39, Fig. 5 (labels 33 and 34). While I understand that Figure 5 is in the context of a landline-to-mobile context, it is also applicable in the mobile-to-mobile context. Ex.1041, 4:13-18, 4:52-58. In addition, both the requesting and the target mobile device can display maps showing the locations of both devices. Ex.1041, 4:52-58, 11:10-51.

35. Thus, it is my opinion that Sheha discloses claim 1h.

2. Claim 2 – The method of claim 1, wherein a positioning system is utilized to provide said location information.

36. Sheha discloses that the wireless devices in its network can determine their own locations using GPS. Ex.1041, 10:5-16. Sheha also describes the use of other network-assisted approaches in which the network determines the position of the wireless devices, or combinations of GPS and network assisted approaches. Ex.1041, 10:5-16.

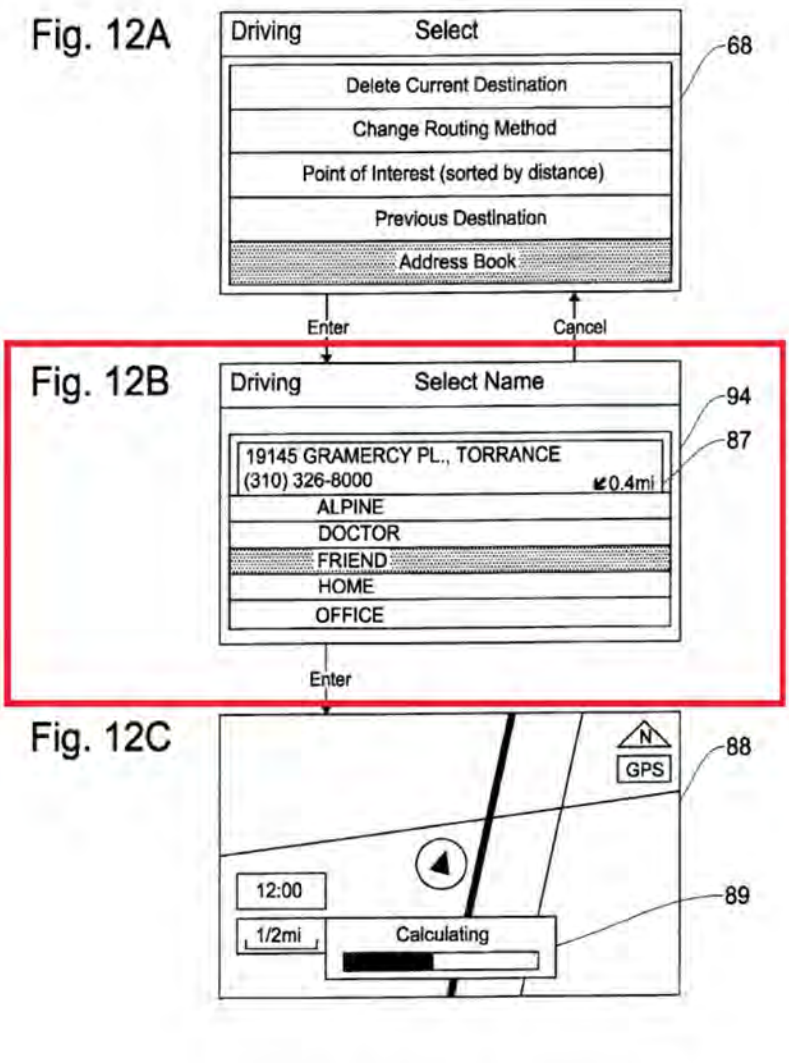
37. Thus, it is my opinion that Sheha in view of Smith and Carey make obvious claim 2.

3. Claim 3 – The method of claim 1, wherein said selection occurs on a first display screen and a second display screen is provided on said first wireless telephonic device during said determination.

38. As I discussed above with respect to claim 1a, Sheha and Smith describe the use of contact lists that a user of a wireless device can use to select a particular contact to obtain location for a particular other user's wireless device. Section IV.A.1.a. In my opinion, it was standard practice before the priority date for the '283 Patent to provide a user with some indication that a request issued by the user is being processed. This was commonly done by displaying an entirely different screen to the user or by presenting information overlaid on the display screen where the user issued the request. While I believe this practice was so routine that no additional proof should be required, I do note that the Wako

reference illustrates a typical selection and request operation on one display screen followed by another display screen indicating that the user's request is being processed.

39. Figure 12b in Wako shows a user selecting, within a GUI, a particular contact whose location they wish to navigate to. Such functionality is expressly contemplated by Sheha, which explains that "[i]t is a further object of this invention to provide the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information obtained using the methods previously described." Ex.1041, 3:29-36. And Wako shows a display screen for selecting such an option:



40. After the user has made their selection, Wako then presents the user with a screen to indicate that a route to the selected location is being calculated. Ex.1062, Fig. 12c.

Fig. 12A

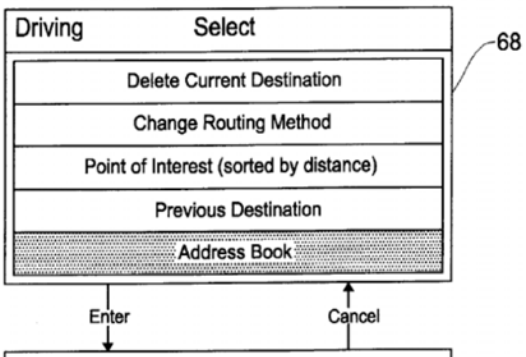


Fig. 12B

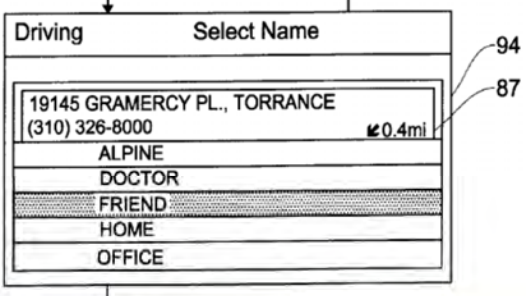
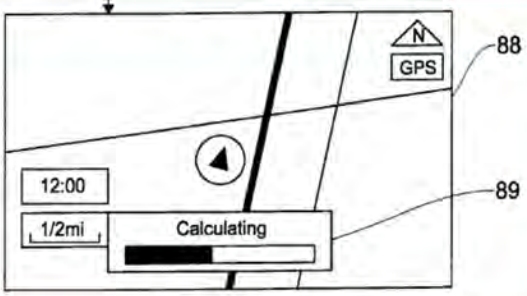


Fig. 12C



41. And while Wako is calculating a route, the same technique is equally applicable in the context of requesting a location from a remote device. Each process requires some time for the request to be processed and so, rather than provide no indication of the request being processed, which may cause the user to believe that the request has not been issued, it would have been obvious to provide another display screen to the user, similar to Figure 12c in Wako, to indicate that the request is being processed. Ex.1021, ¶¶ 212-212.

42. It is my opinion that, while it is obvious to include a second display screen as recited in claim 3 in the Sheha system based solely on the common knowledge of a POSITA before the priority date for the ’283 Patent, the combination of Sheha, Smith, Carey, and Wako make claim 3 obvious.

4. Claim 4 – The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device.

43. I note the claim 4 recites the same limitations as claim 3, but adds “a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device.” As to the repeated functionality in claim 4, it is obvious as discussed above with respect to claim 3.

44. Regarding the third display screen, Sheha discloses that it displays requested location information after it is received. Ex.1041, 4:22-26, 52-58, 9:23-39, Fig. 5 (labels 33 and 34). Moreover, it would be obvious to a POSITA that, after the requested location information is transmitted to the requesting wireless device, an additional display screen to show the requested location would be presented. Thus, a POSITA would have been motivated to incorporate such display

screens into the Sheha system. Ex.1021, ¶¶ 211-212.

45. Thus, it is my opinion that Sheha in view of Smith, Carey, and Wako discloses or makes obvious the functionality recited in claim 4.

5. Claim 5 – The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device, and a fourth display screen is provided that includes an option to obtain directions from said first wireless telephonic device to said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users.

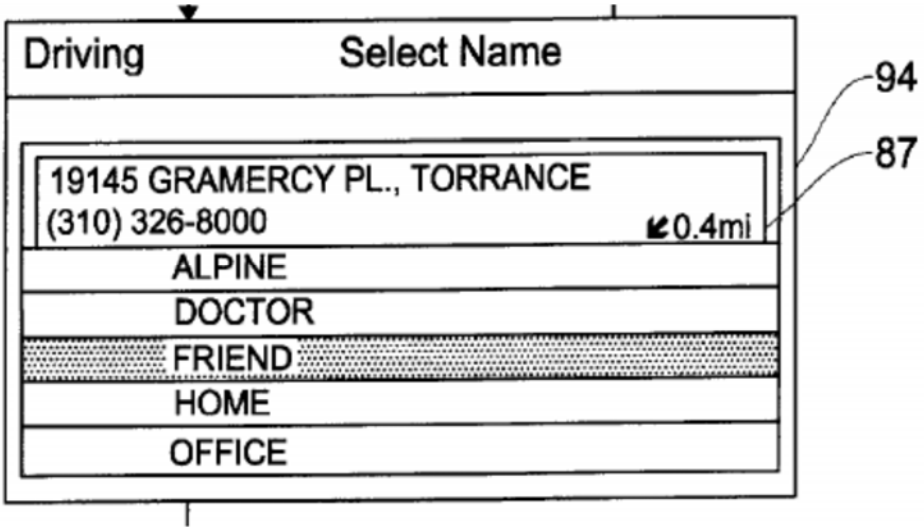
46. I note that claim 5 recites the same limitations as claim 4, which are obvious based on Sheha, Smith, and Wako as discussed above with respect to claim 4. Claim 5 also recites that "a fourth display screen is provided that includes an option to obtain directions from said first wireless telephonic device to said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users."

47. As I discussed above, Sheha describes that one of its goals is to provide driving directions to the location of another wireless device:

> It is a further object of this invention to provide the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated

> from the position information obtained using the methods previously described."

Ex.1041, 3:29-36. One of skill in the art would have recognized that to obtain and display driving directions to the location received from another wireless device as described in Sheha, a user of the wireless device would expect an option to request driving directions. Ex.1041, 3:29-37, 4:52-58, 9:10-16, 9:23-39. Wako shows a display screen in Figure 12b to request driving directions to a particular location, as described in Wako:



See also Ex.1062, 12:35-13:37.

48. In my opinion, it would have been obvious to include a further display screen to the wireless devices in Sheha, after showing the requested location, to allow the user to select an option to obtain driving directions from the user's location to the location of another wireless device, such as the selected wireless device, such as by presenting a display screen as shown in Wako. Ex.1021, ⁋⁋ 211-

212.

49. Therefore, it is my opinion that Sheha in view of Smith, Carey, and Wako makes obvious claim 5.

6. Claim 6 – The method of claim 1, further comprising receiving a third manual input, wherein said first wireless telephonic device assigned location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device and said third manual input modifies said location access rights.

50. As I discussed above with respect to claims 1d-f, Sheha discloses that a user may assign location access rights using their wireless device. Sections IV.A.1.d to IV.A.1.f. It is my opinion that because Sheha allows a user to assign location access rights, it is at least implied that a user can also modify previously assigned access rights. For example, a user could revoke another user's access rights. In addition, because Sheha describes that different types of access rights may be granted, it is at least implied that a user can change the type of access right granted to another user. Ex.1041, 5:38-46. In a system like Sheha's, where access rights are fundamental to whether a requesting user can obtain location information or not, Sheha's system would naturally allow a user to make modifications to previously granted access rights to enable a user to control access to their location information.

51. For example, Smith describes that a user may make changes to

contacts within their contact list using manual inputs. Ex.1059, 10:7-16. Sheha similarly provides manual input devices, like numeric and alphanumeric keys, which a user would expect to use to grants or modify access rights. Ex.1041, 2:64-3:3. The contact list is where a user would expect to find information about different contacts, and would expect to be make changes to privacy settings with respect to those contacts. It would have been obvious to one of skill in the art to allow a user to modify location access rights using a similar technique as discussed in Smith, such as by selecting a particular contact in a contact list and changing the type of location access rights granted for that contact. Ex.1021, ¶ 202.

52. Thus, it is my opinion that Sheha in view of Smith and Carey make claim 6 obvious.

7. Claim 7 – The method of claim 1, wherein a triangulation process is utilized to provide said location information.

53. Sheha describes that the location for a particular wireless device may be determined by GPS or with a network-assisted location technique, such as time-of-arrival ("TOA") techniques. Ex.1041, 10:5-16. A POSITA would have known that triangulation was a well-known network-assisted technique to locate a wireless device before the priority date for the '283 Patent and would have been suggested by Sheha's disclosure. For example, Enzmann describes that triangulation can be used by a network to locate a wireless device. Ex.1040, 1:30-40, 4:25-38, 5:13-20.

54. Because Sheha describes locating wireless devices using network-assisted location techniques, of which triangulation is one, it would have been obvious to use triangulation, such as described in Enzmann, within the Sheha system to locate wireless devices. Further, a POSITA would have been motivated to combine Sheha with Enzmann and would have had a reasonable expectation of success. Ex.1022, ¶ 172.

55. Therefore, it is my opinion that Sheha in view of Smith, Carey, and Enzmann make claim 7 obvious.

8. Claim 8

56. Like claim 1, claim 8's preamble only recites "A method comprising." As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 8 recites a method that includes essentially the same limitations as recited in claim 1. Thus, it is my opinion that claim 8 is invalid essentially for the reasons given above with respect to claim 1.

a. *Claim 8a – displaying on a wireless device a first name associated to a first wireless telephonic device and a second name associated to a second wireless telephonic device*

57. It is my opinion that claim 8a is invalid for the same reasons discussed above with respect to claim 1a. While claim 1a recites "displaying on a first

wireless telephonic device a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephonic devices," claim 8a specifically identifies a first user and a second user, rather than generally referring to a "plurality of users." Claim 8a also specifically recites displaying names of the first and second users. My discussion above with respect to claim 1a includes a contact list that displays names of users. Section IV.A.1.a.

58. Thus, it is my opinion that claim 8a is obvious for the reasons discussed above with respect to claim 1a.

b. *Claim 8b – accepting a selection of said first name on said wireless device*

59. While claim 1b recites "receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users," claim 8b recites essentially this same functionality. Thus, claim 8b is obvious for the same reasons as claim 1b.

c. *Claim 8c – receiving manual input entered into said wireless device that includes a login and a password*

60. Claim 1c recites "receiving on said first wireless telephonic device an input in a form of a login and a second manual input in a form of a password," while claim 8c only recites generically "receiving manual input … that includes a login and password." Because claim 1c is more specific than claim 8c, and because claim 1c is invalid as discussed above, it is my opinion that claim 8c is obvious for

the same reasons discussed above with respect to claim 1c.

d. ***Claim 8d – determining whether to transmit location information associated to said first wireless telephonic device from a server to said wireless device***

61. Both claims 1d and 8d involve conditionally accessing or transmitting location information based on a determination.

62. Therefore, it is my opinion that claim 8d is obvious for the same reasons as claim 1d.

e. ***Claim 8e – wherein said determining includes performing an identification process based, at least in part, on said manual input to identify the user of said wireless device and determining whether said first wireless telephonic device has provided access rights for said location information for said identified user and said server is located remotely from said wireless device, said first wireless telephonic device, and said second wireless telephonic device***

63. Claim 1e recites substantially the same functionality as recited in claim 8e. And while claim 8e recites the location of a server, which claim 1e does not address, Sheha's ODAS is remote from the wireless devices operating in the Sheha system. *See, e.g.*, Ex.1041, Figures 1-3.

64. Thus, it is my opinion that claim 8e is obvious for the same reasons as claim 1e and the reasons given above.

f. ***Claim 8f – said wireless device is operable to assign location access rights to said first wireless telephonic device for obtaining a location of said wireless device***

65. Claim 1f recites substantially the same functionality as recited in claim 8f.

66. Thus, it is my opinion that claim 8f is obvious for the same reasons as claim 1f.

g. ***Claim 8g – transmitting said location information to said wireless device based on said determination***

67. Claim 1g recites substantially the same functionality as recited in claim 8g.

68. Thus, it is my opinion that claim 8g is obvious for the same reasons as claim 1g.

h. ***Claim 8h – displaying said location information on said wireless device.***

69. Claim 1h recites substantially the same functionality as recited in claim 8h.

70. Thus, it is my opinion that claim 8h is obvious for the same reasons as claim 1h.

9. Claim 9 – The method of claim 8, wherein a positioning system is utilized to provide said location information.

71. Claim 2 recites substantially the same functionality as recited in claim 9.

72. Thus, it is my opinion that claim 9 is obvious for the same reasons as claim 2.

10. Claim 10 – The method of claim 8, wherein said selection occurs on a first display screen and a second display screen is provided on said wireless device during said determination.

73. Claim 3 recites substantially the same functionality as recited in claim 10.

74. Thus, it is my opinion that claim 10 is obvious for the same reasons as claim 3.

11. Claim 11 – The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, and a third display screen is provided on said wireless device after said location information is transmitted to said wireless device.

75. Claim 4 recites substantially the same functionality as recited in claim 11.

76. Thus, it is my opinion that claim 11 is obvious for the same reasons as claim 4.

12. Claim 12 – The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, a third display screen is provided on said wireless device after said location information is transmitted to said wireless device, and a fourth display screen is provided that

includes an option to obtain directions from said wireless telephonic device to said first wireless telephonic device.

77. Claim 5 recites substantially the same functionality as recited in claim 12.

78. Thus, it is my opinion that claim 12 is obvious for the same reasons as claim 5.

13. Claim 13 – The method of claim 8, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device and said third manual input modifies said location access rights.

79. Claim 13 recites substantially the same functionality as recited in claim 6.

80. Thus, it is my opinion that claim 13 is obvious for the same reasons as claim 6.

14. Claim 14 – The method of claim 3, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device, said third manual input modifies said location access rights, and determining a travel time between said wireless device and said first wireless telephonic device.

81. I note that claim 14 recites the same limitations as recited in claim 13, but adds "and determining a travel time between said wireless device and said first wireless telephonic device." Sheha describes providing routing and driving

directions, including providing real-time driving directions and the distance to the remote device. Sheha, 3:29-37, Fig. 5.

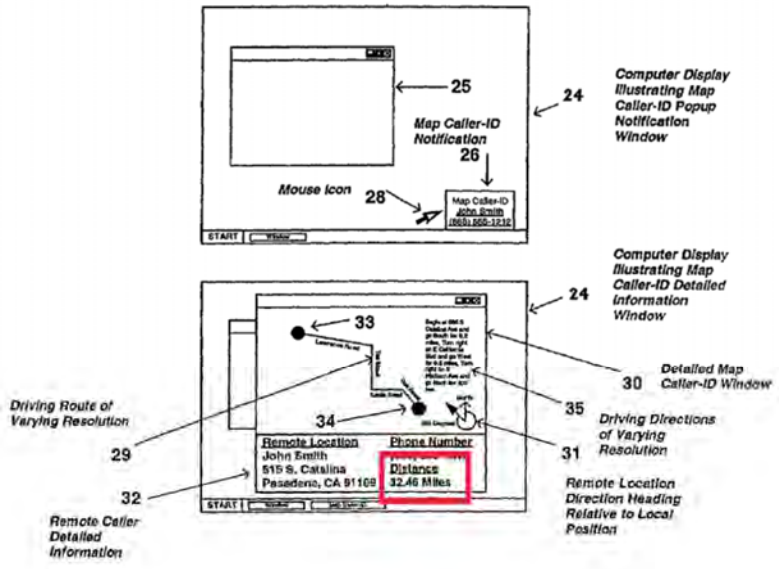


FIG. 5

82. A POSITA would have considered travel time to be an important piece of route information, like distance, before the priority date of the '283 Patent. Indeed, travel time is a basic piece of information a person would want to know when planning to travel to another location. Thus, one of skill in the art would have been motivated to incorporate determining a travel time along a route to a destination into Sheha's system to provide more fulsome travel information to a user.

83. For example, a POSITA would have looked to the Wako reference,

which shows a prior art system that determines an estimated time to reach a final destination. Ex.1062, Fig. 1B. The Wako system itself determines a travel time along a particular route, such as when it described that a "route to the destination may be determined based on, for example, whether it requires the shortest time, it includes many freeways as possible, or it includes few toll roads as possible, or the like." Ex.1062, 11:56-60. Determining a route that requires the shortest time inherently involves determining a travel time between the user's location, which is the location of the wireless device, and the destination, which is the location of the first wireless telephonic device.

84. Thus, it is my opinion that claim 14 is invalid as obvious based on Sheha and Wako.

15. Claim 15

85. Like claim 1, claim 15's preamble only recites "A method comprising." As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 15 recites a method that includes essentially the same limitations as recited in claim 1. Thus, it is my opinion that claim 15 is invalid essentially for the reasons given above with respect to claim 1.

a. *Claim 15a – accepting on a first wireless device a manual selection representative of a second wireless*

device from a list representative of a plurality of wireless devices

86. Claims 1a and 1b recite substantially the same functionality recited in claim 15a.

87. Thus it is my opinion that claim 15a is obvious for the same reasons given above with respect to claims 1a and 1b.

b. ***Claim 15b – locating said second wireless device***

88. Sheha describes that when one wireless device submits a request for the location of another wireless device, the ODAS determines the location of the other wireless device, which may have already been received or determined. Ex.1041, 10:5-16, 10:66-11:7. It may do so by sending a request to the wireless device for its location or retrieving a location for the wireless device from memory. Ex.1041, 10:66-11:51.

89. Thus, it is my opinion that claim 15b is disclosed by Sheha.

c. ***Claim 15c – determining on a server whether said second wireless device has provided permission for said first wireless device to locate said second wireless device based, at least in part, on an identification of a login, that identifies the user of said first wireless device from a plurality of users, and password received by said first wireless device that is associated with said login and determining whether said user is associated with said permission, and said first wireless device is operable to assign a second permission to said second wireless***

device for obtaining second location information of said first wireless device

90. Claims 1d-1f recite substantially the same functionality recited in claim 15c.

91. Thus it is my opinion that claim 15c is obvious for the same reasons given above with respect to claims 1d-1f.

d. ***Claim 15d – providing location information to said first wireless device based on said determination***

92. Claim 1g recites substantially the same limitations as claim 15d.

93. Thus it is my opinion that claim 15d is obvious for the same reasons given above with respect to claims 1g.

e. ***Claim 15e – displaying a map on said first wireless device with a marker representative of the location of said second wireless device***

94. Claim 1h recites substantially the same limitations as claim 15e. Section IV.A.1.h. And while claim 1h does not explicitly recite displaying a marker, Sheha discloses displaying a marker representative of a location of another wireless device. Ex.1041, Fig. 5 (labels 33 and 34). Further, a wireless device would have included such a marker when it displays "a map and address of the destination telephone number can be displayed on the mobile telephone." Ex.1041, 4:52-58.

95. Thus, it is my opinion that claim 15e is obvious for the same reasons

given above with respect to claim 1h and the reasons given above.

16. Claim 16 – The method of claim 15, wherein a positioning system is utilized to provide said location information.

96. Claim 16 recites substantially the same limitations as claim 2: "wherein a positioning system is utilized to provide said location information."

97. Thus it is my opinion that claim 16 is invalid for the same reasons given above with respect to claim 2.

17. Claim 17 – The method of claim 15, wherein said password is received on a first display screen.

98. As discussed above with respect to claim 1c, it would have been obvious based on Sheha alone or in combination with Carey to receive manual input of a password, such as by using the login and password screen described by Carey. Section IV.A.1.c, Ex.1021, ¶¶ 165-166. Moreover, it was conventional before the priority date of the '283 Patent to manually enter a login and password, including as shown in Figure 8 and described in the corresponding description. Ex.1045, 7:67-8:10.

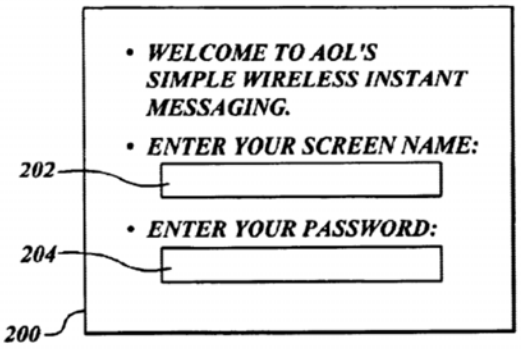


Fig. 8

99. A POSITA would have been motivated to provide such a display screen as discussed in the cover document of my declaration. Ex.1021, ¶¶ 165-166.

100. Thus, it is my opinion that claim 17 is obvious based on Sheha in view of Smith and Carey.

18. Claim 18 – The method of claim 15, wherein said password is received on a first display screen and said login is received on a second display screen.

101. Claim 18 recites the same features as claim 17, but also recites that a login is received on a second display screen. As I discussed above with respect to claim 1c and claim 17, it would have been obvious to receive manual input on a display screen for a login and password. Claim 18 recites that the password and login are received on first and second display screens, though no ordering is required by the claim language. I understand that "first" and "second" are just labels to distinguish the display screens in the claim. It would have been an obvious design choice to separate login and password entry on different screen,

particularly if a device has limited screen space or to ensure that a valid username is entered first. In addition, such a design choice was well-known before the priority date of the '283 Patent. For example, Engberg shows an example that employs different display screens to obtain a user's login and password:

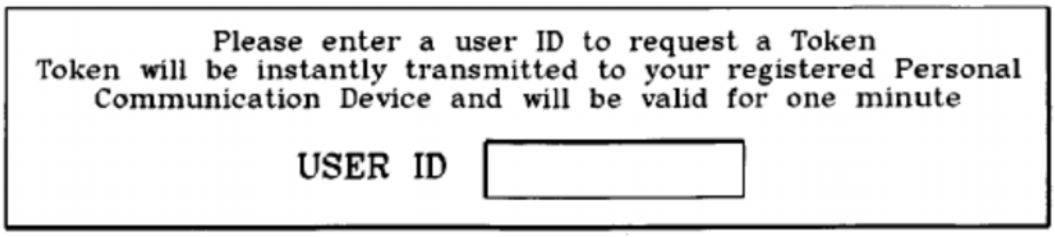


FIG. 2C

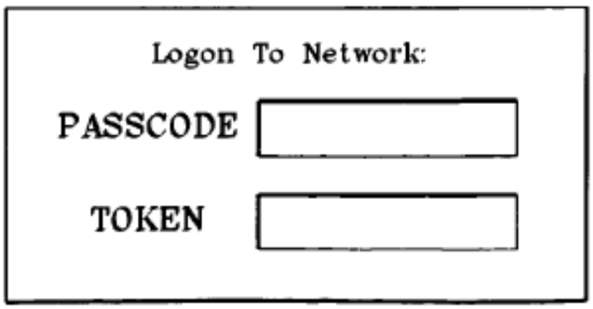


FIG. 2D

One of skill in the art would have been motivated to provide separate display screens to receive login and password information as one of two options for requesting login and password: (1) either on the same display screen or (2) on different display screens as shown in Engberg. Ex.1021, ¶¶ 170-171; Ex.1048, Figs. 2A-2D.

102. Thus, it is my opinion that claim 17 is obvious based on Sheha, Carey,

and Engberg.

19. Claim 19 – The method of claim 15, wherein said manual selection occurs on a first display screen and a second display screen is provided on said first wireless device during said determination.

103. Claim 19 recites substantially the same limitations as claim 3.

104. Thus it is my opinion that claim 19 is obvious for the same reasons given above with respect to claim 3.

20. Claim 20 – The method of claim 15, wherein said manual selection occurs on a first display screen, a second display screen is provided on said first wireless device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless device.

105. Claim 20 recites substantially the same limitations as claim 4.

106. Thus it is my opinion that claim 20 is obvious for the same reasons given above with respect to claim 4.

B. Ground 2: Claims 1-20 are unpatentable as obvious over Enzmann in view of Smith, Carey, Wako, Sheha, and Engberg

107. The Enzmann patent discloses a system as recited in claim 1, including a mobile device that user can use to enter a login and password and to access location information for other wireless devices. It also discloses most of the elements recited in the various dependent claims. However, Sheha, Smith, Carey, Wako, and Engberg disclose these features. It is my opinion that the combination

of Enzmann with Sheha, Smith, Carey, Wako, and/or Engberg renders claims 1-20 obvious.

1. Independent claim 1

108. Claim 1's preamble simply recites "A method comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses methods to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices.

a. *Claim 1a – displaying on a first wireless telephonic device a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephonic devices.*

109. It is my opinion that Enzmann discloses a system that allows users of wireless telephonic devices to obtain locations of other wireless telephonic devices via a wireless network. Ex.1040, Abstract. Enzmann's system employs wireless telephonic devices like pagers and cellular telephones, which conventionally included display devices. Ex.1040, 5:39-41, 9:9-14. And it determines the locations of the wireless telephonic devices using location systems built into the wireless devices, such as GPS, or it can use network-based location systems, like triangulation. Enzmann, 5:13-20, 5:39-50; see also Enzmann, Fig. 1.

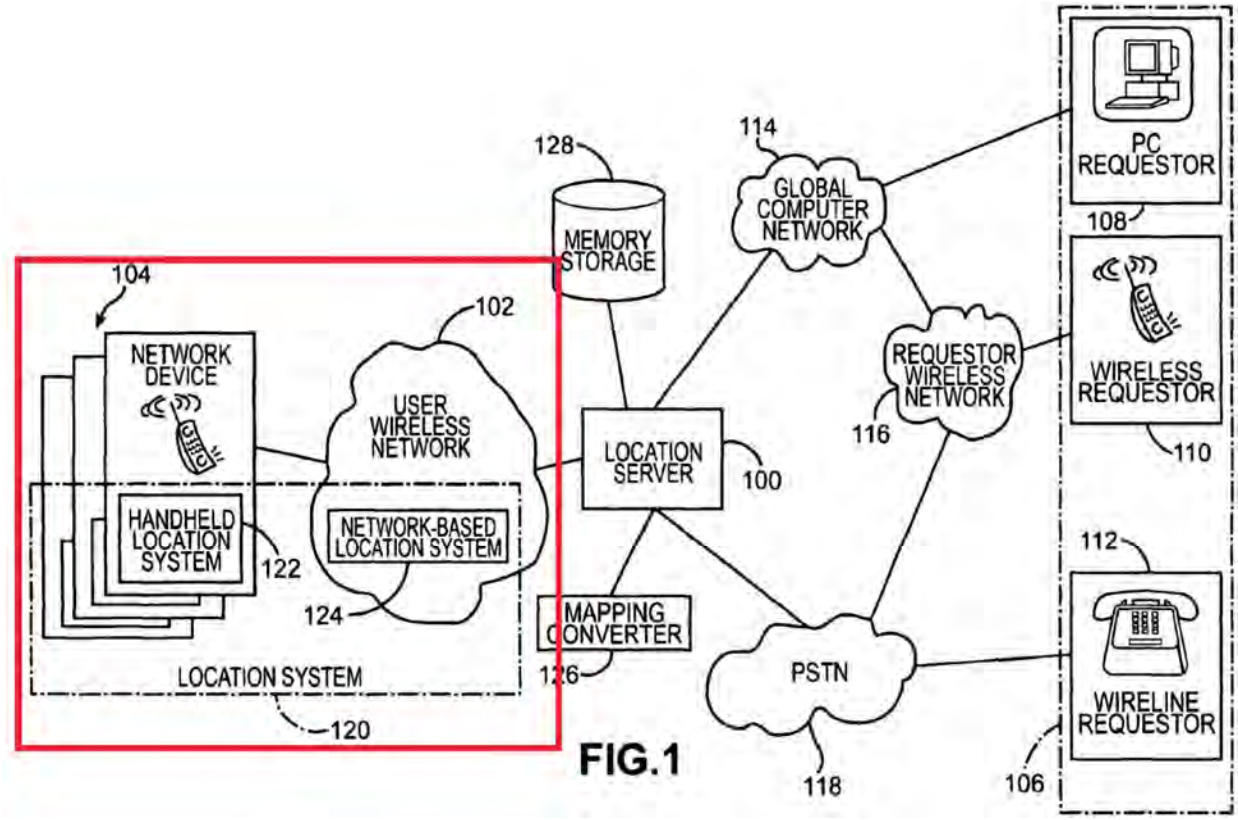


FIG.1

Ex.1040, Fig. 1.

110. Enzmann describes that requesting devices can be wireless devices, shown as wireless requestor 110 in Figure 1 above. These wireless requestors can be any suitable wireless device, including those that have IP messaging or wireless access protocol ("WAP") capabilities. Ex.1040, 4:1-11, 5:6:2-7. One of skill in the art is aware that, prior to priority date for the '283 Patent, wireless cellular devices, such as cellular telephones, had both IP and WAP capabilities to allow users to execute internet applications, which Enzmann discusses. Ex.1040, 5:39-60. Thus, the wireless requestors 110 could also be network devices 104, which are also

disclosed as being wireless telephonic devices that can have messaging and WAP capabilities, such as cellular telephones and pagers, like the wireless requestors 110. Ex.1040, 5:39-60. Thus, the wireless requestors 110 include wireless telephonic devices.

111. Enzmann also discloses that users may interact with their devices via "a user-friendly interface, e.g., a graphical user interface, through which a requestor can submit a location query." Ex.1040, 5:64-6:7. With respect to wireless telephonic devices specifically, Enzmann describes that they may employ a menu driven interface or a series of key sequence inputs to initiate a location query or to interact with an instant-messaging service that provides lists of contacts. Ex.1040, 6:57-62, 9:15-30. In addition, it was well-known before the priority date for the '283 Patent that wireless telephonic devices had display screens that a user could interact with, such as to access contact lists, exchange text messages, and other functionality.

112. As I discussed above under Ground 1, another way to select another mobile device that was well-known in the art was to access a list of contacts stored in the user's wireless telephonic device and scroll through the available contacts to the desired contact. This functionality was standard on mobile wireless devices, such as cellular telephones, before the priority date for the '283 Patent. For example, I note that the Smith reference provides an example of one kind of

contact list that can be displayed by a wireless telephonic devices, such as those in Enzmann. Ex.1059, Fig. 15A.

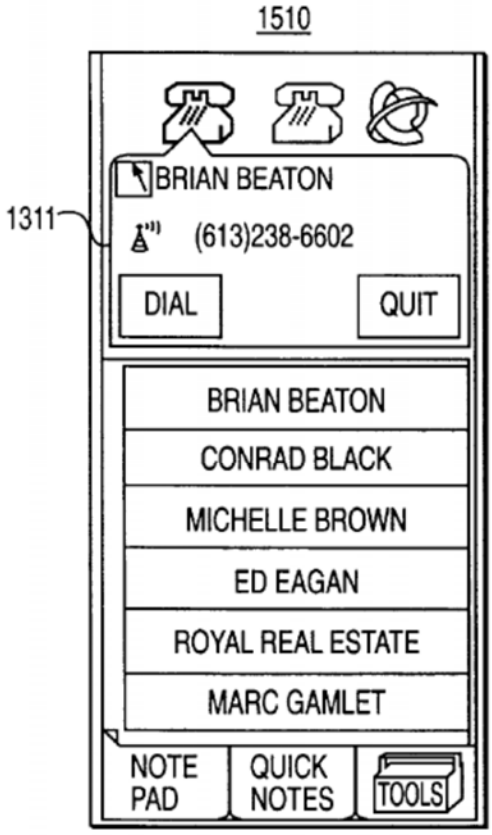


FIG. 15A

113. Smith describes that a user can scroll through the contact list to identify a particular person's contact card, which it calls an "electronic business card" or "EBC." Ex.1059, 6:53-7:3. The user can scroll through the EBCs stored in their mobile device to find a contact of interest and their contact information, such as a telephone number. An example of how this would be presented to the user is shown above in Figure 15A.

114. It would have been obvious to a POSITA to incorporate a contact list, like the one shown in Smith, into the mobile devices in the Sheha system to allow users to easily identify a contact to locate. Ex.1021, ¶ 202. Further, as I mentioned above, user interfaces in a mobile wireless device, like a cellular telephone, to allow selection of a contact were conventional by the priority date for the '283 Patent.

115. Thus, it is my opinion that claim 1a is obvious based on Enzmann in view of Smith.

b. *Claim 1b - receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users*

116. As discussed above, Enzmann discloses that its wireless telephonic devices allow a user to initiate a query using a menu driven interface or a series of key sequence inputs. Ex.1040, 6:57-62. Smith discloses that a user may manually scroll through the contact list to identify a specific person to contact. Ex.1059, 9:42-61, Fig. 14. In addition, manual input devices, like buttons, were standard features of telephone devices before the priority date for the '283 Patent, including on mobile wireless devices, like the pagers and cellular telephones used in the Enzmann system.

117. As I mentioned above, wireless telephonic devices conventionally included contact list functionality, like that described in Smith. In addition, input

devices were routinely included in wireless to allow a user to dial a phone number, navigate through different contacts, and select a contact of interest. These input devices were typically physical buttons and may have been dedicated buttons to navigate information, like a contact list, or they may have been numeric or alphanumeric buttons used to dial phone numbers. Smith describes different examples of input devices, including a keypad with buttons, an on-screen keyboard, or using handwriting recognition. Ex.1059, 7:12-20. It would have been obvious to use these conventional buttons to navigate a contact list and select a contact, as discussed in Smith. Ex.1021, ⁋ 202; Ex.1059, 9:42-61, Fig. 14.

118. In addition, Smith describes a process for scrolling through a contact list, shown in Figure 14. Ex.1059, 9:7-61, Fig. 14. The flowchart illustrates a process that allows a user to scroll through the contact list using physical or graphical buttons. The user can use the process to scroll to a desired contact and ultimately select a contact to call. *Id*. A person of skill in the art incorporating such scrolling functionality would have also included an option for a user to select a contact to locate to make use of Enzmann's location functionality. Ex.1021, ⁋ 202.

119. Thus, it is my opinion that claim 1b is obvious based on Enzmann in view of Smith.

c. *Claim 1c – receiving on said first wireless telephonic device an input in a form of a login and a second manual input in a form of a password*

120. Enzmann describes that when a user submits a request for a location, the request identifies the requestor and can include a password. Ex.1040, 6:41-48. Enzmann expects a user to provide both an identification of the requestor and a password to access Enzmann's location service and obtain another user's location. Ex.1040, 6:41-48. Including manual entry for such information would have been entirely routine for a POSITA before the priority date for the '283 Patent.

121. To illustrate a suitable process, the Carey reference shows an example GUI that allows a user to enter a screen name, i.e., a username, and password to access instant messaging functionality provided by a remote service. Ex.1045, Fig. 8, 7:67-8:10.

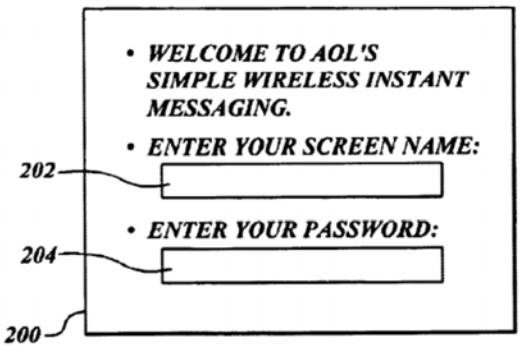


Fig. 8

122. By entering their username and password, a user would gain access to their account in Carey in the same way that a user would provide their identity and

a password in Enzmann. One of skill in the art would have immediately appreciated the need to enter identification and password information on Enzmann's wireless telephonic devices. Ex.1021, ¶ XX. In addition, the POSITA would have known to use the available input devices, e.g., the numeric or alphanumeric buttons, in the same way as described in Carey.

123. Thus, it is my opinion that claim 1c would have been obvious based on Enzmann alone or in combination with Carey.

d. *Claim 1d – determining whether to allow access of location information for said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users*

124. Enzmann describes a system that maintains lists of users who are authorized to access location information of other users. In particular, Enzmann discloses that users can provide lists of other users who are authorized to access their location information. Enzmann, 2:35-41. In Enzmann, the location server 100 stores these lists in memory storage 128. This is shown in Figure 1 in Enzmann.

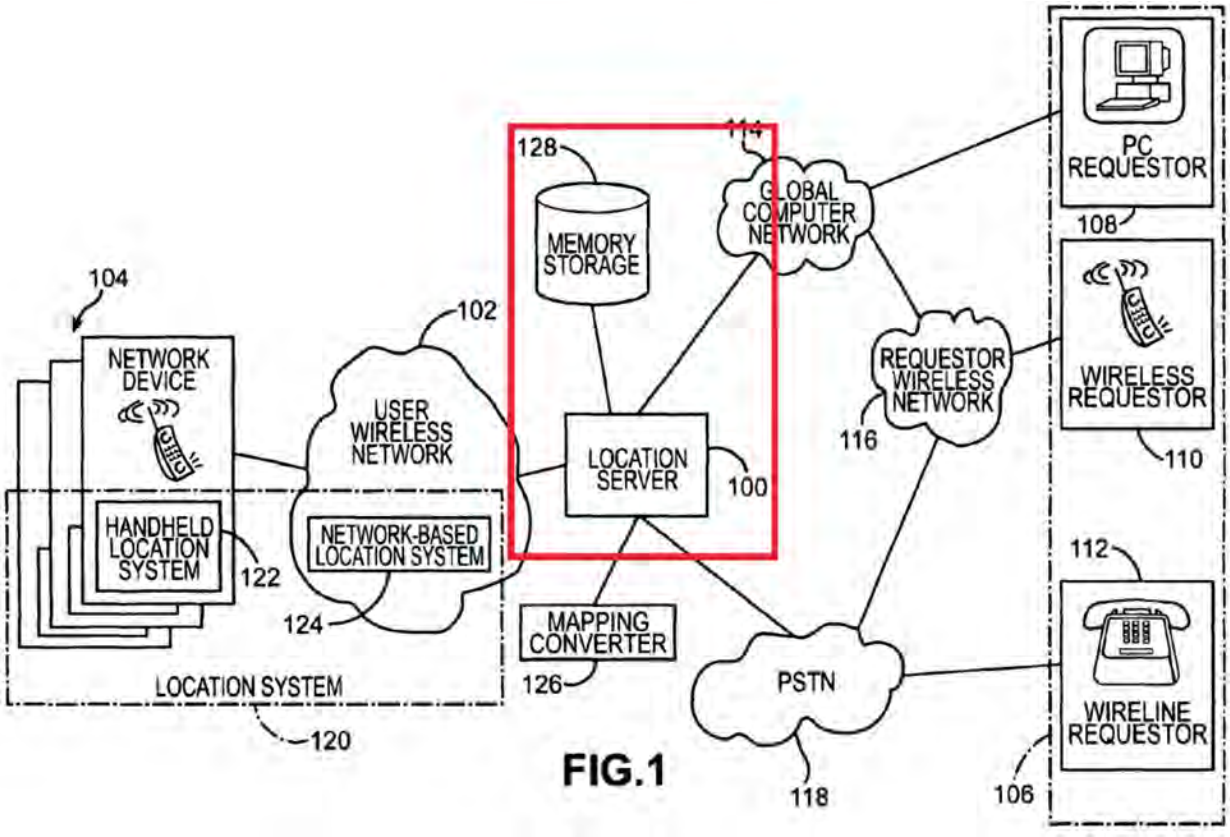


FIG.1

125. When a user requests the location of another user's device, the location server accesses the appropriate list of authorized users to determine whether the user requesting a location of the other user is authorized to receive that location information. Enzmann, 3:1-6, 5:3-12, 7:13-25. This process is illustrated in Figure 2.

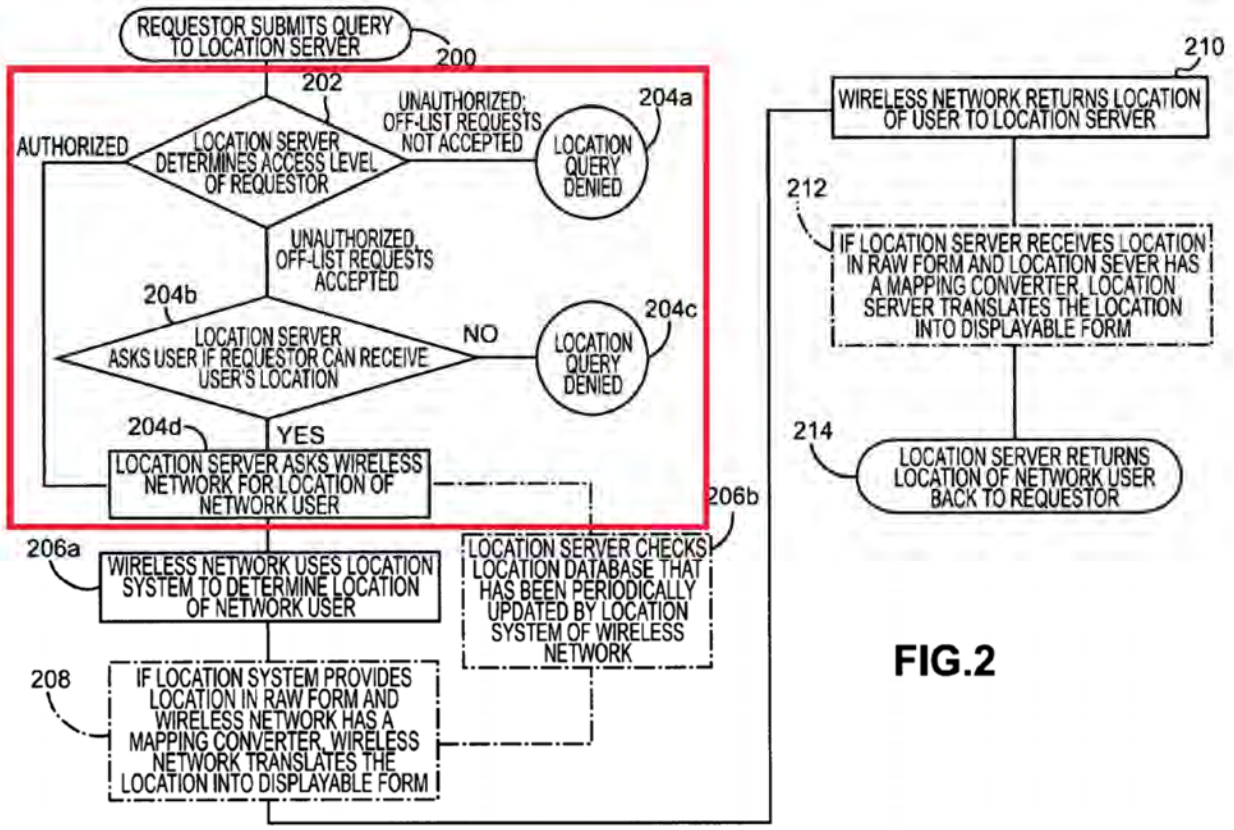


FIG.2

126. Enzmann describes that if the user is authorized by the access list, the location server determines the location of the wireless device and provides it to the requestor. Enzmann, Fig. 2, 7:59-8:67.

127. Thus, it is my opinion that Enzmann discloses claim 1d.

e. ***Claim 1e – wherein said determination includes identifying said user of said first wireless telephonic device from said plurality of users using said login and determining said password is associated with said login and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephonic device***

128. As I discussed above with respect to Ground 1, this claim element

describes a login process using a login and password. Section IV.A.1.e. After the user is logged in, the system can then determine whether the person they are attempting to locate has granted access to their location information. As I discussed above with respect to claims 1c and 1d, Enzmann describes that a user can provide identifying information and a password to access location services provided by the Enzmann system. Sections IV.B.1.c, IV.B.1.d; Ex.1040, 6:41-48 ("Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service. Alternately, only the network user pays for the service and gives her authorized requestors a password to gain access to the service."). In addition, as discussed above with respect to claim 1d, part of the determination is whether the requesting user has been provided access rights to the requested location information. Section IV.B.1.d.

129. Thus, it is my opinion that Enzmann discloses the functionality recited in claim 1e.

f. *Claim 1f – said first wireless telephonic device is operable to assign location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device*

130. As I have discussed above with respect to claims 1d and 1e, Enzmann

allows users to establish which other users may access their location information. Sections IV.B.1.d, IV.B.1.e. While this claim recites that it is the device requesting the location of another device that is able to establish location access rights, Enzmann is agnostic as to whether it is a requesting device or a target device that can establish permission rights – any wireless device can provide an access list to the location server 100. Ex.1040, 2:35-41.

131. A POSITA would understand that a user of the Enzmann system could either provide a list of authorized users from the wireless device or another device. And because a likely use case for a user of a network device in the Enzmann system is a user wanting to dynamically add or remove people from their access list while using the network device, a POSITA would been motivated have included the functionality to create or update an access list via the network device itself. For example, a user would access contact list functionality, such as disclosed by Smith and discussed above with respect to claim 1a, and select an option to authorize a selected user to obtain location information, which would then be provided to the Enzmann location server 100 as a part of the user's list of authorized requestors. Section IV.B.1.a.

132. Thus, it is my opinion that Enzmann in view of Smith makes obvious claim 1f.

g. ***Claim 1g – transmitting said location information from a server to said first wireless telephonic device***

133. Enzmann describes that, if a user is authorized to receive the requested location information, the location server 100 provides the location information to the requesting user. Ex.1040, 3:1-6, 8:65-67, Fig. 2 (label 214).

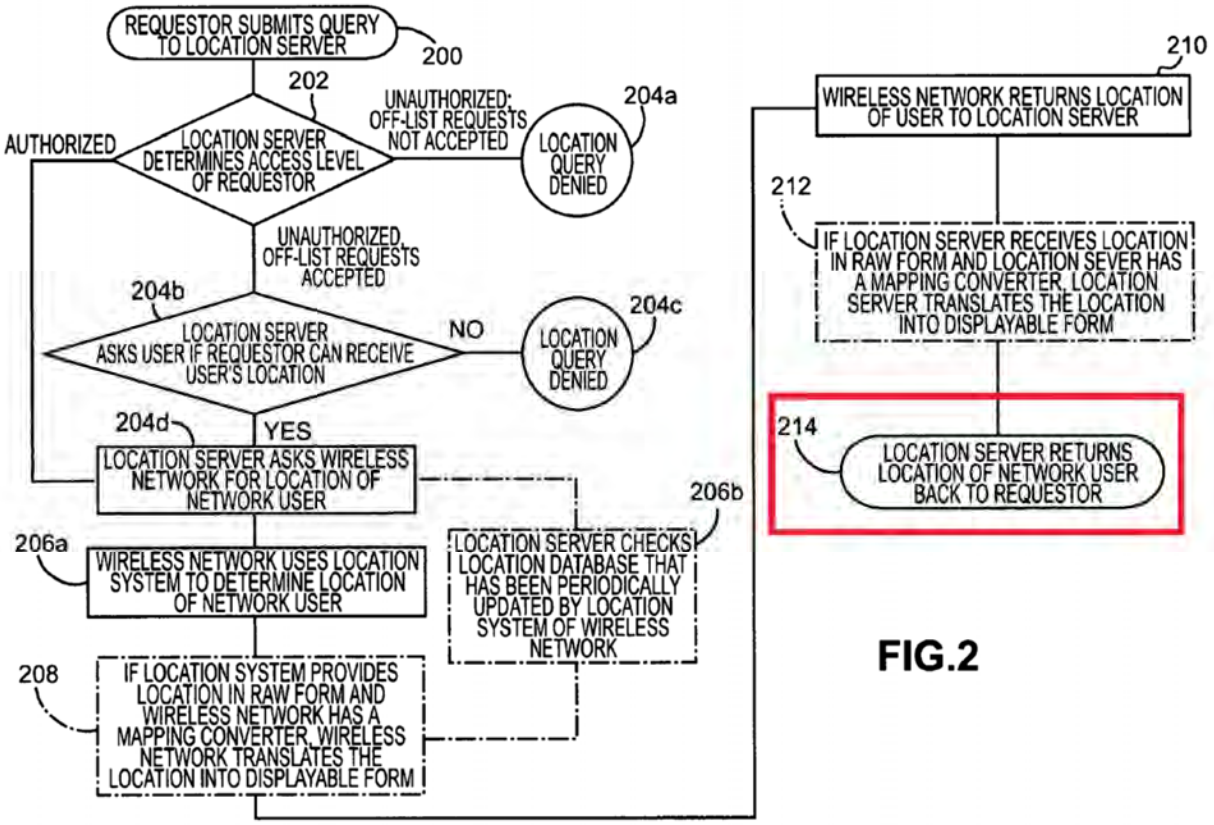


FIG.2

134. Thus, it is my opinion that Enzmann discloses claim 1g.

h. ***Claim 1h - displaying said location information on said first wireless device.***

135. Enzmann describes that location information provided by the location server can be provided in a displayable form. Ex.1040, 3:1-16. Enzmann explains

that "'[d]isplayable' refers to location information easily understood by a typical network user. Although displayable may imply a visual communication, as used herein, the term extends to other forms of communication, such as audio-based communication." Ex.1040, 4:46-50. It would make no sense to provide displayable location information to a user's device and then not display it.

136. In addition, Enzmann describes at least one example in which a user's device is able "to display only the friends of that user who are in the same city as the user." Ex.1040, 9:17-19. It also describes that a user could query the location of one of those friends to obtain their location to determine if they are close enough to the user to meet in person. Ex.1040, 9:19-27. This further discloses the user's device displays the friend's location so the user can assess whether they are near enough to meet. In view of this, Enzmann discloses claim 1h or makes it obvious to a POSITA to display the received location on the user's wireless telephonic device.

137. However, in addition to these capabilities, a POSITA would have been motivated to provide other ways to display location information, such as by incorporating the map display capabilities discussed in Sheha. Ex.1021, ¶ XX, Ex.1041, 4:52-58. A user obtaining location information would expect to be able to view a map showing the received location, such as described in Sheha. Thus, it would have been obvious to modify Enzmann to provide Sheha's mapping

capabilities. Ex.1021, ¶ 201.

138. Thus, it is my opinion that Enzmann discloses or makes obvious claim 1h.

2. Claim 2 – The method of claim 1, wherein a positioning system is utilized to provide said location information.

139. Enzmann describes that its system includes a positioning system, which can include GPS receivers integrated into the network devices or network-assisted positioning, such as triangulation, provided by a wireless network. Ex.1040, 4:15-37. This is also shown in Figures 1, 3, and 4 in Enzmann. Figure 1 is reproduced below as an example.

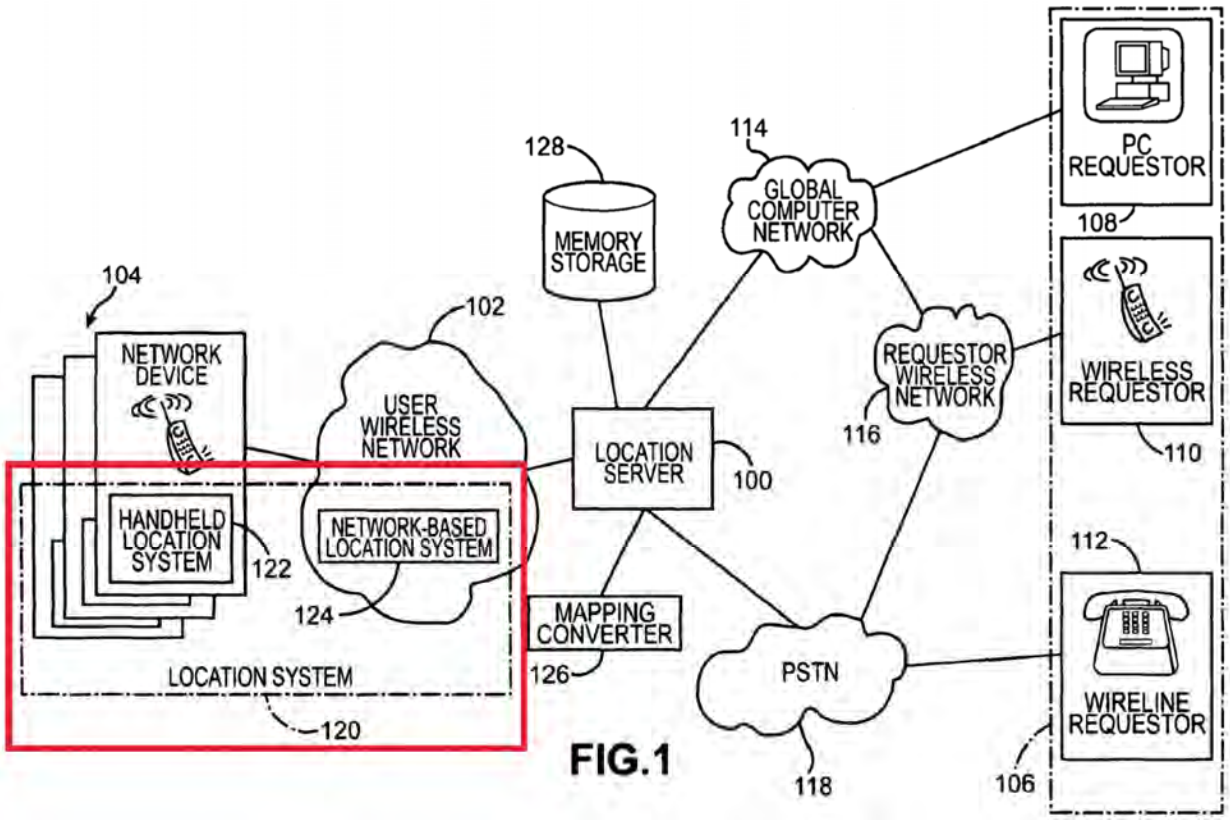


FIG.1

140. Enzmann discloses that the location system 120, whether integrated into the network device or provided by the wireless network, is what provides location information to the location server. Ex.1040, 4:15-37.

141. Thus, it is my opinion that Enzmann discloses claim 2.

3. Claim 3 – The method of claim 1, wherein said selection occurs on a first display screen and a second display screen is provided on said first wireless telephonic device during said determination.

142. Enzmann describes the use of a GUI, a menu-driven interface, or a series of key sequence inputs to initiate a location query. Ex.1040, 5:64-6:7, 6:57-62. In addition, as I discussed above with respect to claim 1, it was well-known at the time that wireless telephonic devices, such as cellular phones and pagers, had display screens. And as discussed above with respect to claim 1a, it was well-known to use contact list functionality, such as described in Smith, to access and select contacts. The selection of a contact occurs on a first display screen.

143. In addition, it was common practice prior to the priority date of the ’283 Patent to provide a display screen in a wide variety of contexts to indicate that a request was being processed. As I discussed above with respect to claim 3 in Ground 1, this was commonly done by displaying an entirely different screen to the user or by presenting information overlaid on the display screen where the user issued the request. Section IV.A.3. While I believe this practice was so routine that

no additional proof should be required, I do note that the Wako reference illustrates a typical selection and request operation on one display screen followed by another display screen indicating that the user's request is being processed.

144. Figure 12b in Wako shows a user selecting, within a GUI, a particular contact whose location they wish to navigate to. While Enzmann does not explicitly discuss navigation, an obvious use for received location information is to determine how to travel to the received location. And Wako shows a display screen for selecting such an option:

Fig. 12A

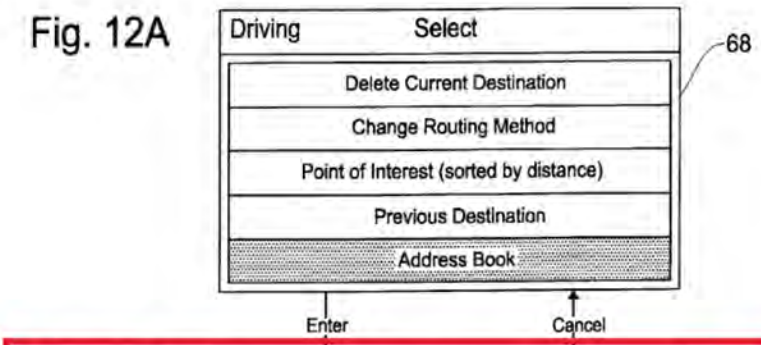


Fig. 12B

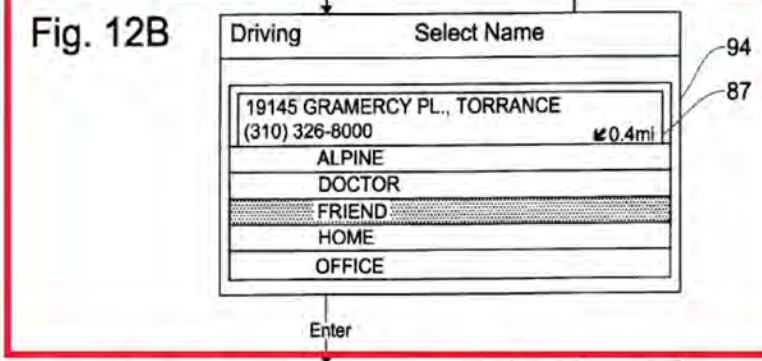
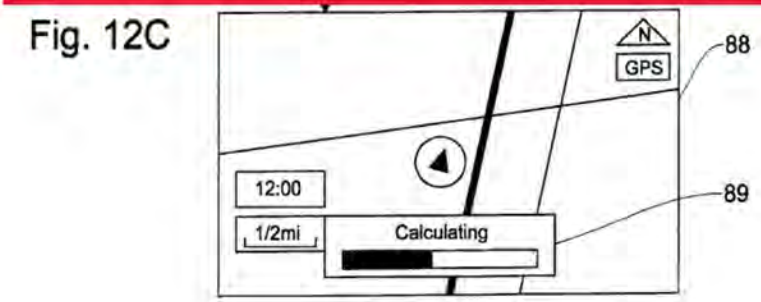


Fig. 12C



145. After the user has made their selection, Wako then presents the user with a screen, replicated below, to indicate that a route to the selected location is being calculated. Wako, Fig. 12c. And while Wako is calculating a route, the same technique is equally applicable in the context of requesting a location from a remote device. Each process requires some time for the request to be processed and so, rather than provide no indication of the request being processed, which may

cause the user to believe that the request has not been issued, it would have been obvious to provide another display screen to the user, similar to Figure 12c in Wako, to indicate that the request is being processed.

Fig. 12A

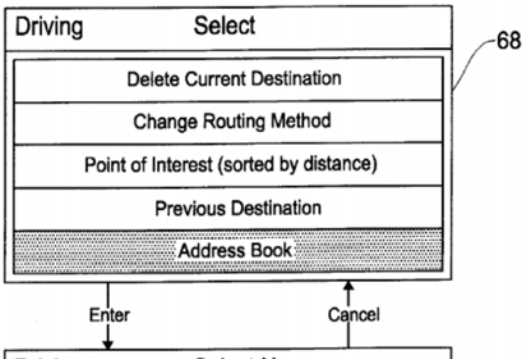


Fig. 12B

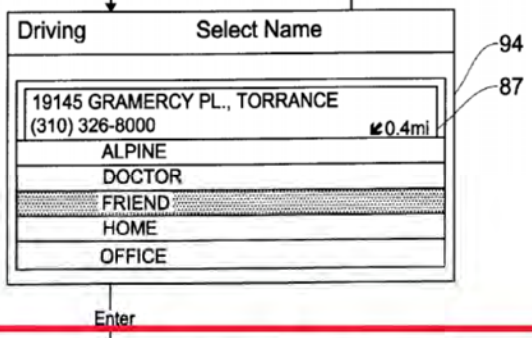
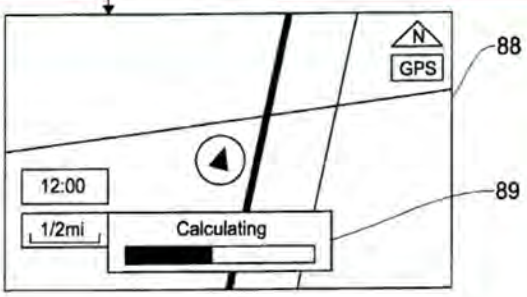


Fig. 12C



146. It is my opinion that, while it is obvious to include a second display screen as recited in claim 3 in the Enzmann system based solely on the common knowledge of a POSITA before the priority date of the '283 Patent, the combination of Enzmann, Smith, Carey, and Wako make claim 3 obvious.

4. Claim 4 – The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device.

147. As with Ground 1, I note the claim 4 recites the same limitations as claim 3, but adds "a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device." As to the other functionality in claim 4, it is obvious as discussed above with respect to claim 3.

148. Regarding the third display screen, as discussed above with respect to claim 1h, Enzmann discloses or makes obvious displaying received location information. Section IV.B.1.h. Moreover, it would be obvious to a POSITA that, after the requested location information is transmitted to the requesting wireless device, an additional display screen to show the requested location would be presented.

149. Thus, it is my opinion that Enzmann in view of Smith, Carey, and Wako discloses or makes obvious the functionality recited in claim 4.

5. Claim 5 – The method of claim 1, wherein said selection occurs on a first display screen, a second display screen is provided on said first wireless telephonic device during said determination, a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless telephonic device, and a

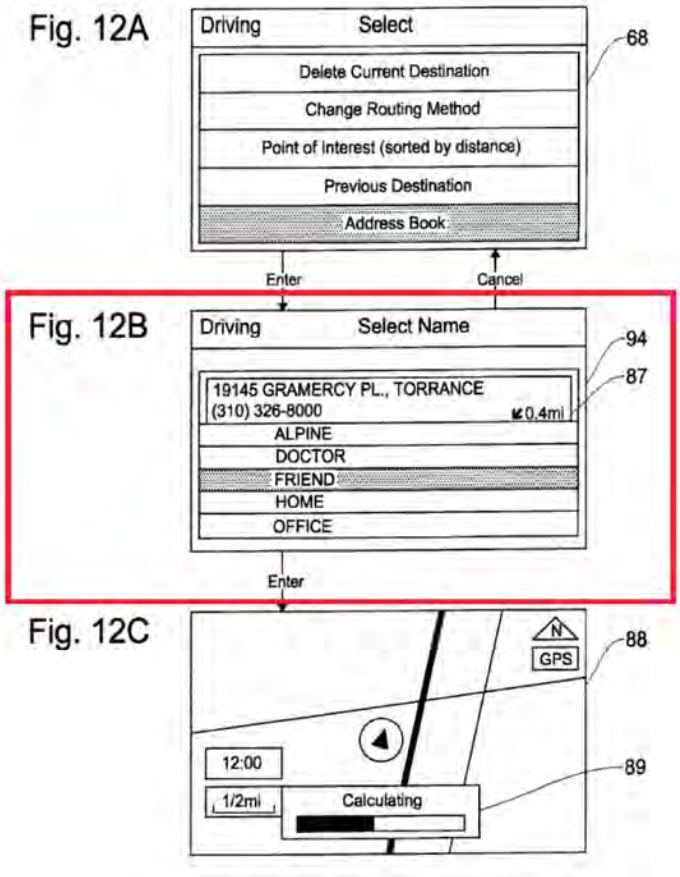
fourth display screen is provided that includes an option to obtain directions from said first wireless telephonic device to said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users.

150. As with Ground 1, I note that claim 5 recites the same limitations as claim 4, which are obvious based on Enzmann, Smith, and Wako as discussed above with respect to claim 4. Claim 5 also recites that "a fourth display screen is provided that includes an option to obtain directions from said first wireless telephonic device to said one of said plurality of wireless telephonic devices associated to said selected one of said plurality of users."

151. As discussed above with respect to claim 4, providing navigation information is one of the most obvious uses for a received location following a request for another person's location. Thus, a user of Enzmann's system would expect to be able to obtain navigation information to a selected device. For example, Enzmann describes using a mapping converter to convert "raw" location information, such as an X-Y coordinate, into a displayable form. Ex.1040, 3:6-16. Enzmann also describes that its system can help a user identify the location of a friend to potentially meet them. Ex.1040, 9:19-27.

152. In addition, the Wako system includes a navigation system that allows a user to select an address and obtain driving directions to the address from its current location. Ex.1062, Figs 12a-c, 12:35-13:14. Because Enzmann already

includes a mapping converter that can convert raw location information into displayable location information, such as a street address, and that its system can help the user meet up with a friend, it would be an obvious portion of Enzmann to provide navigation functionality to requesting devices. Ex.1021, ¶¶ 211-212. For example, the navigation capabilities from Wako could be incorporated into the Enzmann system to provide enhanced functionality to Enzmann's users to not only receive location information but also navigation information. By modifying Enzmann to provide navigation information, the Enzmann requesting devices would also be modified to include an option for their users to select to request navigation information. Such an option would be provided on a display screen, such as shown in Wako's Figure 12b. Ex.1062, Fig. 12b. A user may select the option to navigate to the selected location by pressing "Enter" as shown in Figure 12b.



153. Thus, it is my opinion that claim 5 is obvious based on Enzmann, Smith, Carey, and Wako.

6. Claim 6 – The method of claim 1, further comprising receiving a third manual input, wherein said first wireless telephonic device assigned location access rights to said one of said plurality of wireless telephonic devices associated with said selected one of said plurality of users for obtaining a location of said first wireless telephonic device and said third manual input modifies said location access rights.

154. As I discussed above with respect to claims 1d-f, Enzmann describes that users can create, modify, and provide lists of authorized uses who may request location information. Sections IV.B.1.d to IV.B.1.f. Enzmann describes some

details about the user interfaces provided by its devices, including its wireless telephonic devices, which can include GUIs, menu-driven systems, or series of key sequence inputs. Ex.1040, 5:64-6:2, 6:57-62. I also described with respect to claim 1a how the wireless requestor devices can be network devices 104, thus such functionality is provided by the network devices 104 themselves.

155. I also discussed above with respect to claim 6 in Ground 1 that the ability to assign location access rights means that a user can also modify previously assigned access rights. Section IV.A.6. For example, a user could revoke another user's access rights. This is also true of the Enzmann reference which allows a user to provide lists of authorized users. Thus, a user is naturally allowed to add or remove users from their list.

156. Because the Enzmann network devices provide displays and interfaces for their users, it would be obvious to allow a user to make changes to authorized users via their network device. For example, Smith describes that a user may make changes to contacts within their contact list. Ex.1059, 10:7-16. It would have been obvious to one of skill in the art to allow a user to modify location access rights using a similar technique as discussed in Smith, such as by selecting a particular contact in a contact list and changing the type of location access rights granted for that contact.

157. Thus it is my opinion that claim 6 is obvious based on Enzmann in

view of Smith and Carey.

7. Claim 7 – The method of claim 1, wherein a triangulation process is utilized to provide said location information.

158. As I discussed above with respect to claim 2, Enzmann's system includes a location system 120 that can include network-based location services, such as triangulation. Ex.1040, 4:25-38.

159. Thus, it is my opinion that Enzmann in view of Smith and Carey makes obvious claim 7.

8. Claim 8

160. Like claim 1, claim 8's preamble only recites "A method comprising." As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 8 recites a method that includes essentially the same limitations as recited in claim 1. Thus, it is my opinion that claim 8 is invalid essentially for the reasons given above with respect to claim 1.

a. *Claim 8a – displaying on a wireless device a first name associated to a first wireless telephonic device and a second name associated to a second wireless telephonic device*

161. It is my opinion that claim 8a is invalid for the same reasons discussed above with respect to claim 1a. While claim 1a recites "displaying on a first wireless telephonic device a plurality of users, wherein each one of said plurality

of users is associated to a different one of a plurality of wireless telephonic devices," claim 8a specifically identifies a first user and a second user, rather than generally referring to a "plurality of users." Claim 8a also specifically recites displaying names of the first and second users. My discussion above with respect to claim 1a includes a contact list that displays names of users. Section IV.B.1.a.

162. Thus, it is my opinion that claim 8a is obvious for the reasons discussed above with respect to claim 1a.

b. *Claim 8b – accepting a selection of said first name on said wireless device*

163. While claim 1b recites "receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users," claim 8b recites essentially this same functionality. Thus, claim 8b is obvious for the same reasons as claim 1b.

c. *Claim 8c – receiving manual input entered into said wireless device that includes a login and a password*

164. Claim 1c recites "receiving on said first wireless telephonic device an input in a form of a login and a second manual input in a form of a password," while claim 8c only recites generically "receiving manual input … that includes a login and password." Because claim 1c is more specific than claim 8c, and because claim 1c is invalid as discussed above, it is my opinion that claim 8c is invalid for the same reasons discussed above with respect to claim 1c.

d. ***Claim 8d – determining whether to transmit location information associated to said first wireless telephonic device from a server to said wireless device***

165. Both claims 1d and 8d involve conditionally accessing or transmitting location information based on a determination.

166. It is my opinion that claim 8d is obvious for the same reasons as claim 1d.

e. ***Claim 8e – wherein said determining includes performing an identification process based, at least in part, on said manual input to identify the user of said wireless device and determining whether said first wireless telephonic device has provided access rights for said location information for said identified user and said server is located remotely from said wireless device, said first wireless telephonic device, and said second wireless telephonic device***

167. Claim 1e recites substantially the same functionality as recited in claim 8e. And while claim 8e recites the location of a server, which claim 1e does not address, Enzmann's location server 100 is remote from the network devices and the requestor devices operating in the Enzmann system. *See, e.g.*, Ex.1040, Figures 1, 3, 4.

168. Thus, it is my opinion that Enzmann discloses claim 8e is obvious for the same reasons as claim 1e and the reasons given above.

f. ***Claim 8f – said wireless device is operable to assign location access rights to said first wireless telephonic device for obtaining a location of said wireless device***

169. Claim 1f recites substantially the same functionality as recited in claim 8f.

170. Thus, it is my opinion that claim 8f is invalid for the same reasons as claim 1f.

g. ***Claim 8g – transmitting said location information to said wireless device based on said determination***

171. Claim 1g recites substantially the same functionality as recited in claim 8g.

172. Thus, it is my opinion that claim 8g is invalid for the same reasons as claim 1g.

h. ***Claim 8h – displaying said location information on said wireless device.***

173. Claim 1h recites substantially the same functionality as recited in claim 8h.

174. Thus, it is my opinion that claim 8h is invalid for the same reasons as claim 1h.

9. Claim 9 – The method of claim 8, wherein a positioning system is utilized to provide said location information.

175. Claim 2 recites substantially the same functionality as recited in claim 9.

176. Thus, it is my opinion that claim 9 is invalid for the same reasons as claim 2.

10. Claim 10 – The method of claim 8, wherein said selection occurs on a first display screen and a second display screen is provided on said wireless device during said determination.

177. Claim 3 recites substantially the same functionality as recited in claim 10.

178. Thus, it is my opinion that claim 10 is invalid for the same reasons as claim 3.

11. Claim 11 – The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, and a third display screen is provided on said wireless device after said location information is transmitted to said wireless device.

179. Claim 4 recites substantially the same functionality as recited in claim 11.

180. Thus, it is my opinion that claim 11 is invalid for the same reasons as claim 4.

12. Claim 12 – The method of claim 8, wherein said selection occurs on a first display screen, a second display screen is provided on said wireless device during said determination, a third display screen is provided on said wireless device after said location information is transmitted to said wireless device, and a fourth display screen is provided that

includes an option to obtain directions from said wireless telephonic device to said first wireless telephonic device.

181. Claim 5 recites substantially the same functionality as recited in claim 12.

182. Thus, it is my opinion that claim 12 is invalid for the same reasons as claim 5.

13. Claim 13 – The method of claim 8, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device and said third manual input modifies said location access rights.

183. Claim 13 recites substantially the same functionality as recited in claim 6.

184. Thus, it is my opinion that claim 13 is invalid for the same reasons as claim 6.

14. Claim 14 – The method of claim 3, further comprising receiving a third manual input, wherein said wireless device assigned location access rights to said first wireless telephonic device for obtaining a location of said wireless device, said third manual input modifies said location access rights, and determining a travel time between said wireless device and said first wireless telephonic device.

185. I note that claim 14 recites the same limitations as recited in claim 13, but adds "and determining a travel time between said wireless device and said first wireless telephonic device." As discussed above with respect to claim 5, it would

have been obvious to incorporate navigation functionality into the Enzmann system, such as described in Wako.

186. As I discussed above with respect to claim 14 in Ground 1, a POSITA would have considered travel time to be an important piece of route information before the priority date of the '283 Patent. Indeed, travel time is a basic piece of information a person would want to know when planning to travel to another location. Thus, one of skill in the art would have been motivated to incorporate determining a travel time along a route to a destination into Sheha's system to provide more fulsome travel information to a user. Ex.1021, ¶¶ 211-212

187. For example, a POSITA would have looked to the Wako reference, which discloses a prior art system that provides an estimated time to reach a final destination. Ex.1062, 11:56-60. The Wako system itself determines a travel time along a particular route, such as when it described that a "route to the destination may be determined based on, for example, whether it requires the shortest time, it includes many freeways as possible, or it includes few toll roads as possible, or the like." Ex.1062, 11:56-60. Determining a route that requires the shortest time involves determining a travel time between the user's location, which is the location of the wireless device, and the destination, which is the location of the first wireless telephonic device.

188. Thus, it is my opinion that claim 14 is invalid as obvious based on

Enzmann in view of Smith, Carey, and Wako.

15. Claim 15

189. Like claim 1, claim 15's preamble only recites "A method comprising." As with claim 1, I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Claim 15 recites a method that includes essentially the same limitations as recited in claim 1. Thus, it is my opinion that claim 15 is invalid essentially for the reasons given above with respect to claim 1.

a. *Claim 15a – accepting on a first wireless device a manual selection representative of a second wireless device from a list representative of a plurality of wireless devices*

190. Claims 1a and 1b recite "displaying on a first wireless telephonic device a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephonic devices" and "receiving on said first wireless telephonic device a first manual input in a form of a selection of one of said plurality of users." These limitations recite substantially the same functionality recited in claim 15a.

191. Thus it is my opinion that claim 15a is invalid for the same reasons given above with respect to claims 1a and 1b.

b. *Claim 15b – locating said second wireless device*

192. Enzmann describes that after one wireless device submits a request for the location of another wireless device, the location server 100 obtains the location of the other wireless device, such as from the location system 120. The location system 120 locates the other wireless device either using a location system 122 integrated into the wireless device, such as GPS, or a network-based location system 124 that uses techniques such as triangulation. Ex.1040, 4:15-23, 5:3-12, 5:39-60.

193. Thus, it is my opinion that claim 15b is disclosed by Enzmann.

c. *Claim 15c – determining on a server whether said second wireless device has provided permission for said first wireless device to locate said second wireless device based, at least in part, on an identification of a login, that identifies the user of said first wireless device from a plurality of users, and password received by said first wireless device that is associated with said login and determining whether said user is associated with said permission, and said first wireless device is operable to assign a second permission to said second wireless device for obtaining second location information of said first wireless device*

194. Claims 1d-1f recite substantially the same functionality recited in claim 15c.

195. Thus, it is my opinion that claim 15c is obvious for the same reasons given above with respect to claims 1d-1f.

d. ***Claim 15d – providing location information to said first wireless device based on said determination***

196. Claim 1g recites substantially the same limitations as claim 15d.

197. Thus it is my opinion that claim 15d is invalid for the same reasons given above with respect to claims 1g.

e. ***Claim 15e – displaying a map on said first wireless device with a marker representative of the location of said second wireless device***

198. Claim 1h recites substantially the same limitations as claim 15e. And while claim 1h does not explicitly recite displaying a marker, Enzmann discloses location information in a "displayable" form, and it was well-known before the priority date of the '283 Patent to display a marker representing a location on a map. Ex.1040, 3:1-16. For example, Sheha discloses displaying a marker representative of a location of another wireless device. Ex.1041, Fig. 5 (label 34). Further, a wireless device would have included such a marker when it displays "a map and address of the destination telephone number can be displayed on the mobile telephone." Ex.1041, 4:52-58. A POSITA would have incorporated Sheha's mapping functionality into Enzmann to provide a user with expected functionality, including a displayable map of a received location and a marker to show the location on the map. Ex.1021, ¶ 201.

199. Thus, it is my opinion that claim 15e is invalid for the same reasons

given above with respect to claim 1h and the reasons given above.

16. Claim 16 – The method of claim 15, wherein a positioning system is utilized to provide said location information.

200. Claim 16 recites substantially the same limitations as claim 2.

201. Thus, it is my opinion that claim 16 is obvious for the same reasons given above with respect to claim 2.

17. Claim 17 – The method of claim 15, wherein said password is received on a first display screen.

202. As discussed above with respect to claim 1c, it would have been obvious based on Enzmann alone or in combination with Carey to receive manual input of a password on a display screen, such as by using the login and password screen described by Carey. Section IV.B.1.c; Ex.1045, Fig. 8. A POSITA would have been motivated to incorporate such functionality into Enzmann to allow a user to provide the password information required by Enzmann's system. Ex.1021, ⁋⁋ 165-166, Ex.1040, 6:41-48.

203. Thus, it is my opinion that claim 17 is obvious based on Enzmann in view of Smith and Carey.

18. Claim 18 – The method of claim 15, wherein said password is received on a first display screen and said login is received on a second display screen.

204. Claim 18 recites the same features as claim 17, but also recites that a login is received on a second display screen. As I discussed above with respect to

claim 1c and claim 17, it would have been obvious to receive manual input on a display screen for a login and password. Claim 18 recites that the password and login are received on first and second display screens. It would have been an obvious design choice to separate login and password entry on different screens. In addition, such a design choice was well-known before the priority date of the '283 Patent. For example, Engberg shows an example employs different display screens to obtain a user's login and password:

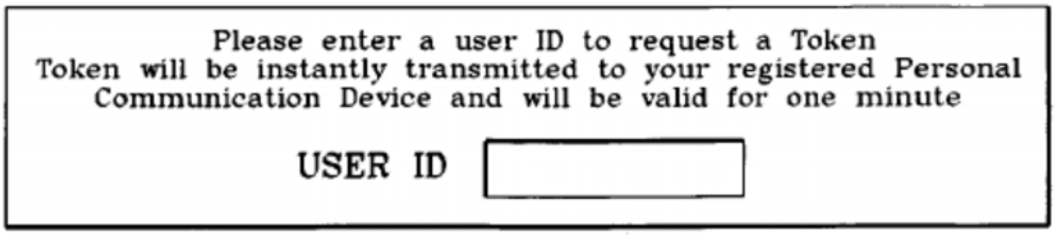


FIG. 2C

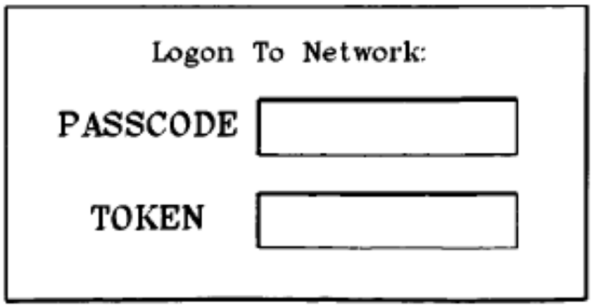


FIG. 2D

205. One of skill in the art would have been motivated to provide separate display screens to receive login and password information as one of two options for requesting login and password: (1) either on the same display screen or (2) on

different display screens as shown in Engberg. Engberg, Figs. 2A-2D.

206. Thus, it is my opinion that claim 18 is obvious based on Enzmann, Smith, Carey, and Engberg.

19. Claim 19 – The method of claim 15, wherein said manual selection occurs on a first display screen and a second display screen is provided on said first wireless device during said determination.

207. Claim 19 recites substantially the same limitations as claim 3.

208. Thus, it is my opinion that claim 19 is obvious for the same reasons given above with respect to claim 3.

20. Claim 20 – The method of claim 15, wherein said manual selection occurs on a first display screen, a second display screen is provided on said first wireless device during said determination, and a third display screen is provided on said first wireless device after said location information is transmitted to said first wireless device.

209. Claim 20 recites substantially the same limitations as claim 4.

210. Thus, it is my opinion that claim 20 is obvious for the same reasons given above with respect to claim 4.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 3

TABLE OF CONTENTS

I. U.S. Patent No. 9,635,540

1. I have been informed that the earliest priority date to which the Patent Owner may claim the ’540 Patent is entitled to is March 25, 2002.

A. Summary of the ’540 Patent

2. The ’540 Patent relates to systems and methods for remotely determining a device’s location. Ex. 1003, 1:15-17. According to the specification, “any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114.” *Id.*, 4:24 – 27. Another feature described in the ’540 Patent is that “every user may assign rights (e.g. govern the security) to whom may or may not locate him/her.” *Id.*, 4:56-58.

3. Figure 2 depicts a method to obtain another user’s location, which generally includes sending a request for a location, determining whether the user is authorized, and, if so, providing the location to the requestor.

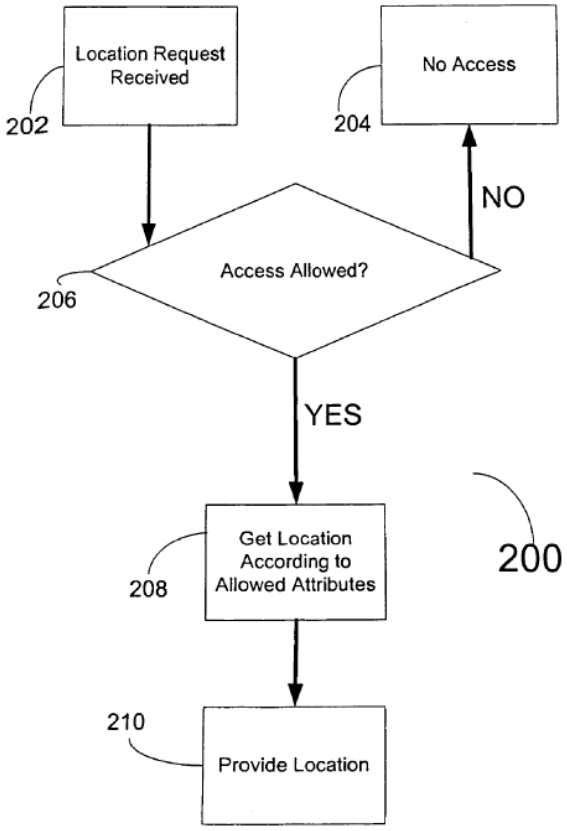


FIG. 2

Ex. 1003 Fig. 2.

4. Figure 6 shows a display screen that provides location information.

Id., FIG. 6; 7:23-27.

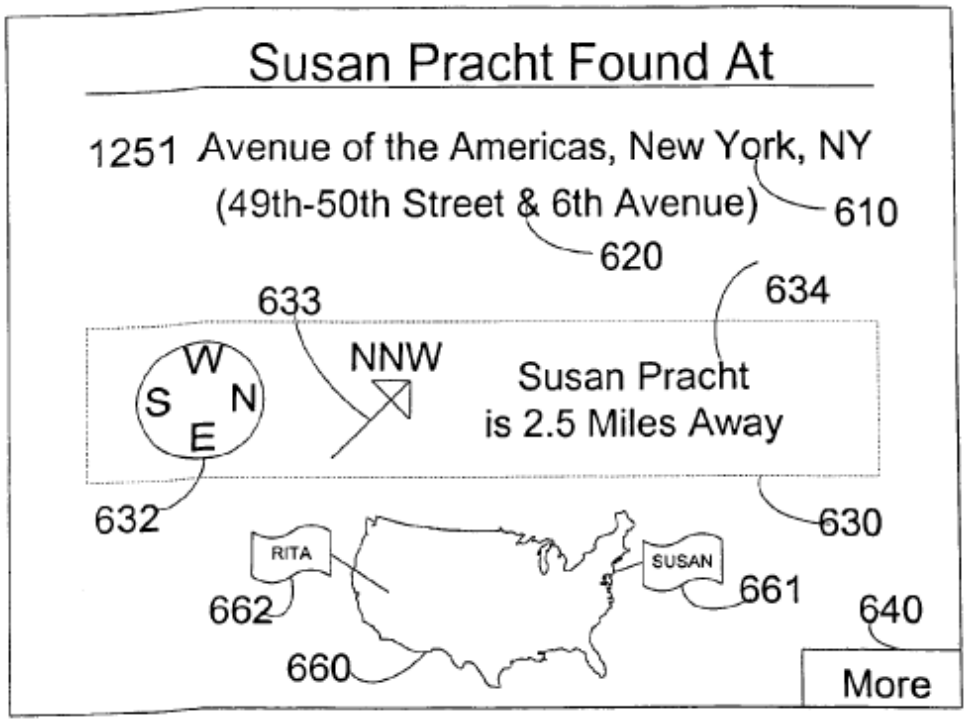


FIG. 6

Ex. 1005, Fig. 6.

5. Available location information, "[d]epending on what scope the requesting user has access to . . . may include, for example, the country, state, city, exact location, or any combination thereof of location information to the user." *Id.*, 7:36-39. The location information may also include directional information, and a map may be included to show locations of multiple users. *Id.*, 7:51-8:21, 8:40-51.

6. According to the '540 Patent, the amount of information provided on the display screen is limited to the scope of the requesting user's access rights. *Id.*, 7:26-27, FIG. 8. The '540 Patent also describes permitting a user to give or modify

access to location rights to another user, e.g., the user may select which users may access his or her location information and what information a specific user may access. *Id.*, 9:10-26, FIG. 10. A user may also set up alerts depending on the location of other users' phones. *Id.*, 9:27-36, FIGS. 11-12. For example, a user might receive an alert "if the requested user is in a specific city or the same city as the user of display 1100, is within a certain distance, or if a user located the user of display 1100." *Id.*

7. A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. *Id.*, 11:56-58. "Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." *Id.*, 11:58-59. After a location is requested, access rights to the requested location for the requesting device and/or user are checked. *Id.*, 11:64-2:4. If the requestor has access rights, location information is provided to the requestor. *Id.*, 12:14-16. If the requestor has not been assigned access rights, then the requestor is informed that he or she does not have access rights to obtain the location information. *Id.*, 12:28-32.

B. Relevant Prosecution History of the '540 Patent

8. During the extended prosecution of the '540 Patent, was rejected 12 times, including 4 final rejections, before ultimately being allowed. During the 10 plus year prosecution, Applicant filed numerous Requests for Continued

Examination solely to file an Information Disclosure Statement immediately after receiving a Notice of Allowance. *See e.g.* Ex. 1013, pp. 1056-1084, 1503-1529, 1534-1560. Prior to the final allowance, Applicant added the limitations of:

- 1) "determining that said second wireless device does not have location access rights for said first wireless device" and
- 2) "asking said second wireless device if said location access rights are to be requested from said first wireless device after determining that said second wireless device does not have said location access rights for said first wireless device" to claim 1, the sole in Claim.

Ex. 1013, p. 1412.

9. The Applicant asserted that the prior art did not teach a step of asking the requesting device if location access rights were to be requested from the first device, instead only performing automatic operations. Ex. 1013, pp. 1431-1433. The Examiner allowed the claims but provided no reasons for allowance. Ex. 1013, pp. 1446-1450, 1585-86.

C. Claim Construction

10. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent

11. In my opinion the claims of the '540 Patent use terms that have ordinary and customary meanings in the art and do not use these terms

inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

II. Analysis and Identification of how the Claims are Unpatentable

A. Ground 1: Sheha in combination with Ganesh, Ryden, Degnbol, and/or Smith makes claims 1-35 obvious

12. Sheha in view of Ganesh makes obvious claim 1. It is my opinion that a POSITA would be motivated to combine Sheha with Ganesh. *See* Ex. 1021, Section IX. Sheha discloses all but one of the elements of a system as recited in claim 1, including a mobile device that user can use to enter a login and password and to access location information for other wireless devices. Ganesh discloses the remaining element of "asking said second wireless device if said location access rights are to be requested from said first wireless device after determining that said second wireless device does not have said location access rights for said first wireless device." Sheha in view of Ganesh also discloses most of the elements recited in the various dependent claims. Ryden, Degnbol, and/or Smith disclose all remaining elements, and it is my opinion that a POSITA would be motivated to combine these references. *See* Ex. 1021, Section IX. Thus, it is my opinion that the combination of Sheha Enzmann, Ganesh, Ryden, Degnbol, and/or Smith render claims 1-35 obvious.

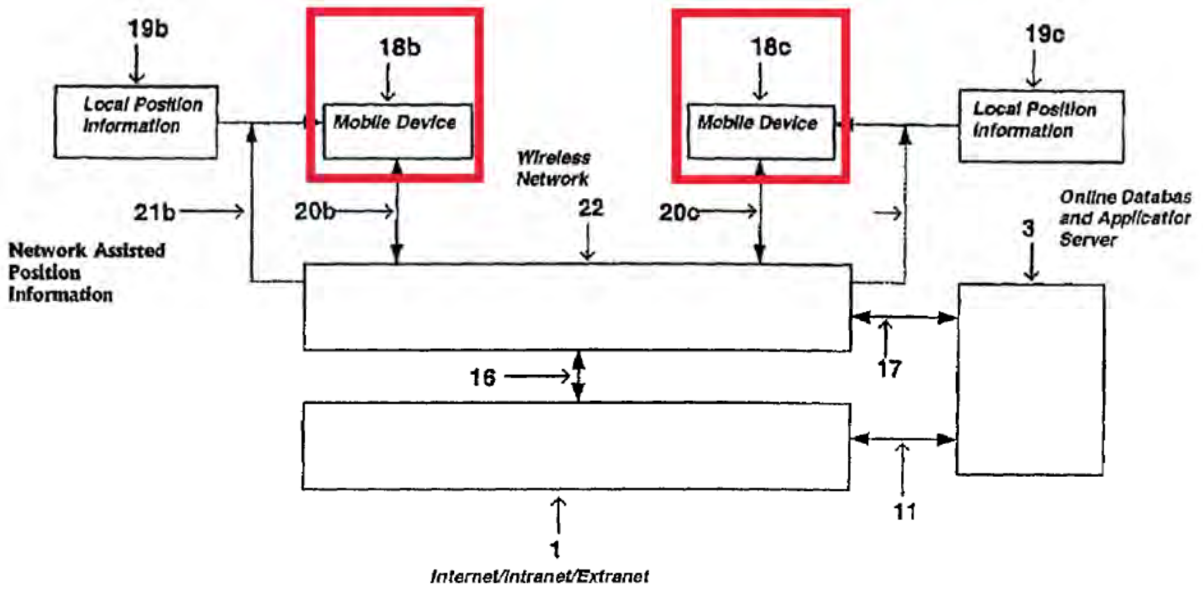
1. Independent claim 1

13. Sheha in view of Ganesh makes obvious claim 1. Claim 1's preamble simply recites "[a] method of mobile-to-mobile locating, said method comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a "method" for mobile-to-mobile locating. Ex. 1041, Abstract ("The present invention is directed to…providing real-time position information of one party to another party by utilizing…a mobile telecommunications network."), 10:66-11:9.

a. Claim 1a – requesting a location of a first wireless device by a second wireless device from a server located remotely from said first and second wireless devices*;*

14. It is my opinion that Sheha discloses a system that employs wireless devices whose locations can be requested, obtained, and provided to a remote system, and then to other wireless devices. Ex. 1041, Abstract, 4:13-18. For example, Sheha describes that its system can operate in multiple configurations, and that the "objective of each of these systems is the same, to determine either or both of the local and remote devices' position information." Ex. 1041, 4:13-18. In addition, Sheha describes that one mobile wireless device can request the location of another mobile wireless device via a wireless network, exemplified in Figure 3.

The system shown includes two mobile devices, identified as mobile devices 18b and 18c, that communicate with Sheha's Online Database and Application Server, or the "ODAS" 3, via a wireless network, labeled as wireless network 22 and respective wireless connections 20b-c. Ex. 1041, 10:67-11:35



Sheha, Fig. 3.

15. Sheha also discloses that the mobile devices shown in Figure 3 can be cell phones or wireless voice-enabled PDAs. Ex. 1041, 10:66-11:3. Sheha further discloses that the cell phones themselves determine their own positions. Ex. 1041, 10:5-16, 11:15-20. After a cell phone determines its position, the position is supplied to an ODAS 3, where it is stored. Ex. 1041, 11:3-8, 11:44-51, Figure 3. This example details that the second (requesting) wireless device 18b requests the

location of the first (target) device 18c from the server, ODAS 3. Ex. 1041, 11:20-37. Thus, it is my opinion that Sheha discloses claim element 1a.

b. Claim 1b: "determining that said second wireless device does not have location access rights for said first wireless device"

16. Sheha describes that each device may have privacy settings that "allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041 5:38-46, 11:63-12:4. Additionally, these privacy settings may be stored at the server or at the device. Ex. 1041 12:1-7.

17. Sheha also teaches that these privacy settings may include a list of users on the remote server who are allowed to access location information. Ex. 1041 11:61-12:1. It is my opinion that as Sheha references defining a list of "users" and "calling devices" interchangeably, each identified user is representative of one of a plurality of wireless telephones. Ex. 1041, 5:38-46, 11:63-12:4.

18. Sheha further describes an exemplary system in which, upon receiving a location request from a requesting device without location access rights, the server can query the target device "for permission on whether the position request can be granted based on criteria such as duration of request." Ex. 1041, 5:21-32. In this example, it is required that the requesting device be determined not to have location access rights, as otherwise it would be unnecessary to query the target device for permission. Thus, it is my opinion that Sheha discloses claim 1b.

c. Claim 1c: "asking said second wireless device if said location access rights are to be requested from said first wireless device after determining that said second wireless device does not have said location access rights for said first wireless device"

19. As I discussed in relation to claim 1b, Sheha discloses that after determining that the requesting device does not have location access rights, the server can present the request for location access rights to the target device. Ex. 1041, 5:21-32. As discussed below, Ganesh discloses the intermediary step of asking the requesting device if location access rights are to be requested for the target device Ganesh does. Ex. 1049. As discussed in my declaration, Ex. 1021 ¶¶173-180, a POSITA would have been motivated to incorporate Ganesh's teachings into Sheha's system.

20. Both Sheha and Ganesh teach a system for providing the location of a target wireless device to an authorized requesting device. *See supra* Section II.A.1; Ex. 1049, 1:14-18. Ganesh discloses an interface screen in Figure 6 that is displayed after a requesting wireless device is determined not to have location access rights for reasons 88. Ex. 1049, 6:33-42. Figure 6 of Ganesh asks the requesting device in query 90 if location access rights are to be received from the target device at a later time. Ex. 1049, 6:42-44, 8:43-50. Query 90 to receive the location of the target device at a later time necessarily requires requesting location access rights to obtain the location of the target device.

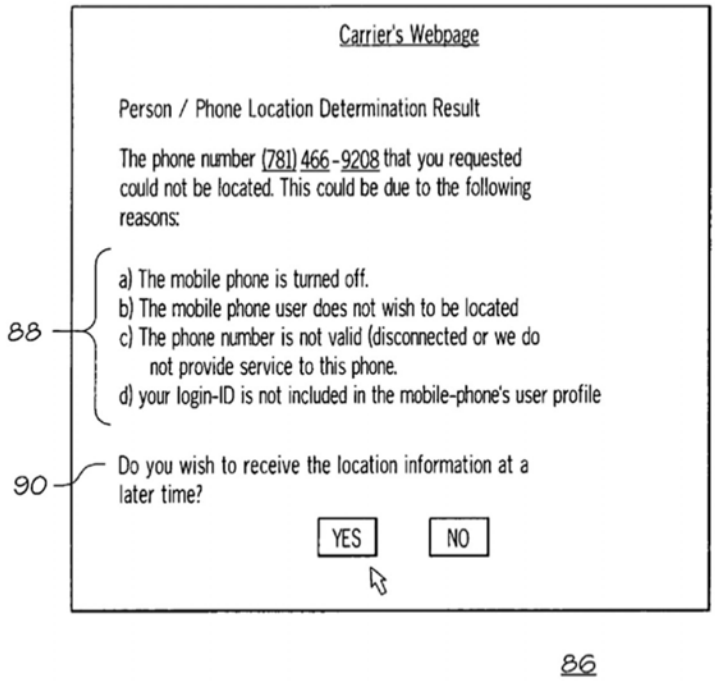


FIG. 6

21. In the Ganesh-modified Sheha system, the denial and query dialog of Ganesh would appear on the requesting device as a confirmation prompt after the server determined that the requesting device did not have location access rights, but before querying the target device for permission. Ex. 1041, 5:21-46; Ex. 1049, 6:33-42. Thus, it is my opinion that Sheha and Ganesh in combination disclose claim 1c.

d. Claim 1d: "requesting that *said* location access rights be assigned for said second wireless device by said first wireless device"

22. As I previously discussed with respect to claim 1b, Sheha discloses that after determining that the requesting device lacks location access rights, the server can request that location access rights be assigned to the requesting device by the target device. Ex. 1041, 5:21-46. Thus, it is my opinion that Sheha discloses claim 1d.

e. Claim 1e: "assigning said location access rights on said server to said second wireless device by said first wireless device"

23. As I previously discussed with respect to claim 1b, Sheha discloses privacy settings and user lists that may be stored on the server. Additionally, Sheha discloses that the target device can assign location access rights to the requesting device in a variety of ways, including by granting permission to the individual requesting device "based on criteria such as the duration of the request," changing privacy settings to "enable position transfer permissions at anytime and for any period of time," or by modifying the list of authorized users. Ex. 1041, 5:9-46, 11:61-12:1. In my opinion, because Sheha discloses that the user of the target device has the authority to "define" a list of users who are allowed to access their location, and further discloses that the user may change these privacy settings "at anytime," Sheha discloses that location access rights may be assigned by the target

device. Ex. 1041, 5:9-20; 11:61-12:1. Thus, it is my opinion that Sheha discloses claim 1e.

f. Claim 1f: "storing said location access rights on said server"

24. Sheha discloses that a mobile device user can define a list of users authorized to have location access rights, which is stored on a server "by utilizing a group database and authorization and authentication protocols." Ex. 1041, 11:63-12:4. Thus, Sheha discloses claim 1f.

g. Claim 1g: "determining said access rights assigned by said first wireless device to said second wireless device on said server"

25. My discussion about claim 1b details the initial determination of the access rights of the requesting device for the target device. Additionally, Sheha discloses that the server determines what access rights have been assigned to the requesting device "based on criteria" before providing the target device's location to the requesting device. Ex. 1041, 5:29-34. In addition, Sheha discloses that the server ODAS continuously receives location information from mobile devices to account for changing locations and to provide accurate real-time driving directions and route information. Ex. 1041, 11:44-51. Sheha, further discloses that the target device may revoke access rights at any time. Sheha, 5:9-20, 5:34-46, 10:66-11:9. It is my opinion that unless the server determines the access rights of the

requesting device for each request, the target device would be unable to revoke access rights at any given moment, as the server would otherwise continue to transmit location information to the requesting device based on the initial grant of access. Thus, it is my opinion that Sheha discloses claim 1g.

h. Claim 1h: "providing said location from said server to said second wireless device *dependent* upon said access rights"

26. As I discussed in claim 1g, Sheha discloses that the server continuously determines the access rights of the requesting device. Sheha also discloses that the server provides the location of the target device to the requesting device so long as the requesting device has been granted location access rights. Ex. 1041, 5:2-7, 5:32-34, 10:66-11:9, 11:44-51. Thus, it is my opinion that Sheha discloses claim 1h.

2. Claim 2: "The method of claim 1, wherein said first and second wireless devices are cellular phones."

27. Sheha teaches that the requesting and target devices are both cellular telephones. Ex. 1041, 10:66-11:3. Thus, Sheha in view of Ganesh makes obvious claim 2.

3. Claim 3: "The method of claim 1, wherein said location access rights include the ability to obtain said location, wherein said location is provided to said second wireless

device from said server even when said first wireless device is OFF."

28. As I discussed in claim 1a above, Sheha discloses that locations of wireless devices are stored at its ODAS. Ex. 1041, 11:3-8, 11:44-51. Further, because the locations are stored at the ODAS, a requesting device can request a target device location regardless of whether the target device is on or off. Ex. 1041, 11:3-8, 11:44-51. Thus, it is my opinion that a POSITA would recognize the ability to get the target wireless device's location via the server even if the target device is off. Further, while the location might be an "old" location, e.g. the last known location, it still would be a location about the target device, as required by claim 3, which does not require that the location provided be the current or most recent location.

29. Similarly, Ganesh discloses that the server can provide the approximate location of a target device to a requesting device even when the target device is turned off, by accessing a comprehensive call history database 34. Ex. 1049, 4:29-35, 6:55-7:20, 7:62-65. In particular, Ganesh teaches in an alternate embodiment that this approximate location can be used to provide an approximate location of the target device when it is "not currently registered," i.e., if the device is not connected to the network or if the device is turned OFF. Ex. 1049, 7:18-20.

30. Ryden also teaches providing location information about a wireless device even if it is powered off. In particular, Ryden further discloses programming wireless telephones to "bypass the unit's ON-OFF switch" to allow location sharing "even when the unit 10 is turned OFF." Ex. 1057, 16:53-62; Ex. 1058, 30:23-31:8. As discussed in my declaration, Ex. 1021 ¶¶197-200, a POSITA would have been motivated to incorporate Ryden's teachings into Sheha's system. Like Sheha, Ryden discloses a system where a server obtains location information from a target mobile device and provides it to the requesting device. Ex. 1057, 5:4-14; Ex. 1058, 8:7-14. It is my opinion that a POSITA would understand that in combination with Sheha, a wireless device with the abovementioned programming taught by Ryden could provide its location information to a server, and thus to a requesting device even when it is turned off.

31. Thus, it is my opinion that Sheha in view of Ganesh and/or Ryden makes obvious claim 3.

4. Claim 4: "The method of claim 1, wherein said location access rights comprise a plurality of access levels."

32. It is my opinion that tiered access levels were a well-known privacy/security feature, including in access sharing (e.g. don't share, share with public, share with friends, share with family, share with immediate family, etc.). Sheha describes privacy settings that allow for a plurality of access levels for

different requesting devices, allowing the user of the target device "to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:37-46. It is my opinion that while Sheha does not explicitly define different access levels, its use of "limit" requires a plurality of access levels—at least full, limited, and no access—to allow limited access to location information.

33. It is my opinion that Sheha further discloses limitations on location information that could be implemented as different access levels. For example, Sheha teaches a privacy setting where location information is transferred "only when a voice or video connection is established," or "only for a given period of time." Ex. 1041, 5:37-46, 10:20-26. Additionally, Sheha teaches other location limitation in that varying the map information provided to the requesting device can be restricted by map resolution, or by excluding information such as "elevation, line-of-sight distances, and curved Earth line-of-sight distances." Ex. 1041, 9:23-39.

34. It is my opinion that Ganesh describes a plurality of access levels. For example, one access level exists when a target device is powered off or out of coverage and requesting devices are only able to access the approximate location of the target device, corresponding to the most recent coverage area ascertained from call records. Ex. 1049, 4:29-35, 6:55-7:20, 7:62-65. As another example, a different access level exists when a target device is powered on and connected to

the network so that the exact latitude and longitude of the target device can be determined and provided to a requesting device. Ex. 1049, 4:35-39, 7:23-25, 7:51-61.

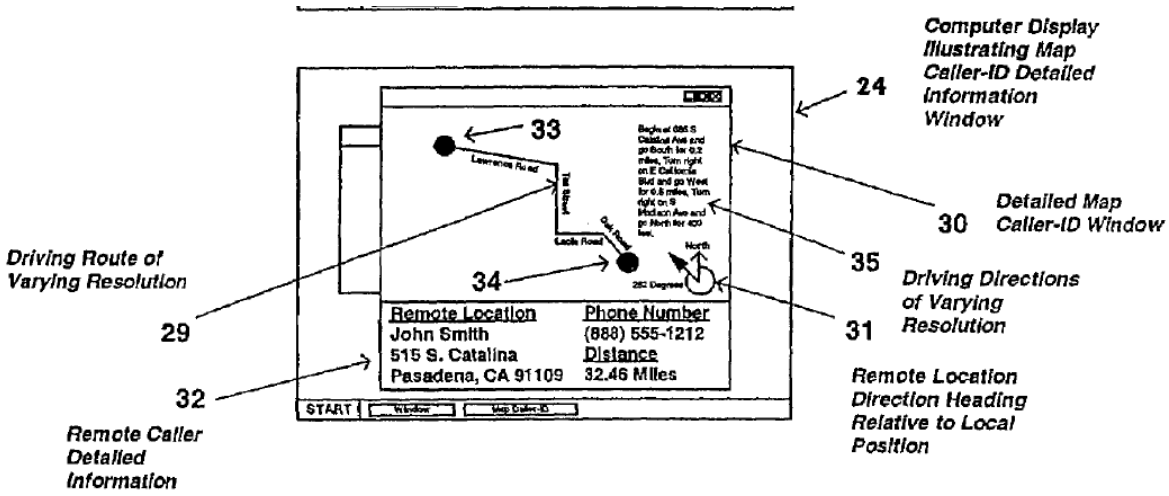
35. Obradovich also teaches a plurality of access levels for location information that includes a security index ranging from one to ten. Ex. 1055, 6:57-63. Specifically, the user of the target device assigns security level indexes for "each electronic communication identifier in geographic location information," such that at each access level, only specific location-related information will be provided. Ex. 1055, 6:37-46, claim 5. For example, Obradovich describes how an individual with a security index level of seven could only obtain a user's general office number, whereas an individual with a security index level of six could obtain the user's direct dial number. Ex. 1055, 6:57-63. Obradovich also teaches that geographic location could be provided as latitude and longitude, or as "street addresses or site names." Ex. 1055, 6:33-36. In my opinion, a POSITA would recognize that the access levels exemplified as limiting which phone number someone retrieves could also limit the location information received. That is, a POSITA would see the correlation that an individual with a security level of seven could only obtain a target user's location by site name, whereas an individual with a security level of six may obtain a target user's exact position via latitude and longitude.

36. As discussed above in my declaration, Ex. 1021 ¶¶191-195, a POSITA would have been motivated to incorporate Obradovich's teachings into Sheha's system. Thus, it is my opinion that Sheha in view of Ganesh or with Obradovich makes obvious claim 4.

5. Claim 5: "The method of claim 1, wherein said location is used to provide a location marker on a map on said second wireless device."

37. Sheha teaches a "Map Caller-ID" screen that is displayed on the requesting wireless device. The screen illustrates directional information representative of directions, driving route 29 and driving directions 35 between the location 34 of the target mobile device 34 and location 33 of the requesting mobile device. Ex. 1041, 4:52-58, 9:23-28, Fig. 5.

38. Sheha further discloses displaying a location marker on a map on the requesting wireless device. Specifically, Sheha describes the Map Caller-ID window 30 displaying both the caller's location 33 and "the [remote] user's location position information, such as a map location 34 of the destination telephone number," where both locations are illustrated as a circular marker. Ex. 1041, 9:23-28, Fig. 5.



Ex. 1041, Fig. 5 (excerpt).

39. It is my opinion that the functionality detailed with respect to Figure 5 works similarly whether one device is mobile or both devices are mobile. While the example in Fig. 5 discloses the destination device at location 34 is a landline device, Sheha also teaches that the network sends Map Caller-ID information to both devices in situations involving two mobile devices. Ex. 1041, 11:37-42.

40. It is my opinion that Ganesh describes a map display similar to Map Caller-ID, detailed in Sheha's system, which uses the current location of the target wireless device to display a location marker, star 106 on map 100, as illustrated in Figure 7 below. 1049, 8:6-16.

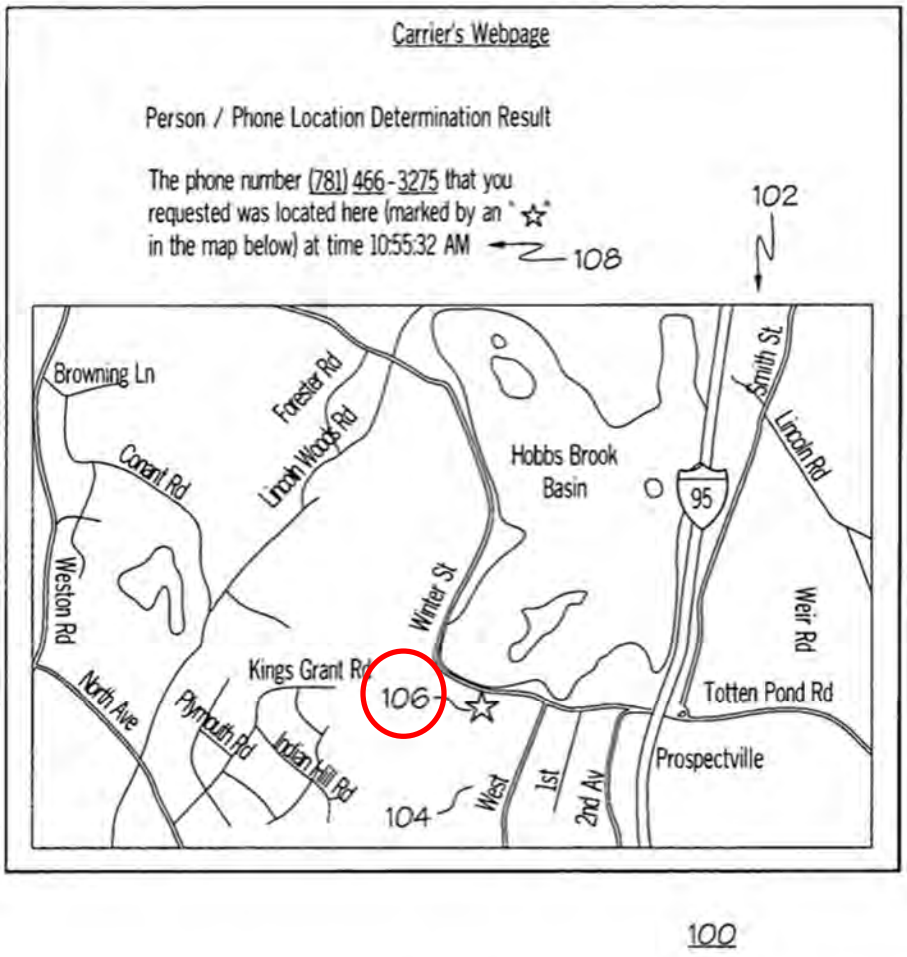


FIG. 7

41. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 5.

6. Claim 6: "The method of claim 1, wherein said location is used to provide directions from said second wireless device to said location on said second wireless device."

42. Sheha describes that a requesting mobile device's location can be used "in order to obtain driving directions to that device," and that if both requesting and target wireless telephones grant access to their respective location information,

this "can be used for real-time driving directions or collaboration purposes." Ex. 1041, 5:21-26, 5:32-34. Sheha further discloses that the server, ODAS, can calculate and provide "driving directions". Ex. 1041, 12:32-37, Fig. 5.

43. Figure 5 shows a "Map Caller-ID" screen with directional information representative of directions, driving route 29 and driving directions 35 between the location 34 of the target mobile device and location 33 of the requestor's mobile device. Ex. 1041, 9:23-28.

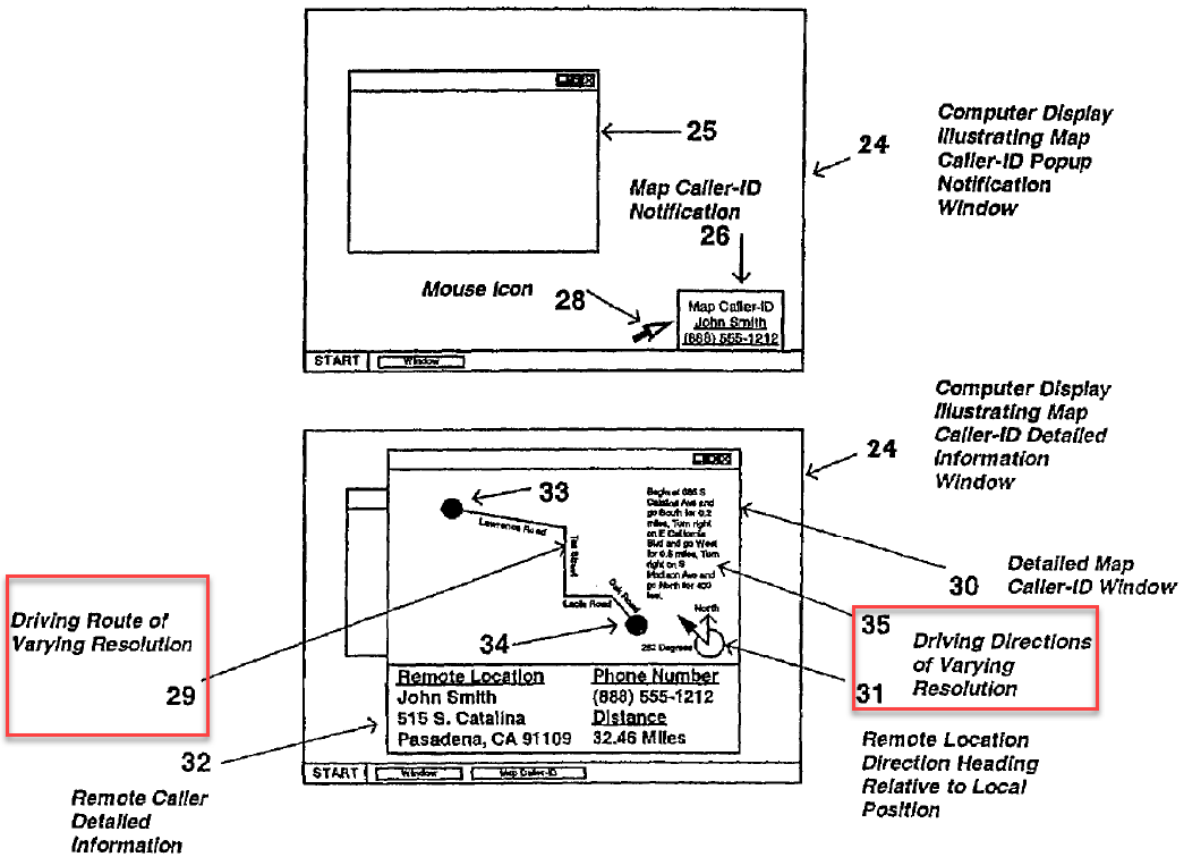


FIG. 5

44. Thus, in my opinion Sheha in view of Ganesh makes obvious claim 6.

7. Claim 7: "The method of claim 1, wherein said location is used to provide directions from said second wireless device

to said location and a travel time on said second wireless device."

45. As I previously discussed in claim 6, Sheha in view of Ganesh discloses providing directions from said second wireless device to said location. Sheha teaches that the location information could be used to "provide typical navigational functionality," which in my opinion a POSITA would have understood to include well-known navigational features such as a travel time. Ex. 1041, 12:8-31.

46. Like Sheha, Ryden's system also relates to a location-based communications system to share location information between mobile devices. Ex. 1057, Abstract, 18:47-48. Ryden teaches providing driving directions for ambulance 164 to meet vehicle 166 carrying a person requiring medical assistance. Ex. 1057, 19:49-61, Fig. 17; Ex. 1058, 35:12-16. Ryden also teaches that using the known locations and "the calculated velocities of both vehicles 164, 166 together with actual road distances and driving conditions, vector analysis or other calculations will determine the time required to achieve meeting." Ex. 1057, 19:49-61; Ex. 1058, 35:12-16. Thus, it is my opinion that Sheha in view of Ganesh together or in combination with Ryden makes obvious claim 7.

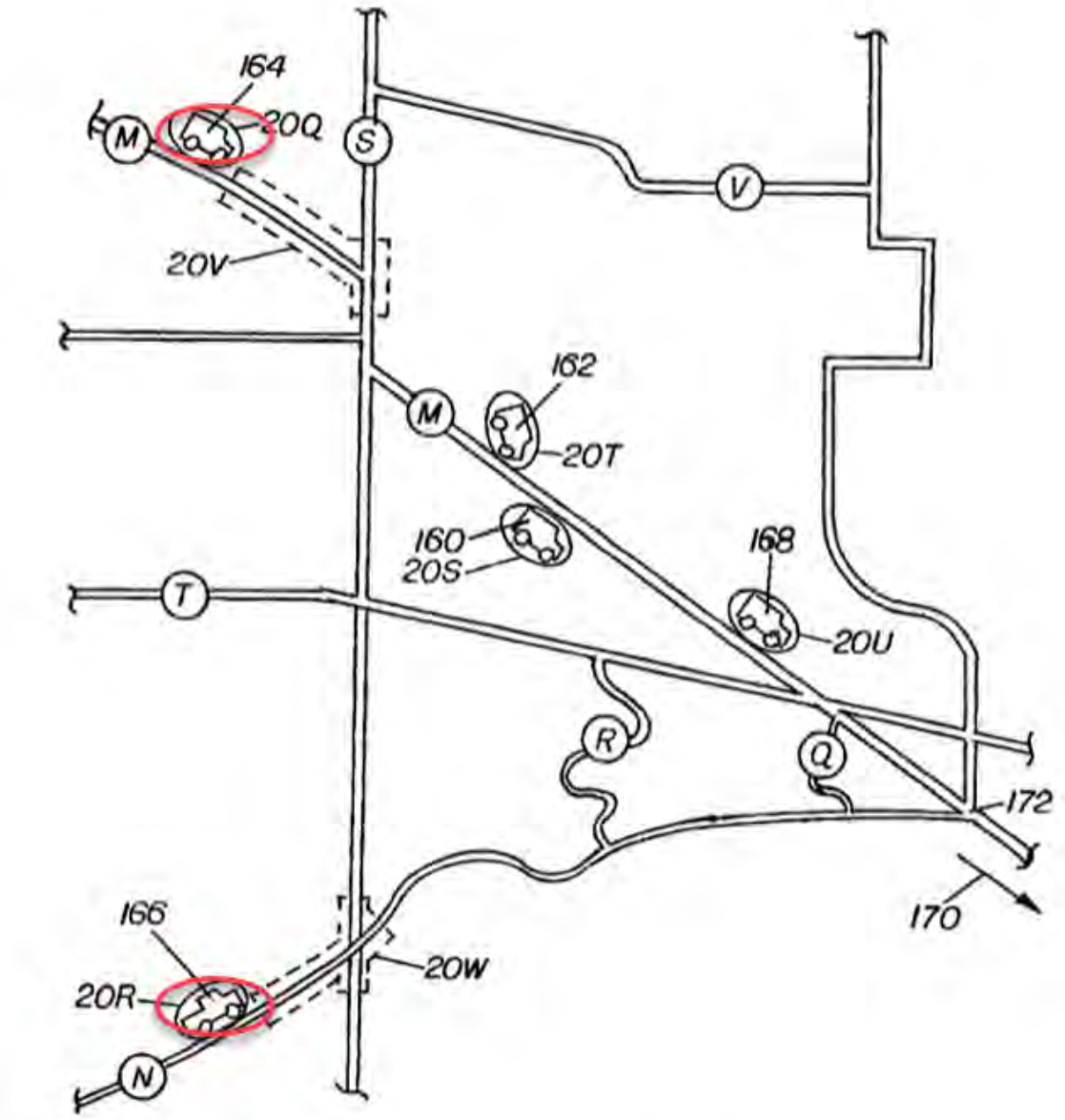


FIG. 17

Ex. 1057, Fig. 17.

8. Claim 8: "The method of claim 1, further comprising requesting a second location of said first wireless device and

using said location and said second location to determine how fast said first wireless device is traveling."

47. As I previously discussed in claim 1, Sheha in view of Ganesh discloses requesting a first location of the target wireless device. Sheha further teaches that for two mobile devices in motion, each device continuously determines and sends its updated position to the ODAS 3 and to the other mobile device. Ex. 1041, 11:37-51. A POSITA would understand that after the first location determination, each time the target mobile device updates its location, it is determining a second (or n^{th}) location associated with the target device.

48. Sheha teaches that the location information could be used to "provide typical navigational functionality," which in my opinion a POSITA would have understood to include well-known navigational features, such as a speed. Ex. 1041, 12:8-31.

49. Ryden explicitly teaches requesting a second location and using that location to determine how fast the wireless device is traveling. Ex. 1057, 18:47-48; ("The system permits extrapolations of existing travel directions and speeds."), 19:34-47; Ex. 1058, 35:4-11. Specifically, Ryden teaches an example where a police officer's wireless telephone is in contact with a telephone unit in a speeding car 160 and continuously obtaining the exact location of car 160. Ex. 1057, 19:34-47; Ex. 1058, 35:4-11. With this location information, Ryden explains that "[t]he

velocity of car 160 is easily established by a computer calculation of car movement as a time function" such that the velocity can be calculated "by a vector program, without use of a radar machine." Ex. 1057, 19:34-47; Ex. 1058, 35:4-11. Thus, it is my opinion that Sheha in view of Ganesh together or in combination with Ryden makes obvious claim 8.

9. Claim 9: "The method of claim 1, 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 first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device."

50. As I previously discussed in regard to claim 4, Sheha in view of Ganesh and/or Obradovich disclose a plurality of access levels, and for the same reasons disclose a plurality of levels of access rights. Furthermore, as I previously discussed in regard to claim 4, Ganesh teaches one access level (for when the device is powered on) comprising the exact location of the target device, where the exact latitude and longitude of the target device can be ascertained and provided to a requesting device. Ex. 1049, 4:35-39, 7:23-25, 7:51-61. Ganesh further teaches another access level (for when a target device is powered off or out of coverage) comprising the approximate location of the first wireless device, where requesting devices are only able to access to the approximate location of the target device, corresponding to the most recent coverage area ascertained from call records. Ex.

1049, 4:29-35, 6:55-7:20, 7:62-65. Thus, Sheha in view of Ganesh together or along with Obradovich makes obvious claim 9.

10. Claim 10: "The method of claim 1, 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 first wireless device, and said approximate location comprises a city or state."

51. As I previously discussed in claim 4, Sheha in view of Ganesh and/or Obradovich disclose a plurality of access levels. For the same reasons, Sheha in view of Ganesh and/or Obradovich disclose a plurality of levels of access rights.

52. As I previously discussed in claim 4, it is my opinion that tiered access levels was a well-known privacy/security feature, including in access sharing (e.g. don't share, share with public, share with friends, share with family, share with immediate family, etc.).

53. Additionally, Sheha describes allowing the user of the target device "to prevent or *limit* other calling devices from obtaining position information." Ex. 1041, 5:37-46 (emphasis added). These limitations imply at least two different access levels, limited and unlimited. Sheha's system can also provide "position-specific information, such as latitude and longitude coordinates, address information, and/or location information of varying size and resolution, such as "a metropolitan area, a state within the United States of America, and an international political territory." Ex. 1041, 3:50-55, claim 24. Sheha therefore discloses that the

location can be provided according to three enumerated types of geographic region.

54. The Obradovich reference describes access levels in terms of "a security level index," which can be configured by a user. Ex. 1055, 6:37-46, claim 5. Obradovich describes one example in which an individual with a security index level of seven could only obtain a user's general office number, whereas an individual with a security index level of six could obtain the user's direct dial number. Ex. 1055, 6:57-63. Obradovich therefore provides another example showing that user-configured access levels were known in the art, and both Sheha and Obradovich disclose this feature.

55. Obradovich further describes examples of geographic information items, such as latitude, longitude, street address, or site names. Ex. 1055, 6:33-36. Obradovich further teaches that each item of geographic location information can be made available for use with specific levels of access rights. Ex. 1055, 6:37-41. While Obradovich does not explicitly mention city or state, these were well-known forms of geographic information, as reflected in the representative caller address information shown in Sheha, Fig. 5. Ex. 1041, 9:23-39, Fig. 5.

56. Ryden describes that a location may be expressed in terms of an area "encompassing the object or surface of interest, whether it is the entire universe, the earth's surface, the earth and its surrounding space, a city, a building or a ship

for example." Ex. 1057, 7:25-31; Ex. 1058, 35:17-21. Thus, in my opinion Sheha in view of Ganesh, Obradovich, and/or Ryden makes obvious claim 10.

11. Claim 11: "The method of claim 1, further comprising further comprising requesting said location of said first wireless device by a non-wireless device."

57. Sheha describes how a non-wireless device, landline device 5, can request the location of a mobile phone 18a. Ex. 1041, 9:50-10:4, Fig. 2 (showing landline-to-mobile scenario). Thus, in my opinion Sheha in view of Ganesh makes obvious claim 11.

12. Claim 12: "The method of claim 1, further comprising obtaining a second location from a non-wireless device."

58. Sheha describes how a server and mobile phone 18a can obtain a second location, the location of the non-wireless landline device 5. Ex. 1041, 9:40-47, 10:52-60, *see also* Ex. 1041, 7:51-55 (describing use of reverse telephone number lookup to obtain the location of the landline device). Thus, in my opinion Sheha in view of Ganesh makes obvious claim 12.

13. Claim 13: "The method of claim 1, further comprising receiving a login and password from said second wireless device to identify said second wireless device."

59. Sheha describes the use of unique identification tokens "that can be used on a networked server system utilizing authentication and authorization procedures." Ex. 1041, 3:4-10, 5:26-29. Sheha further teaches that "every

telephone account user has a username and password for the ODAS 3," i.e., a login and a password, and that the "ODAS 3 correlates both the origin and destination telephone users' identifications to verify if the user is signed-on to the ODAS 3 using authentication and authorization protocols." Ex. 1041, 8:38-46. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 13.

14. Claim 14: "The method of claim 1, wherein said location of said first wireless device is requested by receiving input, in the form of a telephone number of said first wireless device, on said second wireless device."

60. 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. Ex. 1041, Abstract, 10:66-11:8 ("In the mobile-to-mobile example … a user … dials or inputs a telephone number of another mobile device 18 c."), 11:10-23, 11:55-58. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 14.

15. Claim 15: "The method of claim 1, further comprising using said first wireless device to modify said location access rights for said second wireless device."

61. As I previously discussed with respect to claim 1, Sheha discloses that a target device can define a list of authorized users, and that the user of the target device can change their privacy settings at any time using the target device,

thereby modifying location access rights. Ex. 1041, 5:9-20; 11:61-12:1. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 15.

16. Claim 16: "The method of claim 1, further comprising the ability to use said first wireless device to delete said location access rights for said second wireless device."

62. As I previously discussed with respect to claim 15, Sheha discloses that a target device can modify a specific group of authorized users using the target device. Sheha further teaches that the target user may terminate a requesting user's location access rights "at anytime." It is my opinion that a POSITA would understand that terminating a user's location access rights deletes any of that user's location access rights. Ex. 1041, 5:12-14. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 16.

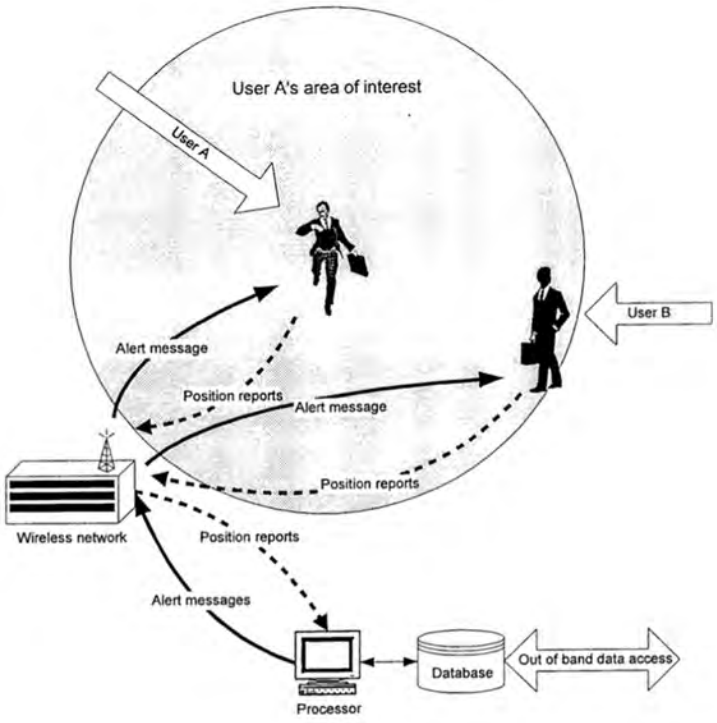
17. Claim 17: "The method of claim 1, further comprising filtering information about said location such that only a portion of the information is passed to said second wireless device."

63. As I previously discussed with respect to claim 9, Sheha, Ganesh, and Obradovich disclose a plurality of access levels where at certain access levels, the location information is filtered so that only a portion of the information is passed to the second wireless device. See, e.g., Ex. 1041, 9:23-34 (discussion of varying the information provided to the requesting device in the Map Caller-ID window), Ex. 1055, 6:57-64 (describing examples where a user's direct line phone number is

provided under security index level 6, while only the general office number is provided under security index level 7). Thus, it is my opinion that Sheha in view of Ganesh and Obradovich makes obvious claim 17.

18. Claim 18: "The method of claim 1, further comprising alerting said second wireless device when said first wireless device is within a distance of second wireless device."

64. Degnbol teaches alerting a second wireless device when the first wireless device is within a distance of the second wireless device. Like Sheha, Degnbol discloses a system related to location sharing. Ex. 1047, Abstract, 10:17-23. As I discussed in my declaration, a POSITA would have been motivated to incorporate Degnbol's teachings into Sheha's system. Ex. 1021, ¶¶168-169. Degnbol, like Sheha describes a requesting user can receive location information about a target user. Specifically, Degnbol teaches that a user of a mobile device can submit a search request for other users of mobile devices that are not only geographically close but also that match search terms in the search requests. Ex. 1047, Abstract; 3:23-24. As Degnbol shows in Figure 1, Users A and B have included in their profiles a desire to be indicated when the other user is within their vicinity. Ex. 1047, 3:23-24, 20:24-28, Fig. 1. Degnbol further teaches that the alert is sent to each user's wireless device. Ex. 1047, 3:11-21. Thus, it is my opinion that Sheha in view of Ganesh and Degnbol makes obvious claim 18



Ex. 1047, Fig. 1

19. Claim 19: "The method of claim 1, further comprising selecting said first wireless device from an identifier list."

65. Sheha discloses manually entering specific telephone numbers. See Ex. 1041, 11:12-15. It is my opinion that the use of identifier lists such as digital phonebooks and contact lists was well known in the art. Smith in fact teaches such a list. Ex. 1059, Figure 15A. Smith, 9:43-47 ("In one embodiment of the present invention, the compressed view displays only the name field of the name list as shown in screen 1510 of FIG. 15A."). As I discussed in my declaration, a POSITA would have been motivated to incorporate Smith's teachings into Sheha's system. Ex. 1021, ¶¶201-202.

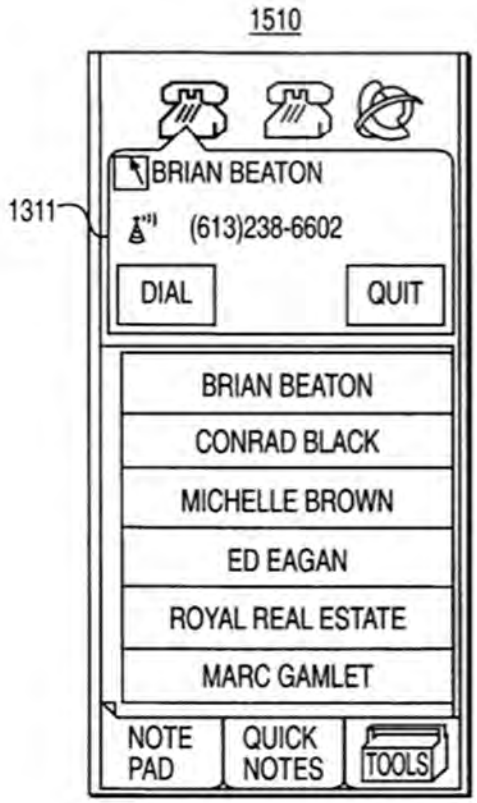


FIG. 15A

Ex. 1059, Fig. 15A

66. It is my opinion that a POSITA would understand that when the Smith identifier list is used with the Sheha system, the requesting user would select the target device from this name list instead of manually dialing telephone numbers. Thus, Sheha in view of Ganesh and Smith makes obvious claim 19.

20. Claim 20: "The method of claim 1, further comprising selecting said first wireless device from an identifier list

wherein said identifier list comprises a list of telephone numbers."

67. As I previously discussed with respect to claim 19, Sheha in view of Ganesh and Smith disclose selecting the target device from an identifier list. Smith further teaches that the identifier list comprises a list of telephone numbers. For example, in Figure 15A, as a user scrolls through the compressed view, the telephone number of each name is displayed in call object 1311. Ex. 1059, 9:19-24, 9:50-57, Fig. 15A. Thus, it is my opinion that Sheha in view of Ganesh and Smith makes obvious claim 20.

21. Claim 21: "The method of claim 1, further comprising selecting said first wireless device from an identifier list wherein said identifier list comprises a list of user profiles."

68. As discussed with respect to claim 19, Sheha in view of Ganesh and Smith disclose selecting the target device from an identifier list, such as the compressed view display in Figure 15A of Smith, shown above under claim 56. Smith further discloses that each entry in the list shown in Figure 15A represents a user profile, such as that displayed in the full view shown in Figure 15B, which is reproduced below. Ex. 1059, 6:65-7:3, 8:18-19, 9:43-55, Figs. 15A-B.

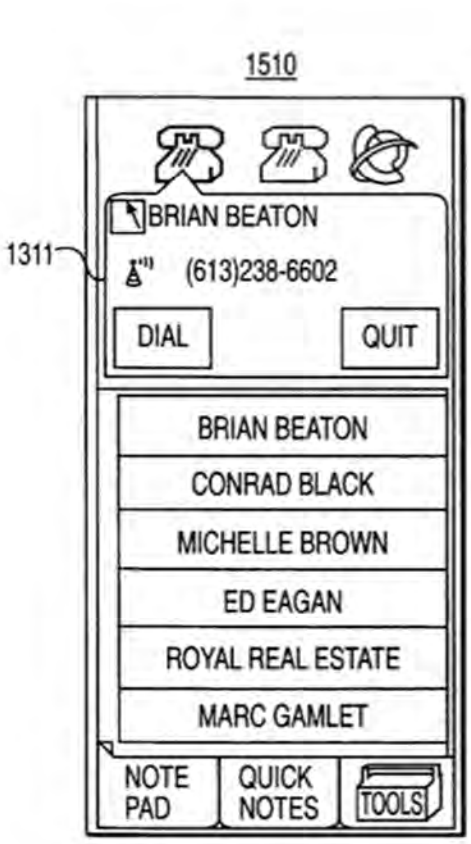


FIG. 15A

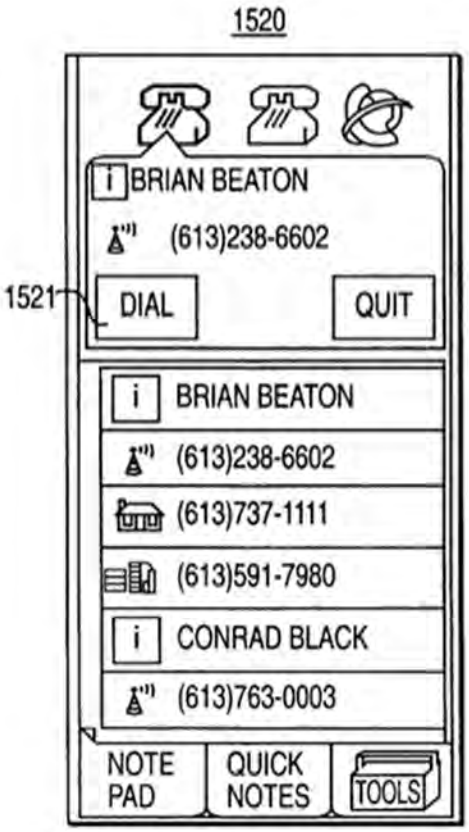


FIG. 15B

Thus, it is my opinion that Sheha in view of Ganesh and Smith makes obvious claim 21.

22. Claim 22: "The method of claim 1, further comprising requesting a second location from said first wireless device from a non-wireless device, wherein said non-wireless device does not comprise a positioning system."

69. As I previously discussed regarding in claim 11, Sheha in view of Ganesh discloses requesting a first location of a target mobile device 18a by a non-wireless device, landline device 5. It is my opinion that Sheha teaches that landline device 5 is not, or does not have, a positioning system because Sheha

discloses that the landline device's location is obtained by reverse telephone number lookup rather than by GPS. Ex. 1041, 7:51-54, 9:43-47.

70. In contrast, Sheha discloses that the landline device 5 requests a second location of the target wireless device, because it continues to receive updated location information for the target mobile device 18a. Ex. 1041, 10:47-52. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 22.

23. Claim 23: "The method of claim 1, wherein said location is provided by a positioning system."

71. Sheha discloses that the location of the mobile devices is provided by a positioning system, such as an external GPS receiver. Ex. 1041, 10:5-16. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 23.

24. Claim 24: "The method of claim 1, further comprising: providing a first dating matching profile by said first wireless device; providing a second dating matching profile by said second wireless device; obtaining a second location, wherein said second location is the location of said second wireless device; and utilizing said location, said second location, said first dating matching profile, and said second dating matching profile to provide an alert"

72. As I previously discussed, regarding claim 18, Sheha in view of Ganesh and Degnbol teaches providing an alert when a first wireless device is within a certain distance of a second wireless device. Sheha further discloses obtaining a second location that is the location of the requesting (second) device,

as both mobile devices provide their location to the server ODAS. Ex. 1041, 10:66-11:9.

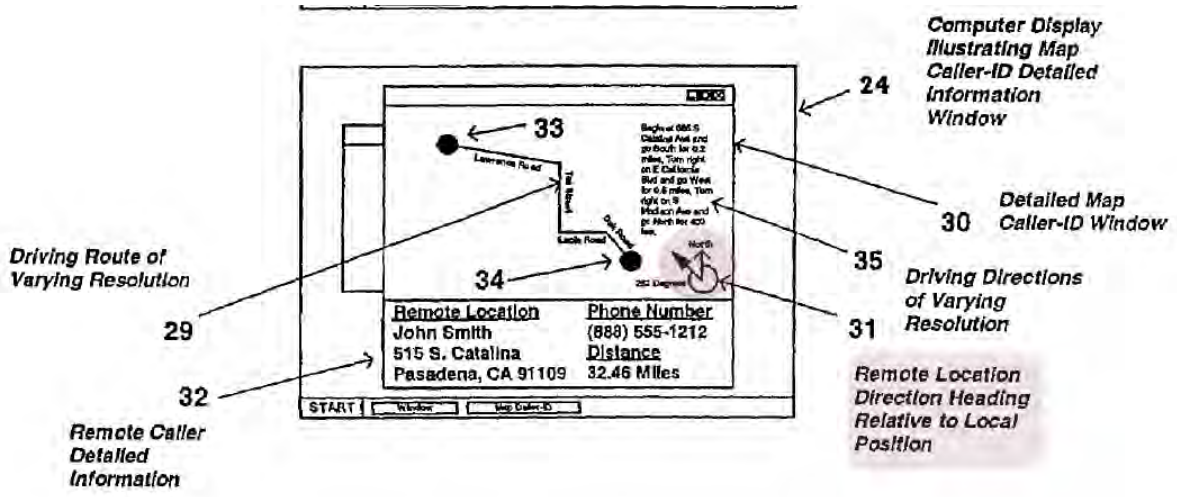
73. Degnbol discloses that for Matchmaking, "users can submit personal information about themselves and their partner preferences - this enables users to be alerted to the proximity of potential partners who match the criteria specified." Ex. 1047, 16:8-21. Therefore, it is my opinion that as each wireless device user profile may include dating information, Degnbol teaches both a first and a second dating matching profile.

74. Degnbol further teaches that the locations of the two wireless devices to alert two users with matching dating profiles when they are in proximity of one another. Ex. 1047, 18:27-34 ("When a match is found between the Personal Profiles of user 'A' and 'B' an alert is transmitted to user 'A', user 'B', or both, depending on their respective preferences. The particular effect of this information is to enable user 'A' to be notified of the presence of others users with matching Personal Profiles."). Thus, it is my opinion that Sheha in view of Ganesh and Degnbol makes obvious claim 24.

25. Claim 25: "The method of claim 1, further comprising providing a compass in said second wireless device."

75. Sheha teaches a compass in the Map Caller-ID display in Figure 5. Ex. 1041, Fig. 5. Item 31 of the illustrated figure depicts a compass, or an

orientation indicator - North, as well as the direction heading (both graphically with an arrow and numerically with the angular distance relative to North) of the target device relative to the requesting device. Ex. 1041, 9:30-34, Fig. 5, 4:52-58 (describing displaying maps on a mobile device specifically). Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 25.

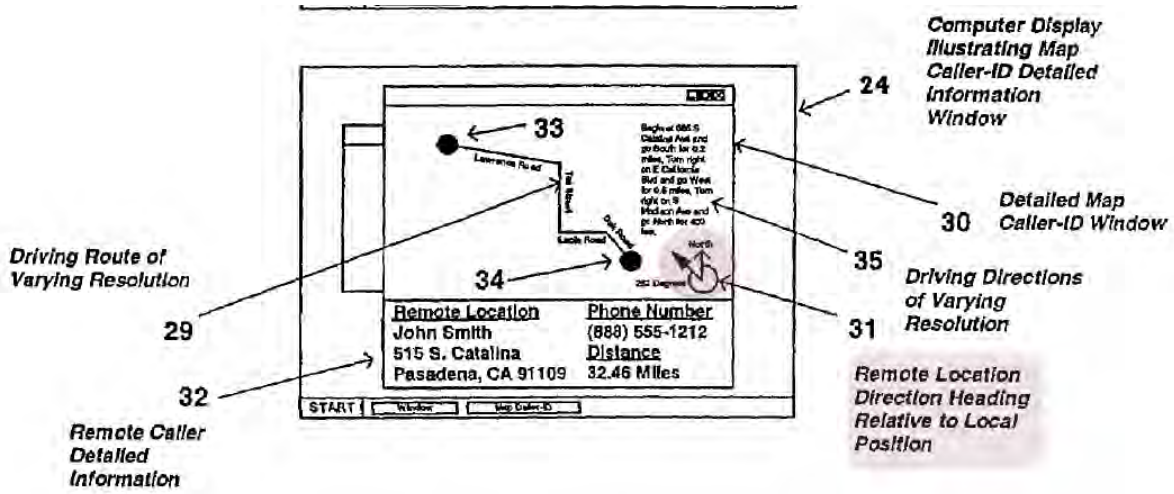


Ex. 1041, Fig. 5.

26. Claim 26: "The method of claim 1, wherein a directional arrow is utilized to display the location of said first wireless device relative to said location of said second wireless device on said second wireless device."

76. As discussed in claim 25, Sheha displays a compass at item 31 in the Map Caller-ID display in Figure 5. On the compass is also a directional arrow with a directional indication relative to Magnetic North. Ex. 1041, Fig. 5. This is utilized to display the location of the target wireless device relative to the location

of the requesting device. Ex. 1041, 9:30-34. Thus, Sheha in view of Ganesh makes obvious claim 26.



Ex. 1041, Fig. 5.

27. Claim 27: "The method of claim 1, further comprising providing a compass in said second wireless device, wherein said compass is utilized to display the direction that said second wireless device is traveling in."

77. As discussed in claim 25, Sheha displays a compass at item 31 in the Map Caller-ID display in Figure 5, which is displayed on the requesting wireless device. Ex. 1041, 9:30-34. While Sheha does not explicitly disclose a compass used to display the direction the second wireless device is traveling in, Sheha teaches that both mobile devices provide location information to the server, ODAS, and that this location information "is allowed to be transferred for all scenarios on each mobile device 18b and 18c." Ex. 1041, 10:66-11:11

78. Additionally, Sheha teaches that the location information could be used to "provide typical navigational functionality," which in my opinion a POSITA would have understood to include well-known navigational features such the use of a compass to ascertain one's own heading, which was well-known by a POSITA at the time of the priority date. Ex. 1041, 12:8-31. For example, Ryden discloses telephone unit 10 with magnetic compass 59 and digital direction finder device 100. EX. 1017, 15:29-56, Thus, it is my opinion that Sheha in view of Ganesh together or in combination with Ryden makes obvious claim 27.

28. Claim 28: "The method of claim 1, further comprising setting location alerts associated with said first wireless device on said second wireless device."

79. As discussed in claims 18 and 24 above, Sheha in view of Ganesh and Degnbol discloses setting location-based alerts associated with a first wireless device on a second wireless device. Degnbol further teaches setting location alerts associated with the target wireless device on the requesting wireless device, such as a husband and wife who each want to be alerted when the other enters a given area on their route home. Degnbol, 13:17-21, 20:24-28. Thus, Sheha in view of Ganesh and Degnbol makes obvious claim 28.

29. Claim 29: "The method of claim 1, wherein said location access rights are only assigned for a period of time."

80. Sheha discloses that location access rights can be assigned for limited periods of time. *See e.g.*, Ex. 1041, 3:10-12. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 29.

30. Claim 30: "The method of claim 1, further comprising alerting said second wireless device when said first wireless device enters a geographic area."

81. As I previously discussed with respect to claims 18 and 24, Sheha in view of Ganesh and Degnbol discloses location-based alerts. Degnbol further teaches that "[e]ach predetermined range [for an alert] may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street." Ex. 1047, 6:6-9. Thus, it is my opinion that Sheha in view of Ganesh and Degnbol makes obvious claim 30.

31. Claim 31: "The method of claim 1, wherein said server stores a history of locations for said first wireless device."

82. As I previously discussed regarding claim 4, Ganesh teaches a method of obtaining approximate locations corresponding to the most recent coverage area ascertained from call records. Ex. 1049, 4:29-35, 6:55-7:20, 7:62-65. An essential component of this location technique is "comprehensive call history database 34" that contains a record of all calls associated with a given device. Ex. 1049, 7:3-7. It is my opinion that this call history database is a history of locations because each

call record includes time, date, and cell site identifiers that allow determination of the location of the target device at the time of the call. Ex. 1049, 7:3-20. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 31.

32. Claim 32: "The method of claim 1, wherein said server stores a history of locations for said first wireless device and said history is utilized to provide an approximate location of said first wireless device when said first wireless device is turned OFF."

83. As I previously discussed in regard to claims 4 and 31, Ganesh discloses a call history database that stores a history of locations, which can be used to provide an approximate location of the target device. Additionally, Ganesh teaches that this approximate location can be used to provide an approximate location of the target device when it is "not currently registered," i.e., if the device is not connected to the network or if the device is turned OFF. Ganesh, 7:18-20. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 32.

33. Claim 33: "The method of claim 1, further comprising displaying on said second wireless device the opportunity to request said location access rights from said first wireless device"

84. As I discussed in claim 1c , Sheha in view of Ganesh discloses asking the requesting wireless device if location access rights are to be requested from the first wireless device.. Additionally, Ganesh teaches the use of an interface screen that is displayed on the requesting wireless device. Ex. 1049, Fig. 6. Fig. 6 shows

a query 90 that displays the opportunity to request location access rights from the target wireless device. Ex. 1049, 6:33-42, Fig. 6. Although query 90 asks if the user wishes "to receive the location information at a later time" rather than requesting location access rights, it is my opinion that in combination with Sheha's system, this query is a request for location access rights. Specifically, as I discussed in regard to claim 1g, Sheha's system determines access rights each time a location is requested, such that Ganesh's query 90 is therefore an opportunity to request location access rights.

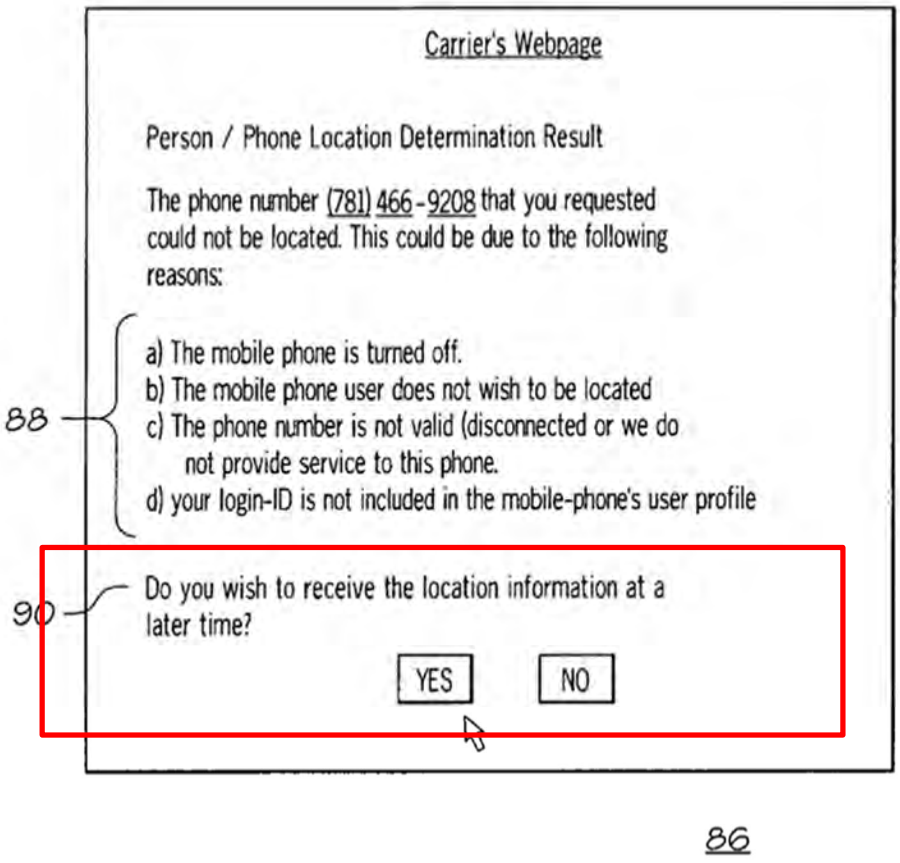


FIG. 6

85. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 33.

34. Claim 34: "The method of claim 1, wherein said first wireless device is requested to manually allow said location access rights for said second wireless device every time said second wireless device requests said location."

86. Sheha describes manually allowing location access rights for the requesting wireless device every time the requesting device makes a location

request, i.e., giving the user of the target device an "opt-in capability for position information transfer." Ex, 1041, 10:17-26, *see also* Ex. 1041, 5:41-44. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 34.

35. Claim 35: "The method of claim 1, wherein one of said location access rights is the ability to not allow said second wireless device to access said location.

87. Sheha describes that each mobile device has a choice to allow or not allow a requesting wireless device access to location information. Ex. 1041, 5:37-46; 10:20-26. Thus, it is my opinion that Sheha in view of Ganesh makes obvious claim 35.

B. Ground 2: Enzmann in combination with Ganesh, Ryden, Degnbol, Sheha, and/or Smith makes obvious claims 1-35 under 35 U.S.C. § 103

88. Enzmann in view of Ganesh makes obvious claim 1. It is my opinion that a POSITA would be motivated to combine Enzmann with Ganesh. *See* Ex. 1021, Section IX. Enzmann discloses all but one of the elements of a system as recited in claim 1, including a mobile device that user can use to enter a login and password and to access location information for other wireless devices. Ganesh discloses the remaining element of "asking said second wireless device if said location access rights are to be requested from said first wireless device after determining that said second wireless device does not have said location access rights for said first wireless device." Enzmann in view of Ganesh also disclose

most of the elements recited in the various dependent claims. Ryden, Degnbol, Sheha, and/or Smith disclose any remaining elements, and it is my opinion that a POSITA would be motivated to combine these references. *See* Ex. 1021, Section IX. It is my opinion that the combination of Enzmann, Ganesh, Ryden, Degnbol, Sheha, and/or Smith render claims 1-35 obvious.

1. Independent Claim 1

89. Claim 1's preamble simply recites "[a] method of mobile-to-mobile locating, said method comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann describes a "method" for mobile-to-mobile locating. Ex. 1040, Abstract ("A location query service for use with a wireless network."), 3:17-19, claim 1.

a. Claim 1a: "requesting a location of a first wireless device by a second wireless device from a server located remotely from said first and second wireless devices"

90. It is my opinion that Enzmann discloses a system that provides a location query service for users of wireless handheld devices. Ex. 1040, 3:53-61. For example, Enzmann describes that its system determines the locations of the wireless devices using either location systems incorporated into the wireless devices themselves or using a network-based location system. Ex. 1040, 5:41-50,

see also Ex. 1040, Fig. 1. Enzmann also describes that wireless requestor 110 can request a location of a target wireless device 104, sending such a request to remote location server 100. Ex. 1040, 3:63-4:12, Fig. 1.

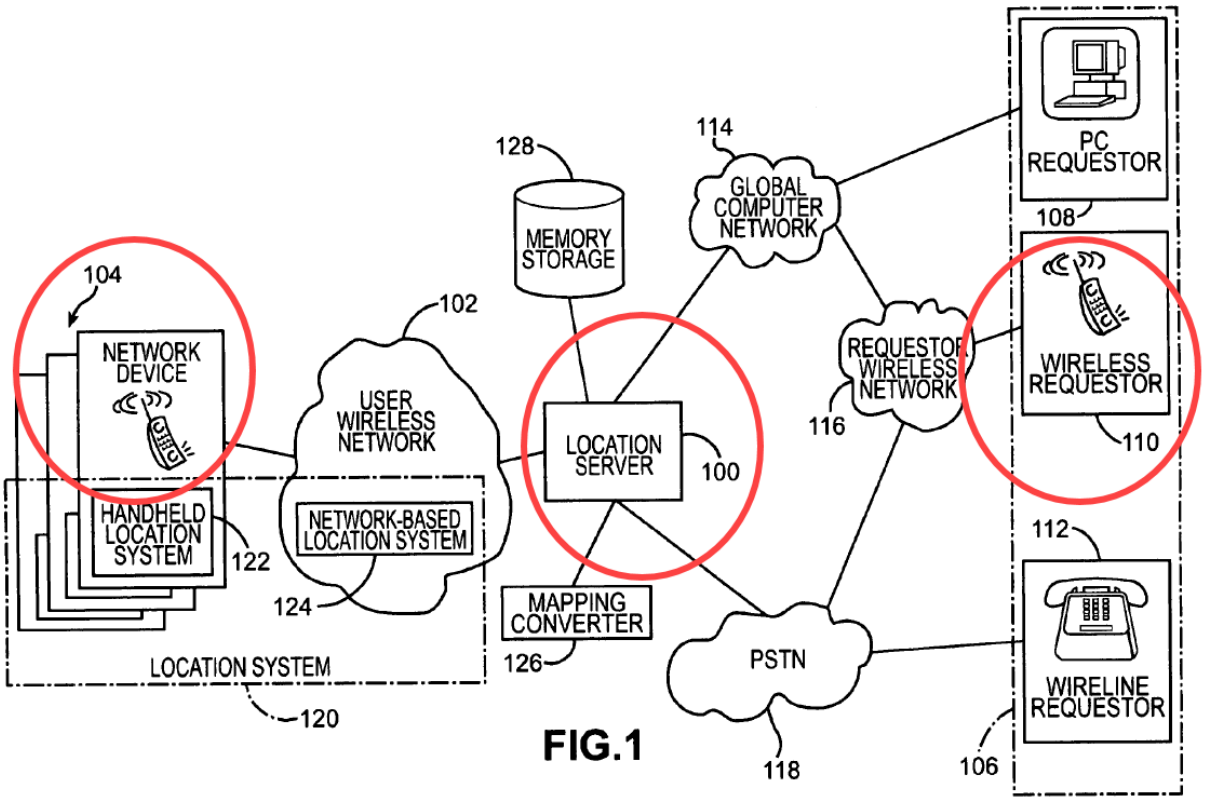


FIG.1

Ex. 1040, Fig. 1. Enzmann further teaches that exemplary wireless handheld devices include pagers and cellular telephones. Ex. 1040, 5:39-41. Thus, it is my opinion that Enzmann discloses claim 1a.

b. Claim 1b: "determining that said second wireless device does not have location access rights for said first wireless device"

91. Enzmann describes a system where users may control who is permitted to access their locations by providing a list of authorized requestors to the system. Ex. 1040, 2:35-41. Additionally, when location server 100 receives a request from the requesting device 106, it determines whether the requestor has location access rights for the target device. Ex. 1040, 2:42-51, 5:3-8, 7:12-17.

92. Enzmann also teaches a scenario where the location server consults the access list and determines that a requesting mobile device is not on the list of authorized requestors. Ex. 1040, 2:24-51, 7:12-19. It is my opinion that a mobile device not being on the list of requestors means that the requesting device does not have location access rights to the target device. In the Enzmann system, the location server queries the target device to determine whether the request for location access should be granted. Ex. 1040, 2:42-51, 7:39-58. Thus, in my opinion Enzmann discloses claim element 1b.

c. Claim 1c: "asking said second wireless device if said location access rights are to be requested from said first wireless device after determining that said second wireless device does not have said location access rights for said first wireless device"

93. As I previously discussed regarding claim 1b, Enzmann teaches that after determining the requesting device does not have location access rights, the

server can present the request for location access rights to the target device. Ex. 1040, 2:42-51, 7:39-58.

94. Ganesh discloses the intermediary step of asking the requesting device if location access rights are to be requested for the target device. As discussed in my declaration, Ex. 1021 ¶¶173-180, a POSITA would have been motivated to incorporate Ganesh's teachings into Enzmann's system.

95. As discussed above in Ground 1, claim 1c, Ganesh teaches an interface screen in Figure 6 that asks the requesting device if location access rights are to be requested from the target device after determining that the requesting device does not have location access right. Ex. 1049, 1:14-18, 6:33-44, 8:43-50, Fig. 6, *supra* Section II.A.1.c. In combination with Enzmann, the denial and query dialog of Ganesh would appear on the requesting device as a confirmation prompt after the server determined that the requesting device did not have location access Ex. 1049, but before querying the target device for permission. Ex. 1040, 2:24-51; Ganesh, 6:33-42. Therefore, Enzmann and Ganesh in combination disclose claim element 1c.

d. Claim 1d: "requesting that said location access rights be assigned for said second wireless device by said first wireless device"

96. As I previously discussed with respect to claim 1b, Enzmann discloses that after determining that the requesting device lacks location access rights, the

server can request that location access rights be assigned to the requesting device by the target device. Ex. 1040, 2:42-51, 7:39-58. Thus, it is my opinion that Enzmann discloses claim 1d.

e. Claim 1e: "assigning said location access rights on said server to said second wireless device by said first wireless device"

97. As I previously discussed with respect to claim 1b, Enzmann discloses that users can provide a list of authorized requestors to the system. Enzmann's system "gives the network user control of who can receive his location information." Ex. 1040, 2:34-36. Enzmann teaches assigning location access rights to a requesting device not on the existing list with the approval of the user of the target device. Ex. 1040, 7:51-54. In my opinion, this is consistent with enabling a user to exercise control after providing the initial list of authorized requestors. Thus, in my opinion Enzmann discloses claim 1e.

f. Claim 1f: "storing said location access rights on said server"

98. Enzmann discloses that the list of authorized requestors is stored in memory storage 128, which may be a part of location server 100. Ex. 1040, 5:28-34, 7:22-25. Therefore, in my opinion that Enzmann discloses claim 1f.

g. Claim 1g: "determining said access rights assigned by said first wireless device to said second wireless device on said server"

99. My discussion about claim 1b details the initial determination of the access rights of the requesting device for the target device. Enzmann further discloses that after sending a request for location access rights, the server reads the response from the target device to determine what access rights have been assigned by the target device to the requesting device, such as when the user of a target device "chooses to release her location information to the requester." Ex. 1040, 7:51-53. In my opinion, a POSITA would recognize that this determination of access rights was separate from the initial determination of access rights discussed in claim 1b, in which the location server in Enzmann determines that a requester is not on the list of authorized requesters, and therefore lacks access rights. Thus, it is my opinion that Enzmann discloses claim 1g.

h. Claim 1h: "providing said location from said server to said second wireless device dependent upon said access rights"

100. Enzmann discloses that if the requesting device has been granted location access rights, the location server 100 provides the location information to the requesting device. Ex. 1040, 7:39-58, 8:65-67. Thus, it is my opinion that Enzmann discloses claim element 1h.

2. Claim 2: "The method of claim 1, wherein said first and second wireless devices are cellular phones."

101. Enzmann teaches that the requesting and target devices are both cellular phones. Ex. 1040, 5:39-41. Thus, Enzmann in view of Ganesh makes obvious claim 2.

3. Claim 3: "The method of claim 1, wherein said location access rights include the ability to obtain said location, wherein said location is provided to said second wireless device from said server even when said first wireless device is OFF."

102. Enzmann discloses that in the system configuration shown in Figure 3 below, "periodically records a device's location in a location database 300," thereby storing a history of locations for the first wireless device. Ex. 1040, 8:20-36. Such a configuration ensures that location system 120 "always has location information available when location server 100 makes a request," and can therefore "provide[] a more immediate response to the requestor." Ex. 1040, 8:20-36. Further, because the locations are stored in a remote database, a requesting device can request a target device location regardless of whether the target device is on or off. Ex. 1040, 8:20-36. Thus, it is my opinion that a POSITA would recognize the ability to get the target wireless device's location via the server even if the target device is off. Further, while the location might be an "old" location, e.g. the last known location, it still would be a location about the target device.

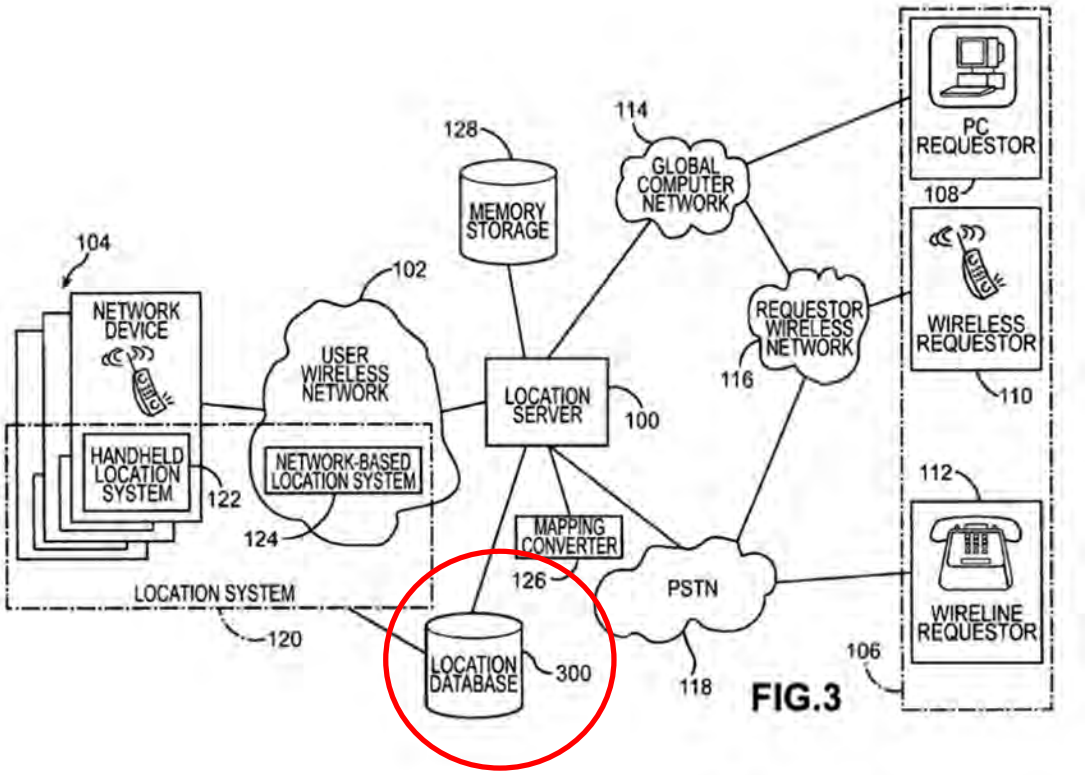

128
MEMORY STORAGE
114
GLOBAL COMPUTER NETWORK
PC REQUESTOR
108
104
NETWORK DEVICE
102
USER WIRELESS NETWORK
REQUESTOR WIRELESS NETWORK
116
WIRELESS REQUESTOR
110
LOCATION SERVER
100
HANDHELD LOCATION SYSTEM
122
NETWORK-BASED LOCATION SYSTEM
124
112
MAPPING CONVERTER
126
PSTN
WIRELINE REQUESTOR
LOCATION SYSTEM
120
LOCATION DATABASE
300
118
106

FIG.3

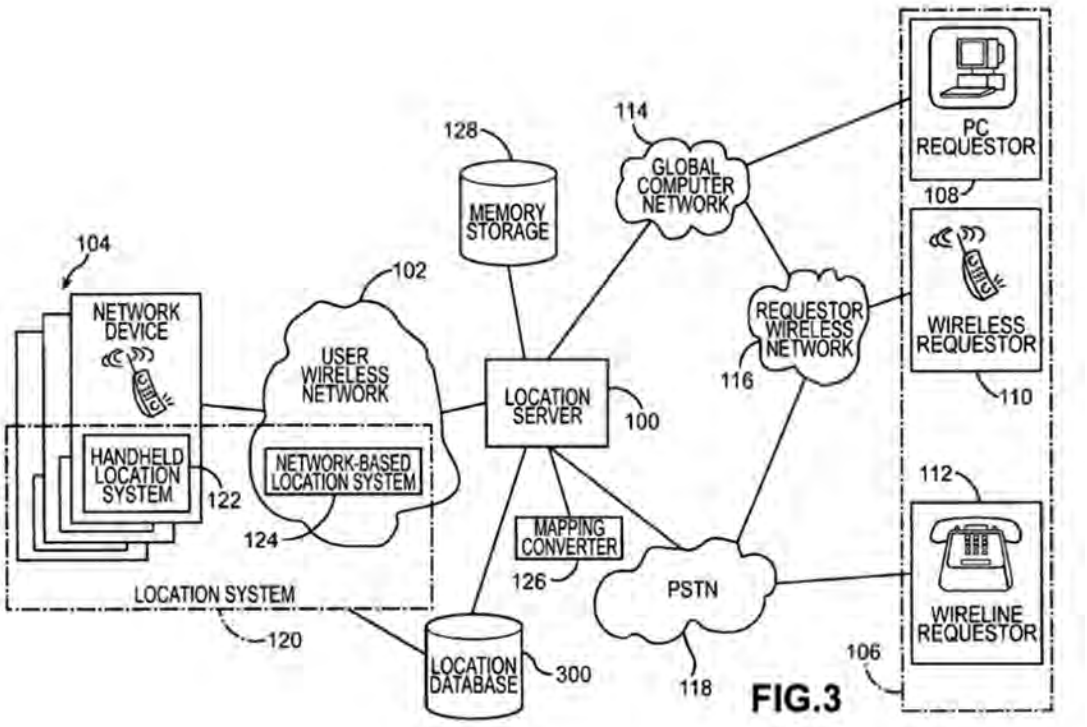


FIG.3

103. In addition, as discussed above in Ground 1 claim 3, Ganesh and Ryden both teach providing location information from the server even when the target device is OFF. Ex. 1017, 5:4-14, 16:53-62. As discussed in my declaration, Ex. 1021 ¶¶197-200, a POSITA would have been motivated to incorporate Ryden's teachings into Enzmann's system. Thus, Enzmann in view of Ganesh and/or Ryden makes obvious claim 3.

4. Claim 4: "The method of claim 1, wherein said location access rights comprise a plurality of access levels."

104. Enzmann describes that location server 100 confirms "the access levels of requestors," thereby indicating that there are a plurality of access levels.

Ex. 1040, 5:3-7. While Enzmann does not explicitly identify these access levels, as discussed above in Ground 1 claim 4, Ganesh teaches a plurality of access levels that include where a user shares exact location at one level and an approximate location at another level. Ex. 1049, 4:29-35, 6:55-7:20, 7:23-25, 7:51-61; *supra* Section II.A.4.

105. Obradovich also teaches a plurality of access levels for location information in teaching a security index, as discussed in Ground 1 claim 4. Ex. 1016, 6:33-36, 6:57-63; *supra* ¶34. As discussed above in my declaration, Ex. 1021 ¶¶191-195, a POSITA would have been motivated to incorporate Obradovich's teachings into Enzmann's system. Thus, it is my opinion that Enzmann in view of Ganesh and/or Obradovich makes obvious claim 4.

5. Claim 5: "The method of claim 1, wherein said location is used to provide a location marker on a map on said second wireless device."

106. While Enzmann does not disclose a location marker on a map representing the target device, I detail in Ground 1 claim 5, how Ganesh discloses the use of the current location of the target device to display a location n marker, star 106 on map 100 in Figure 7. Ex. 1049, 8:6-16.

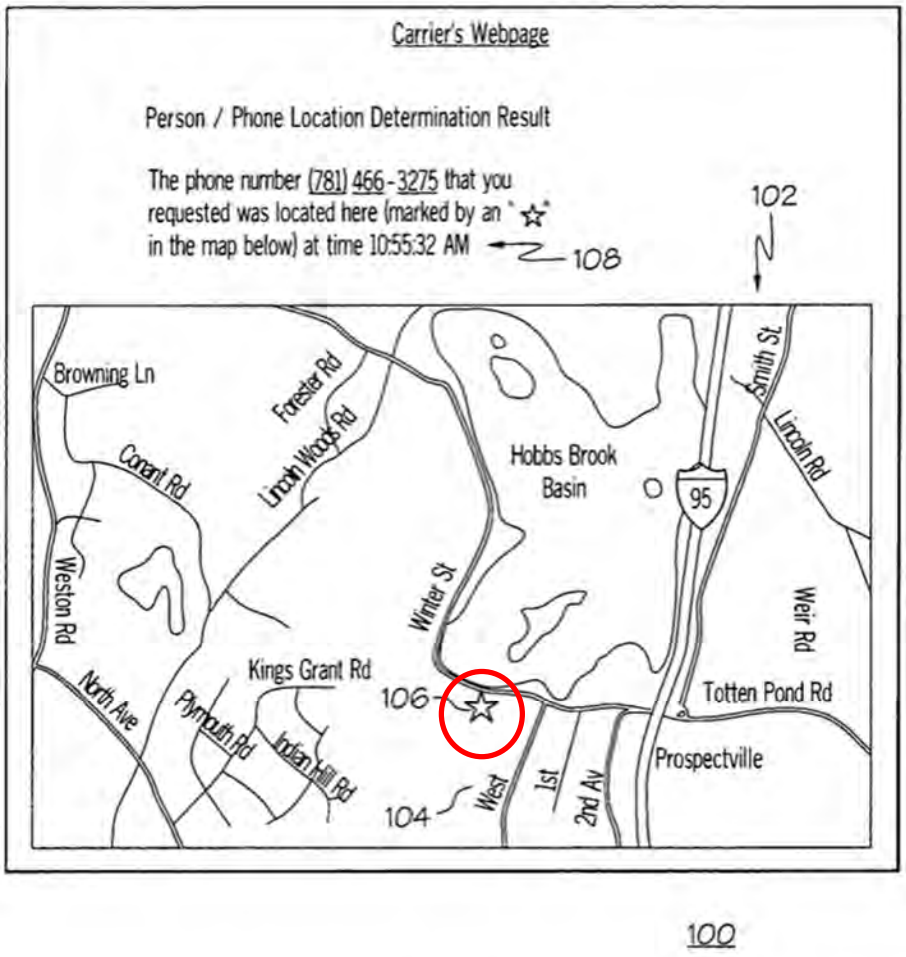


FIG. 7

Ex. 1049, Fig. 7. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 5.

6. Claim 6: "The method of claim 1, wherein said location is used to provide directions from said second wireless device to said location on said second wireless device."

107. A POSITA would recognize that Enzmann discloses obtaining the location information of the requesting device in the same manner as for the target device, since Enzmann's location server provides location services for "a plurality

of network devices operated by a plurality of network users." Ex. 1040, 2:52-60; *see also id.* 8:1-36 (describing configurations where a wireless device provides its location upon initial webpage access, webpage refresh, network transmission, continuously, or periodically).

108. And, as I previously discussed in Ground 1 claim 7, Ryden's system also relates to a location-based communications system to share location information between mobile devices. Ex. 1057, Abstract, 18:47-48; Ex. 1058, 35:12-16; *supra* Section II.A.7. Ryden further teaches the use of location information to provide directions from a second wireless device to said location on said second wireless device, by providing driving directions for ambulance 164 to meet vehicle 166. Ex. 1057, Abstract, 19:49-67, Fig. 17. In Figure 17, since both ambulance 164 and vehicle 166 are moving, the ambulance is given directions M to a meeting point 172. Ex. 1057, 19:61-67. However, since Ryden's stated objective is to allow the ambulance to "meet [] vehicle 166," a POSITA would understand that Ryden also teaches providing directions to vehicle 166's current location. Ex. 1057, 19:49-67.

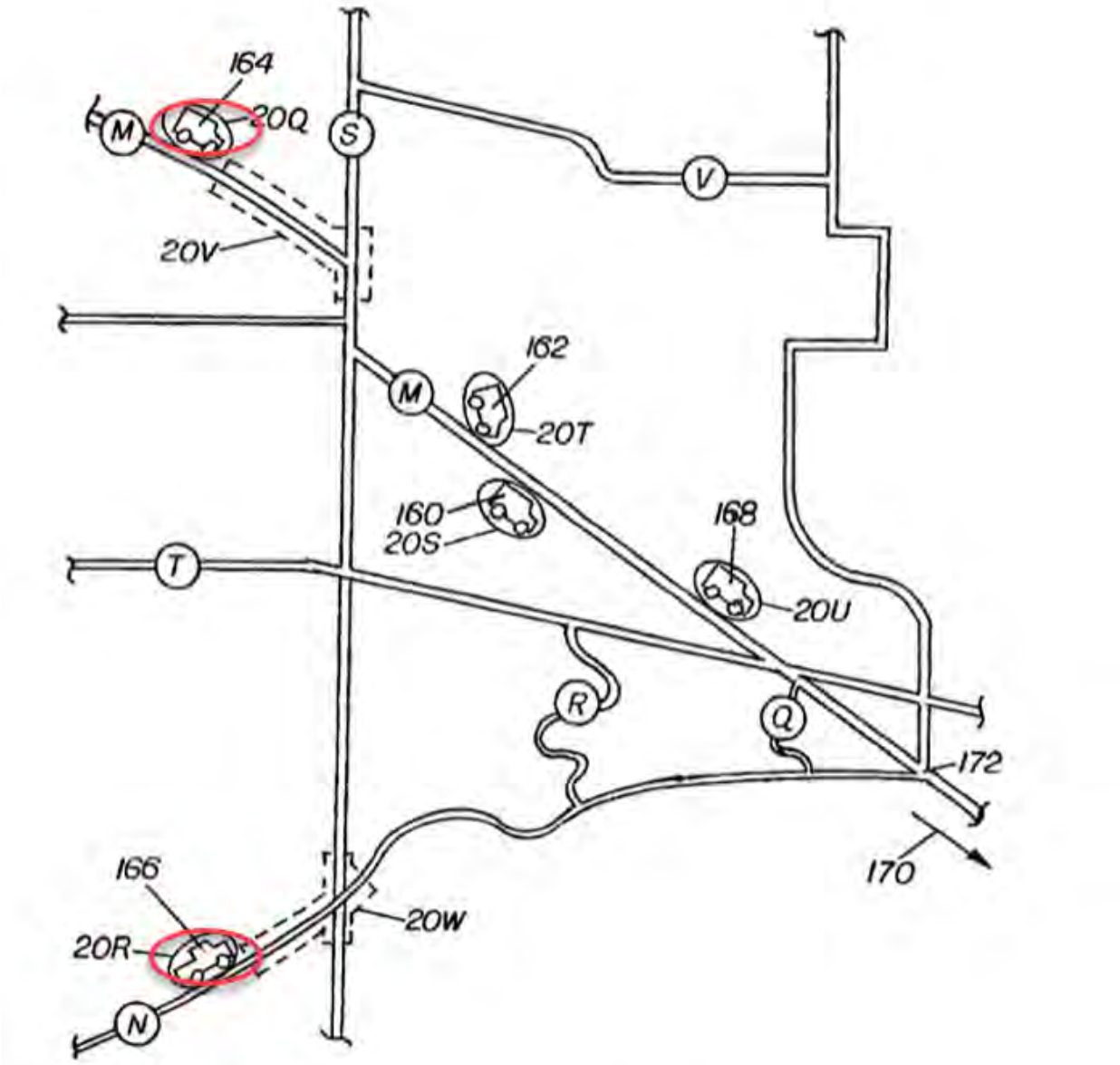


FIG. 17

Ex. 1057, Fig. 17. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 6.

7. Claim 7: "The method of claim 1, wherein said location is used to provide directions from said second wireless device to said location and a travel time on said second wireless device."

109. As I previously discussed regarding claim 6, Enzmann in view of Ganesh and Ryden discloses providing directions from said second wireless device to said location. As discussed aboveregarding Ground 1 claim 7, Ryden further discloses using location information to provide a travel time. Ex. 1057, 18:47-48, 19:49-61; Ex. 1058, 35:12-16; *supra* Section II.A.7. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 7.

8. Claim 8: "The method of claim 1, further comprising requesting a second location of said first wireless device and using said location and said second location to determine how fast said first wireless device is traveling."

110. As detailed in my discussion regarding claim 1, Enzmann in view of Ganesh discloses requesting a first location of the target wireless device. Enzmann in view of Ganesh and Ryden discloses requesting a second location of the target wireless device and using the first and second locations to determine how fast the target device is traveling. As discussed above regarding Ground 1 claim 8, Ryden explicitly teaches requesting a second location and using the first and second locations to calculate a car's velocity. Ex. 1057, 18:47-48; 19:34-47; Ex. 1058, 35:9-11; *supra* Section II.A.8. For example, a police officer's wireless phone in contact with a telephone in a speeding car 160 may continuously obtain the

location of car 160 and calculate the velocity of the car. Ex. 1057, 19:34-47; Ex. 1058, 35:4-11. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 8.

9. Claim 9: "The method of claim 1, 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 first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device."

111. As mentioned in the discussion regarding claim 4, Enzmann in view of Ganesh and/or Obradovich teach a plurality of access levels, and for the same reasons disclose a plurality of levels of access rights. As detailed in the discussion regarding Ground 1 claim 9, Ganesh teaches one level of access rights comprising the exact location of the target device, and another level comprising the approximate location of the target device. Ex. 1049, 4:29-39, 6:55-7:25, 7:51-65; *supra* Section II.A.9. Thus, Enzmann in view of Ganesh and/or Obradovich makes obvious claim 9.

10. Claim 10: "The method of claim 1, 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 first wireless device, and said approximate location comprises a city or state."

112. As I previously discussed in claim 4, Enzmann in view of Ganesh and/or Obradovich disclose a plurality of access levels, and for the same reasons disclose a plurality of levels of access rights.

113. It is my opinion that tiered access levels was a well-known privacy/security feature, including in access sharing (e.g. don't share, share with public, share with friends, share with family, share with immediate family, etc.).

114. Additionally, Enzmann teaches that the location can be provided in many forms, including a street address, building name, or area name. Ex. 1040, 3:6-13.

115. As I previously discussed in Ground 1 claim 10, Obradovich describes access levels in terms of "a security level index," which can be configured by a user. Ex. 1055, 6:37-46, claim 5. Obradovich describes one example in which an individual with a security index level of seven could only obtain a user's general office number, whereas an individual with a security index level of six could obtain the user's direct dial number. Ex. 1055, 6:57-63. Obradovich therefore provides another example showing that user-configured access levels were known in the art, and both Sheha and Obradovich disclose this feature. Additionally, Obradovich teaches that each item of geographic location

information can be made available only to specific levels of access rights. Ex. 1055, 6:37-41. Obradovich also identifies examples of geographic information such as latitude, longitude, street address, or site names. Ex. 1055, 6:33-36.

116. While Enzmann and Obradovich do not expressly mention city or state, as these were well-known forms of geographic information, it is my opinion that a POSITA would have understood that an area or site name includes a city or state name. On small phone displays, shorthand identifiers for geographic names were commonly used, such as "AZ" for Arizona or "NYC" for New York City. Additionally, Ryden explicitly teaches an approximate location comprising a city. Ex. 1058, 7:25-31; Ex. 1058, 35:17-21. Thus, it is my opinion that Enzmann in view of Ganesh, Obradovich, and/or Ryden makes obvious claim 10.

11. Claim 11: "The method of claim 1, further comprising further comprising requesting said location of said first wireless device by a non-wireless device."

117. Enzmann describes how the requesting device can be a non-wireless device such as PC requestor 108 or wireline requestor 112. Ex. 1040, 4:1-4; Fig. 1. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 11.

12. Claim 12: "The method of claim 1, further comprising obtaining a second location from a non-wireless device."

118. While Enzmann in view of Ganesh does not disclose obtaining a second location from a non-wireless device, Ryden, explicitly teaches that the

locations of non-wireless devices are "currently known…or may be readily determined by use of a GPS receiver." Ex. 1057, 5:25-29; Ex. 1058, 8:20-22;. Thus, Enzmann in view of Ganesh and Ryden makes obvious claim 12.

13. Claim 13: "The method of claim 1, further comprising receiving a login and password from said second wireless device to identify said second wireless device."

119. Enzmann describes receiving a login to and password identify the requesting wireless device. Ex. 1040, 6:42-45. Specifically, Enzmann discloses that the server receives "at least an identification of the requestor" and can also include a password. Ex. 1040, 6:42-45. A POSITA would understand an "identification" to include commonly used forms of identification, including a login. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 13.

14. Claim 14: "The method of claim 1, wherein said location of said first wireless device is requested by receiving input, in the form of a telephone number of said first wireless device, on said second wireless device."

120. Enzmann describes identifying the target device by the telephone number of the target device. Ex. 1040, 2:24-26 ("Within the query, the requestor provides an identification of the network user, such as a… telephone number."). Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 14.

15. Claim 15: "The method of claim 1, further comprising using said first wireless device to modify said location access rights for said second wireless device."

121. As I previously discussed with respect to in claim 1, Enzmann discloses that a target device can define a list of authorized users, and that the user of the target device has "control of who can receive his location information[.]" Ex. 1040, 2:34-36, 5:28-34. It is my opinion that a POSITA would recognize that one having control of who can receive one's location information means that one may modify one's location access rights. Although Enzmann does not specify the target user's device that modifies the list, the only device Enzmann associates with the target user is the wireless device. Therefore, in my opinion, to the extent Enzmann does not expressly disclose using said first wireless device to modify location access rights for a requesting device, a POSITA would have found it obvious to do so. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 15.

16. Claim 16: "The method of claim 1, further comprising the ability to use said first wireless device to delete said location access rights for said second wireless device."

122. As discussed with respect to claim 15, Enzmann discloses that a target device can define a list of authorized users, and that the user of the target device has "control of who can receive his location information," thereby modifying location access rights. Ex. 1040, 2:34-36, 5:28-34. . It is my opinion that although

Enzmann does not explicitly disclose deleting location access rights, the ability to delete access rights is obvious because it is an integral aspect of Enzmann's system which allows the user of the target device to control his/her information. A user who was unable to delete location access rights for a given requestor would not actually have "control of who can receive his location information" as Enzmann intends. Ex. 1040, 2:34-36. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 16.

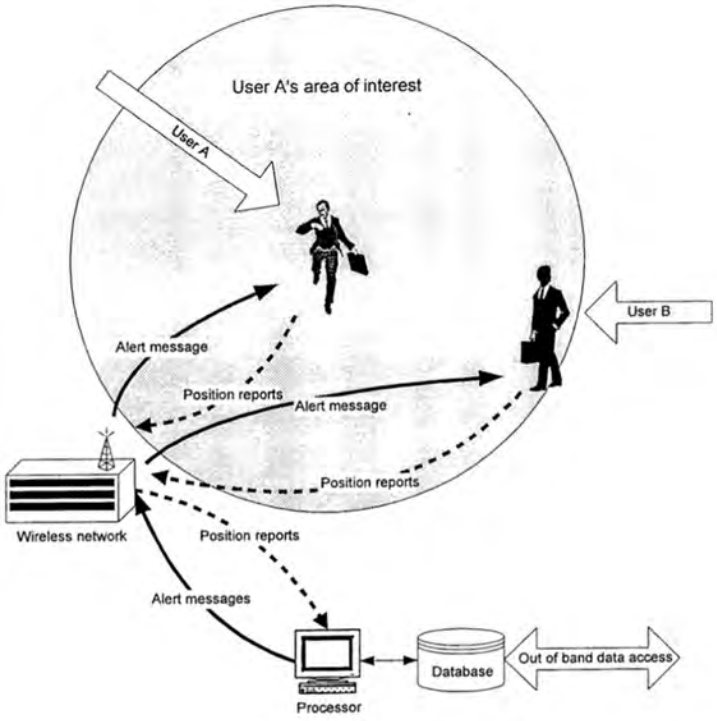
17. Claim 17: "The method of claim 1, further comprising filtering information about said location such that only a portion of the information is passed to said second wireless device."

123. As previously discussed, with respect to claim 9, Enzmann, Ganesh, and Obradovich disclose a plurality of access levels where at certain access levels, the location information is filtered so that only a portion of the information is passed to the second wireless device. *See, e.g.*, Ex. 1040, 5:3-7; Ex. 1055, 6:57-64. Thus, it is my opinion that Enzmann in view of Ganesh and Obradovich makes obvious claim 17.

18. Claim 18: "The method of claim 1, further comprising alerting said second wireless device when said first wireless device is within a distance of second wireless device."

124. While Enzmann in view of Ganesh does not disclose transmitting an alert message, as discussed above in Ground 1 claim 18, Degnbol teaches

transmitting an alert message when the target device is within a distance of the requesting device. Ex. 1047, Abstract, 3:11-24, 20:24-28, Fig. 1; *supra* Section II.A.18.



Ex. 1018, Fig. 1. Thus, it is my opinion that Enzmann in view of Ganesh and Degnbol makes obvious claim 18.

19. Claim 19: "The method of claim 1, further comprising selecting said first wireless device from an identifier list."

125. While Enzmann in view of Ganesh does not disclose selecting the target wireless device from an identifier list. However, as discussed in Ground 1 claim 19, the use of identifier lists such as digital phonebooks and contact lists was well known the art, including the identifier list taught by Smith. Ex. 1059, 9:43-47,

Fig. 15A; *supra* Section II.A.19. As I discussed in my declaration, a POSITA would have been motivated to incorporate Smith's teachings into Enzmann's system. Ex. 1021, ¶¶201-202.

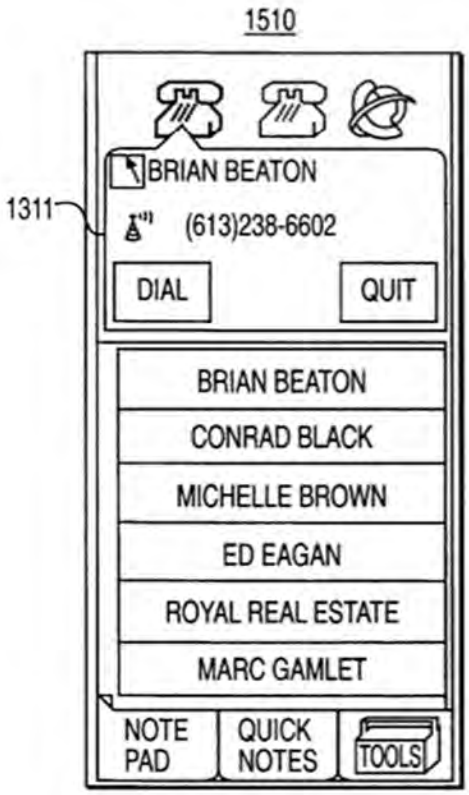


FIG. 15A

126. It is my opinion that a POSITA would understand that when the Smith identifier list is used with Enzmann, the user of the requesting device would select the target device from this identifier list. Thus, it is my opinion that Enzmann in view of Ganesh and Smith makes obvious claim 19.

20. Claim 20: "The method of claim 1, further comprising selecting said first wireless device from an identifier list

wherein said identifier list comprises a list of telephone numbers."

127. As discussed above in claim 19, Enzmann in view of Ganesh and Smith disclose selecting the target device from an identifier list. As discussed above in Ground 1 claim 20, Smith further teaches that the identifier list comprises a list of telephonic numbers. Ex. 1059, 9:43-49; *supra* Section II.A.20. Thus, Enzmann in view of Ganesh and Smith makes obvious claim 19.

21. Claim 21: "The method of claim 1, further comprising selecting said first wireless device from an identifier list wherein said identifier list comprises a list of user profiles."

128. As I previously discussed with respect to claim 19, Enzmann in view of Ganesh and Smith disclose selecting the target device from an identifier list, such as the compressed view display in Figure 15A of Smith. Smith further teaches that each entry in the list shown in Figure 15A represents a user profile, such as that displayed in the full view shown in Figure 15B. Ex. 1059, 1003, 6:65-7:3, 8:18-19, 9:43-55, Figs. 11A-B, Figs. 15A-B.

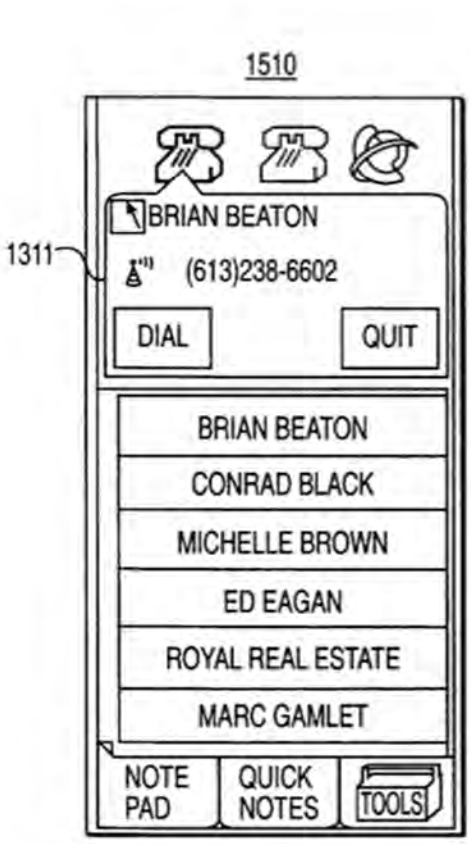


FIG. 15A

FIG. 15B

Thus, Enzmann in view of Ganesh and Smith makes obvious claim 21.

22. Claim 22: "The method of claim 1, further comprising requesting a second location from said first wireless device from a non-wireless device, wherein said non-wireless device does not comprise a positioning system."

129. As I previously discussed regarding in claim 11, Enzmann in view of Ganesh and Ryden discloses requesting a first location of a target wireless device by a non-wireless device. It is my opinion that as discussed with respect to claim 8, Ryden discloses requesting a second location of the target wireless device. Ryden further teaches a non-wireless device not comprising a positioning system,

explaining that some stationary telephone units have known locations and do not need a GPS receiver. Ex. 1057, 5:25-24; Ex. 1058, 8:20-22. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 22.

23. Claim 23: "The method of claim 1, wherein said location is provided by a positioning system."

130. Enzmann describes the location of the mobile devices is provided by a positioning system, such as a wireless network-based location system or a GPS located in a mobile device. Ex. 1040, 4:24-38. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 23.

24. Claim 24: "The method of claim 1, further comprising: providing a first dating matching profile by said first wireless device; providing a second dating matching profile by said second wireless device; obtaining a second location, wherein said second location is the location of said second wireless device; and utilizing said location, said second location, said first dating matching profile, and said second dating matching profile to provide an alert"

131. As I previously discussed regarding claim 18, Enzmann in view of Ganesh and Degnbol disclose providing an alert when a first wireless device is within a distance of a second wireless device. Enzmann further discloses that a requestor may select a restaurant conveniently located between a target device and the requestor after the target device enters "the same city" as the requestor while Degnbol discloses two distinct users (User A and User B) who each have saved profiles, but who also carry system linked communication devices that inform the

system of the devices' location information. Ex. 1040, 9:15-30, Ex. 1047, 20:23-32. As discussed above in Ground 1 claim 24, Degnbol teaches a first and second dating matching profile as well as using the dating matching profiles and locations to provide an alert. Ex 1047, 16:8-21, 18:27-34. It is my opinion that a POSITA would be motivated to incorporate the social (i.e., dating) functionality from Degnbol with the Enzmann system to improve the location-sharing functionality in Enzmann to enable users of mobile devices to identify other users with common or mutual interests and to navigate to each other. Thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 24.

25. Claim 25: "The method of claim 1, further comprising providing a compass in said second wireless device."

132. Enzmann in view of Ganesh does not disclose a compass. It is my opinion that the use of a compass in mobile devices, was well- known in the art at the time of the priority date. Additionally, Ryden explicitly teaches providing a compass in said second wireless device. *See, e.g.*, Ex. 1057, 15:29-56 (disclosing telephone unit 10 with magnetic compass 59 and digital direction finder device 100). Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 25.

26. Claim 26: "The method of claim 1, wherein a directional arrow is utilized to display the location of said first wireless

device relative to said location of said second wireless device on said second wireless device."

133. Enzmann in view of Ganesh and Ryden teaches the use of a directional arrow to display the location of the target device relative to the location of the requesting device on the requesting device. Ganesh teaches displaying the location of the target wireless device in Figure 7. Ex. 1049, 8:6-17, Fig. 7. Ryden teaches the use of direction-finding devices "for determining the compass direction from the telephone unit 10B to another telephone unit." Ex. 1057, 10:54-59; Ex. 1058, 18:10-15. Additionally, in Figure 7, Ryden teaches an arrow 44 representing the direction 44 from telephone unit 10C to telephone unit 10D located aboard ship 19. Ex. 1057, 13:56-67, 14:21-24, Fig. 7. Ryden teaches that direction arrow 44 is stored in the memory of telephone unit 10D, and when combined with Ganesh's display, a POSITA would have found it obvious to display this direction as an arrow, which was a well-known symbol on map displays at the time of the priority date.

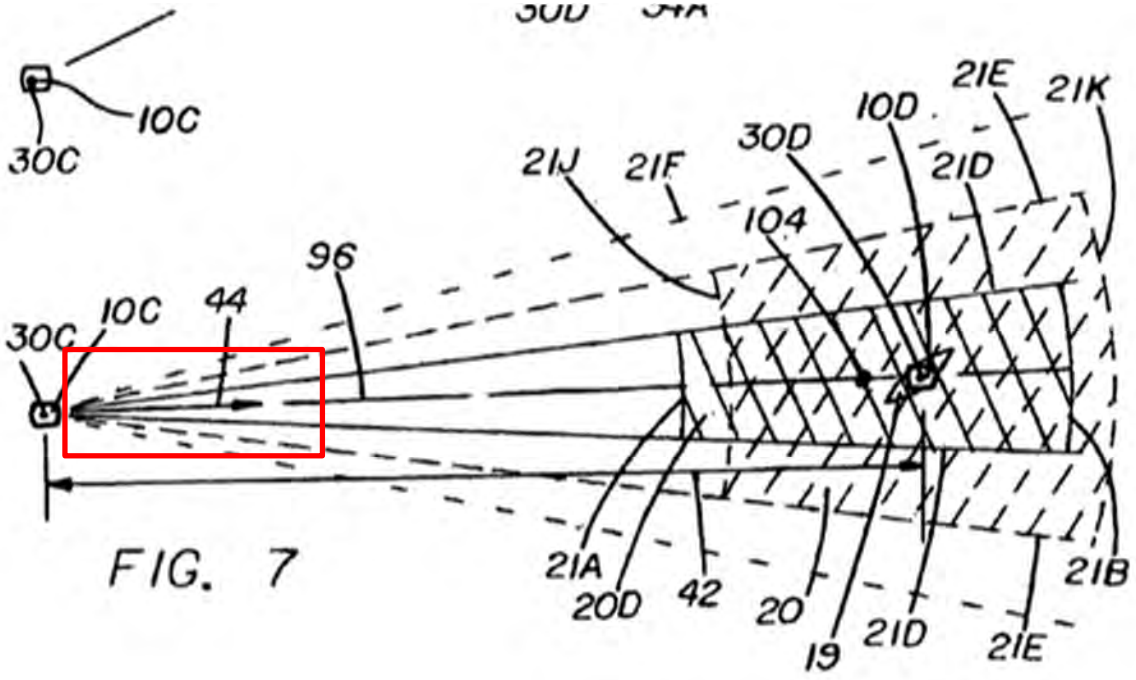


FIG. 7

Ex. 1018, Fig. 7. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 26.

27. Claim 27: "The method of claim 1, further comprising providing a compass in said second wireless device, wherein said compass is utilized to display the direction that said second wireless device is traveling in."

134. As discussed in claim 25, Enzmann in view of Ganesh and Ryden discloses a compass in the requesting wireless device. A POSITA would have found it obvious to use this compass to display the direction that the requesting wireless device is traveling in in view of Ryden's teachings. Specifically, Ryden notes that it was known to use compass heading data in combination with GPS position data "to determine the route and velocity of a vehicle." Ex. 1018, 2:55-60. Ryden further discloses that his invention "permits extrapolations of existing travel

directions and speeds." Ex. 1057, 18:47-48. Thus, it is my opinion that Enzmann in view of Ganesh and Ryden makes obvious claim 27.

28. Claim 28: "The method of claim 1, further comprising setting location alerts associated with said first wireless device on said second wireless device."

135. As discussed in claims 18 and 24 above, Enzmann in view of Ganesh and Degnbol discloses setting location-based alerts associated with a first wireless device on a second wireless device. Degnbol further setting location alerts associated with the target wireless device on the requesting wireless device, such as a husband and wife who each want to be alerted when the other enters a given area on their route home. Ex. 1047, 13:17-21, 20:24-28. Thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 28.

29. Claim 29: "The method of claim 1, wherein said location access rights are only assigned for a period of time."

136. Limiting location access rights to a specific timeframe was well known feature in the art as of the priority date. In addition, Sheha discloses that location access rights can be assigned for limited periods of time. Ex. 1041, 3:10-12. Thus, it is my opinion that Enzmann in view of Ganesh and Sheha makes obvious claim 29.

30. Claim 30: "The method of claim 1, further comprising alerting said second wireless device when said first wireless device enters a geographic area."

137. As I previously discussed with respect to claims 18 and 24, Enzmann in view of Ganesh and Degnbol discloses location-based alerts. In addition, as discussed in Ground 1 claim 30 above, Degnbol further teaches that the alert "may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street." Ex. 1047, 6:6-9; *supra* Section II.A.30. Thus, it is my opinion that Enzmann in view of Ganesh and Degnbol makes obvious claim 30.

31. Claim 31: "The method of claim 1, wherein said server stores a history of locations for said first wireless device."

138. The Enzmann system may "periodically records a device's location in a location database 300[.]" Ex. 1040, 8:20-36. It is my opinion that a POSITA would recognize that this action stores a history of locations for the first wireless device. In addition, as discussed with respect to Ground 1 claim 31, Ganesh teaches that the server stores a history of locations for the first wireless device. Ex. 1049, 4:29-35, 6:55-7:20, 7:62-65. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 31.

32. Claim 32: "The method of claim 1, wherein said server stores a history of locations for said first wireless device and said history is utilized to provide an approximate location of

said first wireless device when said first wireless device is turned OFF."

139. As I previously discussed in regard to Ground 1 claim 32, Ganesh discloses a call history database that stores a history of locations, which can be used to provide an approximate location of the target device. *See supra* Section II.A.32. Additionally, Ganesh teaches that this approximate location can be used to provide an approximate location of the target device when it is "not currently registered," i.e., if the device is not connected to the network or if the device is turned OFF. Ex. 1049, 7:18-20.

140. As discussed above in claims 3 and 31, Enzmann teaches a location history database for a target device stored on a server. Enzmann further discloses that this database can provide a location of the target wireless device at any time, including when the device is turned OFF. *See* Ex. 1040, 8:20-36 (explaining the database obviates the need to directly query the target device for location information, thereby providing a "more immediate response to the requestor"). Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 32.

33. Claim 33: "The method of claim 1, further comprising displaying on said second wireless device the opportunity to request said location access rights from said first wireless device"

141. As I discussed with respect to claim 1c above, Enzmann in view of Ganesh discloses asking the requesting wireless device if location access rights are

to be requested from the first wireless device. Additionally, Ganesh teaches the use of an interface screen in Figure 6 teaches this "asking" step. This screen is displayed on the requesting wireless device, and in query 90 displays the opportunity to request location access rights from the target wireless device. Ex. 1049, 6:33-42, Fig. 6. It is my opinion that in Enzmann's system, a request to "receive the location information at a later time" must involve a request for location access rights if the requesting device not a previously authorized device, as the location server would then ask permission from the target device.

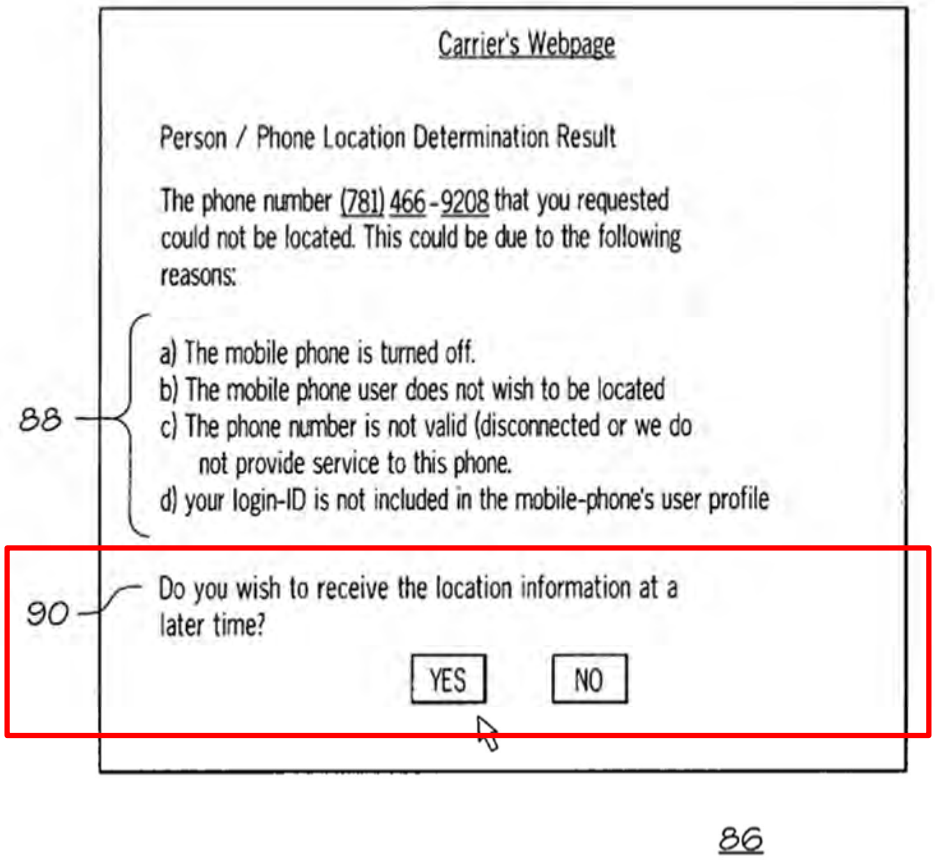


FIG. 6

Ex. 1040, Fig. 6. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 33.

34. Claim 34: "The method of claim 1, wherein said first wireless device is requested to manually allow said location access rights for said second wireless device every time said second wireless device requests said location."

142. Enzmann describes manually allowing location access rights for the requesting wireless device every time the requesting device makes a location

request. Ex. 1040, 7:44-54. Enzmann further teaches that a user may specify preferences such as "whether the network user will entertain requests to release her location information to requestors not on the access list." Ex. 1040, 7:26-28. Additionally, Enzmann describes how a user may "permit or den[y] access for unauthorized (off-list) requestors on an individual basis[.]" Ex. 1040, 2:48-51. Thus, it is my opinion that requiring manual authorization every time an off-list device requests location information. Thus, it is my opinion that Enzmann in view of Ganesh makes obvious claim 34.

35. Claim 35: "The method of claim 1, wherein one of said location access rights is the ability to not allow said second wireless device to access said location.

143. Enzmann describes that each mobile device may choose to not allow a requesting wireless device access to location information. Ex. 1040 7:44-49. Thus, in my opinion Enzmann in view of Ganesh makes obvious claim 35.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 4

TABLE OF CONTENTS

I. U.S. Patent No. 11,096,039

A. Summary of the ’039 Patent

1. I have been informed that the earliest priority date to which the Patent Owner may claim the ’039 Patent is entitled to is March 25, 2002.

2. The ’039 Patent “relates to systems and methods for remotely determining a device’s location.” Ex. 1004, 1:18-20. According to the specification, “any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114.” *Id.*, 4:24-27. And, “every user may assign rights (e.g. govern the security) to whom may or may not locate him/her.” *Id.*, 4:56-58.

3. Figure 6 (below) shows a display screen that provides location information. *Id.*, FIG. 6; 7:23-27.

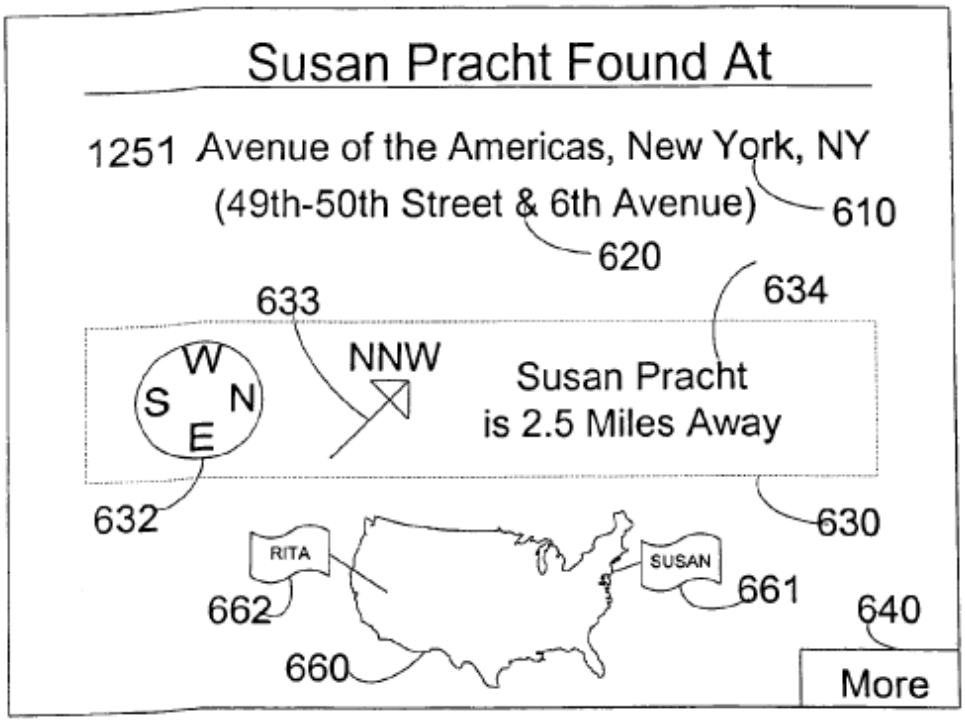


FIG. 6

4. Available location information, "[d]epending on what scope the requesting user has access to . . . may include, for example, the country, state, city, exact location, or any combination thereof of location information to the user." *Id.*, 7:36-39. The location information may also include directional information, and a map may be included to show locations of multiple users. *Id.*, 7:51-8:21, 8:40-51.

5. According to the '039 Patent, the information provided on the display screen is limited to the scope of the requesting user's access rights. *Id.*, 7:26-27; FIG. 8. The '039 Patent also describes permitting a user to give or modify access to location rights to another user. For example, the user may select which users may

access the location information and what specific information may be accessed by a specific user. *Id.*, 9:10-26; FIG. 10. A user may also create alerts that are dependent on the location of other users' phones. *Id.*, 9:27-36; FIGS. 11-12. For example, a user might receive an alert "if the requested user is in a specific city or the same city as the user of display 1100, is within a certain distance, or if a user located the user of display 1100." *Id.*.

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

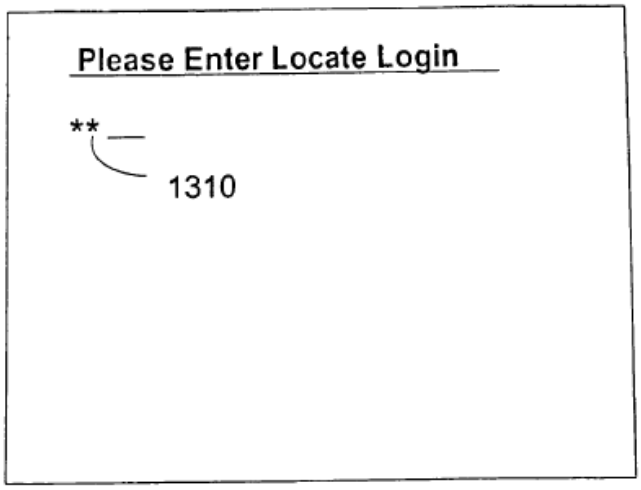


FIG. 13

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

7. A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. *Id.*, 11:56-58. "Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." *Id.*, 11:58-59. After a location is requested, access rights to the requested location for the requesting device and/or user are checked. *Id.*, 11:64-2:4. If the requestor has access rights, location information is provided to the requestor. *Id.*, 12:14-16. If the requestor has not been assigned access rights, then the requestor is informed that he or she does not have access rights to obtain the location information. *Id.*, 12:28-32.

B. Relevant Prosecution History of the '039 Patent

8. Application 11/841,750, which issued in the '039 patent, had a lengthy prosecution history lasting 14 years. Ex. 1053. Throughout prosecution, Mullen argued that certain features were not disclosed in the prior art. The Examiner did not find these arguments persuasive, largely based on the conventional nature of the elements at issue. Ex. 1053. For example, the Examiner noted that "logins are notoriously old in the art and are used to identify a user." Ex. 1053, Non-Final Rejection of June 8, 2010. I agree with the Examiner's finding here.

9. Mullen then amended the claims to include language related to location-

based events including that location-based events are "operable to be provided" and selectable from a list of at least three types of location-based events. Ex. 1053, Response dtd. July 23, 2020. In the subsequent office action, claim 2 (now claim 4) was noted as allowable over the art without explanation. Ex. 1053, Final Rejection dtd. October 27, 2020. In the final response of March 29, 2021, Mullen added language like that in claim 2 (then claim 4). Ex. 1053, Response dtd. March 29, 2021. The claims were allowed without explanation. Ex. 1053, Notice of Allowance dtd. April 14, 2021.

II. Claims

1. A system comprising:

a remote system, wherein user information is operable to be identified from a plurality of different user information by receiving at least a manually entered login from a first wireless device associated with said user information and a manually entered password associated with said login,

a location of said first wireless device is operable to be recorded on said remote system after said user information has been identified on said first wireless device and said location is associated with said user information and provided by said first wireless device to said remove server,

a location-based event is operable to be provided based, at least in part, on said location of said first wireless device, wherein said located-based event is operable to be manually pre-selected from a list of at least three types of location-based events on a device,

a location-based event notification is operable to be provided on said device as a result of, at least in part, location access rights of said device from said first wireless device,

wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.

2. A system comprising:

a remote system operable to perform a trigger of a request of location information of a wireless telephonic device for a device at an occurrence of a location-based event based, at least in part, on a location of said wireless telephonic device,

wherein said located-based event is operable to be manually pre-selected from a plurality of located-based events on a first screen of said device from a list of at least three types of location-based events,

access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,

and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.

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

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

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

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

information is displayed on and selectable from said display screen.

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

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

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

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

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

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

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

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

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

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

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

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

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

III. **Claim Construction**

10. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

11. In my opinion the claims of the ’039 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of how the Claims of the '039 Patent are Unpatentable

A. Ground 1: Claims 1-19 are unpatentable as obvious over Enzmann, alone or in combination with McNulty, Degnbol, Obradovich, Tobin, and/or Lee

1. Claim 1

a. *Claim 1 Preamble-A system comprising:*

12. Enzmann describes a "system" that includes a user wireless network and a location server. Ex. 1040, 2:52-54.

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

13. Enzmann describes a requestor submitting a location query to a location server. "The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password." Ex. 1040, 6:41-45. Thus, Enzmann discloses a login and password.

14. The location server 100 is remote from the wireless devices 104, at least because it is a different device than the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. *Id.*, 2:52-65, FIG. 1. The location server can store relationships between device

identifications and network user identifications. *Id.*, 5:28-38. Thus, Enzmann discloses a remote system receiving a login, the identification of the requestor, who is one of several network users, and a password.

15. A POSITA would have understood that Enzmann discloses manually entering such information or that doing so was at least obvious by the time of the alleged invention as one of skill in the art would have known that manual entry of such information at the time was common. Further, McNulty explicitly describes manual selection of user information-"the user is identified according to the address of wireless telephone 110, whether manually entered . . . or automatically determined." Ex. 1054, 11:54-59. Thus, it would have been obvious to modify Enzmann to manually enter the login and password in light of the disclosure of McNulty**,** given limited choices for entering such information.

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

16. Enzmann describes determining the location of a specified network device. Ex. 1040, 7:63-65. This is performed at step 206a of Enzmann FIG. 2, after receiving the request with login information and password at step 200. *Id.*, FIG, 2; 6:41-50. The device location may be recorded to a location database (*e.g.*, a remote

system, *see id.*, FIG. 1 and claim 1[a]) in association with the corresponding network user after the information is retrieved by the remote system. *Id.*, 8:20-36. The location is provided by the network device to the remote system and stored there ("location system 120 . . . updates location database 300," *Id.*, 8:26-27; *see also* 8:17-19, 4:29-31).

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

17. Enzmann describes providing a location-based event notification:

> A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user. When a friend's name appears on the users instant messaging screen, the user may want the option to query for the location of the friend to determine, for example, whether the friend is near enough to have lunch and, if so, to select a restaurant that is conveniently located for the friend and the user.

Id., 9:17-24. Enzmann notes that, "[t]he location query of the present invention could be explicit or implicit, occurring in the background of the instant messaging service, as a result of a configuration option or an action in the application." *Id.*, 9:27-30. The detection of the friend based on location is a location-based event. Selecting items from a list was well known long before the alleged invention date, generally, with respect to location-based services, and with the use of instant messaging. There is

nothing out of the ordinary about location-based events. Thus, a POSITA would have understood that such location-based events could be manually selected from a list on a device, e.g., "show only local friends," given that using such list-based selection was conventional at the time of the alleged invention.

18. Moreover, Degnbol explicitly describes at least three types of location-based events that can be selected on a device. Degnbol describes multiple examples of the configuration of preferences for members of a Buddy List to generate alerts. Ex. 1047, 10:17 — 33, 11:1-3.

> As an example, user "A" chooses not to be alerted when he is in the geographical area covering his home even though another user - "B" - enters that area. . . . In yet another example, user "A" configures the system so that he only receives alerts when he is not within a specific geographical area or within a predetermined distance from user "B". Preferences can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a call- center.

Id., 10:22-23, 10:31-33, 11:1-3. The alert is the location-based event. Degnbol describes selection of additional types of location-based events as well: "For example, user 'A' may choose to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." *Id.*, 11:10-11. The user can establish the predetermined range, which "may

be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street." *Id.*, 6:6-8.

19. Thus, Degnbol describes more than three different types of location-based events: (1) whether the buddy is in a geographic area covering the home, (2) whether the buddy is within a certain distance of a person, (3) whether the buddy is on the same continent, (4) whether the buddy is in the same country, (5) whether the buddy is in the same district, (6) is within a co-ordinate range; and (7) on a street. Degnbol also describes configuring preferences for these events "directly from the handset of the users cellular phone." *Id.*, 11:1-3. It would have been obvious to combine Degnbol's disclosure of both selection of location-based events and manual entry using the handset of the phone with Enzmann as such techniques were well-known and conventional to a POSITA at the time of alleged invention. In light of Enzmann's disclosure of location sharing, a POSITA would have been motivated to improve user ease by sending alerts rather than the user having to repeatedly request information.

20. Manually selecting items from a list was well-known at the time of the alleged invention. For example, McNulty describes various interfaces for manually selecting items from a list and including at least three selections. In one example, as shown in FIG. 24 (*supra*), a list of several coffee shops is displayed, and a user can select one of the coffee shops. Ex. 1054, FIG. 24; 16:44-56. As I demonstrate

above, it would have been obvious to a POSITA to include such a user-selectable list to achieve user-selection of preferences for event notifications as described in Degnbol and Enzmann. And, McNulty explicitly describes the wireless telephone accepting "manually entered" input. Ex. 1054, 11:54-59.

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

21. Enzmann describes providing a location-based event notification, as described above with respect to claim 1[c]. Enzmann further discloses that such notifications are based on location access rights: "Location server 100 executes the service logic of the present invention, including . . .confirming the access levels of requestors 106, obtaining the location information of wireless network devices 104, and returning the location information to requesters 106." . *Id.*, 5:3 –8; *see also* FIG. 2; 7:12-14, 8:65-67, 9:17-30.

f. ***Claim 1[e]-wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

22. Enzmann describes a location-based event contingent on a friend being in the same city, which is a region-based location-based event. Ex. 1040, 9:4-24, *supra*.

23. Enzmann also describes location-based events that are distance based. For

example, Enzmann discloses, "a friend being near enough to have lunch, and, if so, to select a restaurant that is conveniently located for the friend and the user." *Id.*, 9:22-24, *supra*.

24. Moreover, Degnbol describes region-based events such as "user 'A' configures the system so that he only receives alerts when he is not within a specific geographical area . . . from user 'B.'" Ex. 1047, 10:31-33), as well as a user "establish[ing] a predetermined range, "which may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street. *Id.*, 6:6-8. And Degnbol describes distance-based events such as choosing "to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." *Id.*, 11:5-11. As I demonstrate above, it would have been obvious to incorporate the various types of location alerts described in Degnbol in order to more effectively share location data in Enzmann's system.

25. Thus, Enzmann in view of Degnbol and McNulty renders claim 1 obvious.

2. Claim 2

a. *Claim 2 Preamble-A system comprising:*

26. See claim 1 preamble.

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

27. Enzmann describes triggering a request for a location of a friend based on a location-based event:

> A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user. When a friend's name appears on the users instant messaging screen, the user may want the option to query for the location of the friend to determine, for example, whether the friend is near enough to have lunch and, if so, to select a restaurant that is conveniently located for the friend and the user. Ex. 1040, 9:4-24.

Providing "the option to query for the location of the friend," which, if elected by the user, will trigger a request of location information of the friend's wireless telephonic device for the user's telephonic device, is at the occurrence of the location-based event. (*See Id.* and 12:7-43.). As discussed above, Enzmann also discloses triggering a query in an "implicit" fashion. *Id.*, 9:27-30.

c. ***Claim 2[b]-wherein said located-based [sic] event is operable to be manually pre-selected from a plurality of located-based [sic] events on a first screen of said device from a list of at least three types of location-based events,***

28. See claim 1[c].

d. ***Claim 2[c]-access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger [sic] a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,***

29. Enzmann describes providing a location-based event notification based on access rights. *See* claim 1[d], *supra*.

30. McNulty discloses multiple display screens, including a first display screen for selecting an item from a list, Ex. 1054, FIG. 24, 16:44-56; claim 1[c], *supra*), and a second display screen for displaying location information. Ex. 1054, FIG. 25; 16:44-56. It would have been obvious to a POSITA to provide a location-based event notification based on access rights, as described in Enzmann, via a second display screen, as described in McNulty. One of skill in the art would have known that mobile devices have limited screen space. In order to efficiently and effectively use this limited space, it would have been common to display only a single function at a time on the screen. Thus, a first function would have been displayed on a first display screen, while a second function would be displayed on a second display screen. One of skill in the art would have understood that this is particularly true for the use of location in an application, where there can be many graphics, and significant challenges in terms of how much location-related data can be displayed on a screen at any given time. Adding additional functionality (e.g. access rights) into an already crowded screen would have been difficult and thus one of skill in the art would have been motivated to create a separate screen, either replacing the first screen with the second screen or having the second screen pop up or overlay on the first screen.

e. ***Claim 2[d]-and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

31. See claim 1[e]. Thus, Enzmann in view of Degnbol and McNulty renders claim 2 obvious.

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

32. Enzmann describes multiple wireless devices, each having GPS. For example, "wireless handheld devices 104 may include handheld location systems 122, such as GPSs integral to the devices." Ex. 1040, 5:48-50. Enzmann also describes obtaining locations of multiple devices using GPS: "In step 206 a, user wireless network 102 uses location system 120 to determine the location of the specified network device." *Id.*, 7:63-65. The Enzmann location system 120 includes the GPS. *See Id.*, 4:15-19; 5:48-50. Enzmann also describes storing the location on the remote system. (*See* claims 1[a] and 1[b], *supra*. Thus, Enzmann in view of Degnbol and McNulty renders claim 3 obvious.

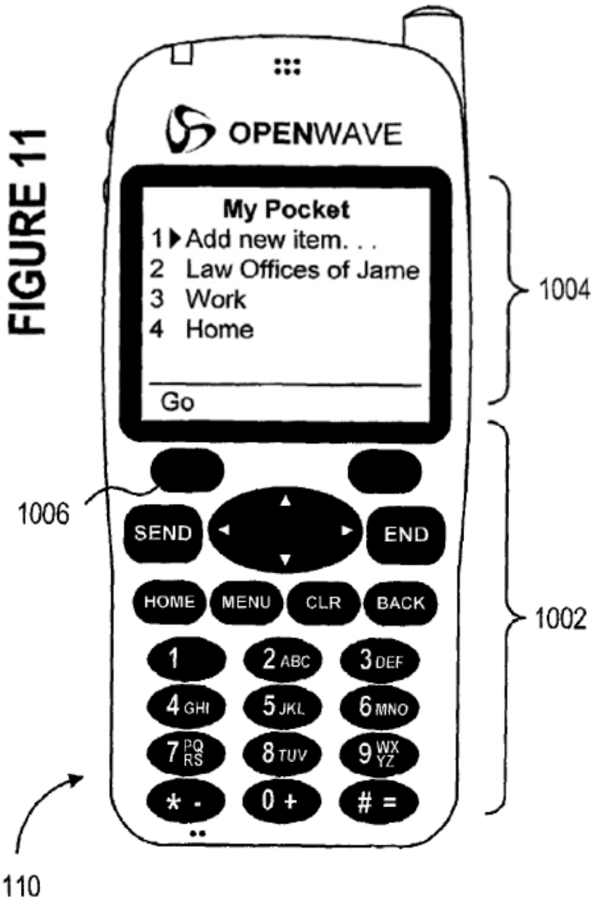
4. Claim 4-The system of claim 1, wherein said first wireless device includes a first global positioning system that is operable to provide said location and a second device is provided that includes a second global positioning system

that is operable to provide a second location, wherein said second location is stored on said remote system.

33. See claim 3.

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

34. Enzmann describes a user selecting a set of authorized requestors, i.e., users with access rights to location information of other users. Ex. 1040, 2:36-40. McNulty describes and illustrates various examples of user selection of information on a display screen from a list of at least four different items of information. *See, e.g.*, Ex. 1054, FIGS. 21-25, 11:54-59, 16:44-56, 15:45-54. For example, FIG. 23 show the categories, "food, fun, travel, and shopping", with a list of four "food subcategories" that include "restaurants, pizza, coffee shops, and Italian food," noting that "[m]ore or fewer, other and different subcategories can be presented to the subject user." Ex. 1054, FIG. 23, 15:45-54. McNulty also describes displaying user information via user interface, such as "frequently contacted people with whom the subject user is likely to share information for easy subsequent retrieval or reference using wireless telephone." *Id.*, FIG. 11 (below), 6:51-58.



35. McNulty also describes manual selection of user information. For example, "the user is identified according to the address of wireless telephone 110, whether manually entered as described above with respect to FIG. 10B or automatically determined." Ex. 1054, 11:54-59.

36. Given Enzmann's disclosure of user configuration of access rights, it would have been obvious to implement this via an interface for selection from a list of four different items, as disclosed in McNulty, to enable the user to perform the

configuration. Thus, Enzmann in view of Degnbol and McNulty renders claim 5 obvious.

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

37. As described above with respect to claim 5, the combination of Enzmann and McNulty discloses manual selection of authorized requestors from a list of users. McNulty further discloses displaying a user name selectable from a display screen. ("In performing the send-to friend action, the subject user is presented with a list of people identified by friends 416 (FIG. 4). The user selects from the list." Ex. 1054, 17:5-15. Thus, Enzmann in view of Degnbol and McNulty renders claim 6 obvious.

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

for providing a second map associated with a third location of a third user information[1].

38. As discussed above in claim 3, Enzmann discloses obtaining locations of multiple devices, i.e., a first location of a first "user information," a second location of a second "user information," a third location of a third "user information," etc. (*see also* Ex. 1040, 4:15:18 ("a location system 120 that provides the locations of the plurality of network devices"). Enzmann also discloses "provid[ing] the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located." Ex. 1040, 4:24-26), and doing so after identifying user information. *Id.*, 6:41-50, 8:65-67.

39. Tobin discloses providing a display screen including selectable options for providing multiple maps of multiple vendors in multiple locations. In Tobin FIG. 1B (below), a display screen includes buttons 134-136 and 138 that a user can

[1] I am interpreting the "user information" and "third user information" as respective user devices. Based on the context (e.g., "providing a second map associated with a third location of a third user information," (claim 7) and "provide said location to a third user information," (claim 10), this would be the most sensible construction. Location information could be provided to a person or a device.

interact with to configure different vendors to locate. Ex. 1050, FIG. 1B, ¶¶ 23-27. The user first selects one or more of buttons 134-146 and then selects the "Go" button. *Id.*

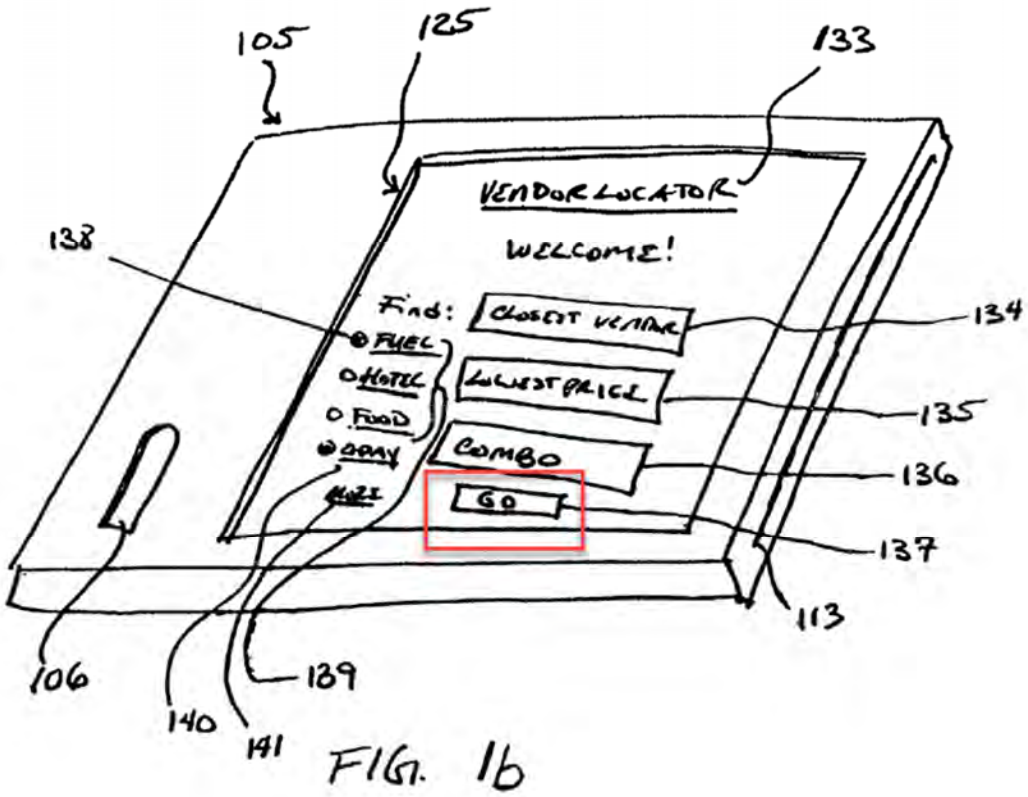


FIG. 1b

40. Based on one configuration, e.g., selecting a first button 134 or a hyperlink 138 associated with a first type of information, the "Go" button 137 will initiate display of a first map showing a first location (e.g., the closest fuel station based on location). . Ex. 1050, ¶¶ 23-27, *see also* FIG. 1C (showing the map). Based on another configuration, e.g., selecting a second button 135 associated with a second

information, the "Go" button 137 will initiate display of a second map showing a second location, and based on yet another configuration, e.g., selecting the third button 136 associated with a third information, the "Go" button 137 will initiate display of a third map showing a third location, and so forth. *Id.*.

41. It would have been obvious to a POSITA to include such an option to display maps of multiple locations associated with each of multiple users in Enzmann's system to improve the flexibility and delivery of location information. Thus, Enzmann in view of Degnbol, McNulty, and Tobin renders claim 7 obvious.

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

42. See claim 7.

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

43. As discussed above in relation to claim 7, Enzmann discloses a wireless device providing locations of other wireless devices after identifying user information. However, Enzmann does not disclose providing a travel time between locations. However, Tobin discloses providing a travel time between locations.

Ex. 1050, ¶ 28. As I have demonstrated above, it would have been obvious to a POSITA to include a travel time between locations in Enzmann's system to improve the delivery of location information. Thus, Enzmann in view of Degnbol, McNulty, and Tobin renders claim 9 obvious.

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

44. As discussed above in claim 7, Enzmann discloses a wireless device querying the locations of other wireless devices after identifying user information. Enzmann further discloses that the location can be provided in different ways, such as "x-y position coordinates . . . , a street address, building name, or area name." Ex. 1040, 3:9-12. In some embodiments, the exact x-y position coordinates are displayed; in other embodiments, a "mapping converter" performs a "translation function." For instance, "if the location system provides the location in a 'raw' form, not easily understood capability the typical requestor (e.g., x-y position coordinates), the ties), the present invention includes a requestor wireless method further includes translating the location from the raw form to a 'displayable' form (e.g., a street address, building name, or area name)." *Id.*, 3:6-16.

45. Further, McDonnell describes "a method and device . . . for obscuring the location of a mobile entity to a specified accuracy level. Available location data

that has a known accuracy greater than the specified accuracy has its accuracy decreased." Ex. 1053, Abstract. The accuracy of the location data L is compared with an accuracy limit established on the mobile entity (e.g., a mobile phone). *Id.*, 9:20 – 22, 1:18 – 22. Based on the specified accuracy limit, the location data may or may not be "modified to make it less reliable," e.g., filtered. Ex. 1053, 9:22 – 35, see also FIG. 16, 38 – 44. The location data "with accuracy limited to the level specified by the . . . parameter set by the mobile entity is then returned to the service system." Ex. 1053, 9:36 – 39. A POSITA would have been motivated to look to McDonnell to enhance privacy by performing Enzmann's filtering according to geographic region and/or exact location before providing it to the other device.

46. Thus, Enzmann in view of Degnbol, McNulty, and McDonnell renders claim 10 obvious.

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

47. As described above in claim 10, the combination of Enzmann and Degnbol teaches filtering by multiple types of geographic regions, and McDonnell describes performing such filtering before providing the location information to another

device. As to the specific examples of a city and state as a geographic region, cities and states have existed for centuries. It would have been obvious to a POSITA to choose a city or a state as a type of geographic region (e.g., cities and states are obvious examples of an "area name," which is disclosed in Enzmann at 3:12). Thus, Enzmann in view of Degnbol, McNulty, and McDonnell renders claim 11 obvious.

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

48. See claim 10 in relation to geographic region. Because the claim recites "geographic region or an exact location," disclosing geographic information is sufficient to render the claim obvious. Enzmann also discloses providing "x-y" coordinates as I discuss in relation to claims 7 and 10. A POSITA would understand an "x-y" coordinate to be an "exact location."

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

49. Enzmann discloses that the devices are wireless telephonic devices ("cellular telephones"). Ex. 1040, 5:39-41. Thus, Enzmann in view of Degnbol and McNulty renders claim 13 obvious.

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

50. As described above at claim 10, Enzmann teaches providing location in the form of a type of geographic region or exact location. Obradovich further expressly describes different user-selectable access rights. Obradovich teaches "a security level index," used for providing different location-related information, which can be configured by a user. Ex. 1055, 26:37-46. For example, an individual with a security index level of seven could only obtain a user's general office number, whereas an individual with a security index level of six could obtain the user's direct dial number. Ex. 1055, 6:57-63. As described above in, a POSITA would have been motivated to incorporate Obradovich's security level index in Enzmann's system to enable known and desirable authentication functions.

51. Further, Lee explicitly teaches a list of selectable options. Lee describes a graphic user interface (GUI) that can be used to establish or create access rules. Ex. 1050, 16:1-2. An example of such an interface is shown in FIG. 2D (below), which shows four different access rules 277 that can be selected by a user via the GUI. *Id.*, FIG. 2D, 16:1-25.

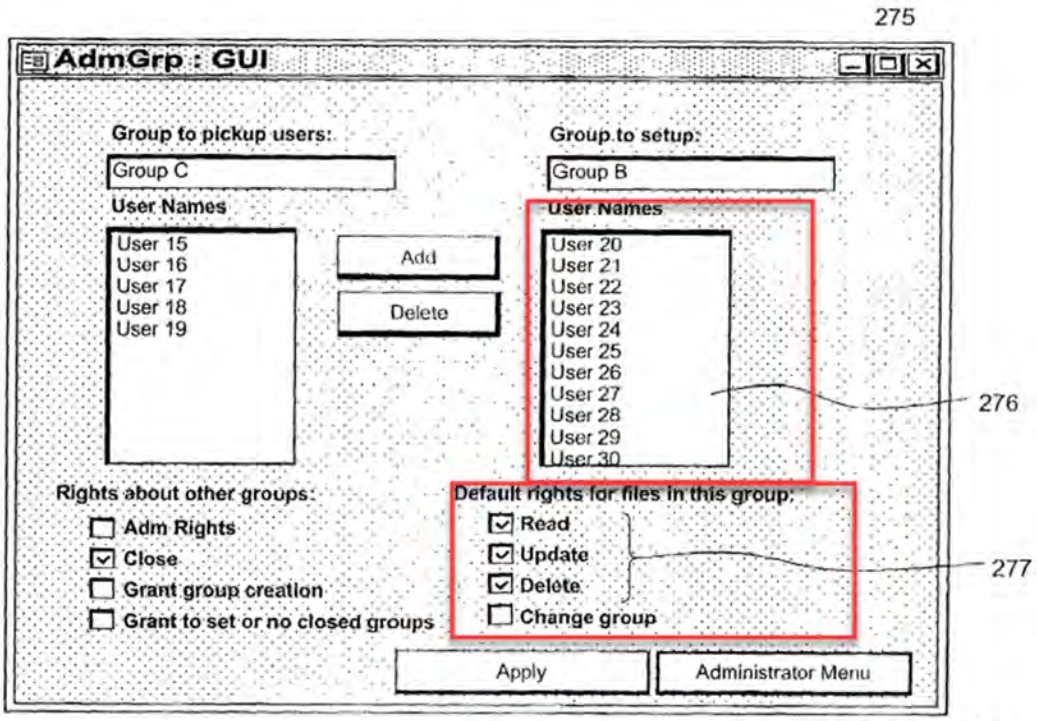


Fig. 2D

52. It would have been obvious to a POSITA to use a GUI as disclosed in Lee for the user configuration described in Enzmann and Obradovich. Thus, Enzmann in view of Degnbol, McNulty, Obradovich, and/or Lee renders claim 14 obvious.

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

53. See claims 10 and 14.

16. Claims 16 / 17 / 18-The system of claim 2, wherein said access rights are operable to be selected from a list of

selectable options including at least two / three / four access options.

54. See claim 14. Lee's FIG. 2D shows a list of four selectable access right options. Ex. 1050, 277 in FIG. 2D. A POSITA would have been motivated to also display a set of options in a menu for selecting access rules, as is both routine and conventional and described in Lee, to facilitate access rule configuration in Enzmann's system. Thus, Enzmann in view of Degnbol, McNulty, and Lee renders claims 16, 17, and 18 obvious.

17. Claim 19-The system of claim 1, wherein a third display screen is operable to be provided on said device with a selectable option for providing a first map associated with said location information based on said access rights or a second map associated with second location information associated with said device.

55. As I noted above in relation to claim 7, Tobin discloses display screens that can be shown to map different locations. As I also noted, the user can configure parameters in the screen shown in FIG. 1B, and, based on these parameters, interaction with the "Go" button will display different locations on a map. *Id.*. As shown in FIG. 1C (below), this includes the ability to display a map showing the location of one or more remote locations 123, 127, 129 (i.e., providing a first map associated with said location information. Ex. 1050, FIG. 1C, ¶ 28. This also includes the ability to display a map showing the location of the user device 105 (i.e., providing a second map associated with second location information

associated with said device. *Id.*.

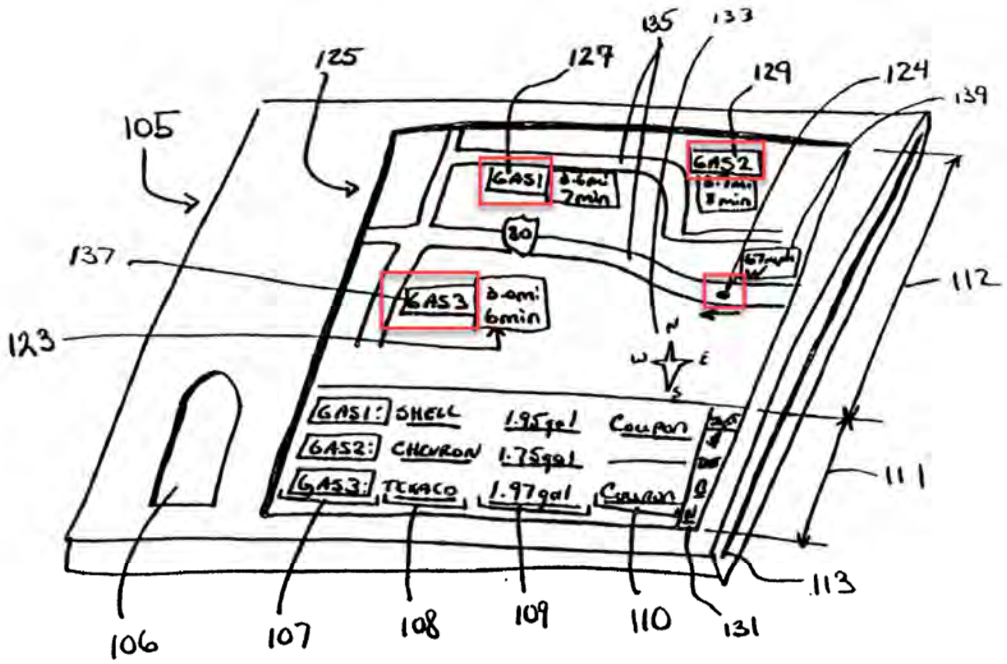


FIG. 1c

56. In Enzmann, locations are provided based on access rights. The location server determines whether the requestor is an authorized requestor at step 202 before returning the location of the requestor at 214, thus, the location-based event notification is based on the location access rights. Ex. 1040, FIG. 2, 7:12-24, 8:65-67, 9:17-30.

57. As I note above, in light of Enzmann's disclosure of displayable mapping information, it would have been obvious to a POSITA to look to Tobin for various ways to display such mapping information, such as by including an option to

display maps of multiple locations. Thus, Enzmann in view of Degnbol, McNulty, and/or Tobin renders claim 19 obvious.

B. Ground 2: Claims 1-19 are unpatentable as obvious over Sheha, alone or in combination with McNulty, Degnbol, Obradovich, Tobin, and/or Lee

1. Claim 1

a. *Claim 1 Preamble-A system comprising:*

58. Sheha discloses "a system and method for providing real-time position information of one party to another party." Ex. 1041, Abstract.

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

59. Sheha describes identification of user information via login. Sheha also discloses a remote system that includes an "online database and application server" (ODAS). Further, "every telephone account user has a username and password for the ODAS 3. . . . ODAS 3 correlates both the origin and destination telephone users' identifications to verify if the user is signed-on to the ODAS 3 using authentication and authorization protocols." Ex. 1041, 8:40-50. The ODAS is remote from the wireless telephone. *See, e.g.*, *Id.*, FIG. 3, *supra*. A POSITA would have understood that this information would generally be manually entered. Moreover, McNulty explicitly discloses manual entry of user information. Ex.

1054, 11:54-59, *supra*. It would have been obvious to incorporate McNulty's manual entry into Sheha's system.

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

60. Sheha discloses identifying a location of a wireless device. Ex. 1041, 7:51-52. The ODAS records the location ("the position information of each device can be updated in the ODAS," *Id.*, 11:5-6. The ODAS is remote from the wireless devices. *See Id.*, FIG. 3, 11:23-26. The location information is provided to the ODAS (remote system) from the wireless device ("[M]obile device 18c . . . forwards its current position information back to the ODAS.") *Id.*, 11:36-37. "This position information transfer is done utilizing authentication and authorization procedures." *Id.*, 3:22-25. In other words, it is based on the user information. *See Id.*, 8:40-50, 12:1-7.

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

61. As described above with respect to Ground 1, claim element 1[c], Degnbol and McNulty teach at least three types of location-based events operable to be

manually selected from a list. As I have explained elsewhere in my declaration, a POSITA would have understood that Sheha's system can be enhanced by displaying configuration options selectable via user interface, per McNulty, and incorporating various location alerts, per Degnbol, in order to more effectively provide location data.

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

62. Sheha describes providing a location notification based on location access rights: "[T]he notification appears on the user's display device," (Ex. 1041, 9:4-5); "users can define a group of specific users that have access to this information." *Id.*, 11:64-65.

63. Degnbol describes providing a location-based event notification on a display screen. Ex. 1047, 9:20-21, 10:5-8. As I demonstrated above, it would have been obvious to a POSITA to provide a location-based event notification, as described in Degnbol, based on access rights, as described in Sheha, and a POSITA would have been motivated to do so to provide the location in a user-friendly manner.

f. ***Claim 1[e]-wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

64. Degnbol discloses region-based and distance-based location-based events, as

described above with respect to Ground 1 for claim element 1[e]. A POSITA would have been motivated to provide location information as described in Sheha via alerts as described in Degnbol to more effectively provide the location data. Thus, Sheha in view of Degnbol and McNulty renders claim 1 obvious.

2. Claim 2

a. *Claim 2 Preamble-A system comprising:*

65. See claim 1 preamble.

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

66. Sheha describes requesting position information of a mobile device. Ex. 1041, 11:32-33. Sheha also describes triggering a request for data based on a location-based event: "if the mobile device is near such a boundary, the device can request, or pull data from the online server." Ex. 1041, 6:15-16.

67. Degnbol describes sending location-based event notifications based on a location of a wireless telephonic device, e.g., to "alert user 'A's' communication device when a user 'B' enters a pre-defined area," Ex. 1047, 11:13-14); "[t]he location of user "B" is determined by reference to the position of a personal mobile communication unit, e.g. telephone." *Id.*, 9:21-23.

68. Although in Degnbol, the location-based event results in a general

notification that the other user is in the area, as I demonstrate above, it would have been obvious to a POSITA to instead provide a more detailed location, as described in Sheha. In Sheha, obtaining the more detailed location involves a request for position information of a mobile device. Ex. 1041, 11:32-33, 12:1-4. Thus, it would have been obvious to a POSITA art in view of Sheha and Degnbol to request location information at the occurrence of a location-based event to provide locations in a user-friendly manner.

c. ***Claim 2[b]-wherein said located-based [sic] event is operable to be manually pre-selected from a plurality of located-based [sic] events on a first screen of said device from a list of at least three types of location-based events,***

69. Manual selection of one of at least three location-based events is taught by Degnbol and McNulty, as described above with respect to Ground 1 for claims 2[b] and 1[c]. As I have demonstrated above, it would have been obvious to a POSITA to enhance Sheha's location provisioning using these features of Degnbol and McNulty.

d. ***Claim 2[c]-access rights are operable to be obtained for said device that are associated with accessing said location information of said first wireless device as a result of said trigger of said trigger a location-based event notification is operable to be provided on said device on a second display screen as a result of, at least in part, said trigger and said access rights,***

70. Sheha describes providing a location notification based on location access

rights: "the notification appears on the user's display device," Ex. 1041, 9:4-5); "users can define a group of specific users that have access to this information." *Id.*, 11:64-67.

71. Degnbol describes providing a location-based event notification ("automatic notification of user 'A' of the entry of pre-selected user 'B' into a pre-determined area," (Ex. 1047, 9:20-21) on a display screen ("[t]he Buddy List may be displayed on the display of the users handset, giving the user an[] at-a-glance overview of who is in the proximity. . . . Buddies who are in the proximity may be highlighted or in other way emphasised." *Id.*, 10:5-8. As I demonstrated above, it would have been obvious to a POSITA to provide a location-based event notification, as described in Degnbol, based on access rights, as described in Sheha.

72. McNulty discloses multiple display screens, including a first display screen for selecting an item from a list (Ex. FIG. 24; col. 16:44-56; claim 1[c], *supra*), and a second display screen for displaying location information. FIG. 25; 16:44-56. It would have been obvious to provide a location-based event notification based on access rights, as described in Sheha and Degnbol, via a second display screen, as described in McNulty. As noted above with respect to Ground 1, claim element 2[c], it would have been an obvious choice to use multiple display screens, given the limitations on mobile device display screen size.

e. ***Claim 2[d]-and a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

73. As described above with respect to Ground 1 for claim elements 2[d] and 1[e], Degnbol discloses at least three types of location-based events including region-based and distance-based location-based events. As I demonstrated above, it would have been obvious to use different types of location-based events, per Degnbol, to enhance Sheha's location providing system. Thus, Sheha in view of Degnbol and McNulty renders claim 2 obvious.

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

74. Sheha describes locating multiple wireless devices: "for the mobile-to-mobile application . . . position information can be obtained in various embodiments," Ex. 1041, 4:60-62. Sheha also discloses using a global positioning system with any of the wireless devices for obtaining the location information. *Id.*, 10:5-14. The location is stored on the ODAS, a remote system. Ex. 1041, 3:50-61; FIG. 3, *supra*. Thus, Sheha in view of Degnbol and McNulty renders claim 3 obvious.

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

75. See claim 3.

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

76. Sheha describes a user selecting access rights for location information to provide to other users. Ex. 1041, 11:64-67. To the extent Sheha does not explicitly disclose manual selection via a display screen from a list of at least four different user information, such manual selection is disclosed in McNulty, as described above in relation to Ground 1, claim 5. Given Sheha's disclosure of user configuration of access rights, it would be obvious to implement this via an interface for selection from a list, as disclosed in McNulty. Thus, Sheha in view of Degnbol and McNulty renders claim 5 obvious.

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

77. As described above with respect to claim 5, Sheha, alone or in combination with McNulty, discloses access rights manually selected on a display screen from information associated with at least four different users. McNulty discloses displaying a user name selectable from a display screen. Ex. 1054, 7:5-15. ("In performing the send-to friend action, the subject user is presented with a list of people . . . . The user selects from the list.") As I demonstrated above, displaying selectable options per McNulty would have been an obvious choice to enable user configuration per Sheha. Thus, Sheha in view of Degnbol and McNulty renders claim 6 obvious.

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

78. As discussed above in relation to claim 3, Sheha discloses obtaining locations of multiple devices. Sheha also discloses providing maps (Ex. 1041, FIG. 5; 9:4-28) after identifying user information. *See Id.*, 8:43-46. As described above in relation to Ground 1, claim 7, Tobin discloses providing a display screen including selectable options for providing multiple maps of multiple locations. As described above, it would have been obvious to a POSITA to include such selectable options to display maps of multiple locations in Sheha's system to

improve the flexibility and delivery of location information. For example, it would have been obvious to provide first, second, third, and more user-selectable options to provide first, second, third, and more maps of locations, depending on the different types of information and different contexts in which the user is accessing such information. Thus, Sheha in view of Degnbol, McNulty, and Tobin renders claim 7 obvious.

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

79. See claim 7.

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

80. As discussed above in relation to claim 7, Sheha discloses a wireless device providing locations of other wireless devices after identifying user information. Tobin discloses providing a travel time between locations. Ex. 1050, ¶ 28. It would have been obvious to a POSITA to include a travel time between locations in Sheha's system to improve the delivery of location information. Such information provides additional context to the location information, such as indicating how far

away the third user is and thus what actions the user might take in response to knowing such information. Thus, Sheha in view of Degnbol, McNulty, and Tobin renders claim 9 obvious.

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

81. Sheha discloses that "each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:38-46. Sheha's system can provide "position-specific information, such as latitude and longitude coordinates [e.g., an exact location,] address information, and/or location information of varying size and resolution." *Id.*, 3:50-55. In some cases, the provided "location of the caller is one of a metropolitan area, a state within the United States of America, and an international political territory," i.e., the location, can be provided according to three enumerated types of geographic region-metropolitan area, state, and international political territory. *Id.*, claim 24. By disclosing "varying resolution," a POSITA would understand that Sheha discloses a form of filtering, i.e., presenting only certain information at each level of resolution, for example, setting the resolution by focusing on a single geographic area, such as a city or state. Further, it would have been obvious to a POSITA to provide "location information of varying size and resolution," as taught

by Sheha, by applying filtering to the obtained coordinates, as this is one of a limited number of ways of achieving such variance. Ex. 1041, 3:50-55. Moreover, McDonnell explicitly describes the location information being filtered before being provided to the other device, as I explained above with respect to Ground 1, claim 10.

82. Thus, Sheha in view of Degnbol, McNulty, and McDonnell renders claim 10 obvious.

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

83. See claim 10.

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

84. See claim 10.

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

85. Sheha discloses the devices being wireless telephonic devices. Ex. 1041, 10:46-49. Thus, Sheha in view of Degnbol and McNulty renders claim 13 obvious.

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

86. Sheha discloses limiting devices from obtaining position information based on user permission, which may correspond to a type of geographic region or an exact location, as described above in relation to claim 10. Obradovich and/or Lee teach configuring access levels via a list of selectable options, as described above with respect to Ground 1, claim 14. It would have been obvious to a POSITA to modify Sheha's system to limit access to location information using access levels and selectable options, as taught by Obradovich and Lee. Thus, Sheha in view of Degnbol, McNulty, Obradovich and/or Lee renders claim 14 obvious.

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

87. See claim 14.

16. Claims 16 / 17 / 18– The system of claim 2, wherein said access rights are operable to be selected from a list of selectable options including at least two / three/ four access options.

88. Lee discloses a selectable list of at least two / three / four access options, as described above with respect to Ground 1, claim 16. A POSITA would have been motivated to also display a set of options in a menu for selecting access rules, as is

both routine and conventional and described in Lee, to facilitate access rule configuration in Sheha's system. Thus, Sheha in view of Degnbol, McNulty, and Lee renders claims 16, 17, and 18 obvious.

17. Claim 19-The system of claim 1, wherein a third display screen is operable to be provided on said device with a selectable option for providing a first map associated with said location information based on said access rights or a second map associated with second location information associated with said device.

89. As described above at Ground 1, claim 19, Tobin discloses selectable options for providing a first map associated with location information or a second map associated with second location information. In Sheha, locations are provided based on access rights. Ex. 1041, 11:55-12:7. As I demonstrate above, it would have been obvious to a POSITA to include such an option to display maps of multiple locations when providing the access right-based location as described in Sheha, to improve the delivery of location information.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 5

TABLE OF CONTENTS

I. U.S. Patent No. 11,109,218

A. Summary of the ’218 Patent

1. The ’218 Patent relates to systems and methods for remotely determining a device’s location. Ex. 1005, 1:18-20. According to the specification, GPS systems had been integrated into cellular phones, but the location of devices determined by GPS signals “are only minimally utilized.” *Id.*, 1:28-31. The patent purports to “better utilize” location information determined by GPS with a system where “any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114,” and “every user may assign rights (e.g., govern the security) to whom may or may not locate him/her.” *Id.*, 1:31-33, 1:38-43, 4:24-27, 4:56-58.

2. Figure 2 (below) shows “a simplified locating feature constructed in accordance with the principles of the present invention” in which “a user requests the location of another user's cell phone” (202), the system determines whether the requesting user “has the rights to access the location of the desired user” (206), and if so, providing the location information to the requesting user (208). *Id.*, 4:52-5:2.

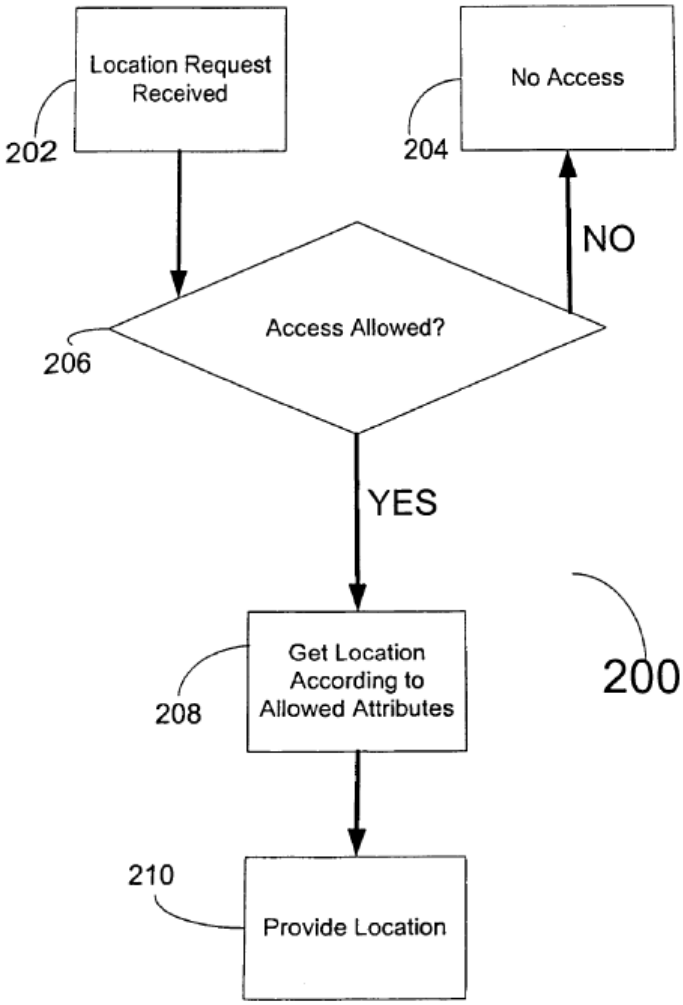


FIG. 2

3. Figure 6 (below) is display screen 600 that provides location information retrieved according to the alleged invention. *Id.*, 7:31-35.

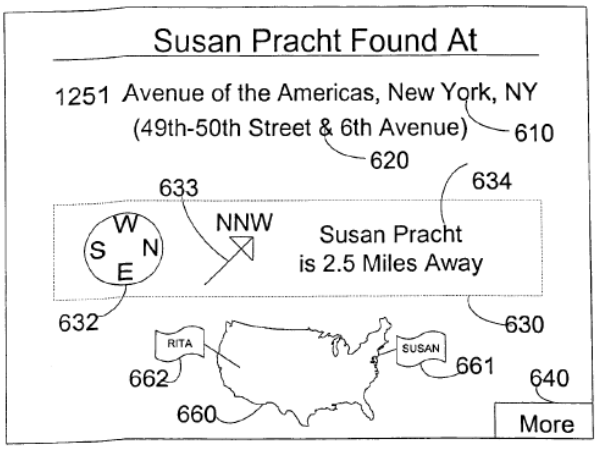


FIG. 6

4. Location information includes primary location information 610, such as "the country, state, city, exact location, or any combination thereof," directional information 630, such as digital compass 632 and directional arrow 633, distance information 634, and map 660. *Id.*, 7:37-8:12. The information provided is limited to information the requesting user has access rights to. *Id.*, 7:26-27.

5. The patent also describes a "login feature" where "user profiles would be used as the locating identifier and the devices into which these profiles are logged into (recognized by) would allow for the user to be located." *Id.*, 9:53-57. In this embodiment, "a user may use another user's location device (e.g., cell phone) to locate a user or may use, for example, the internet to locate a user" and "a user may change the device being located," such as using a car's GPS instead of GPS on the phone. *Id.*, 9:66-10:6.

6. Challenged Claims 1-15 relate to wireless devices operable to display

another user's location information on a screen after its request to locate another device has been granted.

7. Challenged Claims 16-19 relate to the login feature and describe a system in which a user logs in to multiple devices, obtains location information of each device, and sends the location of those devices to a third device.

B. Relevant Prosecution History of the '218 Patent

8. Application 11/841,734, which issued in the '218 Patent, was prosecuted for 13 years, receiving 12 rejections. Ex. 1015. Throughout prosecution, applicant repeatedly argued that the prior art did not disclose a display screen that included a map, a distance from one wireless device to another device's location, an address associated with said location, a directional arrow, and a compass, and that the Examiner's rejections were tainted by hindsight. Ex. 1015, 116-21, 159-65, 185-92, 213-20, 243-49, 269-76, 296-304, 331-37, 363-70, 425-31, 452-58, 487-94, 533-37. The Examiner did not find these arguments persuasive, repeatedly maintaining the rejections and explaining the references disclosed these elements, and further, the systems in the references had the directional information, so it would have been obvious to display it, and displaying this information would have been an obvious convenience to a user. *Id.*, 201-204.

9. After unsuccessfully arguing for patentability for over a decade, applicant amended the claims to require providing the display screen after a

request to locate a second wireless telephonic device from a first wireless telephonic device has occurred and a confirmation that said first wireless telephonic device has been given permission by said second telephonic wireless device to locate said second wireless telephonic device. *Id.*, 363-70. But the Examiner maintained the prior art rejections for three years, and made various written description and enablement rejections. *E.g.*, Ex. 1015, 378-83.

10. Then, after "multiple phone calls in which the merits of the application were discussed," applicant amended the claims to specify that the display screen includes a map "provided from a perspective of said wireless device." *Id.*, 525-38. The claims were allowed without an Examiner's Statement of Reasons for Allowance. *Id.*, 548.

II. Claims of the '218 Patent

1. A system comprising:

a first wireless telephonic device operable to provide a display screen after a request to locate a second wireless telephonic device from said first wireless telephonic device has occurred and after a confirmation that said first wireless telephonic device has been given a permission by said second telephonic wireless device to locate said second telephonic wireless device, wherein said display screen includes a map provided with respect to the location of said first wireless telephonic device, said display screen includes

indicia on said map representative of a first location, said display screen includes indicia representative of a second location obtained from said third wireless telephonic device, said display screen includes a distance from said first wireless telephonic device to said first location, and said display includes an address associated with said first location.

2. The system of claim 1, wherein said permission includes several location access rights, wherein each one of said several location access rights are associated with different location resolutions.

3. The system of claim 1, wherein said permission is stored on a server remote to said second wireless telephonic device, said third wireless telephonic device, and said first wireless telephonic device.

4. The system of claim 1, wherein said third wireless device associates a second permission with said second location to permit said first wireless telephonic device to access said second location.

5. The system of claim 1, wherein said permission of said second wireless telephonic device is associated with one of several access levels with said first location, said one of said several access levels permits said first wireless telephonic device to access said first location.

6. A system comprising:

a wireless telephonic device operable to provide a display screen after a request from said wireless telephonic device for access to a first location of a first wireless device, wherein said display screen includes a map provided from a perspective of said wireless telephonic device, said display screen includes indicia on said map representative of said first location, said display screen includes indicia on said map representative of a second location obtained from a second wireless device, and said display screen includes a distance from said wireless telephonic device to said first location, said display screen includes a compass, said display screen includes a directional arrow representative of the direction of said first location with respect to the location of said wireless telephonic device, and a determination is operable to be made to provide on said wireless telephonic device for a travel time from said first location to said wireless telephonic device.

7. The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

8. The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said

first wireless device, said second wireless device, and said wireless telephonic device.

9. The system of claim 6, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

10. The system of claim 6, wherein said first wireless device associates one of several access levels with said first location, said one of said several access levels permits said wireless telephonic device to access said first location.

11. A system comprising:

a wireless device operable to provide a display screen after a request from said wireless telephonic device for access to a first location of a first wireless device, wherein said display screen includes a map from the perspective of said wireless device, said display screen includes indicia on said map representative of said first location, said display screen includes indicia on said map representative of a second user according to a second location obtained from a second wireless device, and said display screen includes a distance from said wireless telephonic device to said first location, said display screen includes a compass, said display screen includes an address of said first

location, and said display screen includes a travel time based on at least the first location and the location of said wireless telephonic device.

12. The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

13. The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said first wireless device, said second wireless device, and said wireless telephonic device.

14. The system of claim 11, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

15. The system of claim 11, wherein said first wireless device associates one of several access levels with said first location, said one of said several access levels permits said wireless telephonic device to access said first location.

16. A system comprising:

a first device operable to identify a user identification on said first device by receiving a login and password from said first device, a first location is operable to be recorded of said user identification, based on a location of said first device after said user identification is identified on said first device, a first map provided from the perspective of said first location and is operable of being displayed on said first device, said first location is operable to be provided to a third device not associated with said user identification, said user identification is operable to be identified on a second device by receiving said login and password from a second device, a second location is operable to be recorded of said user identification based on a second location of said second device after said user identification is identified on said second device, a second map provided from the perspective of said second location and is operable of being displayed on said second device, said first location and said second location are different, and said second location is operable to be provided a said third device not associated with said user identification.

17. The system of claim 16, wherein said first device includes a first positioning system, said second device includes a second positioning system, said third device includes a third positioning system, said first location is determined, at least in part, based on said first positioning system, and said second location is determined, at least in part, based on said second positioning system.

18. The system of claim 16, wherein said first location is provided to said third device based on an access permission of said first location to said third device provided by said identified user on said first device.

19. The system of claim 16, wherein said first location is recorded on a server remote to said first device, second device, and third device.

III. Claim Construction

11. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

12. In my opinion the claims of the ’218 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of How the Claims are Unpatentable

13. It is my opinion that each of the claims of the ’218 Patent are invalid based on my analysis below. Each of the claims recites functionality that was well-known by the March 25, 2002 priority date for the ’218 Patent. The Sheha and Enzmann references specifically discuss the vast majority of the claim limitations, but even where they do not, the claims recite functionality that was well-known in

the art and would have been naturally identified by a POSITA to enhance the functionality described by Sheha and Enzmann.

A. Ground 1: Claims 1-19 are unpatentable as obvious over Sheha in view of Obradovich and McDonnell

14. The Sheha patent discloses systems in which wireless devices can receive a login and password and determine and share their own location with other devices, and users can control access of their location information and request the locations of other devices, as recited in independent claims 1, 6, 11, and 16. It also discloses most of the elements recited in the various dependent claims. In addition, Obradovich and McDonnell disclose the features recited in the dependent claims. It is my opinion that the combination of Sheha and Obradovich and McDonnell renders claims 1-19 obvious.

1. Independent Claim 1

15. It is my opinion that Sheha discloses or makes obvious claim 1.

a. *Claim 1pre - A system comprising*

16. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a system that provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile

telecommunications network, a computer network, or the Internet." Ex. 1041, Abstract. Sheha discloses systems to allow a user to establish access settings to control access to location information for other user's mobile devices and to request and display received location information from another device. *Id.*, Abstract, Fig. 5.

b. ***Claim 1a – a first wireless telephonic device operable to provide a display screen after a request to locate a second wireless telephonic device from said first wireless telephonic device has occurred and after a confirmation that said first wireless telephonic device has been given a permission by said second telephonic wireless device to locate said second telephonic wireless device***

17. Sheha discloses claim 1a. Sheha discloses a system that includes mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex. 1041, Abstract. In addition, Sheha describes that one mobile wireless device can request the location of another mobile wireless device via a wireless network. *Id*., 10:66-11:51. Figure 3 shows this type of a configuration of the Sheha system. It includes two mobile devices, which are identified as mobile devices 18b and 18c, that communicate with Sheha's Online Database and Application Server, or the "ODAS" 3, via a wireless network, labeled as wireless network 22. *Id.*, 9:23-39, 10:5-16, 10:66-11:54.

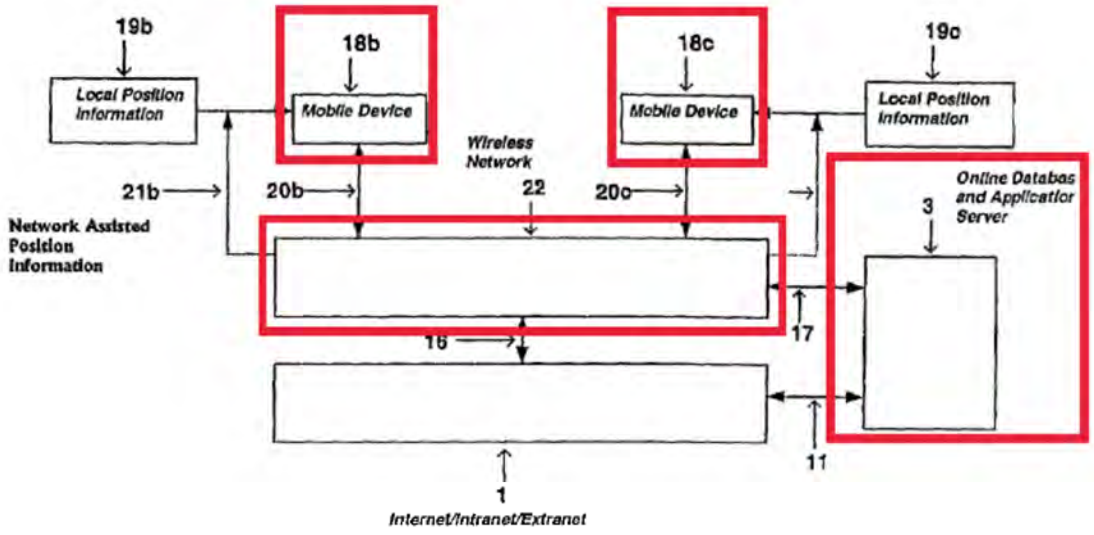


FIG. 3

18. Before transmitting the location information for the target wireless device, Sheha's ODAS first determines whether the requesting wireless device has permission to obtain the target device's location. Ex. 1041, 4:59-5:19, 5:21-32, 10:17-26, claim 47. For example, after the system receives a position request, it can query the targeted mobile device to determine if the requesting mobile device has permission to receive the position information. Ex. 1041, 5:21-32. Each of the wireless devices can establish privacy settings to control which other devices can access its location. *Id.*, 5:38-48. The wireless devices can also define groups of specific users that can access their location information. *Id.*, 11:63-12:7. The Sheha system then can access the privacy settings or group information, stored in a

database, to determine whether the requesting user has permission to receive the requested location information. *Id.*, 4:59-66, 11:63-12:7.

19. Sheha discloses that after it receives a location for the target device, it displays that information on a display screen, including a map that shows locations of the requesting and target devices, which I discuss in more detail below with respect to claims 1b and 1c. *Id.*, Fig. 5, 3:14-22, 4:52-58, 9:23-39, 10:17-26.

20. Thus, it is my opinion that Sheha discloses claim 1a.

c. *Claims 1b and 1c – wherein said display screen includes a map provided with respect to the location of said first wireless telephonic device, said display screen includes indicia on said map representative of a first location, said display screen includes indicia representative of a second location obtained from said third wireless telephonic device*

21. Sheha discloses claim 1b and discloses or makes obvious claim 1c. Sheha discloses that that requesting wireless device can display various information on its display screen after receiving location information for the target wireless device. For example, Sheha describes that its system can transmit a target device's "position information to a caller [which] is displayed on a capable viewing device identified and configured by the destination telephone user" and "similar information containing Map Caller-ID information about the destination telephone number can be transferred to the originating caller." Ex. 1041, 3:14-28. For example, a mobile wireless device can display "navigational information, such

as route information in the form of real-time driving directions, or else a map and address of the destination telephone number can be displayed on the mobile telephone." *Id.*, 4:52-58. An example display of such information can be seen in Figure 5, which shows a display screen that includes various information, including the location of the target wireless device (label 34) and the requesting wireless device (label 33). *Id.*, Fig. 5, 9:23-39. I note that while Figure 5 appears to be shown from the perspective of the target device, Sheha discloses that the same map may be received and displayed by the requesting device, but instead show the map from the perspective of the requesting device. *Id.*, 11:35-51.

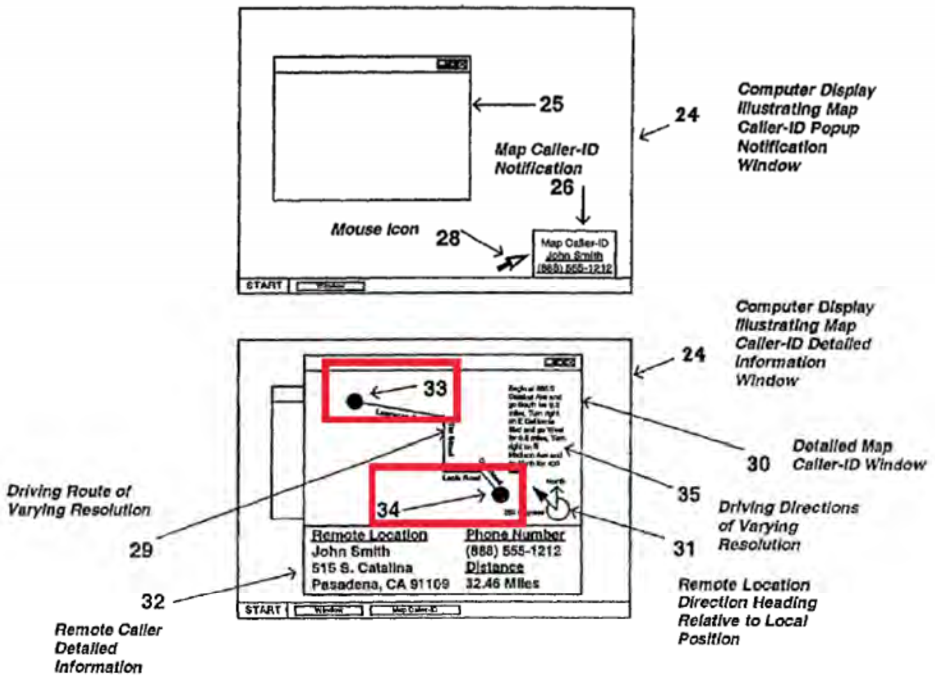


FIG. 5

22. While Sheha describes the display screen shown in Figure 5 in the context of a landline phone, Sheha discloses that all that is required to display such information is a suitable display device. *Id.*, 8:1-24. Further, Sheha's description of its mobile devices being capable of displaying map and navigational information makes clear that such a display screen can be displayed by Sheha's mobile devices. *Id.*, 4:52-58, 11:36-44.

23. Claim 1c also recites "said display screen includes indicia representative of a second location obtained from said *third* wireless telephonic

device." Sheha can display location information for any device from which it obtains a location. Thus, a user could request the location of one device and view it in the map on the display screen and subsequently request the location of another device and view it in the map on the display screen, which satisfies claim 1c.

24. While I do not understand claim 1 to require displaying locations of multiple devices simultaneously, to the extent Sheha does not specifically describe displaying locations of three devices simultaneously, Sheha discloses or at least makes obvious claim 1c because Sheha's wireless devices can display the location of any device from which a location is received, and can display indicia of locations for at least two devices simultaneously, as discussed above. Ex. 1041, 4:52-58, 9:23-28. Sheha discloses that its wireless devices can request locations outside of a telephone call, so it would at least be obvious, if not implicit, that a user could request the locations of multiple wireless devices. Ex. 1041, 11:55-58. Showing an indication for each device from which a location is requested on a map would be obvious to a POSITA because a user who is requesting locations of multiple devices and using Sheha's existing mapping functionality would want to see where each device is positioned on the map. Ex. 1041, 4:52-58, Fig. 5. Thus, it would be obvious to allow Sheha's wireless devices to show its own location, as Sheha discloses, and the locations of each other target wireless device on a map at the same time.

25. Thus, it is my opinion that Sheha discloses claim 1b and Sheha discloses or makes obvious claim 1c.

d. *Claims 1d and 1e – said display screen includes a distance from said first wireless telephonic device to said first location, and said display includes an address associated with said first location.*

26. Sheha discloses claims 1d and 1e. As discussed above with respect to claims 1b and 1c, Sheha discloses that its wireless devices can display maps with location information. Ex. 1041, 4:52-58, 9:23-39, Fig. 5. For example, Sheha states the display window of the requesting device displays "remote location direction heading information relative to local position information" and "can display...driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." Ex. 1041, 9:30-39; *see also id.*, 7:44-51. Sheha also discloses displaying an address associated with the target device's location: "the display unit on the destination telephone 8 can display the caller's name, telephone number, address, and can provide a map illustration of varying resolutions configured by the user through the telephone network 2." Ex. 1041, 7:44-48; *see also id.*, 9:34-39. An example of such a display in Sheha is shown below, which includes an address of the target wireless device (label 32) and a distance from the requesting wireless device to the target wireless device as shown in Figure 5 (label 34).

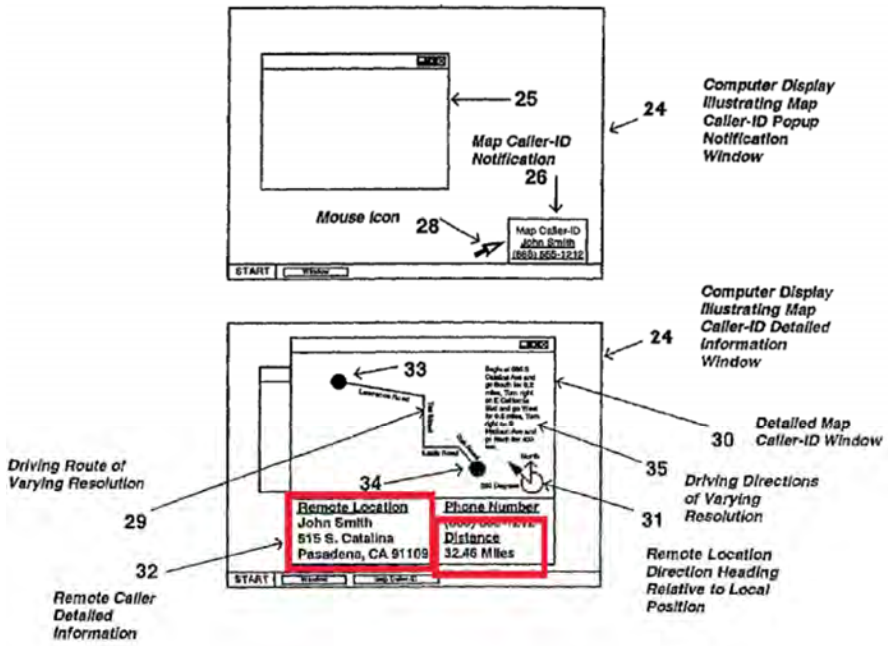


FIG. 5

27. As discussed for claims 1b and 1c, while Sheha describes the display screen shown in Figure 5 in the context of a landline phone, Sheha discloses that all that is required to display such information is a suitable display device. *Id.*, 8:1-24. Further, Sheha's description of its mobile devices being capable of displaying map and navigational information makes clear that such a display screen can be displayed by Sheha's mobile devices. *Id.*, 4:52-58, 11:36-44. Indeed, Sheha explains wireless devices can have limited resources "such as a small display area," and so the wireless devices can pass map information to another device for display. Ex. 1041, 5:53-57. Sheha proposes such functionality only to "better

display the [map] information," not because the wireless devices are incapable of displaying the information. Ex. 1041, 12:32-37.

28. Thus it is my opinion that Sheha discloses claims 1d and 1e, and Sheha discloses or renders obvious claim 1.

2. Claim 2 – The system of claim 1, wherein said permission includes several location access rights, wherein each one of said several location access rights are associated with different location resolutions.

29. It is my opinion that Sheha in view of Obradovich and McDonnell makes obvious claim 2. Sheha discloses that users may establish privacy settings or group access rights for the user's location, including different types of access rights. Ex. 1041, 5:37-40. The privacy settings "can include allowance of position information transfers only when a voice or video connection is established and/or only with the device owner's permission" and "allowing any remote device to request position information for any specified amount of time." *Id.*, 5:40-45; *see also id.*, 10:20-26. In addition, Sheha describes different specificity of location information can be obtained and shared. *Id.*, claim 17 ("The system of claim 13, wherein the caller position information includes one of graphical mapping information, GPS information, longitudinal and latitudinal information, altitude information, and address information."); claim 24 ("The system of claim 13, wherein the location of the caller is one of a metropolitan area, a state within the

United States of America, and an international political territory.").

30. To the extent Sheha does not expressly disclose several location access rights associated with different location resolutions, this would have been obvious based on Obradovich and McDonnell. Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to items of information, including geographic location information, by assigning "security level indexes for each item of information" and "which security level index each such other individual should be provided." Ex. 1055, 26:29-36. McDonnell describes a system that allows a mobile device user to obscure its location information to a specified accuracy level before sending it to a requesting service provider. Ex. 1053, Abstract, 6:44-52, 8:30-45 ("...because of privacy concerns, the user of the mobile entity does not want the Service System to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit as a quality of Service parameter in data package Q1..."). In McDonnell's system, "upon request...from mobile entity 20 [a mobile device], location server 79 returns...the location L of the mobile entity in an encrypted package P," where the encrypted package "contains an identifier for the mobile entity...and an indicator of the accuracy of the location data provided." Ex. 1053, 8:8-15. Thus, when the mobile entity sends the encrypted location data to the service system, the service system has decryption entity decrypt the data based on the information in the

package P so it "can reliably limit the accuracy of the location data it returns to the level specified by the mobile entity." *Id.*, 8:46-53.

31. Sheha's system allows a user to specify various types of permissions for obtaining a mobile device's location information. One of skill in the art aware of Obradovich's security level index and the accuracy limiting capabilities of McDonnell would be motivated to incorporate such functionality into Sheha's system to allow a user to have more complete control over their location information. For example, a user may allow precise location for some people, such as family or friends, to enable a requesting device to navigate to their location; however, for other types of requesters, such as shopping or advertising services (such as the Yellow Pages, described in McDonnell), they may wish to provide less accurate location information as McDonnell describes. Ex. 1055, 26:29-36; Ex. 1053, 3:1-16, 8:30-45, 9:45-55. Thus, a POSITA would be motivated to modify Sheha to incorporate Obradovich's and McDonnell's functionalities to restrict different requesters to different levels of location accuracy.

32. Thus, it is my opinion that Sheha in view of Obradovich and McDonnell makes claim 2 obvious.

3. Claim 3 – The system of claim 1, wherein said permission is stored on a server remote to said second wireless telephonic device, said third wireless telephonic device, and said first wireless telephonic device.

33. Sheha discloses the limitation in claim 3. As I discussed above with respect to claim 1a, Sheha discloses that users of the Sheha system can define groups of specific users that have permission to access their position information. Ex. 1041, 11:63-65. The Sheha system employs an ODAS (an "online database and application server") that can provide a "group database and authorization and authentication protocols to identify users that are permitted to access this information" to store the user-defined groups, which may be used in any of the landline-landline, landline-mobile, and mobile-mobile embodiments. *Id.*, 4:8-13, 11:61-12:7. The ODAS is depicted and described as being remote from Sheha's mobile devices 18a-c. *Id.i*, Figs. 2-3, 10:44-52, 10:66-11:9, 11:23-51.

34. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses or renders obvious claim 3.

4. Claim 4 – The system of claim 1, wherein said third wireless device associates a second permission with said second location to permit said first wireless telephonic device to access said second location.

35. Sheha discloses this element. As I discussed above with respect to claim 1a and claim 3, Sheha allows users of wireless devices to establish privacy settings that "prevent or limit other calling devices from obtaining position information" from the respective device, or groups of authorized users. Ex. 1041, 5:38-41, 10:17-26, 11:63-12:7. claim 47. Sheha allows permission information to

be stored at the respective wireless devices or at the ODAS, which I discuss above with respect to claim 3. *Id.*, 11:61-12:7. Consequently, Sheha discloses that any number of wireless devices within its system may associate permissions to allow other wireless devices to access their respective locations.

36. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses or renders obvious claim 4.

5. Claim 5 – The system of claim 1, wherein said permission of said second wireless telephonic device is associated with one of several access levels with said first location, said one of said several access levels permits said first wireless telephonic device to access said first location.

37. Sheha alone or in view of McDonnell makes claim 5 obvious. As I discuss above with respect to claims 1a and 2-4, Sheha describes that a device may grant or deny access to its location by establishing privacy settings or a group of authorized users. Ex. 1041, 5:37-45, 10:20-26. This corresponds to at least two different access levels, one of which permits access to the location information for the device. This is consistent with the ’218 Patent’s description of location access levels. Ex. 1005, 1:44-54.

38. Sheha also discloses other types of access, such as access for a “specified amount of time” or only during a call. Ex. 1041, 5:9-14, 5:40-45. I interpret a “specified amount of time” to be a defined duration, such as five minutes, as opposed to an indefinite period of time, such as for the duration of a

call. These represent different access levels, which one could refer to colloquially as "unlimited," "indefinite limited," "definite limited," or "no access." Thus, Sheha discloses several different access levels that may be used, at least one of which permits access to location information for the device.

39. In addition, as I discussed above with respect to claim 2, a POSITA would have been motivated to modify Sheha to allow a user to specify a level of position accuracy that a requester is allowed to receive when requesting the user's location. McDonnell describes a system that allows a mobile device to request location-aware services from different service providers and specify any desirable accuracy limit for each requester. Ex. 1053, 8:30-59, 9:20-22, 9:45-55.

40. The user of the mobile device, which McDonnell calls the "mobile entity," can provide the specified service with the mobile device's location when requesting a location-based service; however, the user can establish an accuracy level associated with the provided location. *Id.*, 8:30-36. Because a user can specify any desirable accuracy limit for each requester, each accuracy limit corresponds to a different access level. *Id.* 8:46-59, 9:20-22. Thus, Sheha in view of McDonnell allows a user to associate any number of access levels with a particular location, for any number of locations, and for any user. A POSITA would be motivated to modify Sheha to incorporate McDonnell's functionalities to restrict different requesters to different levels of location accuracy using different

access rights.

41. Thus, it is my opinion that Sheha alone or in view of McDonnell renders obvious this limitation and claim 5 is obvious based on Sheha alone or in view of McDonnell.

6. Independent Claim 6

42. Sheha alone or in view of Obradovich renders claim 6 obvious.

a. *Claim 6pre – A system comprising*

43. Sheha discloses claim 6pre for the same reasons it discloses claim 1pre above.

b. *Claim 6a – a wireless telephonic device operable to provide a display screen after a request from said wireless telephonic device for access to a first location of a first wireless device*

44. Sheha discloses claim 6a for the same reasons it discloses claim 1a above.

c. *Claim 6b – wherein said display screen includes a map provided from a perspective of said wireless telephonic device, said display screen includes indicia on said map representative of said first location, said display screen includes indicia on said map representative of a second location obtained from a second wireless device*

45. Sheha discloses or makes obvious claim 6b for the same reasons it discloses or makes obvious claims 1b and 1c above.

d. *Claim 6c – said display screen includes a distance from said wireless telephonic device to said first location*

46. Sheha discloses claim 6c for the same reasons it discloses claim 1d above.

e. ***Claims 6d and 6e – said display screen includes a compass and said display screen includes a directional arrow representative of the direction of said first location with respect to the location of said wireless telephonic device***

47. Sheha discloses claims 6d and 6e. As discussed above with respect to claims 1b-e, Figure 5 shows a map that includes various information. In addition to the indicia for the requesting and target devices, an address, and a distance, the map also includes a compass that indicates North and a directional arrow pointing towards one device from the perspective of the other device at element 31. Ex. 1041, 7:44-51, 9:30-39, 11:35-51.

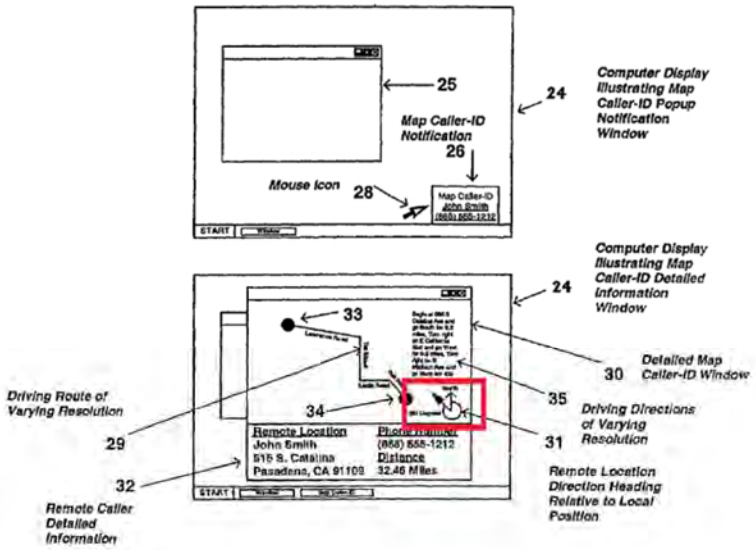


FIG. 5

48. As I noted above with respect to claims 1b-c, this particular map is shown from the perspective of the target wireless device. However, as I discussed above, Sheha discloses that both the requesting and target wireless devices may display maps. Thus, it is my opinion that Sheha discloses, at least impliedly, that a map displayed by the requesting device would show its directional arrow oriented towards the target wireless device.

49. Thus, it is my opinion that Sheha discloses claims 6d and 6e.

f. *Claim 6f – a determination is operable to be made to provide on said wireless telephonic device for a travel time from said first location to said wireless telephonic device*

50. Sheha alone or in view of Obradovich makes obvious claim 6f. Sheha

discloses that its system can provide various types of position and navigational information, including "the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information." Ex. 1041, 3:29-37; *see also id.*, 1:16-22. While this does not specifically reference travel time, a POSITA knows that travel time is standard navigational information that would be of interest to someone intending to follow a route to a destination. Thus, to the extent that Sheha does not disclose the claimed "travel time," it would have been obvious to a POSITA to modify Sheha to determine and provide travel time information from the requesting device to the target device.

51. Moreover, Obradovich describes how a personal communication device could determine a travel time, including based on traffic speed information and distance information, along a route or route segments. Ex. 1055, 2:60-63, 22:47-54, 22:55-65, Fig. 47. Because travel time is basic information of interest to anyone traveling a route to a destination, a POSITA would have been motivated to modify Sheha to determine and provide travel time according to the teachings in Obradovich.

52. Thus, it is my opinion that Sheha alone or in view of Obradovich

discloses or makes obvious claim 6f, and Sheha alone or in view of Obradovich renders obvious claim 6.

7. Claim 7 – The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

53. Sheha discloses the limitation in claim 7 for the same reasons it discloses the limitation in claim 1a above. Thus, it is my opinion that claim 7 is obvious based on Sheha alone or in combination with Obradovich.

8. Claim 8 – The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said first wireless device, said second wireless device, and said wireless telephonic device.

54. Sheha discloses this limitation in claim 8 for the same reasons it discloses the limitation in claim 3 above. Thus, it is my opinion that claim 8 is obvious based on Sheha alone or in combination with Obradovich.

9. Claim 9 – The system of claim 6, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

55. Sheha discloses this limitation in claim 9 for the same reasons it discloses the limitation in claim 4 above. Thus, it is my opinion that claim 9 is

obvious based on Sheha alone or in combination with Obradovich.

10. Claim 10 – The system of claim 6, wherein said first wireless device associates one of several access levels with said first location, said one of said several access levels permits said wireless telephonic device to access said first location.

56. Sheha alone or in view of McDonnell makes this limitation obvious for the same reasons Sheha alone or in view of McDonnel renders obvious the limitation in claim 5 above. Thus, it is my opinion that claim 10 is obvious based on Sheha alone or in combination with Obradovich and/or McDonnell.

11. Independent Claim 11

57. Sheha alone or in view of Obradovich renders claim 11 obvious.

a. *Claim 11pre – A system comprising*

58. Sheha discloses claim 11pre for the same reasons it discloses claim 1pre above.

b. *Claim 11a – a wireless device operable to provide a display screen after a request from said wireless telephonic device for access to a first location of a first wireless device*

59. Sheha discloses claim 11a for the same reasons it discloses claim 1a above.

c. *Claim 11b – wherein said display screen includes a map from the perspective of said wireless device, said display screen includes indicia on said map representative of said first location*

60. Sheha discloses claim 11b for the same reasons it discloses claim 1b

above.

d. ***Claim 11c – said display screen includes indicia on said map representative of a second user according to a second location obtained from a second wireless device***

61. Sheha discloses claim or makes obvious 11c for the same reasons it discloses or makes obvious claim 1c above.

e. ***Claim 11d – said display screen includes a distance from said wireless telephonic device to said first location***

62. Sheha discloses claim 11d for the same reasons it discloses claim 1d above.

f. ***Claim 11e – said display screen includes a compass***

63. Sheha discloses claim 11e for the same reasons it discloses claim 6d above.

g. ***Claim 11f – said display screen includes an address of said first location***

64. Sheha discloses claim 11f for the same reasons it discloses claim 1e above.

h. ***Claim 11g – said display screen includes a travel time based on at least the first location and the location of said wireless telephonic device.***

65. Sheha alone or in view of Obradovich makes obvious claim 11g for the same reasons claim 6f is obvious as discussed above, and Sheha alone or in view of Obradovich renders obvious claim 11.

12. Claim 12 – The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

66. Sheha discloses this limitation for the same reasons it discloses the limitations in claims 1a and 4 above. Thus, it is my opinion claim 12 is obvious based on Sheha alone or in combination with Obradovich.

13. Claim 13 – The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said first wireless device, said second wireless device, and said wireless telephonic device.

67. Sheha discloses this limitation for the same reasons it discloses the limitation in claim 3 above. Thus, it is my opinion claim 13 is obvious based on Sheha alone or in combination with Obradovich.

14. Claim 14 – The system of claim 11, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

68. Sheha discloses the limitation in claim 14 for the same reasons it discloses the limitations in claims 1a and 4 above. Thus, it is my opinion claim 14 is obvious based on Sheha alone or in combination with Obradovich.

15. Claim 15 – The system of claim 11, wherein said first wireless device associates one of several access levels with

said first location, said one of said several access levels permits said so wireless telephonic device to access said first location.

69. Sheha alone or in view of McDonnell makes this limitation obvious for the same reasons I described the limitation in claim 5 is obvious above. Thus, it is my opinion claim 15 is obvious based on Sheha alone or in combination with Obradovich and/or McDonnell.

16. Independent Claim 16

70. Sheha discloses or renders obvious claim 16.

a. *Claim 16pre – A system comprising*

71. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a system that provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet." Ex. 1041, Abstract. Sheha discloses systems to allow a user to provide access information, such as a username and password, to obtain location information. *Id.*, 3:4-13, 8:38-49.

b. *Claim 16a – a first device operable to identify a user identification on said first device by receiving a login and password from said first device*

72. Sheha discloses or makes obvious claim 16a. Sheha discloses that the ODAS receives username and a password from a mobile device to sign a user into its location service using authentication and authorization protocols. Ex. 1041, 8:38-50. It was well-known before March 25, 2002 that, to provide a login and password, a user will enter such information into the device they are using to access protected information or services. Sheha explains that a user can enter a "unique identification token, 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." *Id.*, 3:4-13. Thus, Sheha describes that a user inputs at least a login into their wireless device. But Sheha also allows the use of a password with these same "authentication and authorization procedures." *Id.*, 8:38-50. Thus, if a user is entering a login into their mobile device, if a password is required, the login and password would be entered together.

73. Therefore, Sheha discloses or makes obvious claim 16a.

c. *Claim 16b – a first location is operable to be recorded of said user identification, based on a location of said first device after said user identification is identified on said first device*

74. Sheha discloses or makes obvious claim 16b. Mobile devices in

Sheha's system can determine and provide their locations to the ODAS at any permitted time. Ex. 1041, 3:4-13, 10:5-26, 11:3-51. And as I discussed above with respect to claim 16a, Sheha discloses that a user may be required to login to the ODAS using a login and password to access services provided by the ODAS, such as location services. While Sheha does not use the language of claim 16b in its description, it states that when a user of a device attempts to contact another device, the ODAS first confirms that both users are logged into the ODAS before allowing location information to be transferred. *Id.*, 8:54-9:22. In addition, because the ODAS requires a user to be logged in before accessing the ODAS services, once the user is logged in, location information can be stored at the ODAS when the user logs in or anytime thereafter. *Id.*, 8:38-50. In particular, it would be obvious to require a user to login to the ODAS when they attempt to place call to another device, if they are not already logged in, to enable location services with the ODAS, which would involve determining the mobile device's location at or after that time. *Id.*, 8:54-9:22, 11:3-8.

75. Thus, Sheha discloses or makes obvious claim 16b.

d. *Claim 16c – a first map provided from the perspective of said first location and is operable of being displayed on said first device*

76. Sheha discloses or makes obvious claim 16c for the same reasons it discloses or makes obvious claims 1b and 1c above.

e. *Claim 16d – said first location is operable to be provided to a third device not associated with said user identification*

77. Sheha discloses claim 16d. Sheha's system allows one mobile device to request and obtain the location of another mobile device. Ex. 1041, Abstract, 4:59-5:20. Sheha describes multiple examples of the location of one mobile device being provided to another mobile device, and even explains that, in some embodiments, "all position information is allowed to be transferred for all scenarios on each mobile device 18 b and 18 c." *Id.*, 11:10-12.

78. Thus, Sheha discloses claim 16d.

f. *Claim 16e – said user identification is operable to be identified on a second device by receiving said login and password from a second device*

79. Sheha discloses claim 16e. As I discussed above with respect to claim 16a, Sheha allows a user to be identified on a device by receiving a login and password from a device and access the ODAS using a username and password. Ex. 1041, 8:38-50, 10:5-16, 11:3-8, 11:15-20, 11:41-51. Sheha does not restrict a user or username and password to only one device. Instead, Sheha describes a system where the relevant information for authentication and authorization is a username and password, not a particular device. *Id.*, 8:38-50. Instead, Sheha discloses that the user's login and password may be used to sign in to different devices. *Id.*, 8:50-53 ("These protocols also provide presence capability by notifying the ODAS 3

that a particular user is signed-on to the system on a particular device, such as the PC 23a or Smart TV 23b.").

80. Therefore, Sheha discloses claim 16e.

g. *Claim 16f – a second location is operable to be recorded of said user identification based on a second location of said second device after said user identification is identified on said second device*

81. Sheha discloses or makes obvious claim 16f for the same reasons it discloses or makes obvious claim 16b above. As discussed for 16b, Sheha discloses obtaining location information of a device and periodically updating the location information at the location server to provide. Ex. 1041, 3:4-13, 10:5-26, 11:3-51. A POSITA would have recognized the user identification could be entered on a second device and the location of the second device could be obtained after the user has logged in. For example, at the time of Sheha, many people had multiple devices for convenience, such as computers at home and mobile phones, for use away from home. Thus, it would have been obvious, if not implied, that a user could access Sheha's location service by entering his/her user identification on different devices. Thus, it is my opinion that Sheha discloses or makes obvious claim 16f.

h. *Claim 16g – a second map provided from the perspective of said second location and is operable of being displayed on said second device*

82. Sheha discloses claim 16g for the same reasons it discloses claim 1b above.

i. *Claim 16h – said first location and said second location are different.*

83. Sheha discloses or makes obvious claim 16h. It was conventional for a user to access different devices at different locations, such as at home or at work, while traveling, etc. Further, Sheha discloses a user may log in on a variety devices, including a mobile device, PC, and Smart TV. Ex. 1041, 10:65. To the extent Sheha does not specifically discuss the actual locations of different devices a user might use, it is at least obvious, if not implicit, that different devices would be in different locations when the user uses them.

84. Therefore, Sheha discloses or makes obvious claim 16h.

j. *Claim 16i – said second location is operable to be provided a said third device not associated with said user identification.*

85. Sheha discloses claim 16i for the same reasons it discloses claim 16d above, and Sheha discloses or renders obvious claim 16.

17. Claim 17 – The system of claim 16, wherein said first device includes a first positioning system, said second device includes a second positioning system, said third device includes a third positioning system, said first location is determined, at least in part, based on said first positioning system, and said second location is determined, at least in part, based on said second positioning system.

86. Sheha discloses this limitation. Sheha describes a system where its devices can include positioning systems, such as GPS. Ex. 1041, 10:5-16. In addition, Sheha describes that a device may determine its own location before providing that location to the ODAS, which in turn provides the location to a requesting device. *Id.*, 10:66-11:17. And because this claim is not limited to wireless telephone devices, Sheha discloses examples of many different scenarios of devices providing location information to other devices. *Id.*, 8:54-10:4.

87. Thus, Sheha discloses this limitation and Sheha discloses or renders obvious claim 17.

18. Claim 18 – The system of claim 16, wherein said first location is provided to said third device based on an access permission of said first location to said third device provided by said identified user on said first device.

88. Sheha discloses this limitation for the same reasons it discloses the limitations in claims 1a and 4 above. Thus, it is my opinion that Sheha discloses or renders obvious claim 18.

19. Claim 19 – The system of claim 16, wherein said first location is recorded on a server remote to said first device, second device, and third device.

89. Sheha discloses this limitation. Sheha describes that location information is determined for a device and provided to the ODAS, a remote system, to be stored. Ex. 1041, 4:13-18, 10:5-16, 11:3-8, 11:15-51. As discussed

above with respect to claim 3 and shown below in Figure 3 (as well as in Figures 1 and 2), the ODAS is remote from the various user devices in the Sheha system. *Id.*, 10:66-11:9.

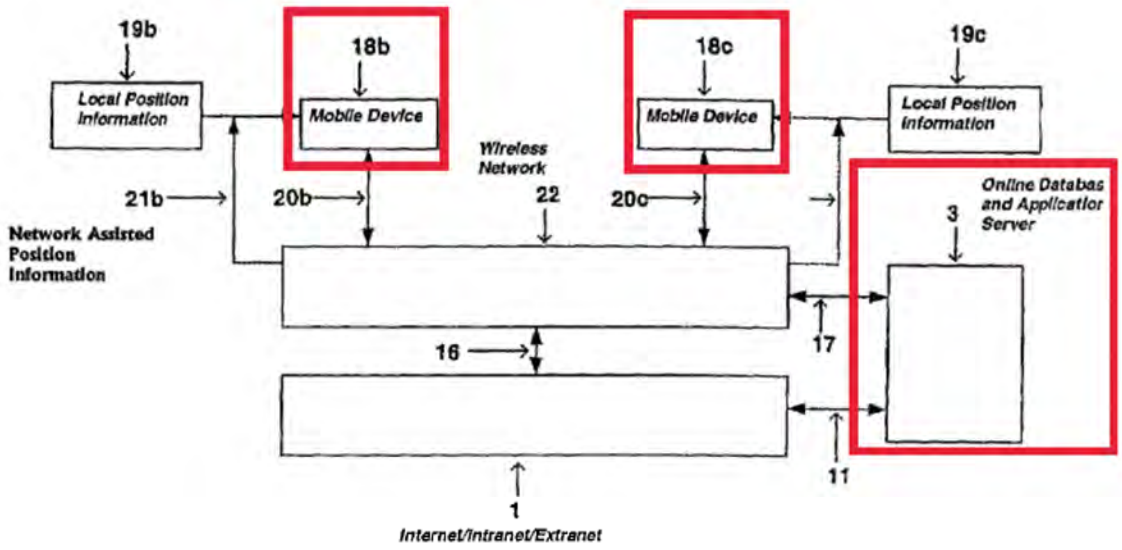


FIG. 3

90. Thus, Sheha discloses this limitation and Sheha discloses or renders obvious claim 19.

B. Ground 2: Claims 1-19 are unpatentable as obvious over Enzmann in view of Obradovich, McDonnell, and Maruyama

91. Enzmann discloses systems in which wireless devices can receive a login and password and determine and share their own location with other devices, and users can control access of their location information and request the locations

of other devices, as recited in independent claims 1, 6, 11, and 16. It also discloses most of the elements recited in the various dependent claims. In addition, Obradovich, McDonnell, and Maruyama disclose the features recited in the dependent claims. It is my opinion that the combination of Enzmann, Obradovich, McDonnell, and Maruyama renders claims 1-19 obvious.

1. Independent claim 1

92. It is my opinion that Enzmann in combination with Obradovich makes obvious claim 1.

a. *Claim 1pre – A system comprising*

93. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses systems to allow a user to establish access settings to control access to location information for other user's mobile devices and to request and display received location information from another device. Ex. 1040, 2:3-7, 4:25-27.

b. *Claim 1a – a first wireless telephonic device operable to provide a display screen after a request to locate a second wireless telephonic device from said first wireless telephonic device has occurred and after a confirmation that said first wireless telephonic device has been given a permission by said second telephonic wireless device to locate said second telephonic wireless device*

94. Enzmann discloses or makes obvious claim 1a. Enzmann describes a system where a user of a wireless telephonic device may request and obtain the location of another wireless telephonic device, if the requesting wireless telephonic device has been given permission to obtain the location of the target wireless telephonic device. Ex. 1040, 3:1-6. 3:53-61, 5:39-60.

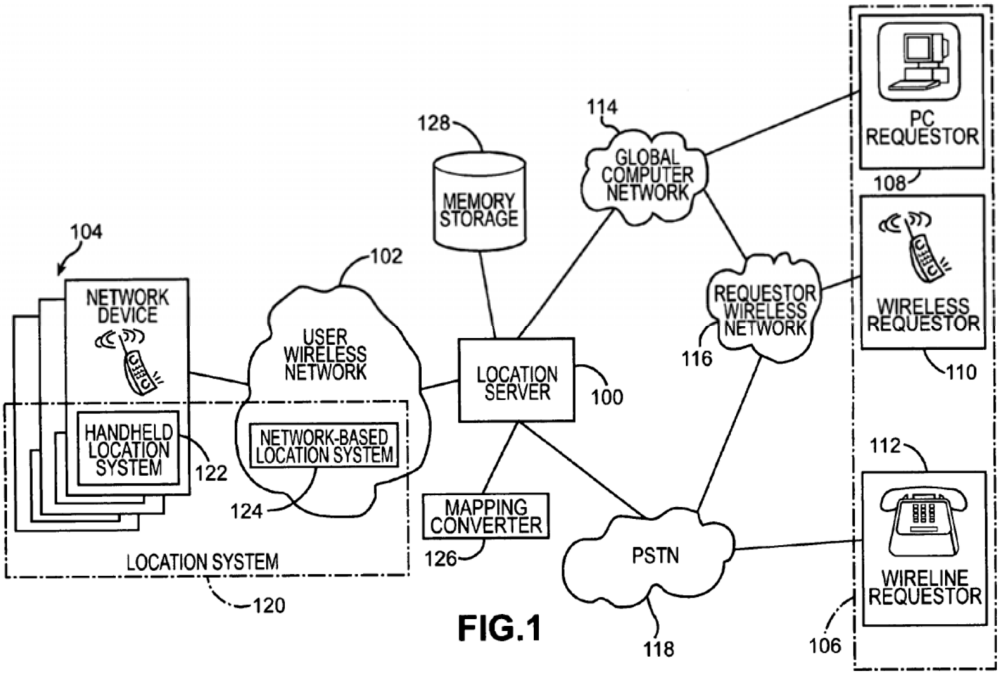


FIG.1

95. Enzmann describes that requesting devices can be wireless devices, shown as wireless requestor 110 in Figure 1 above. *Id.*, 6:8-11. These wireless requestors can be any suitable wireless device, including those that have IP messaging or wireless access protocol ("WAP") capabilities. *Id.*, 4:1-11, 5:6:2-7. One of skill in the art is aware that, prior to March 25, 2002, wireless cellular devices, such as cellular telephones, had both IP and WAP capabilities to allow

users to execute internet applications, which Enzmann discusses. *Id.*, 5:39-60. Thus, the wireless requestors 110 could also be network devices 104, which are also disclosed as being wireless telephonic devices that can have messaging and WAP capabilities, such as cellular telephones and pagers, like the wireless requestors 110. *Id.*, 5:39-60. Thus, the wireless requestors 110 include wireless telephonic devices and further, the wireless requestors 110 may also be network devices 104.

96. After a request for another device's location is received, Enzmann determines whether the requesting device has permission to obtain the target device's location. Ex. 1040, 3:1-6, 5:3-9; 7:54-58. Enzmann explains that a user may provide lists of authorized users who may obtain location information for the user or, if a requester is not on the list, the user may allow the location server to request permission to provide the location information, which the user may allow or deny. *Id.*, 2:35-51, 7:39-43. For example, Enzmann describes with respect to Figure 2 that Enzmann's location server determines whether the requestor is authorized to receive the target device's location. *Id.*, 7:12-16. If the requestor is authorized, the system determines the location of the target device and provides the location to the requesting device. *Id.*, 7:59-62, 8:65-67.

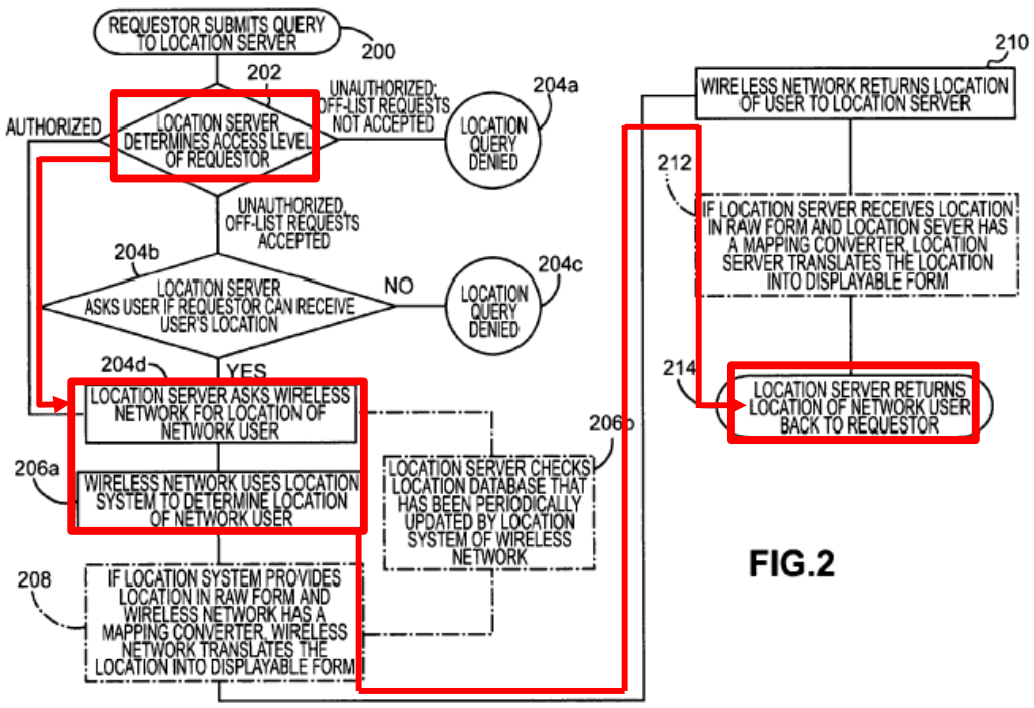


FIG.2

97. Enzmann discloses that location information can be provided in "displayable" form, which can take a variety of forms, such as "a street address, building name, or area name." *Id.*, 3:6-16. Enzmann explains that "'[d]isplayable' refers to location information easily understood by a typical network user. Although displayable may imply a visual communication, as used herein, the term extends to other forms of communication, such as audio-based communication." *Id.*, 4:46-50. To the extent Enzmann does not explicitly state that the "displayable" location information is actually displayed on a screen of the requesting device, it would have been obvious to display such displayable location information at the user device, which conventionally included a display.

98. In addition, Enzmann describes at least one example in which a user's device is able "to display only the friends of that user who are in the same city as the user." *Id.*, 9:17-19. It also describes that a user could query the location of one of those friends to obtain their location to determine if they are close enough to the user to meet in person. *Id.*, 9:19-27. It is at least implied that the user's device displays the friend's location so the user can assess whether they are near enough to meet. In view of this, Enzmann either implicitly discloses claim 1a or makes it entirely obvious to a POSITA to display the received location on the user's wireless telephonic device.

99. Thus, it is my opinion that Enzmann discloses or makes obvious claim 1a.

c. *Claims 1b and 1c – wherein said display screen includes a map provided with respect to the location of said first wireless telephonic device, said display screen includes indicia on said map representative of a first location, said display screen includes indicia representative of a second location obtained from said third wireless telephonic device*

100. Enzmann in view of Obradovich makes obvious claims 1b and 1c. As discussed above, Enzmann discloses providing location information in "displayable" form. Ex. 1040, 3:1-16. To the extent Enzmann does not expressly disclose displaying a map by the requesting device, an obvious use of "displayable" location information is to display it on a map. Indeed, Enzmann's

system does include a mapping converter to translate raw position information into a displayable form. *Id.*, 3:8-11. Thus, it would have been obvious to incorporate functionality into Enzmann's wireless devices to display a map that shows the locations of one or more other devices.

101. Moreover, Obradovich provides map display functionality that one of skill in the art would have incorporated into the Enzmann system. Ex. 1055, 10:30-62. For example, Figures 8 and 11 in Obradovich shows map displays that shows the location of the user, the target location, and a third party. Ex. 1055, Figs. 8, 11.

FIG.8

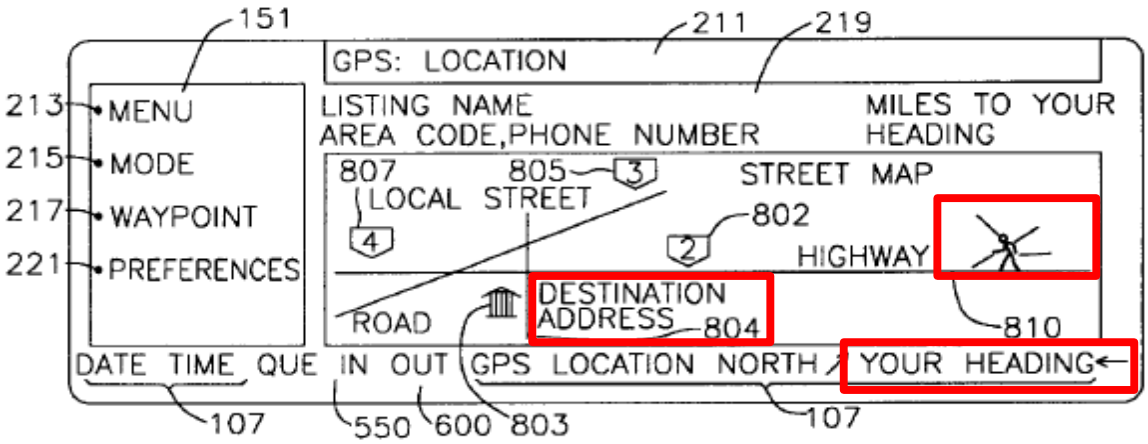
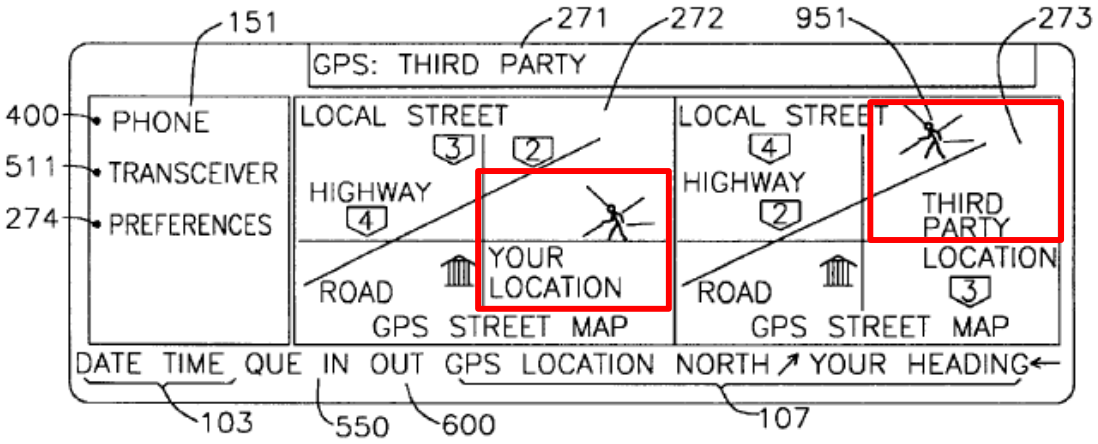


FIG. 11



102. Obradovich discloses that "[i]f the third party's location is sufficiently close to the user's location, or if the user's displayed map covers a sufficiently large area, both the user's and third party's location can be shown on the same map." Ex. 1055, 12:10-14. A POSITA would have been motivated to modify Enzmann based on Obradovich with a reasonable expectation of success given Enzmann discloses providing the location, and providing a map would improve the quality of the displayable form to assist the requesting user.

103. While I do not understand claim 1 to require simultaneous display of indicia of a location of a first wireless device and indicia of a second wireless device, this would have been obvious based on Obradovich, which discloses displaying the location of both the requesting device and target device. Ex. 1055, 12:6-14, Fig. 11. While Fig. 11 shows a split screen, Obradovich states "If the

third party's location is sufficiently close to the user's location, or if the user's displayed map covers a sufficiently large area, both the user's and third party's location can be shown on the same map." Ex. 1055, 12:10-14. A POSITA would have been motivated to display indicia of locations of multiple devices simultaneously, as disclosed in Obradovich, in Enzmann's system to improve the quality of the displayable data and available information to the requestor with a reasonable expectation of success.

104. Thus, it is my opinion that Enzmann in view of Obradovich makes obvious claims 1b and 1c.

d. *Claim 1d – said display screen includes a distance from said first wireless telephonic device to said first location.*

105. Enzmann in view of Obradovich makes obvious claim 1d. As discussed above with respect to claims 1a-1c, Enzmann in view of Obradovich makes obvious providing a display screen with a map. In addition, Enzmann discloses that its devices can obtain locations of various devices. Ex. 1040, 4:25-27, 4:37-38, 5:13-20. To the extent Enzmann does not expressly disclose displaying a distance from the requesting device to the target device's location, it was well-known at the time its described GPS-enabled devices could determine the distance between devices using known techniques and routinely provided among navigational information.

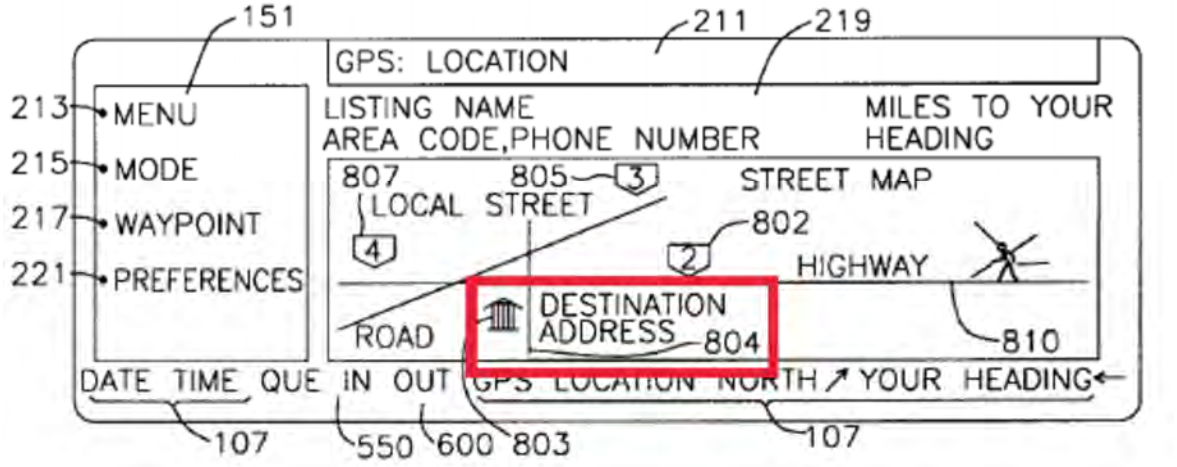
106. Indeed, calculating a distance to a destination was routine as of March 25, 2002, as disclosed in Obradovich. In particular, Obradovich provides a display that shows "miles to your heading." Ex. 1055, Fig. 8, 22:45-50. When a user is navigating a route, the heading will at least ultimately refer to the target device's location. Moreover, it would be obvious to display not just a particular waypoint, but also the total distance remaining to travel to the destination.

107. Thus, Enzmann in view of Obradovich makes obvious claim 1d.

e. *Claim 1e – said display includes an address associated with said first location.*

108. Enzmann in view of Obradovich makes obvious claim 1e. As discussed above with respect to claim 1a, Enzmann discloses that it can provide "displayable" location information in the form of an address, though it does not disclose displaying that address on a display screen with a map. Ex. 1040, 3:6-12, 4:50-56. And as I noted above, Enzmann does not explicitly state that the "displayable" location information is actually displayed by the requesting device; however, it would be obvious to display such displayable location information at the user device, which conventionally included a display. However, Obradovich discloses a display screen that includes a destination address. Ex. 1055, 10:30-51, Fig. 8 (below). Displaying such information would have been obvious based on Obradovich.

FIG.8



109. Thus it is my opinion that Enzmann in view of Obradovich makes obvious claim 1e, and claim 1 is obvious based on Enzmann in view of Obradovich.

2. Claim 2 – The system of claim 1, wherein said permission includes several location access rights, wherein each one of said several location access rights are associated with different location resolutions.

110. It is my opinion that Enzmann in view of Obradovich and McDonnell makes obvious this limitation and claim 2. As I discussed above with respect to claim 1a, Enzmann discloses that users may provide lists of authorized users or may respond to requests from the Enzmann location server to grant access to a requester. Ex. 1040, 2:35-51, 7:39-43. Thus, Enzmann discloses three types of access rights: unlimited access to users on the list of authorized users, access provided for a specific request, or no access.

111. To the extent Enzmann does not expressly disclose several location access rights associated with different location resolutions, this would have been obvious based on Obradovich and McDonnell. Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to items of information, including geographic location information, by assigning "security level indexes for each item of information" and "which security level index each such other individual should be provided." Ex. 1055, 26:29-36. McDonnell describes a system that allows a mobile device user to obscure its location information to a specified accuracy level before sending it to a requesting service provider. Ex. 1053, Abstract, 6:44-52, 8:30-45 ("...because of privacy concerns, the user of the mobile entity does not want the Service System to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit as a quality of Service parameter in data package Q1..."). In McDonnell's system, "upon request...from mobile entity 20 [a mobile device], location server 79 returns...the location L of the mobile entity in an encrypted package P," where the encrypted package "contains an identifier for the mobile entity...and an indicator of the accuracy of the location data provided." Ex. 1053, 8:8-15. Thus, when the mobile entity sends the encrypted location data to the service system, the service system has decryption entity decrypt the data based on the information in the package P so it "can reliably limit the accuracy of the location data it returns to the

level specified by the mobile entity." *Id.*, 8:46-53.

112. Enzmann's system allows a user to specify various types of permissions for obtaining a mobile device's location information. One of skill in the art aware of Obradovich's security level index and the accuracy limiting capabilities of McDonnell would be motivated to incorporate such functionalities into Enzmann's system to allow a user to have more complete control over their location information. For example, a user may allow precise location for some people, such as family or friends, to enable a requesting device to navigate to their location; however, for other types of requesters, such as shopping or advertising services (such as the Yellow Pages, described in McDonnell), they may wish to provide less accurate location information as McDonnell describes. Ex. 1055, 26:29-36; Ex. 1053, 3:1-16, 8:30-45, 9:45-55. Thus, a POSITA would be motivated to modify Enzmann to incorporate Obradovich's and McDonnell's functionalities to restrict different requesters to different levels of location accuracy using different access rights.

113. Thus, it is my opinion that Enzmann in view of Obradovich and McDonnell makes this limitation and claim 2 obvious.

3. Claim 3 – The system of claim 1, wherein said permission is stored on a server remote to said second wireless telephonic device, said third wireless telephonic device, and said first wireless telephonic device.

114. Enzmann discloses this limitation. Enzmann discloses that users may provide lists of authorized users to its location server, which stores them in memory storage 128. Ex. 1040, 2:35-41, 5:28-38, Fig. 1. Enzmann also discloses that its location server is remote from the requesting devices and the target devices. *Id.*, 3:62-4:23, Figs. 1-3.

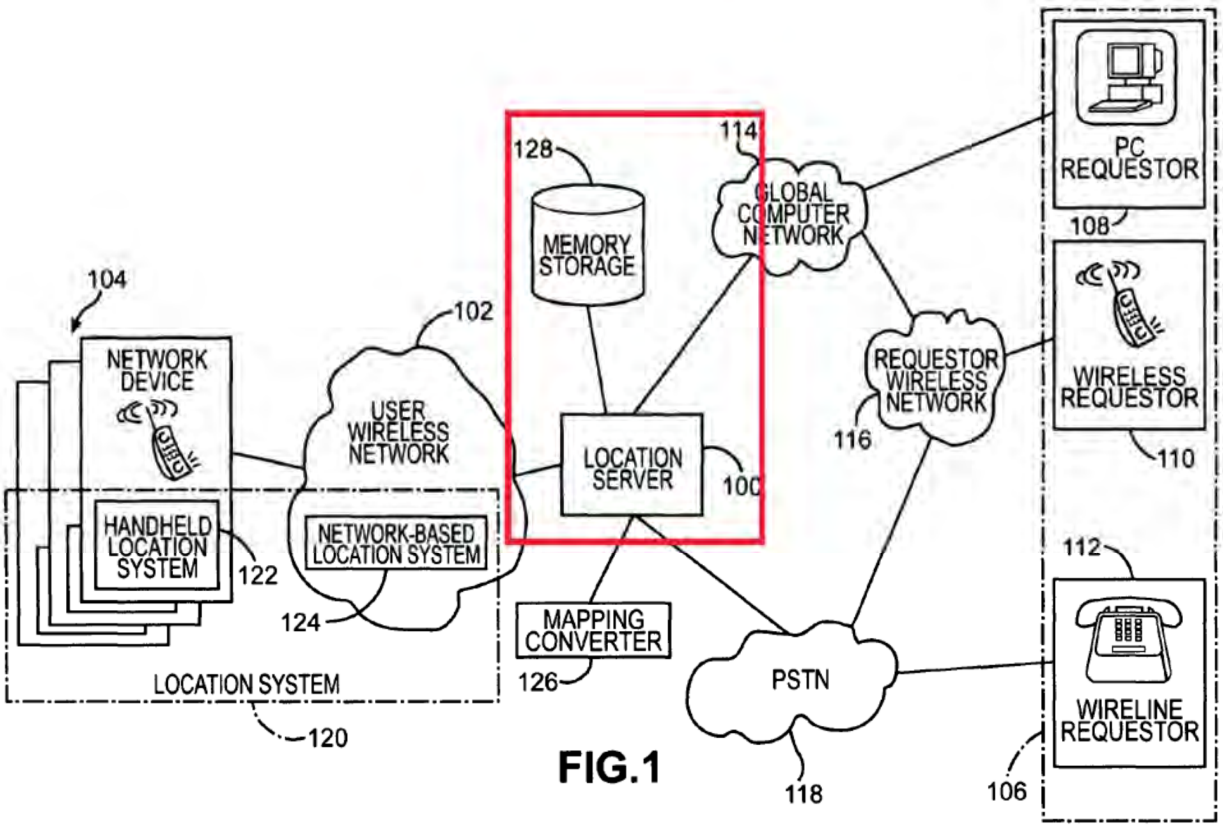


FIG.1

115. Thus it is my opinion that Enzmann discloses this limitation, and claim 3 is obvious based on Enzmann in combination with Obradovich.

4. Claim 4 – The system of claim 1, wherein said third wireless device associates a second permission with said second location to permit said first wireless telephonic device to access said second location.

116. Enzmann discloses this limitation. As I discussed above with respect to claim 1a and claim 3, Enzmann allows users to provide lists of authorized users to the location server 100, which stores them in memory storage 128. Ex. 1040, 2:35-41, 5:28-38. Consequently, Enzmann discloses that any number of wireless devices within its system may associate permissions to allow other wireless devices to access their respective locations.

117. Thus, it is my opinion that Enzmann discloses this limitation, and claim 4 is obvious based on Enzmann in combination with Obradovich.

5. Claim 5 – The system of claim 1, wherein said permission of said second wireless telephonic device is associated with one of several access levels with said first location, said one of said several access levels permits said first wireless telephonic device to access said first location.

118. Enzmann alone or in view of McDonnell makes obvious this limitation. As I discussed above with respect to claim 1a, Enzmann discloses that users may provide lists of authorized users or may respond to requests from the Enzmann location server to grant access to a requester. Ex. 1040, 1:44-51, 2:35-51, 5:3-6, 7:39-43. Thus, Enzmann discloses three types of access rights for a user's location: unlimited access to users on the list of authorized users, access provided for a specific request, or no access.

119. In addition, as I discussed above with respect to claim 2, a POSITA would have been motivated to modify Enzmann to allow a user to specify a level

of position accuracy that a requester is allowed to receive when requesting the user's location. McDonnell describes a system that allows a mobile device to request location-aware services from different service providers and specify any desirable accuracy limit for each requester. Ex. 1053, 8:30-59, 9:20-22, 9:45-55.

120. The user of the mobile device, which McDonnell calls the "mobile entity," can provide the specified service with the mobile device's location when requesting a location-based service; however, the user can establish an accuracy level associated with the provided location. *Id.*, 8:30-36. Because a user can specify any desirable accuracy limit for each requester, each accuracy limit corresponds to a different access level. *Id.* 8:46-59, 9:20-22. Thus, Enzmann in view of McDonnell allows a user to associate any number of access levels with a particular location, for any number of locations, for any user. A POSITA would be motivated to modify Enzmann to incorporate McDonnell's functionalities to restrict different requesters to different levels of location accuracy using different access rights.

121. Thus, it is my opinion that Enzmann alone or in view of McDonnell renders this limitation obvious, and claim 5 is obvious based on Enzmann in combination with Obradovich or with Obradovich and McDonnell.

6. Independent Claim 6

122. Enzmann in view of Obradovich and Maruyama renders claim 6

obvious.

a. *Claim 6pre – A system comprising*

123. Enzmann discloses claim 6pre for the same reasons it discloses claim 1pre above.

b. *Claim 6a – a wireless telephonic device operable to provide a display screen after a request from said wireless telephonic device for access to a first location of a first wireless device*

124. Enzmann discloses or makes obvious claim 6a for the same reasons it discloses or makes obvious claim 1a above.

c. *Claim 6b – wherein said display screen includes a map provided from a perspective of said wireless telephonic device, said display screen includes indicia on said map representative of said first location, said display screen includes indicia on said map representative of a second location obtained from a second wireless device*

125. Enzmann in view of Obradovich makes obvious claim 6b for the same reasons Enzmann in view of Obradovich makes obvious claims 1b and 1c discussed above.

d. *Claim 6c – said display screen includes a distance from said wireless telephonic device to said first location*

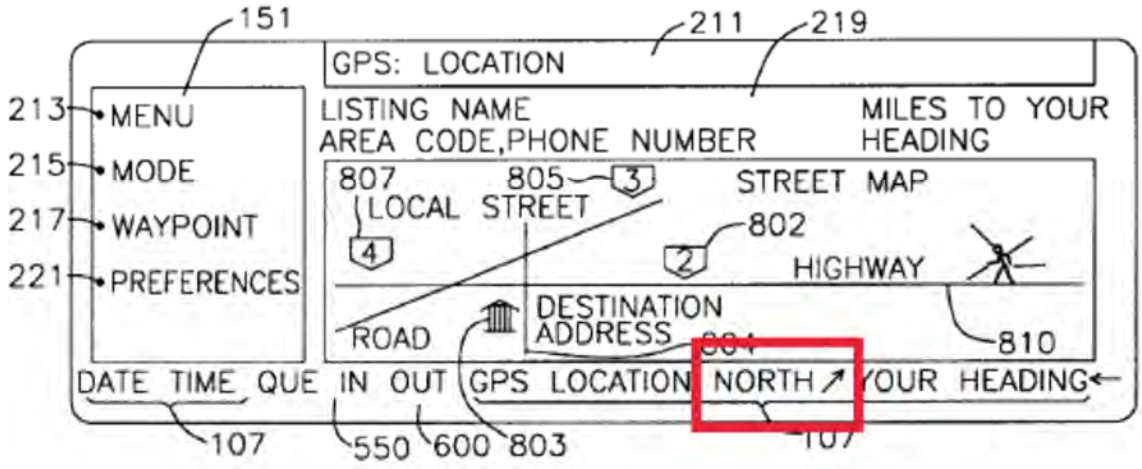
126. Enzmann in view of Obradovich makes obvious claim 6c for the same reasons I described for claim 1d above.

e. *Claim 6d – said display screen includes a compass*

127. Enzmann in view of Obradovich makes obvious claim 6d. Enzmann

discloses transmitting location information in "displayable form." Ex. 1040, 3:1-6, 3:9-12. To the extent Enzmann does not expressly disclose displaying a compass, a compass was routinely displayed as a navigational guide on maps before March 25, 2002. For example, Obradovich discloses that it can display an arrow pointing to north, which constitutes a compass 113 indicating North, and an arrow indicating a direction of travel. Ex. 1055, 9:54-60, Fig. 8.

FIG.8



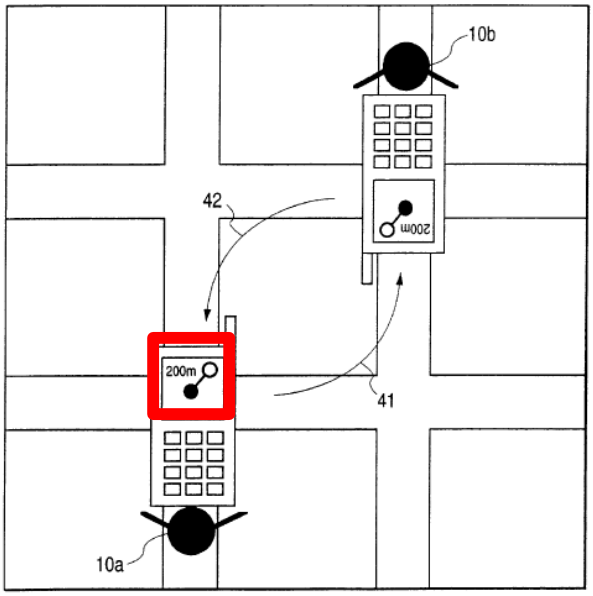
128. One of skill in the art would have been motivated to include a compass as a conventional navigational aid as a part of displaying a map as discussed above with respect to claim 1.

129. Thus, it is my opinion that Enzmann in view of Obradovich makes obvious claim 6d.

f. *Claim 6e – said display screen includes a directional arrow representative of the direction of said first location with respect to the location of said wireless telephonic device*

130. Enzmann in view of Obradovich and Maruyama makes obvious claim 6e. Enzmann discloses transmitting directional information in a "displayable form." Ex. 1040, 3:1-6, 3:9-12. While Enzmann does not expressly disclose displaying a directional arrow representative of the direction of the target device with respect to the location of the requestor, this would have been obvious based on Obradovich and Maruyama. Obradovich displays "an arrow pointing to north and an arrow indicating direction of device travel." Ex. 1055, 9:59-60, Fig. 8. Maruyama discloses displaying a directional arrow in the direction of movement. Ex. 1052, 3:12-20, 6:44-51. For example, Maruyama describes a display with "the starting point (user's present place) of the arrow is represented by a black circle and the ending point (partner's present place) of the arrow is represented by a white circle." Ex. 1052, 8:39-43, Fig. 5 (below).

FIG. 5



131. A POSITA would have been motivated to include a directional arrow in Enzmann's display to enhance Enzmann's displayed information and simplify conveying directional information on a display. For example, a POSITA would have been motivated to use graphics/icons, including a directional arrow, to display directional information in a readily understandable way and in a way that could be displayed on devices having a limited screen size. A POSITA would have had a reasonable expectation of success combining Enzmann, Maruyama, and Obradovich as these references all disclose systems for obtaining and transmitting displayable location information among devices, so incorporating the display features of Obradovich and Maruyama in Enzmann would have been nothing more than using known techniques to improve Enzmann's system and yield predictable

results. Thus, it is my opinion that Enzmann in view of Obradovich and Maruyama makes obvious claim 6e.

g. *Claim 6f – a determination is operable to be made to provide on said wireless telephonic device for a travel time from said first location to said wireless telephonic device*

132. Enzmann in view of Obradovich makes obvious claim 6f. As I discussed above with respect to claim 1, Enzmann can obtain a location of a target wireless device. Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Because the location server can obtain two (or more) positions for devices, it could determine a device's speed and distance from another device based on the received positions and compute the travel time from the requestor's location to the target device. In addition, one of skill in the art would be motivated to provide mapping and navigational capabilities to Enzmann to allow a user to travel to the location of the target wireless device. Such functionality is an obvious technical extension of a system that obtains locations of remote devices.

133. As discussed above, Obradovich provides mapping and navigational functionality. Moreover, Obradovich describes how a personal communication device could determine a travel time, including based on traffic speed information and distance information, along a route or route segments. Ex. 1055, 2:60-63,

22:47-54, Fig. 47. Because travel time is basic information of interest to anyone traveling a route to a destination, a POSITA would have been motivated to modify Enzmann to determine and provide travel time according to the teachings in Obradovich.

134. Thus, it is my opinion that Enzmann in view of Obradovich makes obvious claim 6f, and claim 6 is obvious based on Enzmann in combination with Obradovich and Maruyama.

7. Claim 7 – The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

135. Enzmann discloses or makes obvious this limitation for the same reasons it discloses or makes obvious claim 1a above. Thus, it is my opinion that claim 7 is obvious based on Enzmann in combination with Obradovich and Maruyama.

8. Claim 8 – The system of claim 6, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said first wireless device, said second wireless device, and said wireless telephonic device.

136. Enzmann discloses this limitation for the same reasons it discloses the limitation in claim 3 above. Thus, it is my opinion that claim 8 is obvious based on Enzmann in combination with Obradovich and Maruyama.

9. Claim 9 – The system of claim 6, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

137. Enzmann discloses this limitation for the same reasons it discloses the limitation in claim 4 above. Thus, it is my opinion that claim 9 is obvious based on Enzmann in combination with Obradovich and Maruyama.

10. Claim 10 – The system of claim 6, wherein said first wireless device associates one of several access levels with said first location, said one of said several access levels permits said wireless telephonic device to access said first location.

138. Enzmann alone or in view of McDonnell discloses or makes obvious this limitation for the same reasons discussed above with respect to claim 5. Thus, it is my opinion that claim 10 is obvious based on Enzmann in combination with Obradovich and Maruyama or in combination with Obradovich, Maruyama, and McDonnell.

11. Independent Claim 11

139. Enzmann in view of Obradovich renders claim 11 obvious.

a. *Claim 11pre – A system comprising*

140. Enzmann discloses claim 11pre for the same reasons it discloses claim 1pre above.

b. *Claim 11a – a wireless device operable to provide a display screen after a request from said wireless*

telephonic device for access to a first location of a first wireless device

141. Enzmann discloses or makes obvious claim 11a for the same reasons it discloses or makes obvious claim 1a above.

c. ***Claim 11b – wherein said display screen includes a map from the perspective of said wireless device, said display screen includes indicia on said map representative of said first location***

142. Enzmann in view of Obradovich makes obvious claim 11b for the same reasons described above for claim 1b.

d. ***Claim 11c – said display screen includes indicia on said map representative of a second user according to a second location obtained from a second wireless device***

143. Enzmann in view of Obradovich makes obvious claim 11c for the same reasons described above for claim 1c.

e. ***Claim 11d – said display screen includes a distance from said wireless telephonic device to said first location***

144. Enzmann in view of Obradovich makes obvious claim 11d for the same reasons described above for claim 1d.

f. ***Claim 11e – said display screen includes a compass***

145. Enzmann in view of Obradovich makes obvious claim 11e for the same reasons claim 6d is obvious above.

g. ***Claim 11f – said display screen includes an address of said first location***

146. Enzmann in view of Obradovich makes obvious claim 11f for the same reasons discussed above for claim 1e.

h. *Claim 11g – said display screen includes a travel time based on at least the first location and the location of said wireless telephonic device.*

147. Enzmann in view of Obradovich makes obvious claim 11g for the same reasons discussed above for claim 6f. It is my opinion that claim 11 is obvious based on Enzmann in view of Obradovich.

12. Claim 12 – The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location.

148. Enzmann discloses or makes obvious this limitation for the same reasons I describe for claims 1a and 4 above, and it is my opinion that claim 12 is obvious based on Enzmann in combination with Obradovich.

13. Claim 13 – The system of claim 11, wherein said first wireless device associates a permission with said first location to permit said wireless telephonic device to access said first location and said permission is stored on a server remote to said first wireless device, said second wireless device, and said wireless telephonic device.

149. Enzmann discloses this limitation for the same reasons it discloses the limitation in claim 3 above. Thus, it is my opinion that claim 13 is obvious based on Enzmann in combination with Obradovich.

14. Claim 14 – The system of claim 11, wherein said first wireless device associates a first permission with said first location to permit said wireless telephonic device to access said first location and said second wireless device associates a second permission with said second location to permit said wireless telephonic device to access said second location.

150. Enzmann in view of Obradovich makes obvious this limitation for the same reasons discussed above for claims 1a and 4. Thus, it is my opinion that claim 14 is obvious based on Enzmann in combination with Obradovich.

15. Claim 15 – The system of claim 11, wherein said first wireless device associates one of several access levels with said first location, said one of said several access levels permits said wireless telephonic device to access said first location.

151. Enzmann alone or in view of McDonnell discloses or makes obvious this limitation for the same reasons discussed above with respect to claim 5. Thus, it is my opinion that claim 15 is obvious based on Enzmann in combination with Obradovich or in combination with Obradovich and McDonnell.

16. Independent Claim 16

152. Enzmann in combination with Obradovich renders obvious claim 16.

a. *Claim 16pre – A system comprising*

153. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses methods to allow a user to provide access information, such as a username and password, to obtain location information for

other user's mobile devices. Ex. 1040, 6:41-50.

b. *Claim 16a – a first device operable to identify a user identification on said first device by receiving a login and password from said first device*

154. Enzmann discloses claim 16a. Enzmann discloses that a user may submit a request for another user's location, which may include an identification of the requesting user and a corresponding password. Ex. 1040, 5:28-34, 6:41-50. Thus, Enzmann discloses identifying a user based on a login and password.

155. Enzmann also states "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device. For example, if the requestor uses a personal computer 108 linked to location server 100 through global computer network 114, the requestor could initiate the query using a graphical user interface. As another example, if the requestor uses a text messaging wireless device 110 linked to location server 100 through requestor wireless network 116 and global computer network 114, the requestor could initiate the query using a menu driven interface or a series of key sequence inputs." Ex. 1040, 6:51-62.

156. Therefore, it is my opinion that Enzmann discloses claim 16a.

c. *Claim 16b – a first location is operable to be recorded of said user identification, based on a location of said first device after said user identification is identified on said first device*

157. Enzmann discloses or renders obvious claim 16b. Mobile devices in Enzmann's system can determine and provide their locations to the location server at any time. Ex. 1040, 8:20-36. And as I discussed above with respect to claim 16a, Enzmann discloses that a user may be required to login to the Enzmann system using a login and password to access location services provided by the location server. *Id.*, 6:41-50.

158. While Enzmann does not use the language of claim 16b in its description, it discloses that access to the location services can be restricted to only those users who pay for the service. *Id.*, 6:41-50. Thus, Enzmann discloses a scenario in which a device logs into its location server to access location services, which includes providing location information to the location server. *Id.*, 8:20-36. Once the user is logged in, location information can be stored at the location server when the user logs in or anytime thereafter. *Id.*, 8:20-36. In addition, Enzmann discloses that periodically updating the location information at the location server can provide "a more immediate response" to any requestor. *Id.*, 8:32-36. To ensure the location server has the most up-to-date location information for the user device, it would at least be obvious, if not implied in Enzmann, for the mobile device to provide an updated location after the user has logged in.

159. Thus, it is my opinion that Enzmann discloses or makes claim 16b obvious.

d. ***Claim 16c – a first map provided from the perspective of said first location and is operable of being displayed on said first device***

160. Enzmann in view of Obradovich makes obvious claim 16c for the same reasons described for claims 1b and 1c above.

e. ***Claim 16d – said first location is operable to be provided to a third device not associated with said user identification***

161. Enzmann discloses claim 16d. Enzmann's system allows one mobile device to request and obtain the location of another mobile device, which is provided by the location server. Ex. 1040, Abstract, 2:3-15, 3:1-16, 5:3-9.

162. Thus, it is my opinion that Enzmann discloses claim 16d.

f. ***Claim 16e – said user identification is operable to be identified on a second device by receiving said login and password from a second device***

163. Enzmann discloses or makes obvious claim 16e. As I discussed above with respect to claim 16a, Enzmann discloses a user identification is operable to be identified on a device. Ex. 1040, 5:28-34; 8:2-7. Thus, a POSITA would know that a user could access the location services provided by the location server from any device, such as another network device, by using the login and password.

164. Therefore, it is my opinion that Enzmann discloses or makes obvious claim 16e.

g. ***Claim 16f – a second location is operable to be recorded of said user identification based on a second location of said second device after said user identification is identified on said second device***

165. Enzmann discloses or makes obvious claim 16f for the same reasons discussed for claim 16b above. As discussed for 16b, Enzmann discloses obtaining location information of a device and periodically updating the location information at the location server to provide. Ex. 1040, 8:20-36. A POSITA would have recognized the user identification could be entered on a second device and the location of the second device could be obtained after the user has logged in. For example, at the time of Enzmann, many people had multiple devices for convenience, such as computers at home and mobile phones, for use away from home. Thus, it would have been obvious, if not implied, that a user could access Enzmann's location service by entering his/her user identification on different devices.

166. Thus, it is my opinion Enzmann discloses or renders obvious 16f.

h. ***Claim 16g – a second map provided from the perspective of said second location and is operable of being displayed on said second device***

167. Enzmann in view of Obradovich makes claim 16g obvious for the same reasons described for claim 1b above.

i. ***Claim 16h – said first location and said second location are different.***

168. Enzmann discloses or makes obvious claim 16h. Enzmann's system may obtain location information of different devices in different locations. Ex. 1040, 2:52-57. It is conventional for a user to access different devices at different locations, such as at home or at work, while traveling, etc. To the extent Enzmann does not specifically discuss the actual locations of different devices a user might use, it is at least obvious, if not implied, that different devices would be in different locations when the user uses them.

169. Therefore, it is my opinion that Enzmann discloses or makes obvious claim 16h.

j. *Claim 16i – said second location is operable to be provided a said third device not associated with said user identification.*

170. Enzmann discloses claim 16i for the same reasons it discloses claim 16d above, and it is my opinion that claim 16 is obvious based on Enzmann in combination with Obradovich.

17. Claim 17 – The system of claim 16, wherein said first device includes a first positioning system, said second device includes a second positioning system, said third device includes a third positioning system, said first location is determined, at least in part, based on said first positioning system, and said second location is determined, at least in part, based on said second positioning system.

171. Enzmann discloses this limitation. Enzmann describes a system where its network devices can include positioning systems, such as GPS, and such

network devices can determine their own locations. Ex. 1040, 4:24-38, 5:13-20.

172. Thus, it is my opinion that Enzmann discloses this limitation, and claim 17 is obvious based on Enzmann in combination with Obradovich.

18. Claim 18 – The system of claim 16, wherein said first location is provided to said third device based on an access permission of said first location to said third device provided by said identified user on said first device.

173. Enzmann discloses or makes obvious this limitation for the same reasons detailed for claims 1a and 4 above. Thus, it is my opinion that claim 18 is obvious based on Enzmann in combination with Obradovich.

19. Claim 19 – The system of claim 16, wherein said first location is recorded on a server remote to said first device, second device, and third device.

174. Enzmann discloses this limitation. Enzmann describes that location information may be determined for a device using a network-based location system. Ex. 1040, 5:41-50. As discussed above with respect to claim 3 and shown below in Figure 1 (as well as in Figures 3 and 4), the location server 100 is remote from the various user devices 104, 108, 110, 112 in the Enzmann system. *Id.*, 5:3-12.

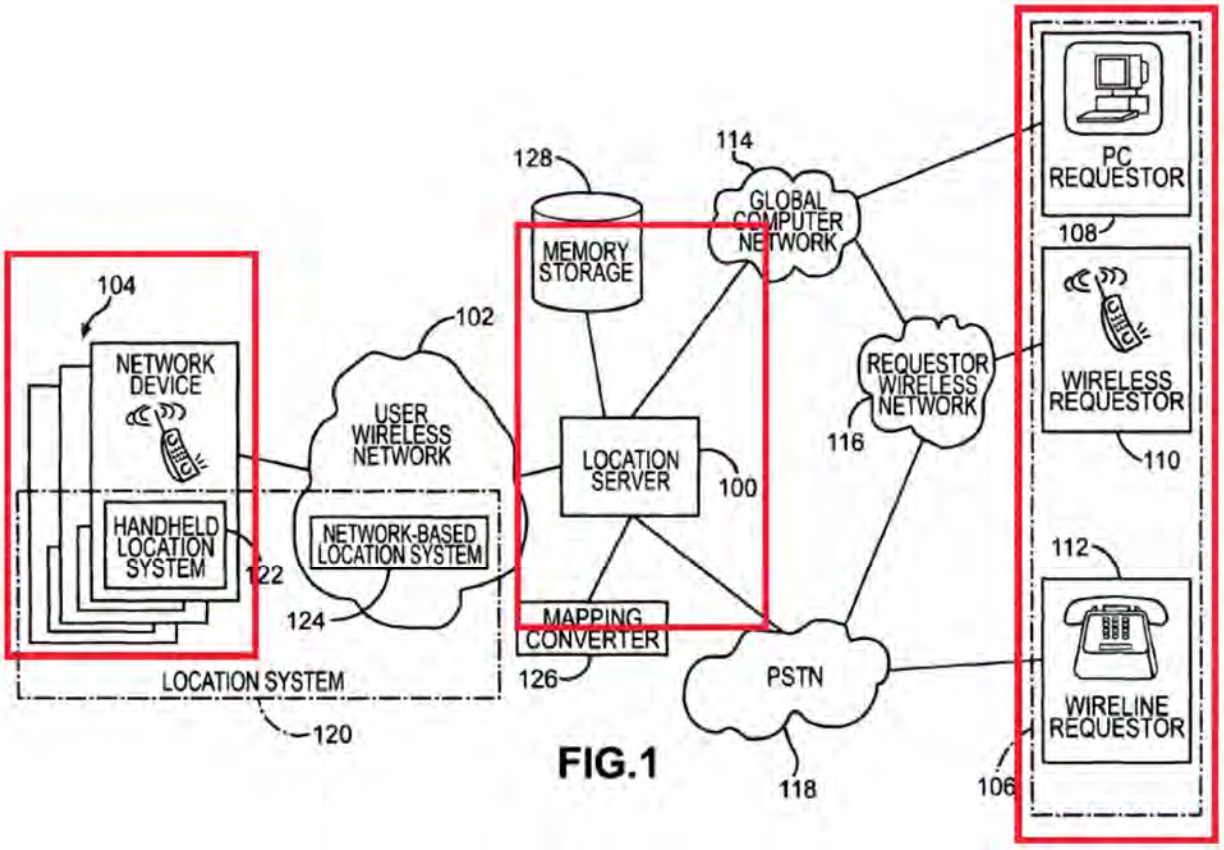


FIG.1

175. Additionally, Enzmann discloses storing locations obtained from a wireless telephone on the memory storage. Ex. 1040, 5:28-34.

176. Thus, it is my opinion Enzmann discloses this limitation, and claim 19 is obvious based on Enzmann in combination with Obradovich.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 6

TABLE OF CONTENTS

I. U.S. Patent No. 11,122,418 (the ’418 Patent)

A. Summary of the ’418 Patent

1. Generally, the description of the ’418 Patent addresses determining and sharing a location of a wireless device, such as via the Global Positioning System (“GPS”). Ex. 1007, 1:18-28. It alleges that determining device location via GPS is rarely used, and so it purports to provide systems and methods that “better utilize” the GPS determined location information by permitting one cell phone to obtain location information from another user’s cell phone. Ex. 1007, 1:31-33, 1:38-43.

2. To allow location sharing, the ’418 Patent describes that cell phones can share their locations with a remote system, from which other users can obtain the locations. Ex. 1007, 5:11-30. However, the ’418 Patent allows a user to restrict access to their location by identifying authorized users. Id. Authorization to obtain location information may be assigned indefinitely or for a limited period of time. Ex. 1007, Abstract, 1:55-65. Thus, users may specify which other users may obtain their location information. Ex. 1007, 3:22-30.

3. Figure 2 depicts a method to obtain another user’s location, which generally includes sending a request for a location, determining whether the user is authorized, and, if so, providing the location to the requestor.

4. The corresponding description states that “Step 202 initiates when a

user requests the location of another user's cell phone. Step 206 evaluates if the user initiating the location request has the rights to access the location of the desired user. If no access rights for the requesting user have been granted then step 204 will preferably inform the requesting user that he/she has not been given access to the requested location... If access has been given by a particular user that allows for the requesting user to locate that particular user, step 208 is initiated and the allowed location information is provided to the user in step 210." Ex. 1001, 4:54-5:2.

5. The '418 Patent describes that authorization to obtain location information may be assigned indefinitely or for a limited period of time. Ex. 1006, Abstract, 1:55-65. Once the location of another wireless device has been received, various types of navigational information may be provided, such as a map showing the received location or directional information, or other information, such as alerts if the other user is within a certain range of the requestor or if a user dating profile matches a dating profile of another nearby user. Ex. 1006, 2:3-8, 5:64-6:19, 7:31-8:5. Other functionality, such as determining a location of the cellphone while it is off or based on location history, is also mentioned. Ex. 1006, 11:3-14.

B. Relevant Prosecution History of the '418 Patent

6. During the extended prosecution of the '418 Patent 18 office actions (including 6 final rejections) over 15 years of prosecution, Applicant

predominantly argued for patentability based on claimed functionality that the Examiner found to be well-known and conventional, such as displaying lists of users and manual logins, passwords, and selections of users. See, e.g., Ex. 1002, pp. 232-235, 266-270, 651-656 (Applicant's remarks); Ex. 1002, pp. 216-219, 246-250, and 666-670 (Examiner remarks). Late in prosecution, Applicant amended its claims from method to system claims while introducing numerous limitations that recite various devices and pieces of information, e.g., locations and permissions, as being "operable of" of some functionality. Ex. 1002, 65-72.

7. Despite these amendments, Applicant was unable to persuade the examiner that any claims were allowable until the response to the eighteenth office action, filed in March 2021, amended claim 3 (issued as claim 1) to recite that the "first wireless device is operable of providing a first map provided with respect to said location." Ex. 1002, 34. The other independent claims were similarly amended.

8. While the Examiner subsequently allowed the application without comment, the Examiner maintained essentially the same rejections based on the Barclay reference (US 2003/0119522) for the preceding fifteen years and fourteen rejections until the addition of the limitation quoted above, or similar limitations added to the other two dependent claims. However, it is my opinion that prior art not considered by the examiner renders all claims of the '418 Patent invalid.

II. Claims of the ’418 Patent

1. A system comprising:

a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system,

said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device,

a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location,

said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices,

said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call, wherein said first wireless device is operable of providing a first map provided with respect to said location.

2. The system of claim 1, wherein said first and second wireless devices are wireless telephones.

3. The system of claim 1, wherein said second wireless device displays a map with a location marker associated with said location.

4. The system of claim 1, wherein a speed said first wireless device is traveling is operable of being determined.

5. The system of claim 1, wherein a direction said first wireless device is traveling is operable of being determined.

6. The system of claim 1, wherein said permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said location.

7. The system of claim 1, wherein said location is determined by a positioning system that receives signals from a plurality of positioning satellites, said location is updated by said positioning system, and said updated location is provided to said facility.

8. The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device.

9. The system of claim 1, wherein:

a first dating matching profile is operable of being provided by said first wireless device;

a second dating matching profile is operable of being provided by said second wireless device;

a second location is operable of being obtained, wherein said second location is the location of said second wireless device; and

said location, said second location, said first dating matching profile, and said second dating matching profile is operable of being utilized to provide an alert.

10. The system of claim 1, wherein a second location is associated with said second wireless device and said location of said first wireless device is displayed relative to said second location of said second wireless device.

11. The system of claim 1, wherein a direction that said second wireless device is traveling in is operable of being displayed.

12. The system of claim 1, wherein said second wireless device is operable of being allowed to set location alerts associated with said first wireless device.

13. The system of claim 1, wherein said permission is assigned for a period of time.

14. The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device enters a geographic region.

15. The system of claim 1, wherein said facility stores a history of locations for said first wireless device.

16. The system of claim 1, wherein said server stores a history of locations for said first wireless device and said history is utilized to provide an approximate location of said first wireless device.

17. The system of claim 1, wherein said first wireless device is OFF when said location is provided to said second wireless device.

18. A system comprising:

a first wireless device, wherein a first location of said first wireless device is operable of being determined,

a second location of a second wireless device is operable of being determined,

said first and second locations are operable of being provided to a server, wherein said server is located remotely from said first and second wireless devices,

said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device,

said second location is operable of being requested by said first wireless device

a first permission is operable of being provided by said first wireless device for said second wireless device to obtain said first location

a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location

said first and second permissions are operable of being stored on said server,

said first location from said server is operable of being provided to said second wireless device as a result of said first permission outside of said call, and

said second location is operable of being provided from said server to said first wireless device as a result of said second permission, wherein said first wireless device is operable of providing a first map from a perspective of said first wireless device.

19. A system comprising:

a first wireless device operable of determining a first location of said first wireless device,

a second location of a second wireless device, is operable of being determined,

said first and second locations are operable of being provided to a server, said server is located remotely from said first and second wireless devices,

said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device,

said second location is operable of being requested by said first wireless device,

a first permission is operable of being provided by said first wireless device for said second wireless device to obtain said first location,

a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location,

said first and second permissions are operable of being stored on said server,

said first location is operable of being provided from said server to said second wireless device as a result of said first permission outside of said call,

said second location is operable of being provided from said server to said first wireless device as a result of said second permission,

updates of said first location are operable of being provided to said second wireless device as a result of said first permission, and

updates of said second location are operable of being provided to said first wireless device as a result of said second permission, wherein said first

wireless device is operable of providing a first map from a perspective of said first location.

20. The system of claim 18, wherein said first and second wireless devices are wireless telephones.

21. The system of claim 18, wherein said second wireless device displays a map with a location marker associated with said first location.

22. The system of claim 18, wherein a speed of said first wireless device is traveling is operable of being determined.

23. The system of claim 18, wherein the direction said first wireless device is traveling is operable of being determined.

24. The system of claim 18, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location.

25. The system of claim 18, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device.

26. The system of claim 19, wherein said first and second wireless devices are wireless telephones.

27. The system of claim 19, wherein said second wireless device displays a map with a location marker associated with said first location.

28. The system of claim 19, wherein a speed said first wireless device is traveling is operable of being determined.

29. The system of claim 19, wherein the direction said first wireless device is traveling is operable of being determined.

30. The system of claim 19, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location.

III. Claim Construction

9. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

10. In my opinion the claims of the ’418 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of how the Claims are Unpatentable

11. It is my opinion that each of the claims of the ’418 Patent is invalid based on my analysis below. Each of the claims recites functionality that was well-known before the March 25, 2002 priority date for the ’418 Patent. The Sheha and

Enzmann references specifically discuss the vast majority of the claim limitations, but even where they do not, the claims recite functionality that was well-known in the art and would have been naturally identified by a POSITA to enhance the functionality described by Sheha and Enzmann

A. Ground 1: Sheha alone or in combination with Tanaka, Enzmann, Ryden, and/or Ganesh renders claims 1-30 obvious

12. The Sheha patent discloses a system as recited in claim 1, including a mobile device that user can use to enter a login and password and to access location information for other wireless devices. It also discloses most of the elements recited in the various dependent claims and invalidates all dependent claims either alone or in combination with Tanaka, Enzmann, Ryden, and/or Ganesh, which disclose the remaining features. It is my opinion that Sheha alone or in combination with Tanaka, Enzmann, Ryden, and/or Ganesh render claims 1-30 invalid.

1. Independent claim 1

13. Claim 1's preamble recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices.

a. ***Claim 1a – a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system.***

14. It is my opinion that Sheha discloses a system with mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex. 1041, Abstract, 4:13-18. In addition, Sheha describes that one mobile wireless device can request the location of another mobile wireless device via a wireless network, such as shown in Figure 3. Ex. 1041, 10:66-11:54; *see also id*. at 11:55-12:7.

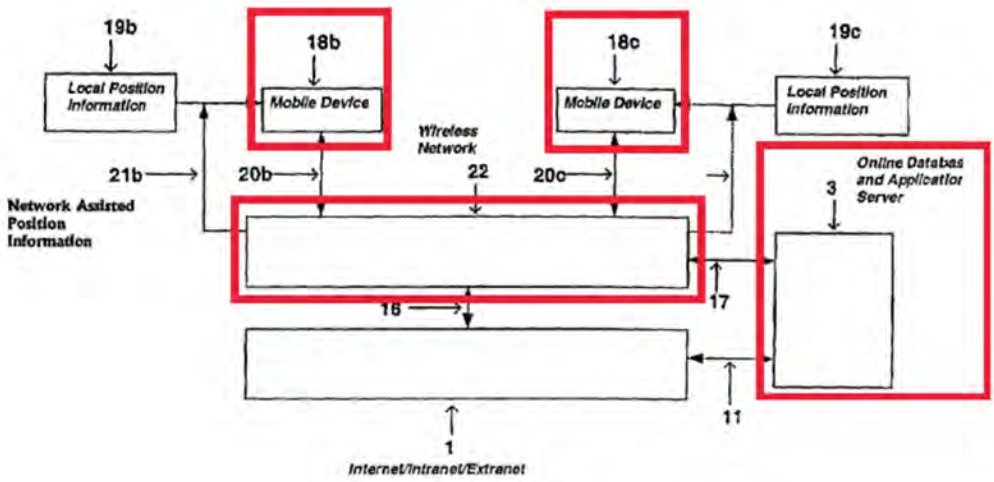


FIG. 3

15. The system shown includes two mobile devices, identified as mobile devices 18b and 18c, that communicate 20b, c with Sheha's Online Database and Application Server, or the "ODAS" 3, via a wireless network, labeled as wireless

network 22. Ex. 1041, 10:66-11:54. Sheha also teaches that the mobile devices shown in Figure 3 can be cell phones. Ex. 1041, 10:66-11:3. Sheha further discloses that the cell phones themselves determine their own positions or they can be determined by the networks. Ex. 1041, 10:5-16, 11:15-20. After a cell phone's position has been determined, the position is supplied to an ODAS 3, where it is stored, and which is remote from the mobile devices 18b-c. Ex. 1041, 11:3-8, 11:44-51, Figure 3.

16. Thus, it is my opinion that Sheha discloses claim 1a.

b. *Claim 1b – said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device*

17. Sheha describes a system that allows one wireless device to request the position of another wireless device "without having to initiate a telephone call." Ex. 1041, 4:59-5:3, 11:55-58. Instead, the ODAS obtains location information from the target mobile device (i.e., the "first wireless device") and provides it to the requesting mobile device (i.e., the "second wireless device"). Ex. 1041, 12:1-7, 12:42-44. So, the requesting mobile device does not have a call to communicate with the identified mobile device, but instead sends the request to the ODAS. Ex. 1041, 11:55-12:7.

18. Thus, it is my opinion that Sheha discloses claim 1b.

c. ***Claim 1c – a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location***

19. Sheha's system allows a mobile device to establish permissions for other mobile devices to obtain its location. For example, after the Sheha system receives a position request, it can ask the target mobile device for privacy settings to determine whether to respond to a position request. Ex. 1041, 4:59-66. Mobile devices in the Sheha system can have privacy settings that allow the device to "prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:21-41, 10:17-26. Thus, a mobile device can provide permission for a requesting device to access its location information.

20. Thus, it is my opinion that Sheha discloses claim 1c.

d. ***Claim 1d – said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices***

21. Sheha discloses maintaining privacy settings at the system or at the wireless device. Sheha describes embodiments where one device can request position information of a target device without initiating a call to the target device. Ex. 1041, 11:55-12:7. These embodiments can store information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. *Id*. For example, Sheha

describes that "users can define a group of specific users that have access to this information" and that this can be accomplished "by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:61-12:1. Sheha describes this in the context of a landline-to-landline position request; however, it does not restrict the use of such a group database to the landline-to-landline scenario. To the contrary, Sheha discloses that the same approach can be used in a mobile-to-mobile scenario. Ex. 1041, 12:4-7. Thus, Sheha discloses that a permission to access location information about a target mobile device may be stored at the remote system.

22. Thus, Sheha discloses claim element 1d.

e. *Claim 1e – said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call*

23. As I discussed above with respect to claim element 1b, a mobile device can request the location of another mobile device outside of a call. Section IV.A.1.b. In response to that request, "…the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." Ex. 1041, 12:1-7. Sheha discloses this within the context of a request for a position of a mobile device without having to initiate a telephone call. Ex. 1041, 11:55-12:8. As discussed above with respect to claim element 1d, the privacy settings can

be maintained by the remote system, e.g., the ODAS, or the mobile device and can identify specific users permitted to access the position information. Section IV.A.1.d. Thus, the remote system provides the position information "in accordance with said permission" that may be stored at the ODAS.

24. Therefore, Sheha discloses claim element 1e.

f. *Claim 1f – wherein said first wireless device is operable of providing a first map provided with respect to said location*

25. Sheha's system can transfer location information from one wireless device to another wireless device in the form of a map. Ex. 1041, 4:22-26. Further, Sheha discloses that its devices have displays and can provide maps showing the locations of the target wireless device and the requesting wireless device. Ex. 1041, 9:23-39, Fig. 5 (labels 33 and 34).

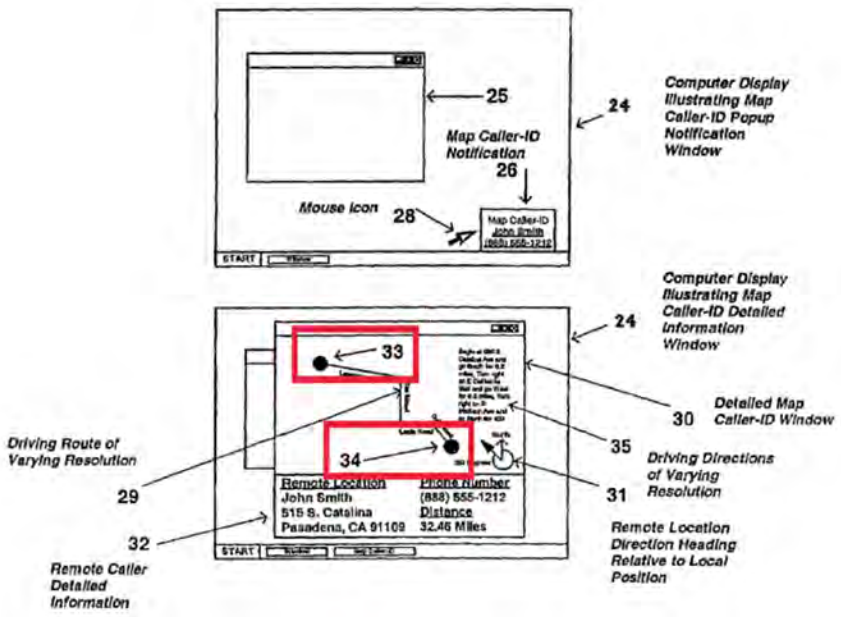


FIG. 5

26. Sheha specifically discloses that such maps "can be displayed on the mobile telephone." Ex. 1041, 4:52-58. While I understand that Figure 5 is in the context of a landline-to-mobile context, it is also applicable in the mobile-to-mobile context. Ex. 1041, 4:13-18, 4:52-58. In addition, both the requesting and the target mobile device can display maps showing the locations of both devices. Ex. 1041, 4:52-58, 11:10-51.

27. Thus, it is my opinion that Sheha discloses or makes obvious claim 1f.

28. For the foregoing reasons, it is my opinion that Sheha discloses or makes obvious claim 1.

2. Claim 2 – The system of claim 1, wherein said first and second wireless devices are wireless telephones.

29. Sheha discloses that the two mobile devices that I discussed above with respect to claim 1 are both wireless telephones: "In the mobile-to-mobile example, as illustrated in FIG. 3, a user placing a telephone call from a mobile device 18 b, such as a cellular telephone or wireless voice-enabled PDA, dials or inputs a telephone number of another mobile device 18 c." Ex. 1041, 10:66-11:3; *see also id*. at 4:59-66. I reproduce an annotated version of Figure 3 below for reference.

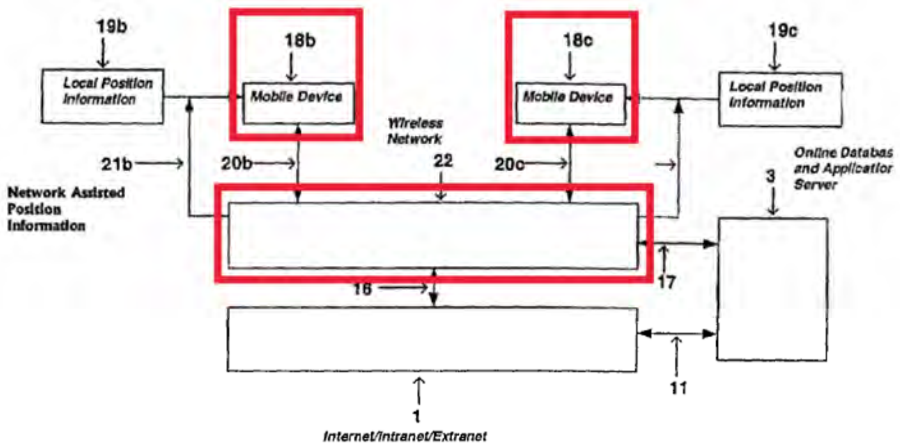


FIG. 3

30. Both mobile devices 18b-c communicate using wireless network 22, shown above, thus both are wireless devices. Ex. 1041, 10:66-11:3. Sheha states that mobile device 18b can be a cellular telephone, while mobile device 18c is

disclosed to have a telephone number, indicating that it is also a wireless telephone. *Id*.

31. Therefore, it is my opinion that Sheha discloses claim 2.

3. Claim 3 – The system of claim 1, wherein said second wireless device displays a map with a location marker associated with said location.

32. I discussed above with respect to claim 1f that Sheha discloses that its mobile devices can display maps, which include location markers as shown in Figure 5. Section IV.A.1.f. Specifically, the requesting device can display a map with a location marker. Ex. 1041, 4:52-58; *see also id*. at 7:35-38, 7:44-48, 9:23-28, 11:36-44, Fig. 5.

33. Thus, it is my opinion that Sheha discloses claim 3.

4. Claims 4 and 5 – The system of claim 1, wherein a speed said first wireless device is traveling is operable of being determined; The system of claim 1, wherein a direction said first wireless device is traveling is operable of being determined

34. Sheha discloses that the wireless devices in its system can update its ODAS as their positions change. Ex. 1041, 11:33-49. In addition, the ODAS can also periodically update a mobile device with another mobile device's position to enable real-time driving directions and route information. Ex. 1041, 11:49-51. The mobile devices can also calculate "all of the navigational information internally by means of the ODAS 3." Ex. 1041, 12:32-41 A POSITA would understand

navigational information to include not only position, but also movement information, like speed and direction of travel, and would expect such information to be determined and displayed by the Sheha system. While calculating speed and determining a direction of travel is straightforward when using GPS, which can directly provide that information, or by simply determining the speed based on a distance travelled over a period of time and heading based on changes in position, the Ryden reference discloses that speed and direction of travel may be determined for a user's device and a target device. Ex. 1057, 19:34-47; Ex. 1058, 34:3-14, 35:4-11.

35. A user seeking to navigate to the target device would expect to be informed of changes to the target device's positions, and providing speed and direction of travel would help the user to better navigate to the target device. Thus, a POSITA would have been motivated to provide both speed and direction of travel of the target device, as well as the reasons I give in the main document of my declaration. Ex. 1021, ⁋⁋ 197-200.

36. Therefore, it is my opinion that Sheha in view of Ryden make obvious claims 4 and 5.

5. Claim 6 – The system of claim 1, wherein said permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said location.

37. As I discussed above with respect to claim 1c, Sheha discloses that a

target device may establish a permission for a requesting device to obtain its position. Section IV.A.1.c. Sheha also discloses that the permission may be terminated at any time by the target device. Ex. 1041, 5:11-14 ("…the position transfer can be terminated by the calling or receiving device at anytime."); *see also id*. at 5:34-38.

38. Therefore, it is my opinion that Sheha discloses claim 6.

6. Claim 7 – The system of claim 1, wherein said location is determined by a positioning system that receives signals from a plurality of positioning satellites, said location is updated by said positioning system, and said updated location is provided to said remote system.

39. Sheha discloses that its mobile devices' locations are "typically calculated by the mobile device 18a by using an onboard positioning information device 19a that is connected to the mobile device," such as from a GPS receiver. Ex. 1041, 10:5-16. While Sheha does not explain that a GPS receiver receives signals from multiple GPS satellites to determine a location, the nature of a GPS receiver's operation was well-known at the time Sheha was filed, as the '418 patent itself acknowledges. Ex. 1006, 1:21-31.

40. In addition, Sheha discloses that mobile devices may obtain updated positions and provide the updated positions to the remote server. Ex. 1041, 11:10-51. It should be noted that claim 7 does not require that updated positions be provided outside of a call. However, as discussed above, Sheha discloses that

location may be requested and provided outside of a call. Ex. 1041, 11:55-58. Sheha discloses that a then-current position is provided in response to each request. Ex. 1041, 5:21-46, 12:1-7. Thus, the mobile device's location is updated using its positioning system and provided to the remote server.

41. Therefore, it is my opinion that Sheha discloses claim 7.

7. Claim 8 – The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device.

42. As I discussed above with respect to claims 1b and 1e, a wireless device in Sheha's system may obtain the location of another wireless device. Sections IV.A.1.b and IV.A.1.e. Tanaka describes that a mobile device can submit a search request and be notified about users of nearby mobile devices that match search terms in the search request and are within a specified proximity of the mobile device. Ex. 1060, Abstract, 7:46-7:5. In addition, Tanaka discloses that the user can be automatically notified if users of mobile devices later become geographically close to the requesting user and satisfy specified search terms. Ex. 1060, claim 20.

43. As I discussed in the main document of my declaration, a POSITA would be motivated to modify Sheha's system to include Tanaka's location alerting functionality and would have had a reasonable expectation of success in

doing so. Ex. 1021, ⁋⁋ 203-207.

44. Therefore, it is my opinion that Sheha in view of Tanaka render claim 8 obvious.

8. Claim 9

a. *Claim 9a-b – a first dating matching profile is operable of being provided by said first wireless device; a second dating matching profile is operable of being provided by said second wireless device*

45. The Tanaka system allows users to establish user profiles that may include dating information. Ex. 1060, 2:43-45, 5:56-6:3. Tanaka also discloses that users may create and update their profiles using their mobile devices. Ex. 1060, 2:43-45, 5:56-6:3. Tanaka further teaches that "[a]n object of the invention is to provide matching and/or introduction services between mobile users, and other mobile users or non-mobile users, in response to real-time, proximate positioning and correlated user profiles." Ex. 1060, 2:15-18. Thus, Tanaka teaches all aspects of claims 9a and 9b.

46. As I discussed in the main document of my declaration, a POSITA would be motivated to modify Sheha's system to include Tanaka's dating matching functionality and would have had a reasonable expectation of success in doing so. Ex. 1021, ⁋ 203-207.

47. Therefore, it is my opinion that Sheha in view of Tanaka render

claims 9a and 9b obvious.

b. *Claim 9c – a second location is operable of being obtained, wherein said second location is the location of said second wireless device*

48. As I discussed above with respect to claim 1a, Sheha discloses a system with mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex. 1041, Abstract, 4:13-18; *see also id*. at 10:5-16, 11:15-20. Tanaka also discloses that locations of the mobile devices in its system can be obtained. Ex. 1060, 2:49-51, 2:58-3:7.

49. Thus, Sheha alone, or in combination with Tanaka, discloses or makes obvious claim 9c.

c. *Claim 9d – said location, said second location, said first dating matching profile, and said second dating matching profile is operable of being utilized to provide an alert*

50. Tanaka discloses that its system can provide alerts to a requesting user if other nearby users satisfy specified search terms from a search request. Section IV.A.7; *see also* Ex. 1060, 6:10-15, 6:56-60. Tanaka describes that its search requests are compared against other users' profiles to identify matches, and that those user profiles can include dating preferences. Ex. 1060, 5:56-6:3, 6:46-7:5. If user profiles are found that match the search request, the results are provided to the requesting user. Ex. 1060, 6:66-7:5. Tanaka also discloses that the search results

can be updated dynamically, so that the requesting user is "automatically notified if an additional user becomes proximate to said first user wherein said additional user meets criterion established in said search of said database." Ex. 1060, Claim 20.

51. A POSITA would have been motivated to modify Sheha to incorporate such functionalities for the reasons given above with respect to claims 8 and 9a-c, as well as those in the main document of my declaration. Ex. 1021, ¶¶ 203-207. Therefore, it is my opinion that Sheha in view of Tanaka makes obvious claim 9d.

52. For the foregoing reasons, it is my opinion that Sheha in view of Tanaka makes claim 9 obvious.

9. Claim 10 – The system of claim 1, wherein a second location is associated with said second wireless device and said location of said first wireless device is displayed relative to said second location of said second wireless device.

53. As I discussed above with respect to claim 1f, Sheha discloses that its wireless devices can display maps that show the location of both the requesting and target devices. Section IV.A.1.f; Ex. 1041, Fig. 5 (labels 33 and 34). While Figure 5 is described as showing location information from the perspective of the device being called by another device, it is my opinion that either or both of the requesting or target devices can provide such a map since each is already capable of displaying a map. Ex. 1041, 4:52-58; *see also id*. at 4:22-26; 5:47-63; 7:35-39,

9:23-39.

54. Therefore, it is my opinion that Sheha discloses or makes obvious claim 10.

10. Claim 11 – The system of claim 1, wherein a direction that said second wireless device is traveling in is operable of being displayed.

55. Sheha discloses that the wireless devices in its system can update its ODAS as their positions change. Ex. 1041, 11:33-49. In addition, the ODAS can also periodically update a mobile device with another mobile device's position to enable real-time driving directions and route information. Ex. 1041, 11:49-51. The mobile devices can also calculate "all of the navigational information internally by means of the ODAS 3." Ex. 1041, 12:32-41. A POSITA would understand navigational information to include not only position, but also movement information, like speed and direction of travel, and would expect such information to be determined and displayed by the Sheha system.

56. While calculating speed and determining a direction of travel is straightforward when working with GPS, the Ryden reference discloses that direction of travel may be determined for a user's device and a target device. Ex. 1057, 19:34-47; Ex. 1058, 34:3-14, 35:4-11. To the extent that a direction of travel is not disclosed by Sheha's "navigational information," a POSITA would have been motivated to modify Sheha to incorporate such functionality from Ryden to

provide such navigational information. See Ex. 1021, ⁋ 197-200. Further, a POSITA would have been motivated to provide the direction of travel on Sheha's maps to provide comprehensive navigational information to the user and would have had a reasonable expectation of success. *Id*.

57. Therefore, it is my opinion that Sheha alone or in combination with Ryden makes obvious claim 11.

11. Claim 12 – The system of claim 1, wherein said second wireless device is operable of being allowed to set location alerts associated with said first wireless device.

58. I discussed above with respect to claim 8 that Tanaka discloses that users can submit search requests and be notified about users of nearby mobile devices that match search terms in the search request. Section IV.A.7. Tanaka's claim 20 recites that a user may be automatically notified, which is the same thing as an alert.

59. To obtain these alerts, Tanaka describes that a user creates and submits a search request that can include one or more search criteria, that can include a particular search radius. Ex. 1060, 4:50-64, 6:46-55. If a particular target device satisfies the criteria, the requesting user will be alerted. Ex. 1060, 6:66-7:5. Such alerts are associated with whichever devices satisfy the search criteria. In addition, one of those criteria could be the identity of another user or device. Ex. 1060, 5:56-6:9. A POSITA would have been motivated to modify Sheha to

incorporate such functionality for the reasons given above with respect to claims 8 and 9. Sections IV.A.7 and IV.A.8; Ex. 1021, ⁋ 203-207.

60. Therefore, it is my opinion that Sheha in view of Tanaka renders obvious claim 12.

12. Claim 13 – The system of claim 1, wherein said permission is assigned for a period of time.

61. Sheha explicitly discloses that permission to access a user's location information may be established for a period of time. Ex. 1041, 3:4-13, 5:9-20.

62. Therefore, it is my opinion that Sheha discloses claim 13.

13. Claim 14 – The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device enters a geographic region.

63. As I have discussed above with respect to several claims, Tanaka discloses that any wireless device (or multiple wirelesss devices) can submit a search request and then output notifications when another wireless device satisfies the criteria in the search request. *See*, *e.g.*, Sections IV.A.7, IV.A.8, and IV.A.11. One of the criteria a user can include in a search request is a search radius, which establishes a geographic proximity to the requesting user, which establishes a geographic region. Ex. 1060, 6:46-7:5, claim 20. I have discussed the motivations to combine Sheha with Tanaka above with respect to multiple claims as well as in the main portion of my declaration. Ex. 1021, ⁋⁋ 203-206, Sections IV.A.7,

IV.A.8, and IV.A.11

64. Therefore, it is my opinion that Sheha in view of Tanaka makes obvious claim 14.

14. Claim 15 – The system of claim 1, wherein said facility stores a history of locations for said first wireless device.

65. As I discussed above with respect to claim 1, wireless devices in the Sheha system provide their locations to the ODAS, which stores them. Sections IV.A.1.a, IV.A.1.d, and IV.A.1.e; Ex. 1041, 11:3-8, 11:44-51, Figure 3. Ganesh discloses that a server can store call histories that includes locations for wireless devices, such as may be represented by cellular sites that the wireless device has previously connected to. Ex. 1049, 4:29-35, 6:55-7:20, 7:62-65. A POSITA would have been motivated to incorporate such functionality into the Sheha system and would have had a reasonable expectation of success, as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 100-105.

66. Therefore, it is my opinion that Sheha in view of Ganesh makes obvious claim 15.

15. Claim 16 – The system of claim 1, wherein said server stores a history of locations for said first wireless device and said history is utilized to provide an approximate location of said first wireless device.

67. Claim 16 bodily incorporates claim 15, which I addressed above, but adds that "said history is utilized to provide an approximate location of said first

wireless device." Section IV.A.14. Ganesh describes that its history feature can be used to provide an approximate location of a wireless device, such as based on the call history and a related cell site. Ex. 1060, 4:29-35, 6:55-7:20, 7:62-65. A POSITA would have been motivated to incorporate such functionality into the Sheha system and would have had a reasonable expectation of success for the same reasons as discussed above with respect to claim 15 and as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 100-105.

68. Therefore, it is my opinion that Sheha in view of Ganesh makes obvious claim 16.

16. Claim 17 – The system of claim 1, wherein said first wireless device is OFF when said location is provided to said second wireless device.

69. As I have discussed above with respect to several claims, Sheha discloses that locations of wireless devices are stored at Sheha's ODAS. Sections IV.A.1.a, IV.A.1.d, and IV.A.1.e; Ex. 1041, 11:3-8, 11:44-51, Fig. 3. As a result, a wireless device can request the location of a target wireless device and obtain that location from the ODAS, regardless of whether the target wireless device is on or off. Ganesh describes this same functionality because it provides location information from call histories for devices that are turned off or otherwise not connected to the network. Ex. 1041, 7:62-65, 6:55-7:20.

70. A POSITA would have been motivated to incorporate such

functionality into the Sheha system and would have had a reasonable expectation of success for the same reasons as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 100-105.

71. Therefore, it is my opinion that Sheha alone or in view of Ganesh makes obvious claim 17.

17. Claim 18 – A system comprising

72. Claim 18's preamble simply recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices.

a. *Claims 18a-b – a first wireless device, wherein a first location of said first wireless device is operable of being determined; a second location of a second wireless device is operable of being determined*

73. Claims 18a and 18b recite substantially the same functionality as recited in claim 1a, though these claims recite two wireless devices. But Sheha describes that each of its wireless devices can determine their locations.

74. Thus, it is my opinion that Sheha discloses claims 18a and 18b for the same reasons as claim 1a.

b. ***Claim 18c – said first and second locations are operable of being provided to a server, wherein said server is located remotely from said first and second wireless devices.***

75. Claim 18c recites similar limitations as claim 1a, though like claims 18a-b, claim 18c recites two wireless devices. But Sheha describes that each of its wireless devices can provide their locations to the ODAS. Ex. 1041, 11:3-8, 11:44-51.

76. Thus, it is my opinion that Sheha discloses claim 18c for the same reasons as claim 1a.

c. ***Claim 18d – said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device.***

77. Claim 18d recites similar limitations as claim 1b. Thus, it is my opinion that Sheha discloses claim 18d for the same reasons as claim 1b.

d. ***Claim 18e – said second location is operable of being requested by said first wireless device.***

78. Claim 18e recites similar limitations as claim 1b. Thus, it is my opinion that Sheha discloses claim 18e for the same reasons as claim 1b.

e. ***Claim 18f – provided by said first wireless device for said second wireless device to obtain said first location."***

79. Claim 18f recites similar limitations as claim 1c. Thus, it is my opinion that Sheha discloses claim 18f for the same reasons as claim 1c.

f. ***Claim 18g – a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location.***

80. Claim 18g recites similar limitations as claim 1c. Thus, it is my opinion that Sheha discloses claim 18g for the same reasons as claim 1c.

g. ***Claim 18h – said first and second permissions are operable of being stored on said server.***

81. Claim 18h recites similar limitations as claim 1d. Thus, it is my opinion that Sheha discloses claim 18h for the same reasons as claim 1d.

h. ***Claim 18i – said first location from said server is operable of being provided to said second wireless device as a result of said first permission outside of said call.***

82. Claim 18i recites similar limitations as claim 1e. Thus, it is my opinion that Sheha discloses claim 18i for the same reasons as claim 1e.

i. ***Claim 18j – said second location is operable of being provided from said server to said first wireless device as a result of said second permission."***

83. Claim 18j recites similar limitations as claim 1e. Thus, it is my opinion that Sheha discloses claim 18j for the same reasons as claim 1e.

j. ***Claim 18k – wherein said first wireless device is operable of providing a first map from a perspective of said first wireless device.***

84. Claim 18k recites similar limitations as claim 1f. Thus, it is my opinion that Sheha discloses or makes obvious claim 18k for the same reasons as

claim 1f. Therefore, it is my opinion that Sheha discloses or makes obvious claim 18.

18. Claim 19 – A system comprising

85. Claim 19's preamble simply recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices.

a. *Claims 19a-b – a first wireless device operable of determining a first location of said first wireless device; a second location of a second wireless device, is operable of being determined.*

86. Claims 19a and 19b recite substantially the same functionality as recited in claim 18a, though these claims recite two wireless devices. But Sheha describes that each of its wireless devices can determine their locations. Ex. 1041, Abstract, 4:13-18.

87. Thus, it is my opinion that Sheha discloses claims 19a and 19b for the same reasons as claims 18a-b.

b. *Claim 19c – said first and second locations are operable of being provided to a server, said server is located remotely from said first and second wireless devices.*

88. Claim 19c recites similar limitations as claim 18c. Thus, it is my opinion that Sheha discloses claim 19c for the same reasons as claim 18c.

c. ***Claim 19d – said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device.***

89. Claim 19d recites similar limitations as claim 18d. Thus, it is my opinion that Sheha discloses claim 19d for the same reasons as claim 18d.

d. ***Claim 19e – said second location is operable of being requested by said first wireless device.***

90. Claim 19e recites similar limitations as claim 18e. Thus, it is my opinion that Sheha discloses claim 19e for the same reasons as claim 18e.

e. ***Claim 19f – a first permission is operable of being provided by said first wireless device for said second wireless device to obtain said first location.***

91. Claim 19f recites similar limitations as claim 18f. Thus, it is my opinion that Sheha discloses claim 19f for the same reasons as claim 18f.

f. ***Claim 19g – a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location.***

92. Claim 19g recites similar limitations as claim 18g. Thus, it is my opinion that Sheha discloses claim 19g for the same reasons as claim 18g.

g. ***Claim 19h – said first and second permissions are operable of being stored on said server.***

93. Claim 19h recites similar limitations as claim 18h. Thus, it is my

opinion that Sheha discloses claim 19h for the same reasons as claim 18h.

h. ***Claim 19i – said first location is operable of being provided from said server to said second wireless device as a result of said first permission outside of said call.***

94. Claim 19i recites similar limitations as claim 18i. Thus, it is my opinion that Sheha discloses claim 19i for the same reasons as claim 18i.

i. ***Claim 19j – said second location is operable of being provided from said server to said first wireless device as a result of said second permission.***

95. Claim 19j recites similar limitations as claim 18j. Thus, it is my opinion that Sheha discloses claim 19j for the same reasons as claim 18j.

j. ***Claims 19k-l – updates of said first location are operable of being provided to said second wireless device as a result of said first permission; updates of said second location are operable of being provided to said first wireless device as a result of said second permission***

96. Claims 19k and 19l recites similar limitations as claim 7, which I discussed above. Section IV.A.6. In particular, Sheha discloses the two different wireless devices can update each other with their respective positions based on the corresponding permissions. Ex. 1041, 10:66-11:51

97. Thus, it is my opinion that Sheha discloses claims 19k-l.

k. ***Claim 19m – wherein said first wireless device is operable of providing a first map from a perspective of said first location.***

98. Claim 19m recites similar limitations as claim 1f. Thus, it is my

opinion that Sheha discloses or makes obvious claim 19m for the same reasons as claim 1f.

99. Therefore, it is my opinion that Sheha discloses or makes obvious claim 19.

19. Claim 20 – The system of claim 18, wherein said first and second wireless devices are wireless telephones.

100. Claim 20 recites similar limitations as claim 2. Thus, it is my opinion that Sheha discloses claim 20 for the same reasons as claim 2.

20. Claim 21 – The system of claim 18, wherein said second wireless device displays a map with a location marker associated with said first location.

101. Claim 21 recites similar limitations as claim 3. Thus, it is my opinion that Sheha discloses claim 21 for the same reasons as claim 3.

21. Claim 22 – The system of claim 18, wherein a speed of said first wireless device is traveling is operable of being determined.

102. Claim 22 recites similar limitations as claim 4. Thus, it is my opinion that Sheha in view of Ryden makes obvious claim 22 for the same reasons as claim 4.

22. Claim 23 – The system of claim 18, wherein the direction said first wireless device is traveling is operable of being determined.

103. Claim 23 recites similar limitations as claim 5. Thus, it is my opinion that Sheha in view of Ryden makes obvious claim 23 for the same reasons as claim

5.

23. Claim 24 – The system of claim 18, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location.

104. Claim 24 recites similar limitations as claim 6. Thus, it is my opinion that Sheha discloses claim 24 for the same reasons as claim 6.

24. Claim 25 – The system of claim 18, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device.

105. Claim 25 recites similar limitations as claim 8. Thus, it is my opinion that Sheha in view of Tanaka makes obvious claim 25 for the same reasons as claim 8.

25. Claim 26 – The system of claim 19, wherein said first and second wireless devices are wireless telephones.

106. Claim 26 recites similar limitations as claim 2. Thus, it is my opinion that Sheha discloses claim 26 for the same reasons as claim 2.

26. Claim 27 – The system of claim 19, wherein said second wireless device displays a map with a location marker associated with said first location.

107. Claim 27 recites similar limitations as claim 3. Thus, it is my opinion that Sheha discloses claim 27 for the same reasons as claim 3.

27. Claim 28 – The system of claim 19, wherein a speed said first wireless device is traveling is operable of being determined.

108. Claim 28 recites similar limitations as claim 4. Thus, it is my opinion that Sheha in view of Ryden makes obvious claim 28 for the same reasons as claim 4.

28. Claim 29 – The system of claim 19, wherein the direction said first wireless device is traveling is operable of being determined.

109. Claim 29 recites similar limitations as claim 5. Thus, it is my opinion that Sheha in view of Ryden makes obvious claim 29 for the same reasons as claim 5.

29. Claim 30 – The system of claim 19, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location.

110. Claim 30 recites similar limitations as claim 6. Thus, it is my opinion that Sheha discloses claim 30 for the same reasons as claim 6.

B. Ground 2: Enzmann alone or in combination with Tanaka, Ryden, Ganesh, and/or Sheha renders obvious claims 1-30 under 35 U.S.C. § 103

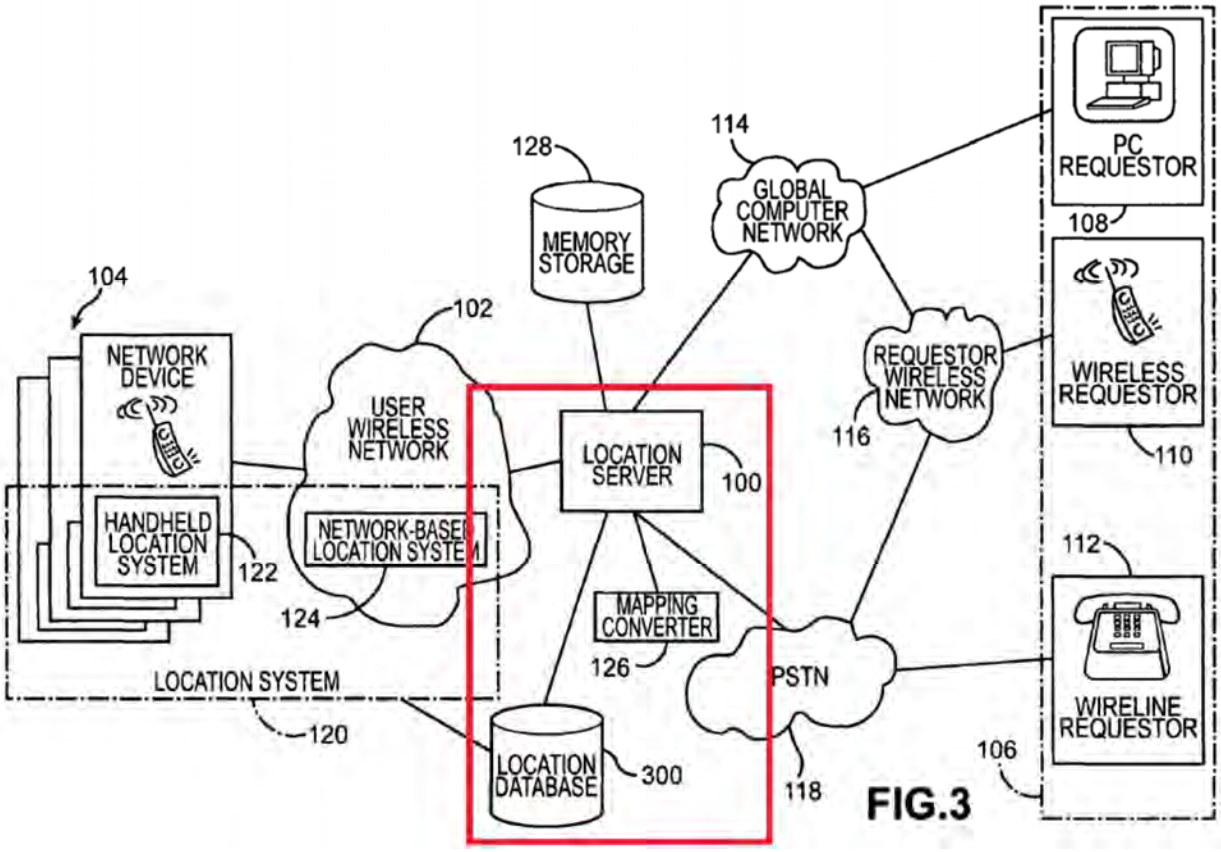
1. Claim 1 – A system comprising

111. Claim 1's preamble simply recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile

devices.

a. ***Claim 1a – a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system."***

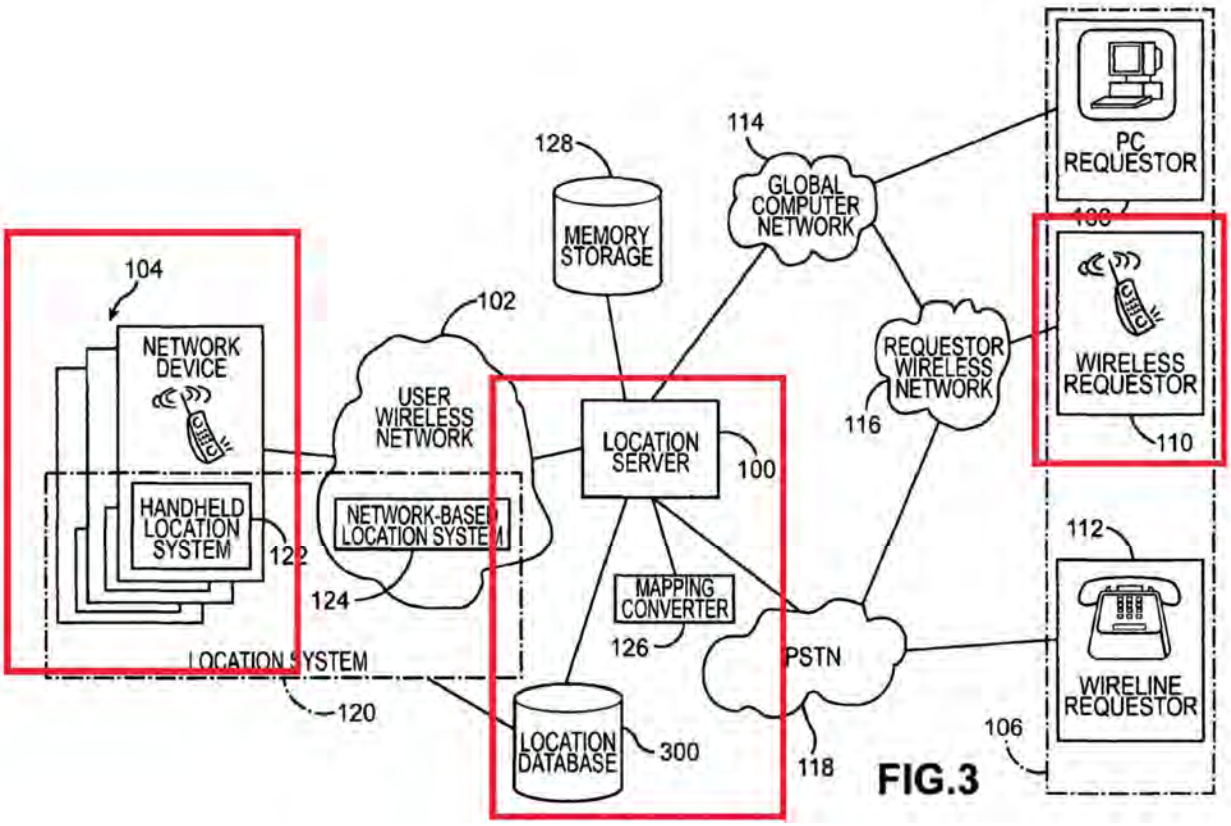
112. Enzmann discloses a system that allows a user to query the location of wireless network devices, such as pagers and cellular telephones. Ex. 1040, 3:53-61, 5:39-41. The locations of the devices may be determined by the devices themselves, which include their own location systems, or by using a network-based location system, such as shown in the excerpted portion of Figure 1 below. Ex. 1040, 5:41-50; *see also* Fig. 3. The network devices 104 provide these locations to the location server 100, which is remote from the network devices 104 and the requesting device 110 and which stores them in a location database 300. Ex. 1040, 8:20-36.



113. Therefore, it is my opinion that Enzmann discloses claim 1a.

b. ***Claim 1b – said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device***

114. The Enzmann system allows users to request and obtain the location of other wireless devices without a call between the devices. Ex. 1040, 2:7-9, 3:17-19, 8:20-36, 9:15-27. Instead, referring to Figure 3 below, the Enzmann system allows a user to send a request to a location server 120, which retrieves the location of the targeted device from memory storage 128, and provides that information back to the requestor 110. Ex. 1040, 2:16-20, 6:41-65.



115. Therefore, it is my opinion that Enzmann discloses claim 1b.

c. *Claim 1c – a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location*

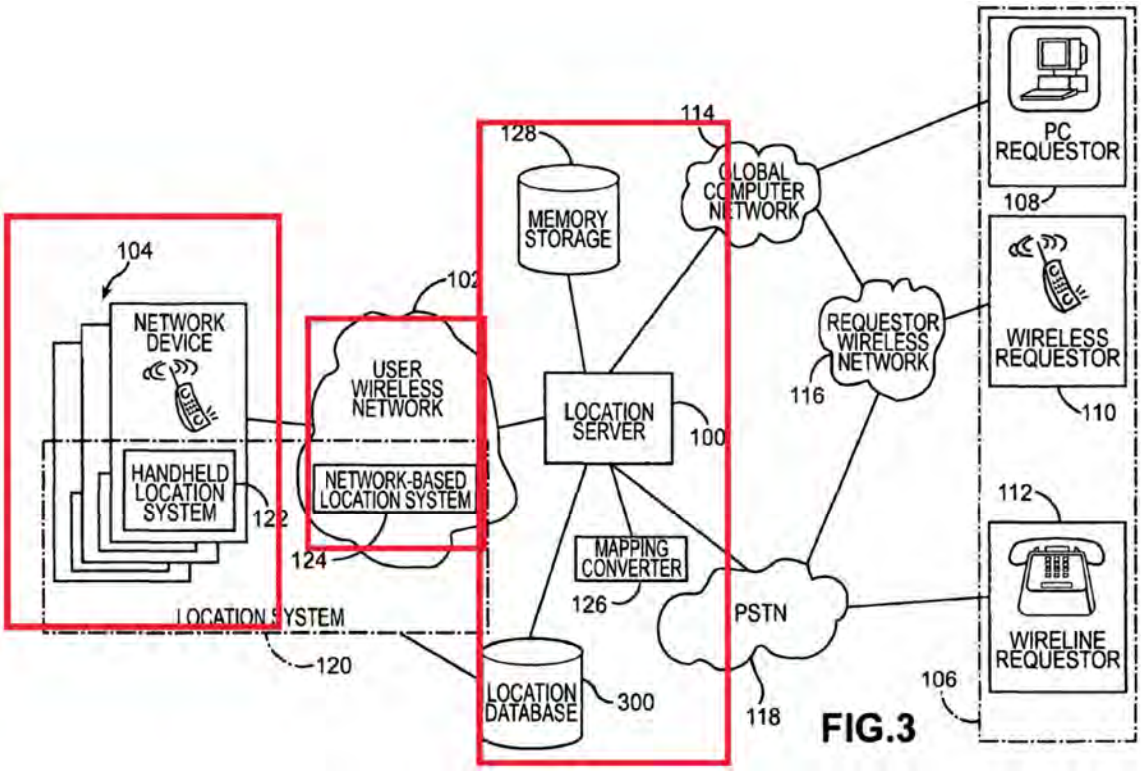
116. Users of the Enzmann system can control which requestors can access their location information. To do so, users provide a list of authorized requestors to the Enzmann system that are stored in its memory storage 128, which the system uses to determine whether a requestor can obtain the user's location information. Ex. 1040, 2:35-41, 5:28-38. For requestors that are not identified on the list, the Enzmann system can ask the targeted user if they are willing to grant permission to

the requestor or not. Ex. 1040, 7:26-58.

117. Therefore, it is my opinion that Enzmann discloses claim 1c.

d. *Claim 1d – said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices*

118. As discussed above with respect to claim 1c, the Enzmann system receives lists of authorized requestors and stores them in memory storage 128, shown in Figure 3 below. Ex. 1040, 5:28-38, Fig. 3. As can be seen, the location server 100 and memory storage 128 are remote from the network devices 104 and the requestor devices 110.



119. Therefore, it is my opinion that Enzmann discloses claim 1d.

e. ***Claim 1e – said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call***

120. After receiving a request for a target device's location, and confirming that the requestor is authorized to obtain the location based on the stored list of authorized requestors in the memory storage 128, the location system obtains the requested location from the location database 300 and provides it to the requestor. Ex. 1040, 2:35-41, 3:1-16, 7:12-24, 7:39-58, 8:20-36.

121. Therefore, it is my opinion that Enzmann discloses claim 1e.

f. ***Claim 1f – wherein said first wireless device is operable of providing a first map provided with respect to said location***

122. Enzmann's system can provide location information to the requesting device in a "displayable form," which may be "a street address, building name, or area name." Ex. 1040, 3:1-16. Sheha discloses that a displayable form of location information can be a map that can be displayed by a mobile telephone. Ex. 1041, 4:52-58. Sheha's Figure 5 shows an example of such map that shows the position of both the requesting and target device.

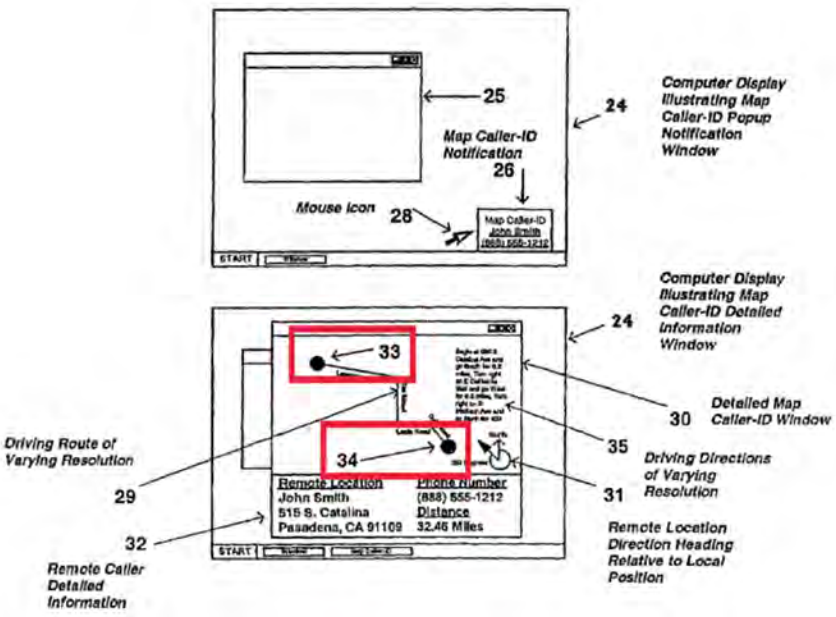


FIG. 5

123. And while Figure 5 illustrates a landline-to-mobile context, it equally applies in the mobile-to-mobile context. Ex. 1013, 4:13-18, 4:52-58, Fig. 5. In addition, as I discussed above with respect to claim 1f in Ground 1, both the requesting and the target mobile device can display maps showing the locations of both devices. Ex. 1041, 4:52-58, 11:10-51. A POSITA would have been motivated to provide maps as a displayable form of location information in the Enzmann system as I discussed in the main portion of my declaration and would have had a reasonable expectation of success. Ex. 1021, ¶ 201.

124. Therefore, it is my opinion that Enzmann in view of Sheha makes

obvious claim 1f.

125. In view of the foregoing, it is my opinion that Enzmann in view of Sheha makes claim 1 obvious.

2. Claim 2 – The system of claim 1, wherein said first and second wireless devices are wireless telephones.

126. Enzmann describes that both the requesting device and the target device can be wireless telephones, such as cellular telephones. Ex. 1040, 3:53-61. It describes the network devices 104 as being cellular telephones. Ex. 1040, 5:39-41. The wireless requestor 110 can be any kind of wireless device that has IP messaging capabilities or that is WAP (wireless access protocol)-compatible. Ex. 1040, 6:2-4. It also discloses that network devices 104 may also be WAP-compatible. Ex. 1040, 5:56-50. As a result, it is my opinion that Enzmann discloses or makes obvious that any of the network devices 104 can be both a wireless requestor 110 and a cellular telephone.

127. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 2.

3. Claim 3 – The system of claim 1, wherein said second wireless device displays a map with a location marker associated with said location.

128. As I discussed above with respect to claim 1f, Sheha discloses that both the target and requesting mobile devices can display maps with identified

locations. Section IV.B.1.f; Ex. 1041, 4:52-58; 7:35-38, 7:44-48, 9:23-28, 11:36-44. In addition, Figure 5 provides location markers for both devices. Ex. 1041, Fig. 5 (labels 33 and 34). While I understand that Figure 5 is in the context of a landline-to-mobile context, it is also applicable in the mobile-to-mobile context. Ex. 1041, 4:13-18, 4:52-58. In addition, both the requesting and the target mobile device can display maps showing the locations of both devices. Ex. 1041, 4:52-58, 11:10-51.

129. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 3.

4. Claims 4 and 5 – The system of claim 1, wherein a speed said first wireless device is traveling is operable of being determined; The system of claim 1, wherein a direction said first wireless device is traveling is operable of being determined

130. As I discussed above, the Enzmann system allows wireless requestors to obtain the location of a network device 104, and that the network devices 104 can periodically update the location server with their locations. Ex. 1040, 8:20-30. Therefore, the location server has multiple positions received from the network devices over time, and POSITA knows that a speed and direction are determined based on a change in position over a period of time.

131. Enzmann describes that one of the uses of its system is to track network devices over time, such as by using GPS, which can directly provide

speed and heading. Ex. 1040, 2:3-15. As a part of tracking a network device 104, a user would expect to be able to both know the device's location, but also whether it was moving and, if so, which direction and at what speed. As discussed above with respect to Ground 1, the Enzmann devices and system already have the necessary information to determine both direction and speed of both the requesting and target devices based on repeatedly obtaining their location information and updating the location system, and a POSITA would know that both speed and direction can be determined from position data. Section IV.A.4. In addition, Ryden discloses that the speed and direction of travel may be determined for a user's device and a target device, such as by extrapolating it from received position information or determining it directly based on position changes over time. Ex. 1057, 18:33-50, 19:34-47; Ex. 1058, 16:3-15, 34:3-14, 35:4-11.

132. A POSITA would be motivated to modify Enzmann to determine speed and direction of travel information to better track the location of the network devices 104 for the substantially the same reasons as discussed above with respect to Sheha in Ground 1, as well as the reasons given in the main document of my declaration. Ex. 1021, ⁋⁋ 197-200; Section IV.A.4. In addition, the POSITA would have had a reasonable expectation of success given the relatively straightforward calculations needed to determine speed and direction of travel. Ex. 1021, ⁋ 199.

133. Therefore, it is my opinion that Enzmann in view of Sheha and Ryden

makes obvious claims 4 and 5.

5. Claim 6 – The system of claim 1, wherein said permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said location.

134. As I discussed above with respect to claim 1c, Enzmann discloses that users may provide lists of authorized requestors to its location system, which stores the lists in memory storage 128. Section IV.B.1.c; Ex. 1040, 2:35-41, 5:28-38. Because Enzmann discloses that users can create and provide these lists of authorized requestors, Enzmann also discloses that the users can change the lists to add or remove requestors, such as by providing a new list. Consequently, Enzmann discloses that a user can remove authorization for a requestor by updating its list of authorized requestors.

135. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 6.

6. Claim 7 – The system of claim 1, wherein said location is determined by a positioning system that receives signals from a plurality of positioning satellites, said location is updated by said positioning system, and said updated location is provided to said remote system.

136. Enzmann describes that its network devices 104 can include integrated "handheld location systems 122" that can be GPS receivers. Ex. 1040, 4:37-38, 5:13-20, 5:47-50. A POSITA would understand GPS receivers use signals received from multiple positioning satellites to determine a location. Further, the

'418 Patent itself acknowledges it. Ex. 1006, 1:21-31. Enzmann also discloses that its network devices 104 periodically update its location server 120 with new determined locations. Ex. 1040, 8:20-36.

137. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 7.

7. Claim 8 – The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device.

138. Enzmann describes that its system could be used with an instant messaging service to only show the user's friends "who are in the same city as the user," which provides a notification to the user of those friends who are nearby. Ex. 1040, 9:15-30. Such a notification constitutes an alert. Thus. by curating the displayed contacts in this way, the user is alerted to those nearby friends. And as I described above with respect to Ground 1, Tanaka describes that a mobile device can submit a search request and be notified about users of nearby mobile devices that match search terms in the search request. Ex. 1060, Abstract. In addition, Tanaka discloses that the user can be automatically notified if users of mobile devices later become geographically close to the requesting user and satisfy specified search terms. Ex. 1060, claim 20.

139. As I discussed in the main document of my declaration, a POSITA

would be motivated to modify Enzmann's system to include Tanaka's location alerting functionality and would have had a reasonable expectation of success in doing so. Ex. 1021, ⁋⁋ 203-206.

140. Therefore, it is my opinion that Enzmann in view of Sheha and Tanaka render claim 8 obvious.

8. Claim 9 – The system of claim 1, wherein:"

a. *Claim 9a-b – a first dating matching profile is operable of being provided by said first wireless device; a second dating matching profile is operable of being provided by said second wireless device*

141. As I discussed above with respect to Ground 1, the Tanaka system allows users to establish user profiles that may include dating information. Ex. 1020, 2:43-45, 5:56-6:3. Tanaka also discloses that users may create and update their profiles using their mobile devices. Ex. 1020, 2:43-45, 5:56-6:3. Tanaka further teaches that "[a]n object of the invention is to provide matching and/or introduction services between mobile users, and other mobile users or non-mobile users, in response to real-time, proximate positioning and correlated user profiles." Ex. 1020, 2:15-18. Thus, Tanaka teaches all aspects of claims 9a and 9b.

142. As I discussed above with respect to Ground 1 and in the main document of my declaration, a POSITA would be motivated to modify Enzmann's system to include Tanaka's dating matching functionality, such as to enable

Enzmann's users to identify other users who may be of interest and they might like to meet. Ex. 1021, ⁋⁋ 203-206, Section IV.A.8.a. Moreover, a POSITA would have had a reasonable expectation of success in incorporating such functionality into the Enzmann system. Ex. 1021, ⁋ 206.

143. Therefore, it is my opinion that Enzmann in view of Sheha and Tanaka renders claims 9a and 9b obvious.

b. *Claim 9c – a second location is operable of being obtained, wherein said second location is the location of said second wireless device*

144. As I discussed above with respect to claim 1a, Enzmann discloses a system with mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex. 1040, 5:41-50, 8:20-36. Tanaka also discloses that locations of the mobile devices in its system can be obtained. Ex. 1060, 2:49-51, 2:58-3:7; *see also* Ex. 1021, ⁋⁋ 203-206.

145. Therefore, it is my opinion that Enzmann in view of Sheha alone, or also in combination with Tanaka, makes obvious claim 9c.

c. *Claim 9d – said location, said second location, said first dating matching profile, and said second dating matching profile is operable of being utilized to provide an alert.*

146. As I discussed above with respect to claim 9d in Ground 1, Tanaka discloses that its system can provide alerts to a requesting user if other nearby

users satisfy specified search terms from a search request. Section IV.A.7; *see also* Ex. 1060, 6:10-15, 6:56-60. Tanaka describes that its search requests are compared against other users' profiles to identify matches, and that those user profiles can include dating preferences. Ex. 1060, 5:56-6:3, 6:46-7:5. If user profiles are found that match the search request, the results are provided to the requesting user. Ex. 1060, 6:66-7:5. Tanaka also discloses that the search results can be updated dynamically, so that the requesting user is "automatically notified if an additional user becomes proximate to said first user wherein said additional user meets criterion established in said search of said database." Ex. 1060, Claim 20.

147. A POSITA would have been motivated to modify Enzmann to incorporate such functionalities for the reasons given above with respect to claims 8 and 9a-c, as well as those in the main document of my declaration. Ex. 1021, ¶¶ 203-206. Therefore, it is my opinion that Enzmann in view of Sheha and Tanaka makes obvious claim 9d.

148. For the foregoing reasons, it is my opinion that Sheha in view of Tanaka makes claim 9 obvious.

9. Claim 10 – The system of claim 1, wherein a second location is associated with said second wireless device and said location of said first wireless device is displayed relative to said second location of said second wireless device.

149. As I discussed above with respect to claim 1f, Sheha discloses that a

displayable form of location information is a map that can be displayed by a mobile telephone. Ex. 1041, 4:52-58. In addition, Sheha shows that its maps can include markers for both the requesting and target devices.

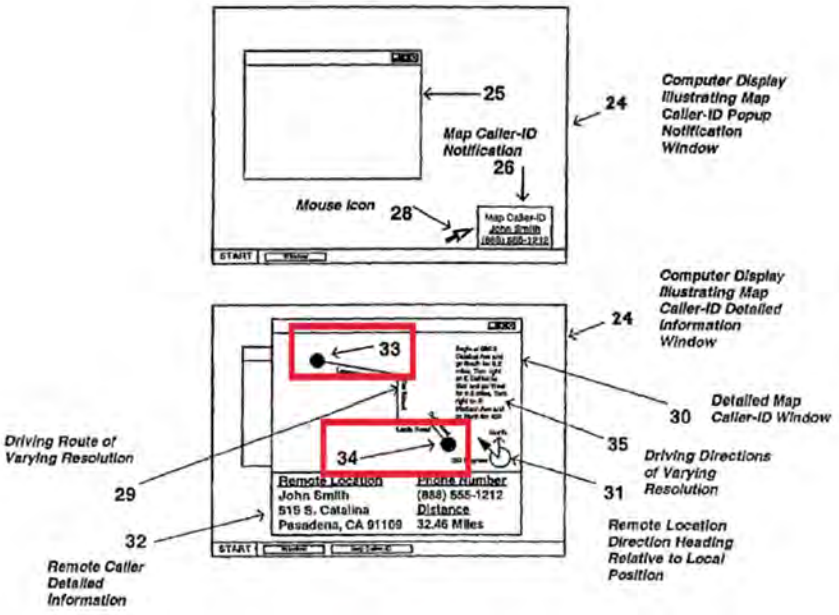


FIG. 5

150. And while Figure 5 is described as showing location information from the perspective of the device being called by another device, it is my opinion that either or both of the requesting or target devices can provide such a map since each is already capable of displaying a map. Ex. 1041, 4:52-58; *see also id*. at 4:22-26; 5:47-63; 7:35-39, 9:23-39. As I discussed above with respect to claim 1f, a POSITA would have been motivated to modify the Enzmann system to include

such functionality from Sheha. Section IV.B.1.f.

151. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 10.

10. Claim 11 – The system of claim 1, wherein a direction that said second wireless device is traveling in is operable of being displayed.

152. Enzmann describes that its network devices 104 can periodically determine their locations and update the location system. Ex. 1040, 8:20-36. For a system like Enzmann that can be used to track network devices over time, knowing the direction of travel of the network devices 104 would be expected. Ex. 1040, 2:3-15. Similarly, a user would expect their device to provide such so that they could determine whether they are heading towards the target device or not. And as I discussed above with respect to claims 4 and 5, the Enzmann devices already receives the necessary information to determine both direction and speed. Ryden discloses that the speed and direction of travel may be determined for a user's device and a target device. Ex. 1057, 19:34-47; Ex. 1058, 34:3-14, 35:4-11.

153. A POSITA would be motivated to modify Enzmann to determine and display a direction of travel on a map, such as disclosed by Sheha, to better assist in determining whether it is approaching the target device or not, in addition to the reasons given in the main document of my declaration. Ex. 1021, ¶ 197-201. In addition, the POSITA would have had a reasonable expectation of success given

the relatively straightforward calculations needed to determine direction of travel.

154. Therefore, it is my opinion that Enzmann in view of Sheha and Ryden makes obvious claim 11.

11. Claim 12 – The system of claim 1, wherein said second wireless device is operable of being allowed to set location alerts associated with said first wireless device.

155. As I discussed above with respect to claim 8, Tanaka discloses that users can submit search requests and be notified about users of nearby mobile devices that match search terms in the search request. Section IV.B.7. In addition, Tanaka's claim 20 recites that a user may be automatically notified, which is the same thing as an alert.

156. To obtain these alerts, Tanaka describes that a user creates and submits a search request that can include one or more search criteria, that can include a particular search radius. Ex. 1060, 4:50-64, 6:46-55. If a particular target device satisfies the criteria, the requesting user will be alerted. Ex. 1060, 6:66-7:5. Such alerts are associated with whichever devices satisfy the search criteria. In addition, Tanaka allows a user to use one of those criteria to identify another user, such as by identifying a corresponding username or device identifier, such as a phone number, or any other information contained within other users' user_profiles. Ex. 1060, 5:56-6:9; 6:46-7:5. A POSITA would have been motivated to modify Enzmann to incorporate such functionality for the reasons given above

with respect to claims 8 and 9. Sections IV.A.7 and IV.A.8 Ex. 1021, ⁋⁋ 203-206.

157. Therefore, it is my opinion that Enzmann in view of Sheha and Tanaka discloses claim 12.

12. Claim 13 – The system of claim 1, wherein said permission is assigned for a period of time.

158. Enzmann describes different ways for a user to provide permission to another user to obtain their location, including providing a list of authorized requestors or, as I discussed above with respect to claim 1c, sending a request to the user if a requestor who has not been authorized requests the user's location. Section IV.B.1.c; Ex. 1040, 2:35-41, 5:28-38, 7:26-58. In such a case, permission is provided to obtain the location and lasts for the duration of that request. But in addition, for requestors on the user's list of authorized requestors, they are only authorized for the period of time they are included on the user's list of authorized requestors. Ex. 1040, 2:35-41, 7:26-58. In my opinion, this also meets the claim language.

159. Therefore, it is my opinion that Enzmann in view of Sheha makes obvious claim 13.

13. Claim 14 – The system of claim 1, wherein said second wireless device is operable of being alerted when said first wireless device enters a geographic region.

160. As I discussed above with respect to claim 8, Enzmann describes that

its system could be used with an instant messaging service to only show the user's friends "who are in the same city as the user." Section IV.B.7; Ex. 1040, 9:15-30. Since this describes that the user can be notified of other users in the same city, it discloses that the user is "alerted when said first wireless device enters a geographic region." But in addition, as I discussed with respect to Tanaka, Tanaka describes that a user of any device in its system may submit a search request and be notified when a matching user satisfies search criteria, such as a search radius, which specifies a geographic region. Ex. 1060, 6:46-7:5, claim 20. Moreover, a POSITA would be motivated to combine Enzmann with Tanaka for the reasons I discussed above with respect to claims 8, 9, and 12, and would have a reasonable expectation of success. Sections IV.B.7, IV.B.8, IV.B.11; Ex. 1021, ⁋⁋ 203-206.

161. Therefore, it is my opinion that Enzmann in view of Sheha alone or also in view of Tanaka makes obvious claim 14.

14. Claim 15 – The system of claim 1, wherein said facility stores a history of locations for said first wireless device.

162. As I discussed above with respect to claim 1, wireless devices in the Enzmann system provide their locations to the location server 100, which stores them in a location database 300. Sections IV.B.1.a, IV.A.1.d, and IV.A.1.e; Ex. 1040, Fig. 3, 8:20-36. Ganesh discloses that a server can store call histories that includes locations for wireless devices, such as may be represented by cellular sites

that the wireless device has previously connected to. Ex. 1060, 4:29-35, 6:55-7:20, 7:62-65. A history of locations may be extensive, or it may only include two or more received locations. A POSITA would have been motivated to incorporate such functionality into the Enzmann system and would have had a reasonable expectation of success, as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 173-175, 177. For example, because Enzmann's location server 100 already receives repeated updates from its network devices 104, modifying its location database 300 to store more than one received location would be a simple task for a POSITA.

163. Therefore, it is my opinion that Enzmann in view of Sheha and Ganesh makes obvious claim 15.

15. Claim 16 – The system of claim 1, wherein said server stores a history of locations for said first wireless device and said history is utilized to provide an approximate location of said first wireless device.

164. As I noted above with respect to Ground 1, claim 16 bodily incorporates claim 15 and adds that "said history is utilized to provide an approximate location of said first wireless device." Section IV.A.14. Ganesh describes that its history feature can be used to provide an approximate location of a wireless device, such as based on the call history and an associated cell site. Ex. 1060, 4:29-35, 6:55-7:20, 7:62-65. A POSITA would have been motivated to

incorporate such functionality into the Enzmann system and would have had a reasonable expectation of success for the same reasons as discussed above with respect to claim 15 and as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 173-175, 177.

165. Therefore, it is my opinion that Enzmann in view of Sheha and Ganesh makes obvious claim 16.

16. Claim 17 – The system of claim 1, wherein said first wireless device is OFF when said location is provided to said second wireless device.

166. As I have discussed above with respect to several claims, Enzmann discloses that location information can be stored in Enzmann's location database 300. Sections IV.B.1.a; Ex. 1040, 8:20-36, Fig. 3. As a result, a wireless device can request the location of a target wireless device and obtain that location from the location server 100, regardless of whether the target wireless device is on or off. Ganesh describes this same functionality because it provides location information from call histories for devices that are turned off or otherwise not connected to the network. Ex. 1060, 7:62-65, 6:55-7:20.

167. A POSITA would have been motivated to incorporate such functionality into the Enzmann system and would have had a reasonable expectation of success for the same reasons as I discussed in the main portion of my declaration. Ex. 1021, ⁋⁋ 173-175, 177.

168. Therefore, it is my opinion that Enzmann in view of Sheha alone or also in view of Ganesh makes obvious claim 17.

17. Claim 18 – A system comprising

169. Claim 18's preamble simply recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile devices.

a. *Claims 18a-b – a first wireless device, wherein a first location of said first wireless device is operable of being determined" and "a second location of a second wireless device is operable of being determined*

170. Claims 18a and 18b recite substantially the same functionality as recited in claim 1a, though these claims recite two wireless devices. But Enzmann describes that each of its network devices 104 can determine their locations. IV.B.1.a.

171. Thus, it is my opinion that Enzmann discloses claims 18a and 18b for the same reasons as claim 1a.

b. *Claim 18c – said first and second locations are operable of being provided to a server, wherein said server is located remotely from said first and second wireless devices.*

172. Claim 18c recites similar limitations as claim 1a, though like claims 18a-b, claim 18c recites two wireless devices. But Enzmann describes that each of its wireless devices can provide their locations to the location server 100, which is remote from the network devices 104. Ex. 1040, 8:20-36, Fig. 3.

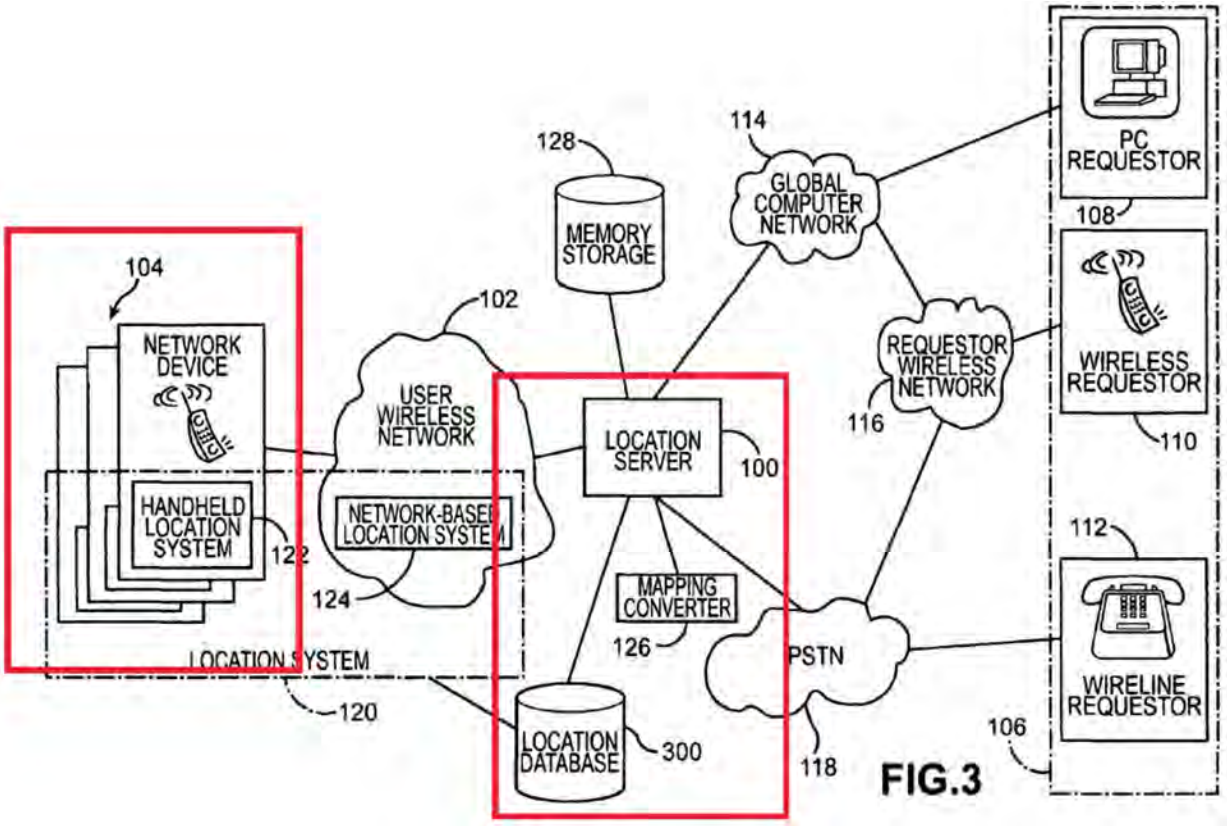


FIG.3

173. Thus, it is my opinion that Enzmann discloses claim 18c.

c. *Claim 18d – said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device.*

174. Claim 18d recites similar limitations as claim 1b. Thus, it is my opinion that Enzmann discloses claim 18d for the same reasons as claim 1b.

d. ***Claim 18e – said second location is operable of being requested by said first wireless device.***

175. Claim 18e recites similar limitations as claim 1b. In the Enzmann system, each device can request the location of the other devices. See, e.g., Ex. 1040, 3:1-16. Thus, it is my opinion that Enzmann discloses claim 18e for the same reasons as claim 1b.

e. ***Claim 18f – provided by said first wireless device for said second wireless device to obtain said first location.***

176. Claim 18f recites similar limitations as claim 1c. Thus, it is my opinion that Enzmann discloses claim 18f for the same reasons as claim 1c.

f. ***Claim 18g – a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location.***

177. Claim 18g recites similar limitations as claim 1c. Thus, it is my opinion that Enzmann discloses claim 18g for the same reasons as claim 1c.

g. ***Claim 18h – said first and second permissions are operable of being stored on said server.***

178. Claim 18h recites similar limitations as claim 1d, and each network device can provide an access list. Ex. 1040, 5:28-38. Thus, it is my opinion that Enzmann discloses claim 18h for the same reasons as claim 1d.

h. ***Claim 18i – said first location from said server is operable of being provided to said second wireless device as a result of said first permission outside of said call.***

179. Claim 18i recites similar limitations as claim 1e. Thus, it is my opinion that Enzmann discloses claim 18i for the same reasons as claim 1e.

i. *Claim 18j – said second location is operable of being provided from said server to said first wireless device as a result of said second permission."*

180. Claim 18j recites similar limitations as claim 1e. Thus, because each device can provide its location to a requesting device, it is my opinion that Enzmann discloses claim 18j for the same reasons as claim 1e.

j. *Claim 18k – wherein said first wireless device is operable of providing a first map from a perspective of said first wireless device.*

181. Claim 18k recites similar limitations as claim 1f. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 18k for the same reasons as claim 1f.

182. For the reasons given above, it is my opinion that Enzmann in view of Sheha make obvious claim 18.

18. Claim 19 – A system comprising:"

183. Claim 19's preamble simply recites "A system comprising." I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Enzmann discloses systems to allow a user to provide access information, such as a username and password, to obtain location information for other user's mobile

devices.

a. ***Claims 19a-b – a first wireless device operable of determining a first location of said first wireless device; a second location of a second wireless device, is operable of being determined.***

184. Claims 19a and 19b recite substantially the same functionality as recited in claim 18a, though these claims recite two wireless devices. But Enzmann describes that each of its wireless devices can determine their locations. Ex. 1040, 5:13-27

185. Thus, it is my opinion that Enzmann discloses claims 19a and 19b for the same reasons as claims 18a-b.

b. ***Claim 19c – said first and second locations are operable of being provided to a server, said server is located remotely from said first and second wireless devices.***

186. Claim 19c recites similar limitations as claim 18c. Thus, it is my opinion that Enzmann discloses claim 19c for the same reasons as claim 18c.

c. ***Claim 19d – said first location is operable of being requested by said second wireless device outside of a call for communication between said first wireless device and said second wireless device.***

187. Claim 19d recites similar limitations as claim 18d. Thus, it is my opinion that Enzmann discloses claim 19d for the same reasons as claim 18d.

d. ***Claim 19e – said second location is operable of being requested by said first wireless device.***

188. Claim 19e recites similar limitations as claim 18e. Thus, it is my

opinion that Enzmann discloses claim 19e for the same reasons as claim 18e.

e. ***Claim 19f – a first permission is operable of being provided by said first wireless device for said second wireless device to obtain said first location.***

189. Claim 19f recites similar limitations as claim 18f. Thus, it is my opinion that Enzmann discloses claim 19f for the same reasons as claim 18f.

f. ***Claim 19g – a second permission is operable of being provided by said second wireless device for said first wireless device to obtain said second location.***

190. Claim 19g recites similar limitations as claim 18g. Thus, it is my opinion that Enzmann discloses claim 19g for the same reasons as claim 18g.

g. ***Claim 19h – said first and second permissions are operable of being stored on said server.***

191. Claim 19h recites similar limitations as claim 18h. Thus, it is my opinion that Enzmann discloses claim 19h for the same reasons as claim 18h.

h. ***Claim 19i – said first location is operable of being provided from said server to said second wireless device as a result of said first permission outside of said call.***

192. Claim 19i recites similar limitations as claim 18i. Thus, it is my opinion that Enzmann discloses claim 19i for the same reasons as claim 18i.

i. ***Claim 19j – said second location is operable of being provided from said server to said first wireless device as a result of said second permission.***

193. Claim 19j recites similar limitations as claim 18j. Thus, it is my opinion that Enzmann discloses claim 19j for the same reasons as claim 18j.

j. ***Claims 19k-l – updates of said first location are operable of being provided to said second wireless device as a result of said first permission; updates of said second location are operable of being provided to said first wireless device as a result of said second permission***

194. Claims 19k and 19l recites similar limitations as claim 7, which I discussed above. Section IV.B.6. In particular, Enzmann discloses the two different wireless devices can periodically update the location server 100 with their respective positions. Ex. 1040, 8:20-36. In addition, Enzmann discloses that its wireless devices can explicitly or implicitly, e.g., in the background, obtain updated versions of the positions of other devices. Ex. 1040, 2:35-41, 7:54-58, 9:15-30. Thus, each of the devices provides updated locations to other devices via the location server 100.

195. Thus, it is my opinion that Sheha discloses claims 19k-l.

k. ***Claim 19m: "wherein said first wireless device is operable of providing a first map from a perspective of said first location."***

196. Claim 19m recites similar limitations as claim 1f. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 19m for the same reasons as claim 1f.

197. For the reasons given above, it is my opinion that Enzmann in view of Sheha make obvious claim 19.

19. Claim 20 – The system of claim 18, wherein said first and second wireless devices are wireless telephones.

198. Claim 20 recites similar limitations as claim 2. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 20 for the same reasons as claim 2.

20. Claim 21 – The system of claim 18, wherein said second wireless device displays a map with a location marker associated with said first location.

199. Claim 21 recites similar limitations as claim 3. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 21 for the same reasons as claim 3.

21. Claim 22: "The system of claim 18, wherein a speed of said first wireless device is traveling is operable of being determined."

200. Claim 22 recites similar limitations as claim 4. Thus, it is my opinion that Enzmann in view of Sheha and Ryden makes obvious claim 22 for the same reasons as claim 4.

22. Claim 23: "The system of claim 18, wherein the direction said first wireless device is traveling is operable of being determined."

201. Claim 23 recites similar limitations as claim 5. Thus, it is my opinion that Enzmann in view of Sheha and Ryden makes obvious claim 23 for the same reasons as claim 5.

23. Claim 24: "The system of claim 18, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location."

202. Claim 24 recites similar limitations as claim 6. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 24 for the same reasons as claim 6.

24. Claim 25: "The system of claim 18, wherein said second wireless device is operable of being alerted when said first wireless device is within a distance of said second wireless device."

203. Claim 25 recites similar limitations as claim 8. Thus, it is my opinion that Enzmann in view of Sheha and Tanaka makes obvious claim 25 for the same reasons as claim 8.

25. Claim 26: "The system of claim 19, wherein said first and second wireless devices are wireless telephones."

204. Claim 26 recites similar limitations as claim 2. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 26 for the same reasons as claim 2.

26. Claim 27: "The system of claim 19, wherein said second wireless device displays a map with a location marker associated with said first location."

205. Claim 27 recites similar limitations as claim 3. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 27 for the same reasons as claim 3.

27. Claim 28: "The system of claim 19, wherein a speed said first wireless device is traveling is operable of being determined."

206. Claim 28 recites similar limitations as claim 4. Thus, it is my opinion that Enzmann in view of Sheha and Ryden makes obvious claim 28 for the same reasons as claim 4.

28. Claim 29: "The system of claim 19, wherein the direction said first wireless device is traveling is operable of being determined."

207. Claim 29 recites similar limitations as claim 5. Thus, it is my opinion that Enzmann in view of Sheha and Ryden makes obvious claim 29 for the same reasons as claim 5.

29. Claim 30: "The system of claim 19, wherein said first permission is operable of being removed, by said first wireless device, for said second wireless device to obtain said first location."

208. Claim 30 recites similar limitations as claim 6. Thus, it is my opinion that Enzmann in view of Sheha makes obvious claim 30 for the same reasons as claim 6.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 7

TABLE OF CONTENTS

I. U.S. Patent No. 11,234,117

1. I have been informed that the earliest priority date to which the Patent Owner may claim the '117 Patent is entitled to is March 25, 2002.

A. Summary of the '117 Patent

2. The '117 Patent relates to systems and methods for remotely determining a device's location. Ex. 1007, 1:18-20. According to the specification, "any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114." *Id.*, 4:24 – 27. Another feature described in the '117 Patent is that "every user may assign rights (e.g., govern the security) to whom may or may not locate him/her." *Id.*, 4:56-58.

3. Figure 2 depicts a method to obtain another user's location, which generally includes sending a request for a location, determining whether the user is authorized, and, if so, providing the location to the requestor.

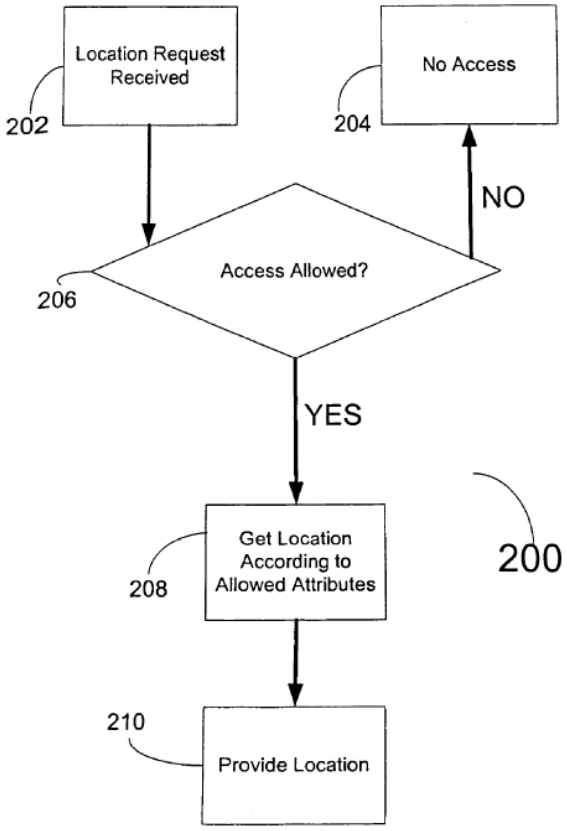


FIG. 2

4. Figure 6 (below) shows a display screen that provides location information. *Id.*, FIG. 6; 7:23-27.

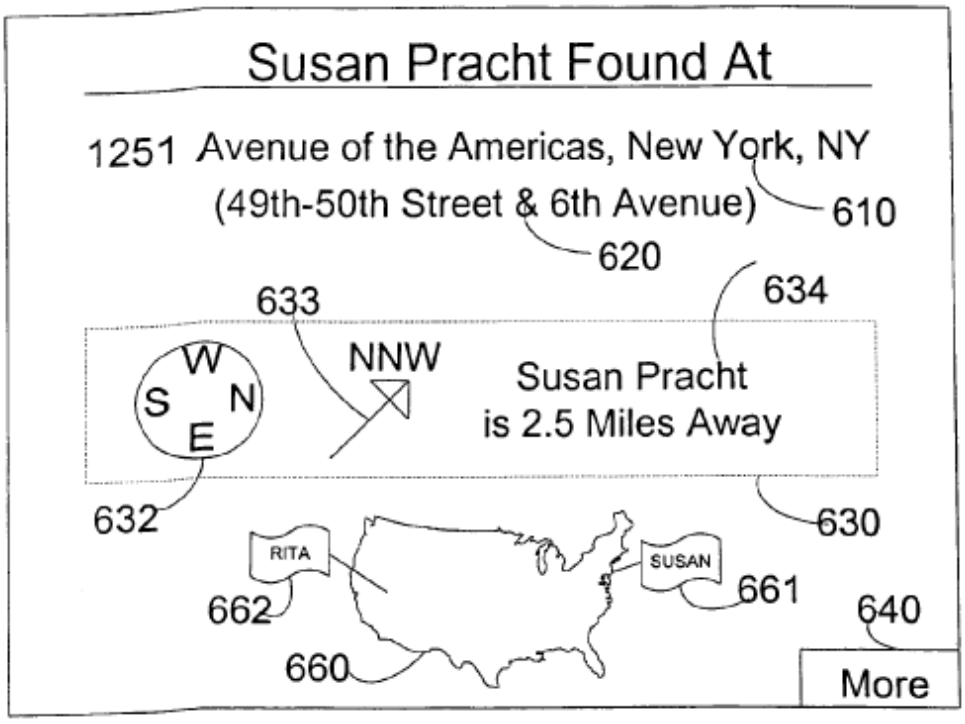


FIG. 6

5. Available location information, "[d]epending on what scope the requesting user has access to . . . may include, for example, the country, state, city, exact location, or any combination thereof of location information to the user." *Id.*, 7:36-39. The location information may also include directional information, and a map may be included to show locations of multiple users. *Id.*, 7:51-8:21, 8:40-51.

6. According to the '117 Patent, the amount of information provided on the display screen is limited to the scope of the requesting user's access rights. *Id.*, 7:26-27, FIG. 8. The '117 Patent also describes permitting a user to give or modify access to location rights to another user, e.g., the user may select which users may

access his or her location information and what information a specific user may access. *Id.*, 9:10-26, FIG. 10. A user may also set up alerts depending on the location of other users' phones. *Id.*, 9:27-36, FIGS. 11-12. For example, a user might receive an alert "if the requested user is in a specific city or the same city as the user of display 1100, is within a certain distance, or if a user located the user of display 1100." *Id.*

7. A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. *Id.*, 11:56-58. "Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." *Id.*, 11:58-59. After a location is requested, access rights to the requested location for the requesting device and/or user are checked. *Id.*, 11:64-2:4. If the requestor has access rights, location information is provided to the requestor. *Id.*, 12:14-16. If the requestor has not been assigned access rights, then the requestor is informed that he or she does not have access rights to obtain the location information. *Id.*, 12:28-32.

B. Claims

8. The '117 Patent has 92 claims, which are as follows.

1. A wireless telephone comprising:
a processor;
a positioning system for determining a location of said wireless telephone; and
memory storing programming capable of:

providing said location of said wireless telephone to a remote server;

instructing said remote server to change a list of users on said remote server for a profile associated with said wireless telephone that are allowed to access said location by way of said remote server providing said location from said remote server to at least one of said users of said list of users, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and

receiving and displaying directional information to one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and a second location associated with said one of said plurality of wireless telephones.

2. The wireless telephone of claim 1, wherein said programming capable of instructing said remote server to change a list of users comprises programming capable of instructing said remote server to add an additional user to said list of users.

3. The wireless telephone of claim 1, wherein said programming is further capable of displaying the name of said second location.

4. The wireless telephone of claim 1, wherein said programming is further capable of displaying the distance between said first wireless telephone and said one of said plurality of wireless telephones.

5. The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

6. The wireless telephone of claim 1, wherein said programming is further capable of receiving an alert regarding a user of said list of users based on a location of a wireless telephone associated with said user.

7. The wireless telephone of claim 6, wherein said programming is further capable of requesting said remote server to provide said alert.

8. The wireless telephone of claim 7, wherein said alert is geographic area-based, said programming is further capable of specifying

said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said list of users is within said geographic area.

9. The wireless telephone of claim 1, wherein said programing is further capable of receiving an alert when a user of said list of users locates said wireless telephone.

10. The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a watch.

11. The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a radio.

12. The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a car.

13. The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

14. The wireless telephone of claim 1, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

15. A wireless telephone comprising:

a processor;

a positioning system for determining a location of said wireless telephone; and

memory storing programming capable of:

displaying a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones;

receiving a first manual input in a form of a selection of one of said plurality of users;

receiving an input in a form of a login and a second manual input in a form of a password;

providing said login and said password to a remote server for use in determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, said determining including identifying a user of said wireless telephone using said login, determining said password is associated with said login, and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said wireless telephone,

assigning location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining said location of said wireless telephone;

receiving said location information for said one of said plurality of wireless telephones from a server; and

displaying said location information.

16. The wireless telephone of claim 15, wherein said programming is further capable of displaying an option to obtain directions from said first wireless telephone to said one of said plurality of wireless telephones associated to said selected one of said plurality of users.

17. The wireless telephone of claim 15, wherein said programming is further capable of receiving a manual input for modifying said location access rights.

18. The wireless telephone of claim 15, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

19. The wireless telephone of claim 15, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

20. The wireless telephone of claim 15, wherein said programming is further capable of receiving an alert regarding a user of said plurality of

users based on a location of a wireless telephone associated with said user of said plurality of users.

21. The wireless telephone of claim 20, wherein said programming is further capable of requesting said remote server to provide said alert.

22. The wireless telephone of claim 21, wherein said alert is geographic area-based, said programming is further capable of specifying said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said plurality of users is within said geographic area.

23. The wireless telephone of claim 15, wherein said programing is further capable of receiving an alert when a user of said plurality of users locates said wireless telephone.

24. The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a watch.

25. The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a radio.

26. The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a car.

27. The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

28. The wireless telephone of claim 15, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

29. A wireless telephone comprising:

a processor;

a positioning system for determining a location of said wireless telephone; and

memory storing programming capable of:

receiving user information comprising a manually entered login associated with a user of said wireless telephone and a manually entered password associated with said login;

providing said location for recording on a remote system in association with said user information;

selecting a location-based event that is based, at least in part, on a location of a second wireless telephone, wherein said location-based event is operable to be manually pre-selected from a list of at least three types of location-based events; and

receiving a location-based event notification corresponding to said selected location-based event as a result of, at least in part, location access rights of said wireless telephone from said second wireless telephone,

wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.

30. The wireless telephone of claim 29, wherein said first wireless device comprises a global positioning system that is operable to provide said location.

31. The wireless telephone of claim 29, wherein said programming is further capable of displaying a display screen on said wireless telephone, after receiving said location-based event notification, that includes a first selectable option for providing a map associated with said location of said second wireless telephone.

32. The wireless telephone of claim 29, wherein said programming is further capable of displaying after receiving said location-based event notification a travel time between a location of said wireless telephone and a location of said second wireless telephone.

33. The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow a user of said second wireless telephone to access said location of said wireless telephone for an indefinite period of time.

34. The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow a user of said second wireless telephone to access said location of said wireless telephone for only a specific period of time.

35. The wireless telephone of claim 29, wherein said programming is further capable of specifying said region, and said region-based location-based event indicates that said location of said second wireless telephone is within said region.

36. The wireless telephone of claim 29, wherein said programing is further capable of receiving an alert when a user of said second wireless telephone locates said wireless telephone.

37. The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a watch.

38. The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a radio.

39. The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a car.

40. The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying information indicating time to reach a second location associated with said second wireless telephone from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

41. The wireless telephone of claim 29, wherein said programming is further capable of downloading from said remote system a phone book corresponding to a user of said wireless telephone.

42. A wireless telephone comprising:

a processor;

a positioning system for determining a location of said wireless telephone; and

memory storing programming capable of:

requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;

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;

transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and

receiving said location of said second wireless device from said server dependent upon said access rights.

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

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.

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

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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

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

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.

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

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.

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.

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.

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.

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.

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

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

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

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.

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.

73. A wireless telephone comprising:

a processor;

a positioning system for determining a location of said wireless telephone; and

memory storing programming capable of:

providing said location to a remote system, wherein said location is operable of being requested by a second wireless device outside of a call for communication between said wireless telephone and said second wireless device;

providing a permission for said second wireless device to access location information about said location, said permission operable of being stored in said remote system, wherein said remote system is located remotely from said wireless telephone and said second wireless device, said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call, wherein said programming of said wireless telephone is further operable of providing a first map provided with respect to said location.

74. The wireless telephone of claim 73, wherein said second wireless device comprises a wireless telephone.

75. The wireless telephone of claim 73, wherein said programming is further capable of displaying a map with a location marker associated with a location of said second wireless device.

76. The wireless telephone of claim 73, wherein said programming is further capable of removing said permission, by said wireless telephone, for said second wireless device to obtain said location.

77. The wireless telephone of claim 73, wherein said positioning system is operable to receive signals from a plurality of positioning satellites, and said location is operable to be updated by said positioning system, and said programming is further capable of providing said updated location to said remote system.

78. The wireless telephone of claim 73, wherein said programming is further capable of receiving an alert when said second wireless device is within a distance of said wireless telephone.

79. The wireless telephone of claim 73, wherein said programming is further capable of displaying said location of said wireless telephone relative to a second location of said second wireless device.

80. The wireless telephone of claim 73, wherein said programming is further capable of setting location alerts associated with said second wireless device.

81. The wireless telephone of claim 73, wherein said programming is further capable of assigning said permission for a specific period of time.

82. The wireless telephone of claim 73, wherein said programming is further capable of being alerted when said second wireless device enters a geographic region.

83. The wireless telephone of claim 73, wherein said programming is further capable of displaying said first map from a perspective of said first wireless device, said map identifying said location of said wireless telephone and a location of said second wireless device.

84. The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

85. The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.

86. The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote 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.

87. The wireless telephone of claim 73, wherein said programing is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.

88. The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a watch.

89. The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a radio.

90. The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a car.

91. The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying information indicating time to reach a location 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.

92. The wireless telephone of claim 73, wherein said programming is further capable of downloading from said remote system a phone book corresponding to a user of said wireless telephone.

II. Claim Construction

9. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

10. In my opinion the claims of the ’117 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

III. Analysis and Identification of how the Claims are Unpatentable

A. Ground 1: Claims 1-92 are unpatentable as anticipated by or obvious over Sheha, alone or in combination with McNulty, Degnbol, Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, and/or Bedingfield

11. The Sheha patent anticipates, or at least renders obvious, a wireless telephone configured to provide its location to a remote server, manage users able

to obtain its location, and receive and display directional information to other wireless telephones as recited in claim 1.

12. The Sheha patent also discloses, or at least renders obvious, a wireless telephone configured to obtain and display a location of another wireless telephone based on access rights as recited in claim 15, including receiving a login and password and providing them to a remote server, and based on the login and password and determined access rights, receiving and displaying the wireless telephone location. The Sheha patent also discloses, or at least renders obvious, a wireless telephone configured to obtain a location-based event notification as recited in claim 29, including receiving a login, selecting a location-based event based on a location of a second wireless telephone, and receiving the location-based event notification based on location access rights.

13. The Sheha patent also renders obvious a wireless telephone configured to obtain a location of another wireless device based on access rights as recited in claim 42, including requesting the location from a remote server, requesting location access rights from the remote server, and receiving the location of the wireless device from the server based on the access rights. Sheha also discloses, or at least renders obvious, a wireless telephone configured to provide its location to a remote system and provide permission for other devices to access the location as recited in claim 73, including doing so outside of a call.

14. Sheha also discloses many features of the dependent claims. To the extent Sheha may not explicitly disclose certain features of claims 1-92, McNulty, Degnbol, Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, and/or Bedingfield disclose these features. It is my opinion that Sheha, alone or in combination with McNulty, Degnbol, Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, and/or Bedingfield, renders claims 1-92 obvious.

1. Independent claim 1

15. It is my opinion that claim 1 is anticipated by Sheha.

a. *Claim 1 Preamble – A wireless telephone comprising:*

16. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses methods performed using wireless telephones. Ex. 1041, 3:38-40, 5:46-67, claims 12, 23, and 44, FIGS. 2 and 3. Thus, Sheha discloses the features of the preamble of claim 1.

b. *Claim 1 [a] – a processor;*

17. Sheha refers to the "processing capability" of "wireless telephones," which implies the inclusion of a processor. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had processors, as some sort of processor is necessary for performing computations. This was a routine and conventional component of wireless telephones. Thus, Sheha discloses the features

of claim 1a.

c. *Claim 1 [b] – a positioning system for determining a location of said wireless telephone; and*

18. Sheha discloses a positioning system for determining a location of a wireless telephone. For example, Sheha describes "an onboard positioning information device" that calculates the location of a mobile device. Ex. 1041, 10:5-11, 12:32-33. This was a common feature of mobile devices such as wireless telephones. Thus, Sheha discloses the features of claim 1b.

d. *Claim 1 [c] – memory storing programming capable of:*

19. Sheha states that "current wireless phones . . . have . . . limited memory," i.e., current wireless phones have memory. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had memory, which was a routine and conventional component of wireless telephones. Sheha implies the memory storing programming because Sheha's wireless telephones are described as performing specific tasks, which a person skilled in the art would have understood as something achieved using programming stored to memory. Storing programming to a memory of a wireless telephone was also routine and conventional at the time. Thus, Sheha discloses the features of claim 1c.

e. *Claim 1 [d] – providing said location of said wireless telephone to a remote server;*

20. Sheha discloses providing the location of a wireless telephone to a

remote server. Specifically, Sheha states that "the mobile device . . . send[ing] . . . position information to the ODAS." Ex. 1041, 10:48-50. The ODAS is a server ("online database and application server"). Ex. 1041, 7:22-23. As shown in FIG. 3 of Sheha, reproduced below, the ODAS is remote from the mobile devices, which are remotely connected to the ODAS via a wireless network. Ex. 1041, FIG. 3.

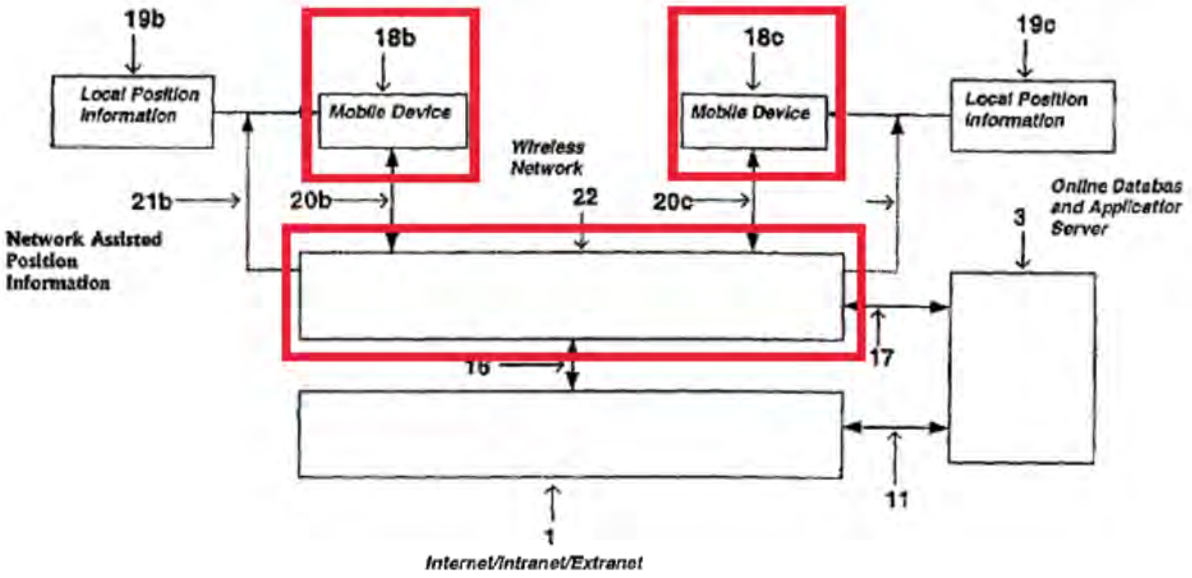


FIG. 3

21. Thus, Sheha discloses the features of claim 1d.

f. ***Claim 1 [e] – instructing said remote server to change a list of users on said remote server for a profile associated with said wireless telephone that are allowed to access said location by way of said remote server providing said location from said remote server to at least one of said users of said list of users, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and***

22. In Sheha, "users can define a group of specific users that have access to [caller privacy] information." Ex. 1041, 11:63-65. The list is stored at the ODAS, which includes a remote server, as described above. The "caller privacy information identif[ies] 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" Ex. 1041, Claim 1. In Sheha, the "caller user group" is analogous to the "list of users on said remote server for a profile" of claim 1 of the '117 Patent. The "caller user group" of Sheha "consist[s] 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." Therefore, each user is associated with a wireless telephone in the telecommunication network. Ex. 1041, claim 1. The "caller user group" of Sheha is used "to identify users that are permitted to access . . . a mobile device's position information . . . based on privacy settings." Ex. 1041, 11:63-12:4.

23. Sheha describes "defining a group of specific users." Ex. 1041, 11:63-

65. A person skilled in the art would have understood that this would involve the ability to change a list of users. For example, as the list is established, it is being changed from listing no users to listing one user to listing two users, and so forth. Thus, Sheha discloses the features of claim 1e.

24. Even if changing the list of users were not implied in Sheha's system, it would have been obvious to include the ability to update the list to add users as needed, as was conventional in contexts such as contact lists. Thus, Sheha claim 1e is also obvious in view of Sheha.

g. ***Claim 1 [f] – receiving and displaying directional information to one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and a second location associated with said one of said plurality of wireless telephones.***

25. It is my opinion that Sheha discloses the features of claim 1f. Sheha discloses receiving and displaying directional information including directions between the wireless telephones. "The ODAS 3 . . . provid[es] real-time driving directions and route information" that can be obtained and displayed by a wireless telephone. Ex. 1041, 11:49-51, 12:8-10, 4:55-58. This information can be used to provide typical navigational functionality, such as routing, driving directions, mapped information, etc." Ex. 1041, 12:27-31.

26. Sheha therefore anticipates claim 1.

2. Dependent claim 2 – The wireless telephone of claim 1, wherein said programming capable of instructing said remote server to change a list of users comprises programming capable of instructing said remote server to add an additional user to said list of users.

27. It is my opinion that Sheha and McNulty disclose the functionality recited in claim 2, and that claim 2 is thus obvious over Sheha, alone or in combination with McNulty. As described above with respect to claim 1, Sheha discloses "defining a group of specific users." Ex. 1041, 11:63-65. As also described above with respect to claim 1, a person skilled in the art would have understood that defining a group of users would obviously involve the ability to change a list of users, such as by adding an additional user to a list of users.

28. The ability to add users to a list was routine and conventional before March 25, 2002. For example, McNulty describes adding an additional user to a list of users. McNulty discloses user configuration of "[f]riends [which] specify another user of the system implemented by pocket server 112." Ex. 1054, 6:51-52. This friend list can be modified by adding a friend, as shown in FIG. 8B, reproduced below. Ex. 1054, FIG. 8B. The highlighted "add friend" icon would enable a user to add another user to the friend list of users.

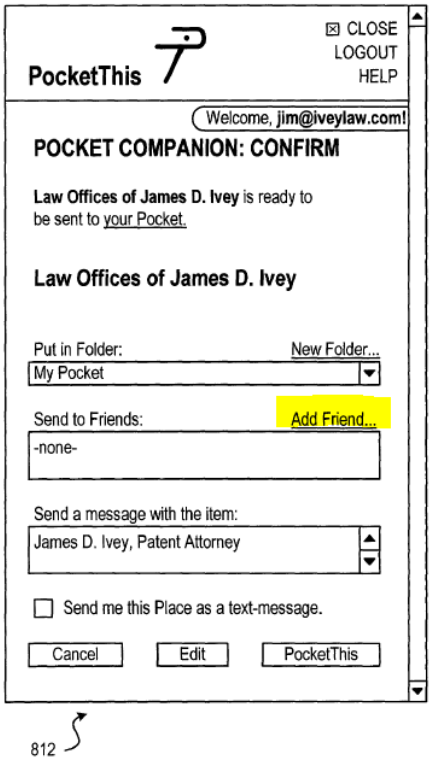


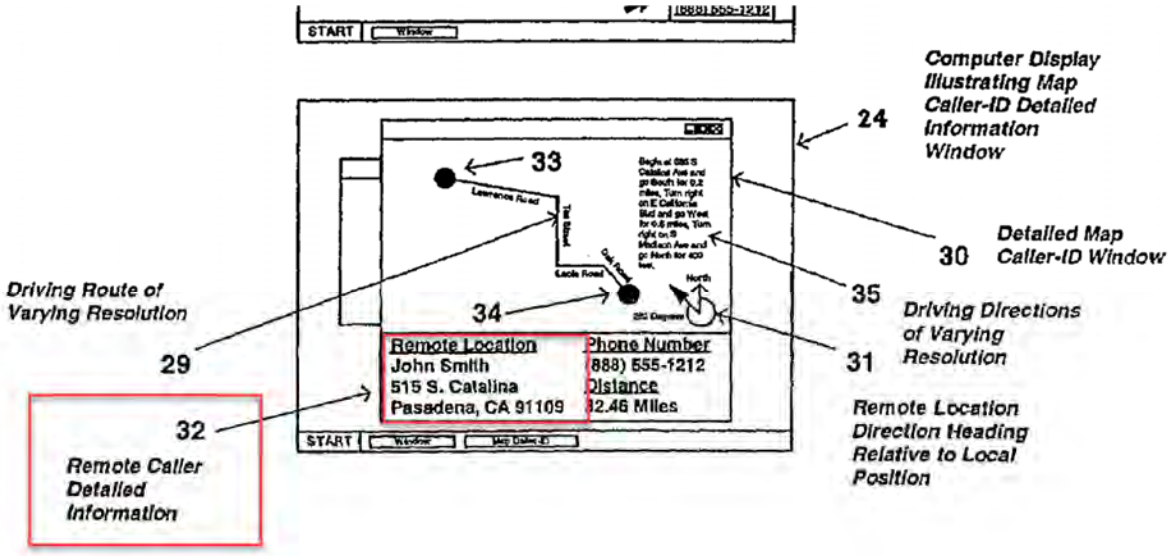
FIGURE 8B

29. A person skilled in the art at the time of the filing of the '117 patent would have understood that typical user list functionality includes the ability to add or remove users from the list. Persons skilled in the art would have been motivated to allow a user to update the list established in Sheha to provide better control over permissions for other users, such as taught by McNulty. Thus, Sheha in view of McNulty renders claim 2 obvious.

3. Dependent claim 3 – The wireless telephone of claim 1, wherein said programming is further capable of displaying the name of said second location.

30. It is my opinion that Sheha discloses the functionality recited in claim

3, and thus claim 3 is anticipated by Sheha. As described above with respect to claim 1, Sheha discloses receiving displaying directional information including directions between the wireless telephones. Ex. 1041, 11:49-51, 12:8-10, 4:55-58. FIG. 5 of Sheha (reproduced in part below with annotation) illustrates an example of such an interface, which clearly shows the name of the remote location and associated caller. Ex. 1041, FIG. 5.

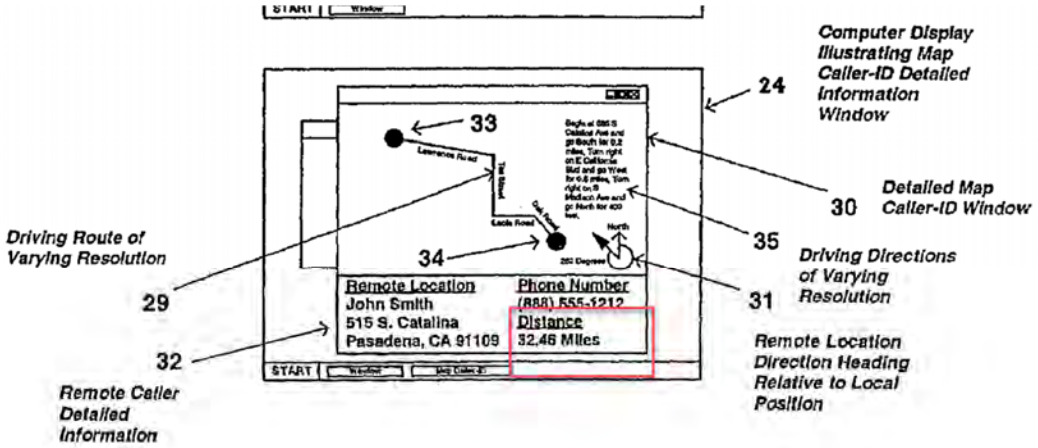


31. Thus, Sheha anticipates claim 3.

4. Dependent claim 4 – The wireless telephone of claim 1, wherein said programming is further capable of displaying the distance between said first wireless telephone and said one of said plurality of wireless telephones.

32. It is my opinion that Sheha discloses the functionality recited in claim 4, and thus claim 4 is anticipated by Sheha. Sheha describes displaying the distance between wireless telephones: "the window 30 can display all of the identification

information 32 of both the originating and destination users, such as addresses and telephone numbers, and **provide driving direction distance information**." Ex. 1041, 9:34-39 (emphasis added). FIG. 5 of Sheha also illustrates displaying distance, as shown in the annotated portion FIG. 5 below. Ex. 1041, FIG. 5. Sheha states that in some embodiments, the mapping and/or direction information is displayed on a mobile device, and can involve the two devices being two wireless telephones. Ex. 1041, 4:52-58, 10:66-11:9.



33. Thus, Sheha anticipates claim 4.

5. Dependent claim 5 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

34. It is my opinion that Sheha discloses the functionality recited in claim 5, and thus claim 5 is anticipated by Sheha. Sheha discloses instructing a remote

server to allow users to access a location of a wireless telephone for only a specific period of time. Sheha describes "allowing any remote device to **request position information for any specified amount of time**." Ex. 1041, 5:44-46 (emphasis added). As described above, with respect to claim 1, Sheha describes a remote server, or ODAS, which can control location sharing between wireless telephones. Ex. 1041, 7:22-23, FIG. 3. Thus, Sheha anticipates claim 5.

6. Dependent claim 6 – The wireless telephone of claim 1, wherein said programming is further capable of receiving an alert regarding a user of said list of users based on a location of a wireless telephone associated with said user.

35. It is my opinion that Degnbol discloses the functionality recited in claim 6, and thus claim 6 is obvious over Sheha and Degnbol. Degnbol discloses receiving an alert on a wireless telephone regarding a user of a list of users based on a location of a wireless telephone associated with the user. Degnbol describes "two-way wireless communication devices (e.g., telephones or pagers) with the ability to alert user 'A's' communication device when a user 'B' enters the proximity of user 'A'. . . to enable user 'A' to be notified of the presence of other users with matching Personal Profiles." Ex. 1047, 18:27-33, 10:17-33. The users in Degnbol are part of a list of users – a Buddy List. 9:32 – 34.

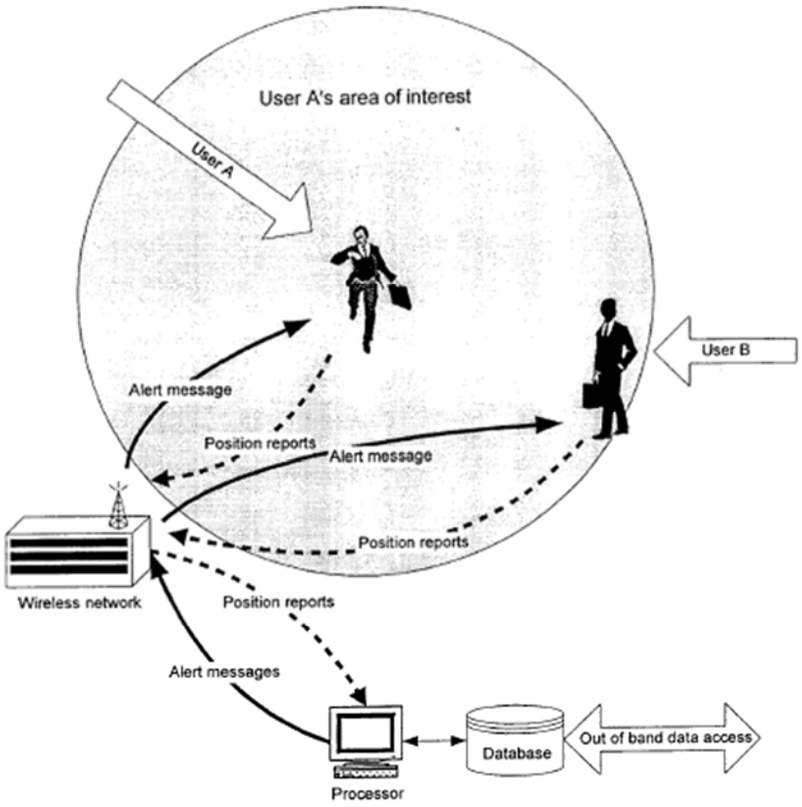


Fig. 1

36. It is my opinion that a person skilled in the art would have been motivated to look for suitable triggers for location sharing between wireless devices to use to enhance Sheha's system. A person skilled in the art would have understood that sending alerts based on device location, as described in Degnbol, would have been an effective enhancement to Sheha's system. A person skilled in the art would have had a reasonable expectation of success in applying the alerts of Degnbol in Sheha's system. The system described in the Sheha patent includes

functionality for determining device location and informing a user of one device of the location of a user of another device. It would have only required routine and conventional programming to add a trigger to provide an alert based on the location. Thus, Sheha in view of Degnbol makes obvious claim 6.

7. Dependent claim 7 – The wireless telephone of claim 6, wherein said programming is further capable of requesting said remote server to provide said alert.

37. It is my opinion that Sheha discloses the functionality recited in claim 7, and thus claim 7 is obvious over Sheha and Degnbol. Sheha describes requesting data from a server based on a mobile device location – "if the mobile device is near such a boundary, the device can request, or pull data from the online server." Ex. 1041, 6:15-16. It would have been obvious to a POSITA in view of Degnbol to implement an alert as this data requested to be provided from the online server. And, Degnbol explicitly describes such data including an alert, which originates from a processor, i.e., server, as shown in FIG. 1 above. (Ex. 1047, FIG. 1, 21:1 – 6). As described above with respect to claim 6, Degnbol discloses the features of claim 6, which would be an obvious and straightforward addition to Sheha's system. Thus, Sheha in view of Degnbol makes obvious claim 7.

8. Dependent claim 8 – The wireless telephone of claim 7, wherein said alert is geographic area-based, said programming is further capable of specifying said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said list of users is within said geographic area.

38. It is my opinion that Degnbol discloses the functionality recited in claim 8, and thus claim 8 is obvious over Sheha and Degnbol. As described above with respect to claim 6, Degnbol describes sending alerts based on a location of another wireless telephone. Degnbol also describes various examples of basing the alerts on geographic area: "For example, user 'A' may choose to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." Ex. 1047, 11:5 – 11. A range of 500 meters is one example of a geographic area. Degnbol describes other examples of geographic areas that can be used for the alerts, "such as a continent, country, district, city, co-ordinate range or a street." Ex. 1047, 6:6-8. Thus, Sheha in view of Degnbol makes obvious claim 8.

9. Dependent claim 9 – The wireless telephone of claim 1, wherein said programing is further capable of receiving an alert when a user of said list of users locates said wireless telephone.

39. It is my opinion that Degnbol discloses the functionality recited in claim 9, and thus claim 9 is obvious in view of Sheha and Degnbol. Degnbol teaches a wireless telephone that is capable of receiving an alert when a user of a list of users locates the wireless telephone. Degnbol states: "[w]hen a match is

found between the Personal Profiles of user 'A' and 'B' an alert is transmitted to user 'A', user 'B', or both, depending on their respective preferences." Ex. 1047, 18:29-31. Degnbol also describes a scenario in which "message is sent to User 'B', informing him that he has been the subject of an alert to another user." Ex. 1047, 21:4-6.

40. A person skilled in the art would have been motivated to look for suitable enhancements Sheha's system, such as sending alerts when a device is located. A person skilled in the art would have found it obvious to include such an alert in Sheha's system in order to let a user know when another user has located them. As described above with respect to claim 6, a person skilled in the art would have had a reasonable expectation of success in applying the alerts of Degnbol in Sheha's system, as it would have only required routine and conventional programming modifications. Thus, Sheha in view of Degnbol makes obvious claim 9.

10. Dependent claim 10 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a watch.

41. It is my opinion that Sheha, alone or in combination with Degnbol, makes obvious a wireless telephone that is capable of receiving and displaying a location of a watch. As described above with respect to claim 1, Sheha discloses receiving and displaying location information on a wireless telephone. Ex. 1041,

11:49-51, 12:8-10, 4:55-58. Sheha lists various devices that can be located, including a "wireless telephone, a personal digital assistant, and a portable computer." Ex. 1041, claim 12. A watch is one obvious choice of a device that could be located. At the time of filing of the '117 Patent, watches were well-known portable devices, and it was well-known for watches to include location functionality.

42. As an example of the well-known nature of locating watches before March 2002, Degnbol discloses a wireless telephone capable of receiving and displaying a location of a watch. Degnbol describes "determining the position of one or more units in the set," where "a unit in the set" can include devices such as "wristwatches." Ex. 1047, 7:4-17, 4:29 – 31, claim 10. Given that Sheha discloses receiving and displaying the location of various devices, it would have been obvious to a person skilled in the art to use Sheha's system to receive and display the location of any suitable device, such as a watch, as disclosed in Degnbol. A person skilled in the art would have had a reasonable expectation of success in doing so, given that Sheha's system is already configured to receive and display location information from various devices, and the type of device located has little bearing on that functionality. Thus, Sheha in view of Degnbol makes obvious claim 10.

11. Dependent claim 11 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a radio.

43. It is my opinion that Sheha and Lelievre make obvious a wireless telephone that is capable of receiving and displaying a location of a radio. As described above with respect to claims 1 and 10, Sheha discloses receiving and displaying location information on a wireless telephone. Ex. 1041, 11:49-51, 12:8-10, 4:55-58. Sheha lists various devices that can be located, including a "wireless telephone, a personal digital assistant, and a portable computer." Ex. 1041, claim 12.

44. A radio is one obvious device that could be located. For example, Lelievre discloses a radio that is "location-aware" and can "transmit[] location information, including its present location" to an external device. Ex. 1051, ¶ 47, FIG. 5. At the time of filing of the '117 Patent, it was known in the art that radios could include location functionality. Therefore, given Sheha's description of locating various types of devices, it would have been obvious to a person skilled in the art to use a system such as Sheha's to locate a radio, as described in Lelievre. Sheha and Lelievre therefore make claim 11 obvious.

12. Dependent claim 12 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a car.

45. Sheha discloses receiving and displaying a location of a car. Sheha

describes "pass[ing] any or all of that information to an additional navigation or computing device, such as an in-vehicle navigation system or a mobile computer, in order for that additional navigation or computing device to make better use of the acquired position information, such as for improved route calculation and/or improved display." Ex. 1041, 3:37-49. FIGS. 6 and 7 of Sheha show such a system including an in-vehicle mobile navigation device. Ex, 1041, FIGS. 6-7. FIG. 7 (reproduced below) shows a mobile navigation device 45 in a motor vehicle 39b, connected to the server 3 from which location information can be received. Ex, 1041, FIGS. 6-7,12:57-13:31.

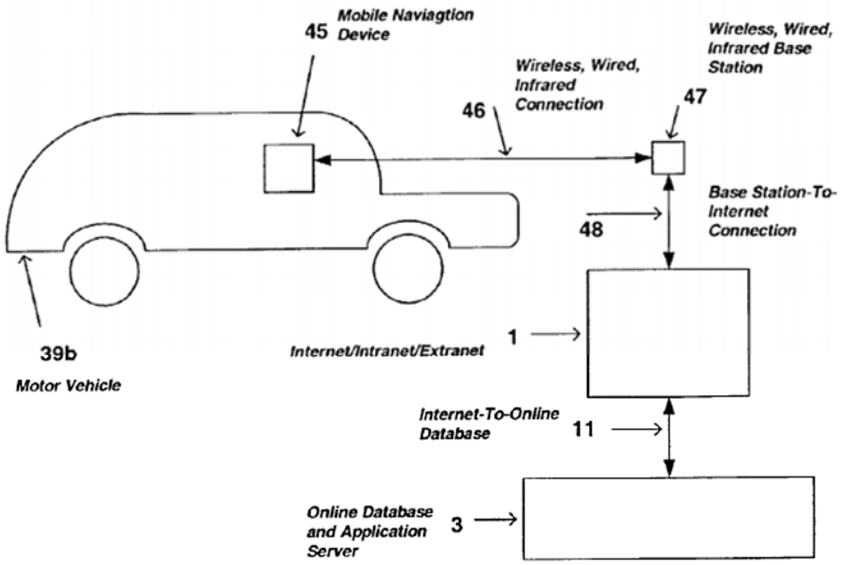
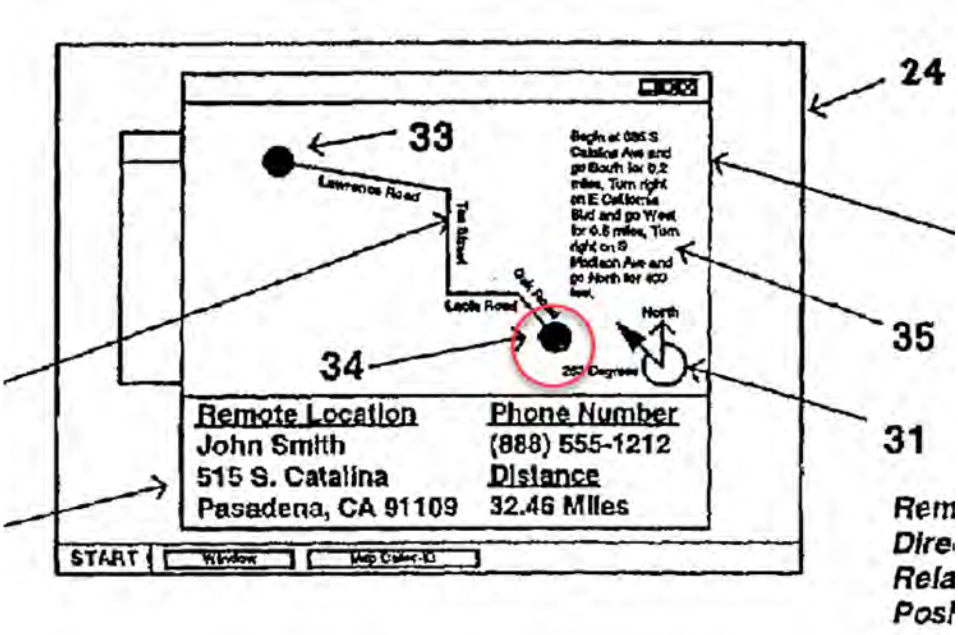


FIG. 7

As shown in FIG. 5 of Sheha (reproduced in part below with annotation), displayed

information includes a map location 34 of the destination telephone number, which is the location of the vehicle in the in-vehicle navigation system implementation. Ex. 1041, FIG. 5, 9:23-28.



Therefore, Sheha's system receives and displays the location of a car. Thus, Sheha anticipates claim 12.

13. Dependent claim 13 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

46. It is my opinion that Sheha and Bedingfield disclose the functionality recited in claim 13, and thus claim 13 is obvious over Sheha and Bedingfield. Sheha describes receiving and displaying direction-related information: "The

ODAS . . . updates each mobile device with the other's position information, thus providing real-time driving directions and route information." Ex. 1041, 11:44-51. This can include "driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." Ex. 1041, 9:30-39; FIG. 5. Therefore, Sheha's system can display different information useful for navigational purposes.

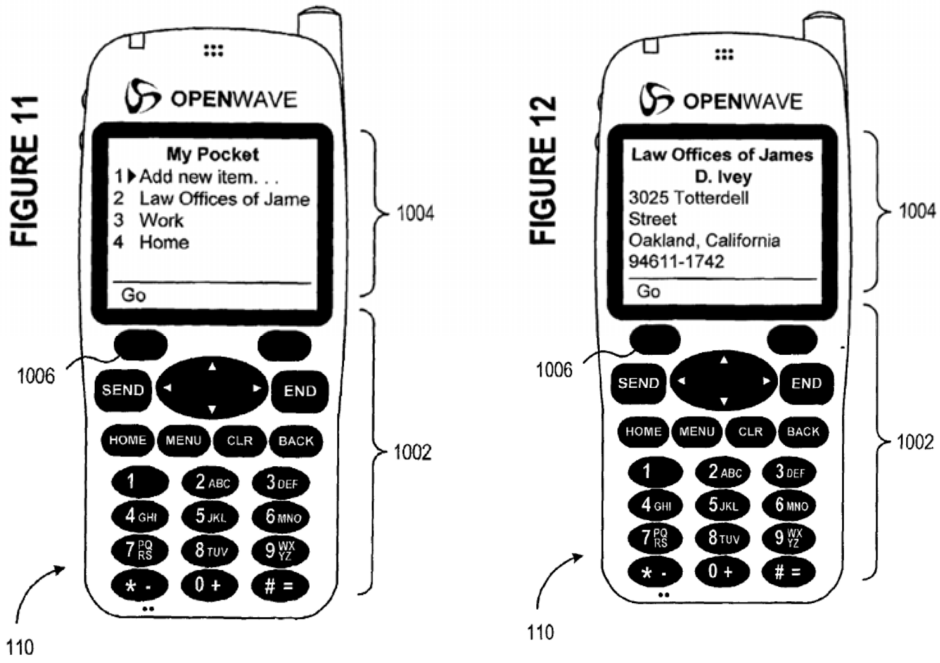
47. Further, Bedingfield describes displaying information indicating time to reach one location from another location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving. Bedingfield discusses presenting information such as "a distance in time when driving, a distance in time when walking, a distance in time when bicycling, and so on." Ex. 1044, ¶¶ 53-54. Bedingfield lists at least two of the types of travel enumerated in claim 13, "walking" and "driving." *Id.*

48. It would have been obvious to a person skilled in the art to enhance Sheha's system with travel time information. Sheha describes adjusting the displayed route information based on different factors such as time of day. Travel time information via different modes as described in Bedingfield and well-known at the time would have been an obvious extension of the different factors used for displaying directional information described in Sheha. Thus, Sheha in view of Bedingfield makes obvious claim 13.

14. Dependent claim 14 – The wireless telephone of claim 1, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

49. It is my opinion that claim 14 is obvious in view of Sheha, alone or in combination with Degnbol and/or McNulty. Sheha's system can store information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. Ex. 1041, 11:51-12:1.

50. Phone book functionality was common on mobile wireless devices, such as cellular telephones, before March 25, 2002. For example, both Degnbol and McNulty disclose conventional phone book functionality. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. McNulty describes a pocket dataset stored on a remote server, which in some implementations is a phone book, as shown in FIG. 12 of McNulty, reproduced below. Ex. 1054, FIG. 12, FIGS. 2 and 11.



51. It is my opinion that a person skilled in the art would have been motivated to modify Sheha's system to include phone book functionality with a reasonable expectation of success. Sheha's system includes a group database correlating privacy settings and identified users. Including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks. Thus, Sheha in view of Degnbol and/or McNulty makes obvious claim 14.

15. Independent claim 15

52. It is my opinion that claim 15 is obvious over Sheha, alone or in combination with Smith and/or Carey.

a. *Claim 15 Preamble – A wireless telephone comprising:*

53. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses methods performed using wireless telephones. Ex. 1041, 3:38-40, 5:46-67, claims 12, 23, and 44, FIGS. 2 and 3. Thus, Sheha discloses the features of the preamble of claim 15.

b. *Claim 15 [a] – a processor;*

54. Sheha refers to the "processing capability" of "wireless telephones," which implies the inclusion of a processor. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had processors, as some sort of processor is necessary for performing computations. This was a routine and conventional component of wireless telephones. Thus, Sheha discloses claim 15a.

c. *Claim 15 [b] – a positioning system for determining a location of said wireless telephone; and*

55. Sheha discloses a positioning system for determining a location of a wireless telephone. For example, Sheha describes "an onboard positioning information device" that calculates the location of a mobile device. Ex. 1041, 10:5-11, 12:32-33. This was a common feature of mobile devices such as wireless telephones. Thus, Sheha discloses claim 15b.

d. *Claim 15 [c] – memory storing programming capable of:*

56. Sheha states that "current wireless phones . . . have . . . limited memory," i.e., current wireless phones have memory. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had memory, which was a routine and conventional component of wireless telephones. Sheha implies the memory storing programming because Sheha's wireless telephones are described as performing specific tasks, which a person skilled in the art would have understood as something achieved using programming stored to memory. Storing programming to a memory of a wireless telephone was also routine and conventional at the time. Thus, Sheha discloses claim 15c.

e. *Claim 15 [d] – displaying a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones;*

57. It is my opinion that Sheha discloses a system with mobile wireless devices that can determine their own locations and provide those locations to a remote system. Ex. 1041, Abstract. In addition, Sheha describes that one mobile wireless device can request the location of another mobile wireless device via a wireless network. Figure 3 shows this type of a configuration of the Sheha system. It includes two mobile devices, which are identified as mobile devices 18b and 18c, that communicate with Sheha's Online Database and Application Server, or

the "ODAS" 3, via a wireless network, labeled as wireless network 22. Thus, Sheha discloses claim 15d.

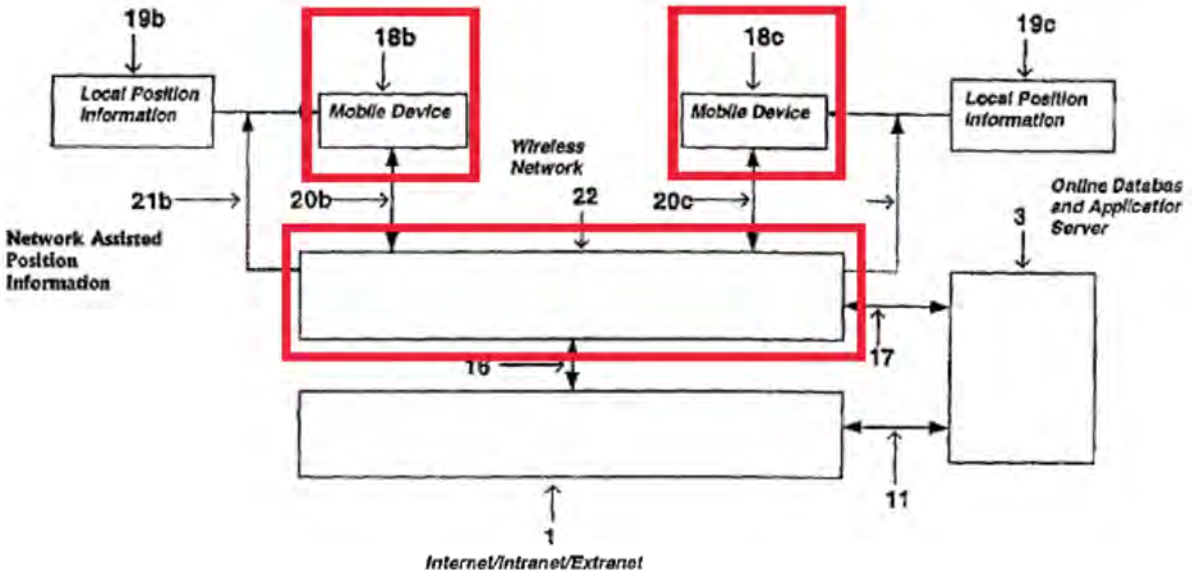


FIG. 3

58. Because Sheha describes that a user can request the location of another mobile device, it also includes functionality to select that other mobile device. One way Sheha describes to do so is to input or dial a telephone number. Ex. 1041, 10:66-11:9, 11:55-12:8.

59. Another way to select another mobile device that was well-known in the art was to access a list of contacts stored in the user's mobile device and scroll through the available contacts to the desired contact. This functionality was

standard on mobile wireless devices, such as cellular telephones, before March 25, 2002. For example, I note that the Smith reference provides an example of one kind of contact list that can be displayed by a mobile wireless device, such as those in Sheha. Ex. 1059, Fig. 15A.

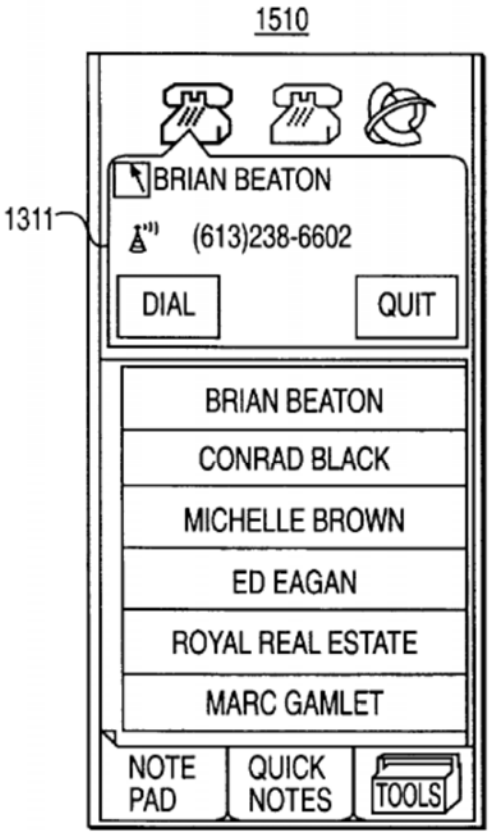


FIG. 15A

60. Smith describes that a user can scroll through the contact list to identify a particular person's contact card, which it calls an "electronic business card" or "EBC." Ex. 1059, 6:53-7:3. The user can scroll through the EBCs stored in their mobile device to find a contact of interest and their contact information,

such as a telephone number. An example of how this would be presented to the user is shown above in Figure 15A.

61. It would have been entirely obvious to a person skilled in the art to incorporate a contact list, like the one shown in Smith, into the mobile devices in the Sheha system to allow users to easily identify a contact to locate. Further, as I mentioned above, user interfaces in a mobile wireless device, like a cellular telephone, to allow selection of a contact were entirely standard and conventional by March 25, 2002. Thus, Sheha, alone or in view of Smith, makes obvious claim 15d.

f. *Claim 15 [e] – receiving a first manual input in a form of a selection of one of said plurality of users;*

62. Sheha explains that its wireless devices have input devices to allow a user to enter telephone numbers, such as by using numeric or alphanumeric input devices. Ex. 1041, 2:64-3:3. It is my opinion that these numeric or alphanumeric input devices are likely physical buttons provided on the devices. In addition, these types of input devices were entirely standard features of telephone devices before March 25, 2002, including on mobile wireless devices, like cellular telephones.

63. As I mentioned above, mobile wireless devices conventionally included contact list functionality, like that described in Smith. In addition, input devices were included to allow a user to view different contacts and select a

contact of interest. These input devices were typically physical buttons and may have been dedicated buttons to navigate information, like a contact list, or they may have been the numeric or alphanumeric buttons used to dial phone numbers. Smith describes different examples of input devices, including a keypad with buttons, an on-screen keyboard, or using handwriting recognition. Ex. 1059, 7:12-20. And it would have been obvious to use the numeric or alphanumeric keys described by Sheha to navigate a contact list and select a contact, as discussed in Smith.

64. In addition, Smith describes a process for scrolling through a contact list, shown in Figure 14 (*reproduced below*).

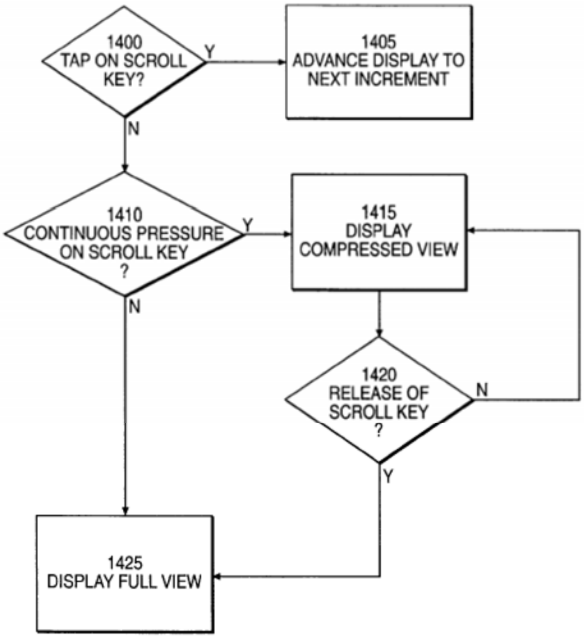


FIG. 14

65. The flowchart allows a user to scroll through the contact list using physical or graphical buttons. The user can use the process to scroll to a desired contact and ultimately select a contact to call. A person of skill in the art incorporating such scrolling functionality would have also included an option for a user to select a contact to locate. Thus, Sheha discloses claim 15e, alone or in view of Smith.

g. ***Claim 15 [f] – receiving an input in a form of a login and a second manual input in a form of a password;***

66. Sheha describes that users may have accounts established with the

ODAS 3 discussed above with respect to Figure 3 that include a username and password. Ex. 1041, 8:40-53. The example discussed in column 8 relates to a wireline telephone, however, it refers to the ODAS, which is also shown in the wireless embodiment of Figure 3. In addition, the ODAS is capable of operating with any of the different combinations of wireline and wireless devices discussed in Sheha. Ex. 1041, Figs. 1-3 (each showing the same ODAS 3). Sheha also explains that the same authorization and authentication protocols can be used in the mobile context in the same way they are used in the landline context. Ex. 1041, 12:4-7; *see also* Ex. 1041, 8:25-53. Thus, it is clear that Sheha expects a user to provide a username and password to access the location functionality provided by the ODAS. The routine technique of actually entering a username and password would have been a necessary step for the user to access their account and make use of the ODAS location functionality, and a user could have used the numeric or alphanumeric buttons that Sheha describes. Ex. 1041, 2:64-3:3.

67. To illustrate this process, the Carey reference shows an example GUI that allows a user to enter a screen name, i.e., a username, and password to access instant messaging functionality provided by a remote service. Ex. 1045, Fig. 8, 7:67-8:10. By entering their username and password, a user would gain access to their account in Carey in the same way that a user would need to enter their username and password to access Sheha's ODAS. One of skill in the art would

have immediately appreciated the need to enter username and password information on Sheha's wireless devices as a way to access the location services provided by the ODAS. In addition, the person skilled in the art would have known to use the available input devices, e.g., the numeric or alphanumeric buttons, in the same way as described in Carey. Thus, it is my opinion that claim 15f would have been obvious based on Sheha alone or in combination with Carey.

h. ***Claim 15 [g] – providing said login and said password to a remote server for use in determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, said determining including identifying a user of said wireless telephone using said login, determining said password is associated with said login, and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said wireless telephone,***

68. This claim element essentially describes a login process using a login and password. After the user is logged in, the system can then determine whether the person they are attempting to locate has granted access to their location information. As I discussed above with respect to claims 15e and 15f, Sheha describes that a user provides a username and password to access location services provided by the ODAS of the Sheha system, which can use the authentication and authorization protocols discussed with respect to claim 15f to determine that the user is authorized to access the system and has permission to access the requested

location information. Thus, it is my opinion that Sheha discloses the functionality recited in claim 15g.

i. ***Claim 15 [h] – assigning location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining said location of said wireless telephone;***

69. As I have discussed above with respect to claims 15f and 15g, Sheha allows users to establish which other users may access their location information. While this claim (15) recites that it is the device requesting the location of another device that is able to establish location access rights, Sheha is agnostic as to whether it is a requesting device or a target device that can establish permission rights – any device that can provide its location to the ODAS can establish location access rights. Sheha discloses that it is the users (of either device) that can configure their mobile devices with the desired privacy settings. Ex. 1041, 10:17-26.

70. For example, Sheha describes that in the case of a one device calling another device, the called device can request location permission of the calling device and the calling device's location can be provided, "based on permission settings of the calling local mobile device." Ex. 1041, 5:3-9. In another example, Sheha describes two mobile devices continuously exchanging location information in real-time. Ex. 1041, 11:10-54. In addition, Sheha also explains that its users can

establish groups of specific users that can have access to position information. Ex. 1041, 11:55-12:7. Because the Sheha system employs privacy settings established via the wireless devices, it is my opinion that Sheha discloses that a user can use their wireless device to establish location access rights for other wireless devices, including a particular wireless device selected from a contact list, as discussed above. Thus, Sheha discloses claim 15h.

j. *Claim 15 [i] – receiving said location information for said one of said plurality of wireless telephones from a server; and*

71. Sheha describes that when a wireless device requests the location of another wireless device, the ODAS—the online database and application server—provides the location to the requesting wireless device. Ex. 1041, 7:22-23 (defining the "ODAS" acronym). For example, the ODAS can request the location from the target wireless device before relaying it to the requesting wireless device, or the wireless devices can update the ODAS with their positions. Ex. 1041, 11:10-51. Because the ODAS is a server and provides location information to requesting devices, it is my opinion that Sheha discloses claim limitation 15i.

k. *Claim 15 [j] – displaying said location information.*

72. Sheha discloses that its mobile devices can display a map with the location of the target wireless device displayed on that map: "If the mobile telephone is connected to a position determination system, the mobile telephone

would be able to provide navigational information, such as route information in the form of real-time driving directions, or else a map and address of the destination telephone number can be displayed on the mobile telephone." Ex. 1041, 4:52-58. Thus, Sheha discloses claim 15j.

73. Based on the above discussion of claim elements 15 (preamble) – 15j, it is therefore my opinion that claim 15 is obvious over Sheha, alone or in combination with Smith and/or Carey.

16. Dependent claim 16 – The wireless telephone of claim 15, wherein said programming is further capable of displaying an option to obtain directions from said first wireless telephone to said one of said plurality of wireless telephones associated to said selected one of said plurality of users.

74. It is my opinion that Sheha discloses the functionality recited in claim 16, and that claim 16 is thus obvious over Sheha, alone or in combination with Smith and/or Carey. Sheha discloses displaying driving directions between the two wireless telephones: the window 30 can display all of the identification information 32 of both the originating and destination users, such as addresses and telephone numbers, and provide driving direction distance information for the optimal route." Ex. 1041, 9:34-39, 4:52-58, FIG. 5. Thus, Sheha discloses the features of claim 16, which depends from claim 15, and claim 16 is therefore obvious over Sheha, alone or in view of Smith and/or Carey.

17. Dependent claim 17 – The wireless telephone of claim 15, wherein said programming is further capable of receiving a manual input for modifying said location access rights.

75. It is my opinion that Sheha and Smith disclose the functionality recited in claim 17, and that claim 17 is thus obvious over Sheha, alone or in combination with Smith and/or Carey. As I discussed above with respect to claim 15, Sheha describes receiving user input defining users with location access rights, and manual input is both an obvious way of receiving user input and disclosed explicitly in Smith. Smith discloses that a user may modify contact information for other users, such as to add phone numbers, email addresses, or other information, and this can be performed manually. Ex. 1059, 10:7-16, 12:41-44; Ex. 1003, ¶ []). It would have been obvious to use manual input to configure the permissions, as was both widely known and disclosed in Smith, to configure access rights as disclosed in Sheha. Thus, Sheha and Smith disclose the features of claim 17, which depends from claim 15, and claim 17 is therefore obvious over Sheha, alone or in view of Smith and/or Carey.

18. Dependent claim 18 – The wireless telephone of claim 15, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

76. It is my opinion that Sheha discloses the functionality recited in claim 18, and that claim 18 is thus obvious over Sheha, alone or in combination with

Smith and/or Carey. As I discussed above, Sheha describes location access permissions, which can be provided by the wireless devices to the ODAS server. Ex. 1041, 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." *Id.*, 5:31-46. In the case where the transfer is terminated manually, the user grants permission to obtain location information until it is revoked. Therefore, it is my understanding that until and if there is manual intervention, Sheha's system grants location access for an indefinite time period. Thus, Sheha discloses the features of claim 18, which depends from claim 15, and claim 18 is therefore obvious over Sheha, alone or in view of Smith and/or Carey.

19. Dependent claim 19 – The wireless telephone of claim 15, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

77. It is my opinion that Sheha discloses the functionality recited in claim 19, and that claim 19 is thus obvious over Sheha, alone or in combination with Smith and/or Carey. As I discussed above with respect to claim 15, Sheha describes a remote server (ODAS) which controls location sharing between wireless telephones. Sheha also describes "allowing any remote device to request position information for any specified amount of time." Ex. 1041, 5:44-46. Thus,

Sheha discloses the features of claim 19, which depends from claim 15, and claim 19 is therefore obvious over Sheha, alone or in view of Smith and/or Carey.

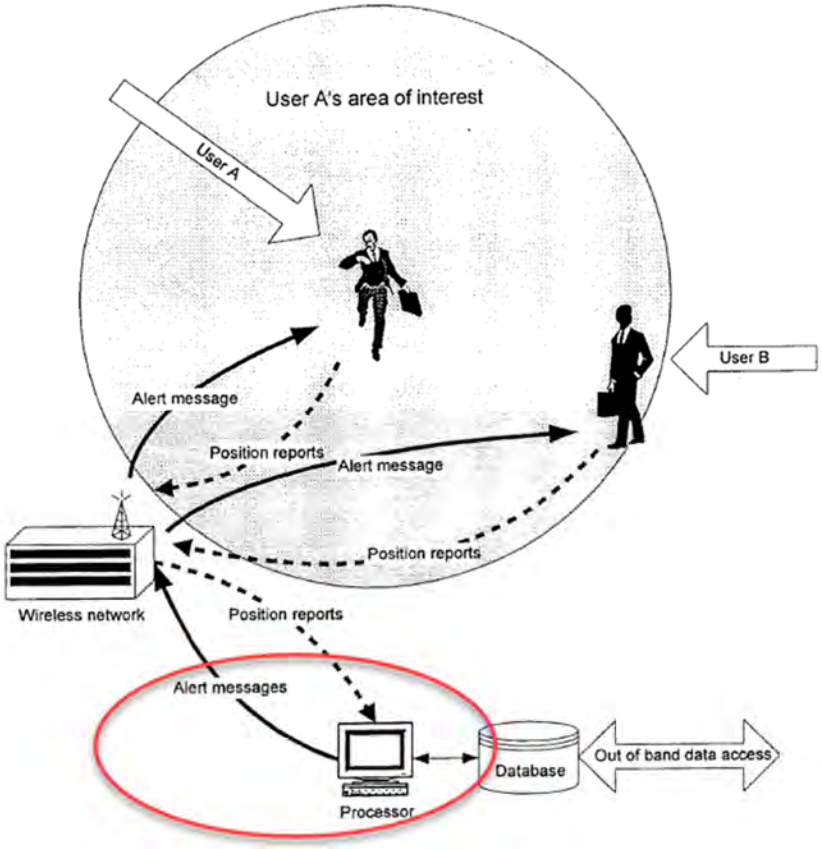
20. Dependent claim 20 – The wireless telephone of claim 15, wherein said programming is further capable of receiving an alert regarding a user of said plurality of users based on a location of a wireless telephone associated with said user of said plurality of users.

78. It is my opinion that Degnbol discloses the functionality recited in claim 20. Degnbol discloses "two-way wireless communication devices (e.g. telephones or pagers) with the ability to alert user 'A's' communication device when a user 'B' enters the proximity of user 'A'." Ex. 1047, 18:27-33, also see 10:17-33. Thus, Degnbol teaches a wireless telephone capable of receiving an alert regarding a user based on a location of a wireless telephone associated with the users. The users in Degnbol are part of a Buddy List, or list of users. *Id.*, 9:32-34. Using alerts was widely known prior to March 25, 2002, and it is my opinion that it would have been straightforward and obvious to incorporate alerts in Sheha's system. Thus, Degnbol discloses the features of claim 20, which depends from claim 15, and claim 20 is therefore obvious over Sheha in view of Degnbol, alone or in further view of Smith and/or Carey.

21. Dependent claim 21 – The wireless telephone of claim 20, wherein said programming is further capable of requesting said remote server to provide said alert.

79. It is my opinion that Degnbol discloses the functionality recited in

claim 21. As I discussed above under claim 20, Degnbol discloses alerts based on mobile telephone location. In Degnbol, the alerts are provided via a "processor," which is shown in FIG. 1 (below) as remote from the users. Ex. 1047, FIG. 1, 21:3-6. It is my understanding that such a processor would commonly have been a server, and that this would have been understood to those skilled in the art. In Degnbol, these alerts are provided by the processor based on a request from the user device at the setup phase. *See* Ex. 1047, 11:1-14.



80. Sheha describes requesting a remote server to provide data based on a device location – "if the mobile device is near such a boundary, the device can

request, or pull data from the online server." Ex. 1041, 6:15-16. As I discussed above, adding alerts to Sheha's system would have been obvious and straightforward. Thus, Degnbol discloses the features of claim 21, which depends from claim 15, and claim 20 is therefore obvious over Sheha in view of Degnbol, alone or in further view of Smith and/or Carey.

22. Dependent claim 22 – The wireless telephone of claim 21, wherein said alert is geographic area-based, said programming is further capable of specifying said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said plurality of users is within said geographic area.

81. It is my opinion that Degnbol discloses the functionality recited in claim 22, and that claim 22 is thus obvious over Sheha and Degnbol, alone or in combination with Smith and/or Carey. Degnbol discloses alerts when a user is within a geographic area: "user 'A' may choose to configure the system so that he . . . receives alerts." Ex. 1047, 11:5-11. These alerts "may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street." *Id.*, 6:6-8. In Degnbol's system, the alert is in the form of a message that can include information about the distance or location of the target user, such as "arrival at a given area," therefore Degnbol's system is capable of specifying the geographic area. *Id.*, 13:19, 5:16-20. As I discussed above, adding alerts to Sheha's system would have been obvious and straightforward. Thus, Degnbol discloses the

features of claim 22, which depends from claim 15, and claim 22 is therefore obvious over Sheha in view of Degnbol, alone or in further view of Smith and/or Carey.

23. Dependent claim 23 – The wireless telephone of claim 15, wherein said programing is further capable of receiving an alert when a user of said plurality of users locates said wireless telephone.

82. It is my opinion that Degnbol discloses the functionality recited in claim 23. As I have discussed above, Sheha's system transmits locates devices, and sends transmissions to one device upon locating another device. Ex. 1041, 12:1-7.

83. Degnbol describes transmitting an alert to a wireless telephone when another wireless device locates it. Degnbol describes a scenario in which a "position report" is given to a communication device of "User A" which includes "the current locations of 'A' and 'B.'" Ex. 1047, 20:23-21:4. "At the same time, a message is sent to User 'B', informing him that he has been the subject of an alert to another user. Ex. 1047, 21:4-6. Degnbol also describes "the ability to alert user 'A's' communication device when a user 'B' enters the proximity of user 'A'" and "an alert is transmitted to user 'A', user 'B', or both." Ex. 1041, 18:27-31. Transmitting alerts related to location was well-known at the time, and it would have been straightforward to a person skilled in the art to incorporate such functionality into Sheha's system. Thus, Degnbol discloses the features of claim

23, which depends from claim 15, and claim 23 is therefore obvious over Sheha in view of Degnbol, alone or in further view of Smith and/or Carey.

24. Dependent claim 24 – wherein said programming is further capable of receiving and displaying a location of a watch.

84. It is my opinion that Sheha and Degnbol disclose the functionality recited in claim 24, and that claim 24 is thus obvious over Sheha and Degnbol, alone or in combination with Smith and/or Carey. As I discussed above under claim 15, Sheha's system is capable of receiving and displaying location information of one device to another device. Sheha lists various devices that can be located, including a "wireless telephone, a personal digital assistant, and a portable computer." Ex. 1041, claim 12. A watch is one obvious choice of a device that could be located. At the time of filing of the '117 Patent, watches were well-known portable devices, and it was common for watches to include location functionality.

85. Degnbol describes "determining the position of one or more units in the set" where units in the set can be "wristwatches." Ex. 1047, 7:4-17, see also 4:29-31, claim 10. Given that Sheha discloses receiving and displaying the location of various devices, it would have been obvious to a person skilled in the art to use Sheha's system to receive and display the location of any suitable device, such as a watch, as disclosed in Degnbol. A person skilled in the art would have had a reasonable expectation of success in doing so, given that Sheha's system is already

configured to receive and display location information from various devices, and the type of device located has little bearing on that functionality. Thus, Degnbol and Sheha teach the features of claim 24, which depends from claim 15, and claim 24 is therefore obvious over Sheha in view of Degnbol, alone or further in view of Smith and/or Carey.

25. Dependent claim 25 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a radio.

86. It is my opinion that Sheha and Lelievre teach the functionality recited in claim 25. As I discuss above under claims 15 and 24, Sheha's system is capable of receiving and displaying location information of different devices such as a "wireless telephone, a personal digital assistant, and a portable computer." Ex. 1041, claim 12.

87. A radio is one obvious choice of a device that could be located. For example, Lelievre discloses a radio that is "location-aware" and can "transmit[] location information, including its present location" to an external device. Ex. 1051, ¶ 47, FIG. 5. At the time of filing of the '117 Patent, it was known in the art that radios could include location functionality. Thus, Lelievre and Sheha teach the features of claim 25, which depends from claim 15, and claim 25 is therefore obvious over Sheha in view of Lelievre, alone or further in view of Smith and/or Carey.

26. Dependent claim 26 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a car.

88. It is my opinion that the functionality of claim 26 is disclosed by Sheha, and that claim 26 is thus obvious over Sheha, alone or in combination with Smith and/or Carey. Sheha describes "pass[ing] any or all of that information to an additional navigation or computing device, such as an in-vehicle navigation system or a mobile computer, in order for that additional navigation or computing device to make better use of the acquired position information, such as for improved route calculation and/or improved display." Ex. 1041, 3:37-49. FIGS. 6 and 7 of Sheha show such a system including an in-vehicle mobile navigation device. Ex, 1041, FIGS. 6-7. FIG. 7 (reproduced below) shows a mobile navigation device 45 in a motor vehicle 39b, connected to the server 3 from which location information can be received. Ex, 1041, FIGS. 6-7,12:57-13:31.

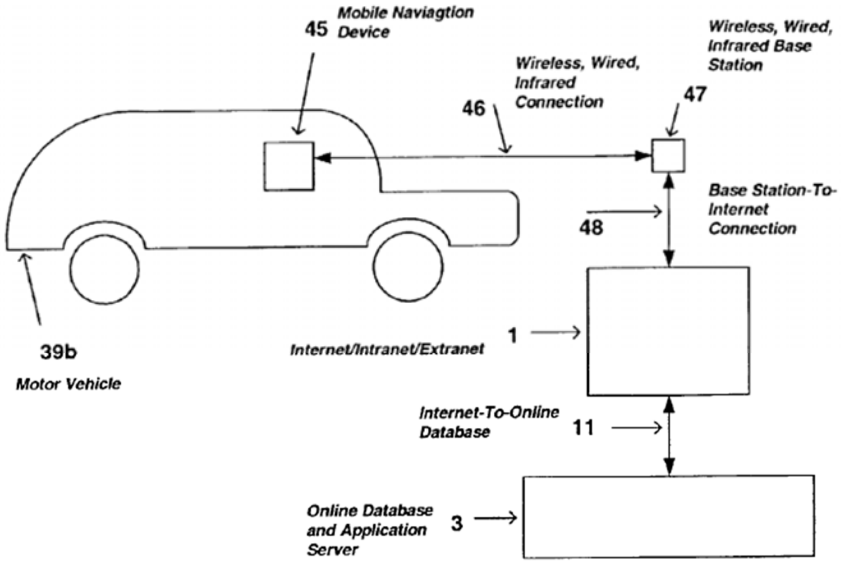
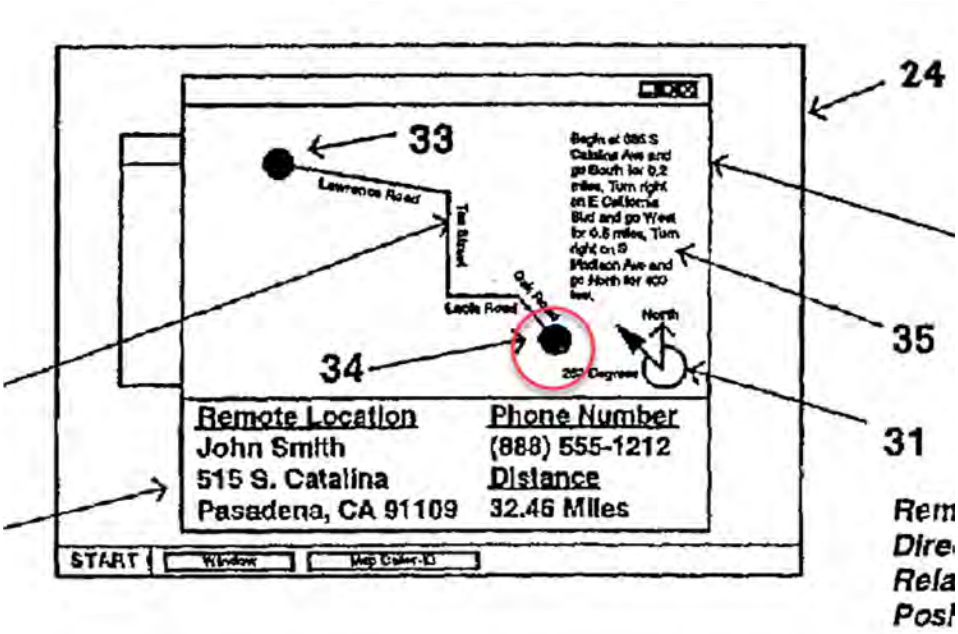


FIG. 7

89. As shown in FIG. 5 of Sheha (reproduced in part below with annotation), displayed information includes a map location 34 of the destination telephone number, which is the location of the vehicle in the in-vehicle navigation system implementation. Ex. 1041, FIG. 5, 9:23-28.



90. Therefore, Sheha's system receives and displays the location of a car. Thus, Sheha discloses the features of claim 26, which depends from claim 15, and claim 26 is therefore obvious over Sheha, alone or in view of Smith and/or Carey.

27. Dependent claim 27 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

91. It is my opinion that Sheha and Bedingfield disclose the features of claim 27, and that claim 27 is thus obvious over Sheha and Bedingfield, alone or in combination with Smith and/or Carey. Sheha describes receiving and displaying direction-related information: "The ODAS . . . updates each mobile device with the other's position information, thus providing real-time driving directions and route

information." Ex. 1041, 11:44-51. This can include "driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." Ex. 1041, 9:30-39; FIG. 5. Therefore, Sheha's system can display different information useful for navigational purposes.

92. Bedingfield describes displaying information indicating time to reach one location from another location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving. Bedingfield discusses presenting information such as "a distance in time when driving, a distance in time when walking, a distance in time when bicycling, and so on." Ex. 1044, ¶¶ 53-54. Bedingfield lists at least two of the types of travel enumerated in claim 13, "walking" and "driving." *Id.*

93. It would have been obvious to a person skilled in the art to enhance Sheha's system with travel time information. Sheha describes adjusting the displayed route information based on different factors such as time of day. Travel time information via different modes as described in Bedingfield and well-known at the time would have been an obvious extension of the different factors used for displaying directional information described in Sheha. Thus, Sheha and Bedingfield disclose the features of claim 27, which depends from claim 15, and claim 27 is therefore obvious over Sheha and Bedingfield, alone or further in view

of Smith and/or Carey.

28. Dependent claim 28 – wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

94. It is my opinion that Sheha, Smith, and Degnbol disclose the functionality of claim 28 and that claim 28 is thus obvious over Sheha, Smith, Degnbol and/or Carey. Sheha's system can store information that correlates position information to a telephone number in a group database, and can establish which users may access such information. Ex. 1041, 11:51-12:1. In Sheha, "the Map Caller-ID information . . . contain[ing] the originating position and user identification information" is sent to the mobile device from the ODAS remote server. *Id.*, 10:37-42, FIG. 3. Therefore, Sheha discloses downloading user information from a remote system.

95. Phone book functionality was common on mobile wireless devices, such as cellular telephones, before March 25, 2002. For example, both Degnbol and Smith disclose conventional phone book functionality. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1015, 10:13-15, 20:24-28. Smith describes displaying a phone book on a mobile device: "screen 1310 displays . . . a name list with corresponding telephone numbers." Ex. 1059, 9:4-6. An example of such a phone book is shown in FIGS.

13A and 13B of Smith, shown below.

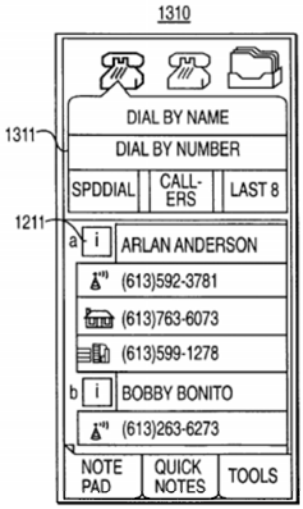


FIG. 13A

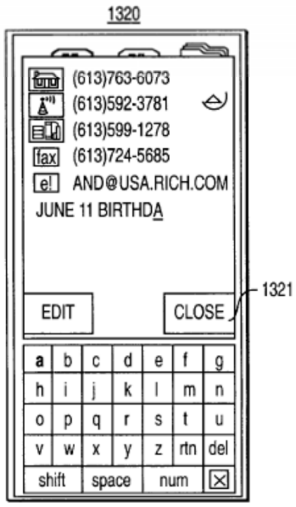


FIG. 13B

96. Thus, Sheha, Smith, and Degnbol discloses the features of claim 26, which depends from claim 15, and claim 26 is therefore obvious over Sheha, alone or in view of Smith, Carey, and or Degnbol.

29. Independent claim 29

97. It is my opinion that claim 29 is obvious over Sheha in view of Degnbol.

a. ***Claim 29 Preamble – A wireless telephone comprising:***

98. See claim 15 preamble.

b. ***Claim 29 [a] – a processor;***

99. See claim 15a.

c. ***Claim 29 [b] – a positioning system for determining a location of said wireless telephone; and***

100. See claim 15b.

d. ***Claim 29 [c] – memory storing programming capable of:***

101. See claim 15c.

e. ***Claim 29 [d] – receiving user information comprising a manually entered login associated with a user of said wireless telephone and a manually entered password associated with said login;***

102. See claim 15f.

f. ***Claim 29 [e] – providing said location for recording on a remote system in association with said user information;***

103. Sheha discloses identifying a location of a wireless telephone, which is recorded by the ODAS. Ex. 1041, 7:51-52; 11:5-6. The ODAS 3 is remote from the wireless devices. Ex. 1041, FIG. 3, 11:23-26. As I discussed above under claim 15, Sheha describes a remote server (ODAS) which controls location sharing between wireless telephones. The "mobile device 18c . . . forwards its current position information back to the ODAS." *Id.*, 11:36-38. "This position information

transfer is done utilizing authentication and authorization procedures," (*Id.*, 3:22 – 25), i.e., based on the user information (*see id.,* 8:40 – 50; 12:1 – 7; Ex. 1003, ¶ []). Sheha therefore discloses claim 29e.

g. ***Claim 29 [f] – selecting a location-based event that is based, at least in part, on a location of a second wireless telephone, wherein said location-based event is operable to be manually pre-selected from a list of at least three types of location-based events; and***

104. Sheha discloses different configurable situations in which location information is shared, "such as the option to never send position information, or to send position information while receiving and/or sending calls, and whether the transfer of position information should be allowed only for an instance or for a given period of time." Ex. 1041, 10:17-26.

105. Degnbol describes more than three different types of configurable events associated with a location of a Buddy. Ex. 1047, 10:17-11:3, 6:6-8. As one example, a user can "configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." Ex. 1047, 11:10-11. As another example, a user can "choose[] not to be alerted when he is in the geographical area covering his home even though another user . . . enters that area. *Id.*, 10:22-23. As other examples, alerts can be based on another user being in a "predetermined range," which can come in different forms such as "continent, country, district, city, co-ordinate range or a street." *Id.*, 10:25-26, 6:6-8. The user can also be

alerted when located by another: "a message is sent to User 'B', informing him that he has been the subject of an alert to another user." Ex. 1047, 21:5-6. Degnbol therefore describes more than three different types of location-based events, including geographic-area based (based on geographic area), distance-based (e.g., when a Buddy comes within a range of 500 meters), and based on whether the user has been the subject of an alert to another user.

106. These events are "pre-selected" in that they are configured prior to the alert being sent. *See* Ex. 1047, 11:1-33. The configuration can be performed "directly from the handset of the users cellular phone," i.e., manually. Ex. 1047, 11:1-33. Sheha and Degnbol therefore disclose claim 29f.

h. ***Claim 29 [g] – receiving a location-based event notification corresponding to said selected location-based event as a result of, at least in part, location access rights of said wireless telephone from said second wireless telephone,***

107. Sheha describes providing a location notification based on location access rights. Sheha states that "the notification appears on the user's display device." Ex. 1041, 9:4-5. Sheha also states that "users can define a group of specific users that have access to this information." *Id.*, 11:64-67.

108. Degnbol describes providing a location-based event notification: "automatic notification of user 'A' of the entry of pre-selected user 'B' into a pre-determined area." Ex. 1047, 9:20-21. "The Buddy List may be displayed on the

display of the users handset, giving the user an[] at-a-glance overview of who is in the proximity . . . . Buddies who are in the proximity may be highlighted or in other way emphasised." *Id.*, 10:5-8. Providing notifications was well-known and routine before March 25, 2002, and it is my opinion that it would have been obvious to a person skilled in the art to provide a location-based event notification, as described in Degnbol, based on access rights, as described in Sheha.

i. ***Claim 29 [h] – wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

109. Degnbol describes region-based events such as user configuration of alerts based on a geographical area of a second user. Ex. 1047, 10: 31-33, 6:6-8. Degnbol also describes distance-based events such as choosing "to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." *Id.*, 11:5-11. As I discussed above, it would have been obvious to a person skilled in the art to implement such alerts in Sheha's system. Sheha in view of Degnbol therefore makes obvious claim 29h. Thus, claim 29 is obvious in view of Sheha and Degnbol.

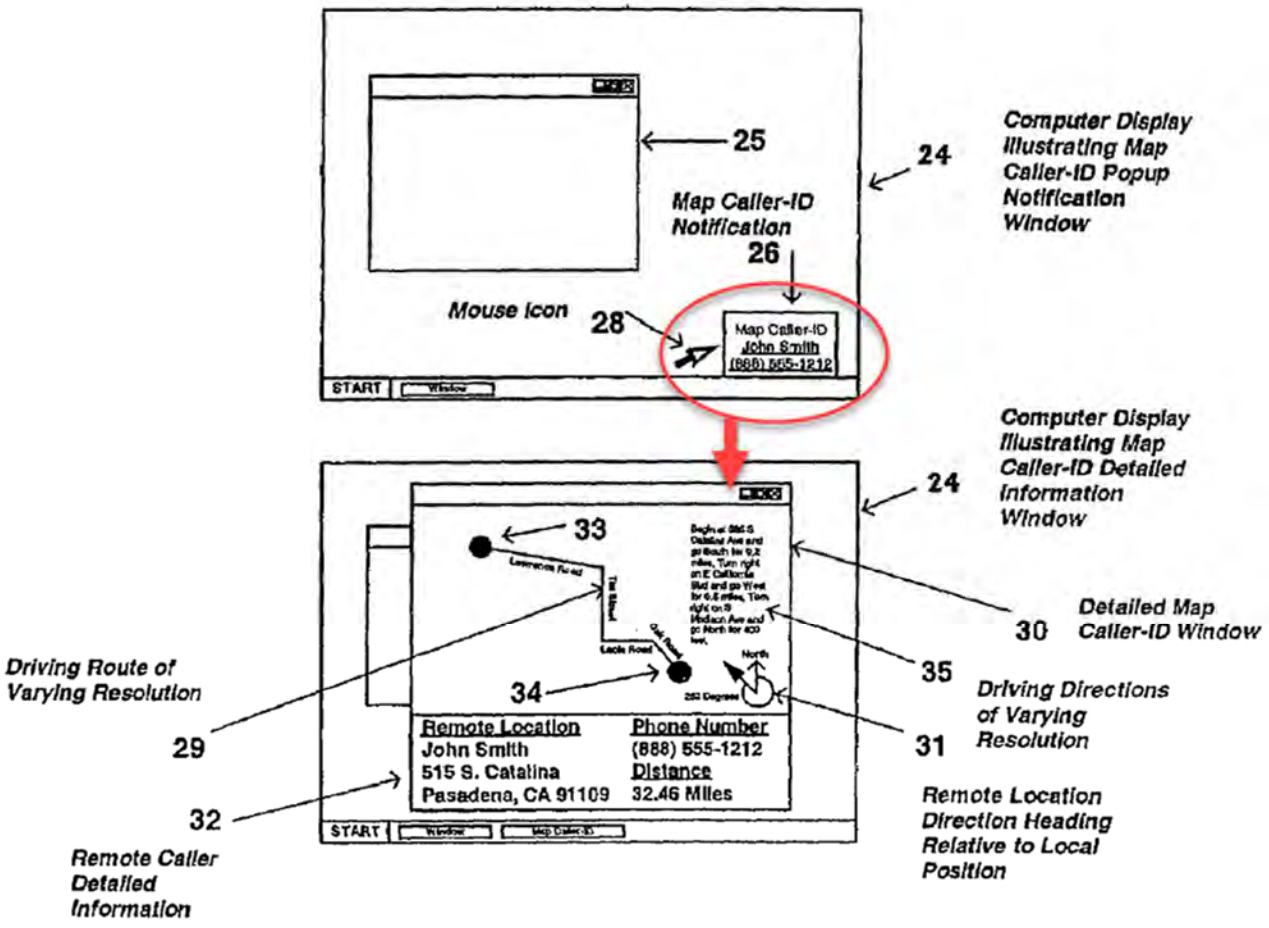
30. Dependent claim 30 – The wireless telephone of claim 29, wherein said first wireless device comprises a global positioning system that is operable to provide said location.

110. It is my opinion that Sheha discloses the functionality of claim 30 and

claim 30 is thus obvious over Sheha in view of Degnbol. Sheha describes a global positioning system operable to provide the location: "The location of the mobile device is typically calculated by the mobile device 18a by using an onboard positioning information device . . . . The position information can also be obtained from a combination of an onboard positioning information device 19a, such as a GPS receiver." Ex. 1041, 10:5-16. Sheha therefore discloses the features of claim 30, which depends from claim 29. Thus, claim 30 is obvious in view of Sheha and Degnbol.

31. Dependent claim 31 – The wireless telephone of claim 29, wherein said programming is further capable of displaying a display screen on said wireless telephone, after receiving said location-based event notification, that includes a first selectable option for providing a map associated with said location of said second wireless telephone.

111. It is my opinion that Sheha discloses the functionality of claim 31 and claim 31 is thus obvious over Sheha in view of Degnbol. As shown in FIG. 5 (reproduced below), in Sheha's system, a first display screen includes a selectable option (circled) for providing the map. Ex. 1041, ¶ FIG. 5, 9:13-30, 5:3-9, 1:29. Sheha notes that such a display can be provided on a mobile device. *Id.*, 4:52-58. Sheha therefore discloses a selectable option for providing a map. Providing such an option to pull up directions was common functionality before March 25, 2002.



112. As I discussed above under claim 29f, Degnbol describes the well-known functionality of providing a location-based event notification, which can include information about the distance or location of the target user. Ex. 1047, 5:16-20.

113. Since both location-based events and options to provide directions were well-known and routine functionality, it is my opinion that it would have been obvious to a person skilled in the art to incorporate such functionality into a system such as Sheha's. Thus, claim 31 is obvious in view of Sheha and Degnbol.

32. Dependent claim 32 – The wireless telephone of claim 29, wherein said programming is further capable of displaying after receiving said location-based event notification a travel time between a location of said wireless telephone and a location of said second wireless telephone.

114. It is my opinion that claim 32 obvious over Sheha in view of Degnbol and further in view of Tobin. Sheha describes receiving and displaying various types of directional information based on the respective locations of mobile devices, including driving directions, as I discussed above under claim 27.

115. Tobin discloses providing a travel time between locations: "The time information displays the estimated remaining travel time, calculated by dividing the approximate distance separating the Texaco station from user device 105 by the speed of user device 105." Ex. 1061, ¶ 28. Displaying a travel time was a common and well-known feature when displaying directions prior to March 25, 2002.

116. As I pointed out above with respect to claim 29, Sheha in view of Degnbol discloses receiving a location-based event notification. It would have been obvious to a person skilled in the art to display other related useful information, such as a travel time which was well-known and disclosed in Tobin. It is my opinion that it would have been obvious to display the travel time after the location-based event notification. Once the location-based event occurs, this would create a situation in which the user would want to see information such as the travel time to that location. Thus, claim 30 is obvious in view of Sheha and

Degnbol and further in view of Tobin.

33. Dependent claim 33 – The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

117. See claim 18.

34. Dependent claim 34 – The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow a user of said second wireless telephone to access said location of said wireless telephone for only a specific period of time.

118. See claim 19.

35. Dependent claim 35 – The wireless telephone of claim 29, wherein said programming is further capable of specifying said region, and said region-based location-based event indicates that said location of said second wireless telephone is within said region.

119. It is my opinion that claim 35 is obvious over Sheha in view of Degnbol. As I discussed above with respect to claim 29i, Degnbol describes notifying a user when another user is in a region, which would have been an obvious addition to enhance Sheha's location providing. Degnbol also discloses specifying the region, as I discussed above with respect to claim 22. As I noted above, providing alerts would have been a straightforward and obvious addition to a system such as Sheha's. Therefore, claim 35 is obvious in view of Sheha and Degnbol.

36. Dependent claim 36 – The wireless telephone of claim 29, wherein said programing is further capable of receiving an alert when a user of said second wireless telephone locates said wireless telephone.

120. See claim 23.

37. Dependent claim 37 – The wireless telephone of claim 29, wherein said programing is further capable of receiving and displaying a location of a watch.

121. See claim 24.

38. Dependent claim 38 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a radio.

122. See claim 25.

39. Dependent claim 39 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a car.

123. See claim 26.

40. Dependent claim 40 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying information indicating time to reach a second location associated with said second wireless telephone from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

124. See claim 27.

41. Dependent claim 41 – The wireless telephone of claim 29, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

125. See claim 28.

42. Independent claim 42

126. It is my opinion that claim 42 is obvious over Sheha in view of Ganesh.

a. *Claim 42 Preamble – A wireless telephone comprising:*

127. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses methods performed using wireless telephones. Ex. 1041, 3:38-40, 5:46-67, claims 12, 23, and 44, FIGS. 2 and 3. Thus, Sheha discloses the features of the preamble of claim 42.

b. *Claim 42 [a] – a processor;*

128. Sheha refers to the "processing capability" of "wireless telephones," which implies the inclusion of a processor. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had processors, as some sort of processor is necessary for performing computations. This was a routine and conventional component of wireless telephones. Thus, Sheha discloses claim 42a.

c. *Claim 42 [b] – a positioning system for determining a location of said wireless telephone; and*

129. Sheha discloses a positioning system for determining a location of a wireless telephone. For example, Sheha describes "an onboard positioning information device" that calculates the location of a mobile device. Ex. 1041, 10:5-11, 12:32-33. This was a well-known feature of mobile devices such as wireless telephones. Thus, Sheha discloses claim 42b.

d. *Claim 42 [c] – a memory storing programming capable of:*

130. Sheha states that "current wireless phones . . . have . . . limited memory," i.e., current wireless phones have memory. Ex. 1041, 5:53-57. One skilled in the art would have understood that wireless phones had memory, which was a routine and conventional component of wireless telephones. Further, a POSITA would have understood that the memory of Sheha's wireless telephones store programming, because Sheha's wireless telephones are described as performing specific tasks, which is achieved using programming stored to memory. It was routine and conventional for wireless telephones to include a memory storing programming. Thus, claim 42 is obvious in view of Sheha and common knowledge in the art.

e. ***Claim 42 [d] – requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;***

131. Sheha discloses requesting a location of a second wireless device from a remote server: "a user can initiate a position request by entering a unique identification token, such as an e-mail address. The remote user that is logged on to a wireless or landline position-enabled computing device is verified by the networked server's authentication and authorization protocol procedures." Ex. 1041, 5:24- 29, also see 11:55-58, claims 47 and 54. Thus, Sheha discloses claim 42d.

f. ***Claim 42 [e] – 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;***

132. Sheha discloses that each device may have privacy settings that "allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:38-46, 11:63-12:4. Sheha discloses that these privacy settings include a list of users on the remote server who are allowed to access location information. *Id.*, 11:61-12:1. Sheha refers to defining a list of "users" and "calling devices" interchangeably. *Id.*, 5:38-46, 11:63-12:4. Thus, in Sheha, each identified user is representative of one of a plurality of wireless telephones.

133. Sheha also discloses requesting access rights from a wireless device.

For example, upon receiving a location request from a requesting device without location access rights, Sheha discloses that the server can query the target device "for permission on whether the position request can be granted based on criteria such as duration of request." Ex. 1041, 5:21-32; Ex. 1003. It is my opinion that this would in most situations require some sort of determination or assumption that the requesting device does not have location access rights. Otherwise, there would be no reason to query the target device for permission. Thus, Sheha discloses querying the target device to request location access rights after it is determined that it does not have the needed access location rights. Given that displaying options in order to present such requests to a user was conventional functionality, it is my opinion that this would have been an obvious way to do so in Sheha's system.

134. The Ganesh reference illustrates examples of such conventional functionality of providing an option to request access rights via a display screen. Ganesh describes displaying an access denial webpage after determining that a requestor does not have location access rights for a wireless device. Ex. 1049, 6:33-46. In Ganesh, FIG. 6 (reproduced below) shows the access denial webpage, which is shown if access is not possible for various reasons including permission. Specifically, Ganesh discusses permission-related reasons for displaying the access denial webpage including "the mobile phone user does not wish to be located" and

"your login-ID is not included in the mobile-phone's user profile," as shown in FIG. 6. FIG. 6 also shows "an option, in the form of a query 90, to receive current location 35." Ex. 1049, FIG. 6, 6:33-46. If the option / query 90 is selected, the location will be provided at a later time. Ex. 1049, 8:33-34.

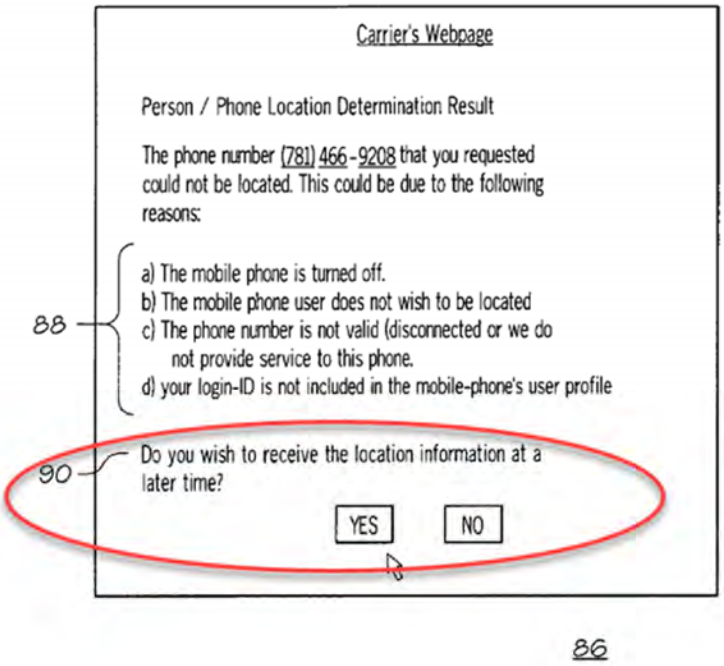


FIG. 6

135. Thus, Sheha and Ganesh render obvious claim 42e.

g. *Claim 42 [f] – transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and*

136. As discussed above with respect to claim element 42e, Sheha in view of Ganesh discloses displaying an option to request location access rights from a

wireless device after it is determined that such access rights are not in place. In Ganesh, when a user interacts with the option on the webpage, this will cause a request to be transmitted to a server, since a server is hosting the webpage. Ex. 1049, 3:39-42, 4:45-52. Thus, Sheha and Ganesh render obvious claim 42f.

h. *Claim 42 [g] – receiving said location of said second wireless device from said server dependent upon said access rights.*

137. Sheha discloses receiving a location of a wireless device dependent upon access rights: "If granted, both parties have access to each other's position information." Ex. 1041, 5:32-34, *see also* 11:63-12:7, 5:38-46.

138. Thus, Sheha in view of Ganesh makes obvious claim 42.

43. Dependent claim 43 – The wireless telephone of claim 42, wherein said second wireless device is a second wireless telephone.

139. It is my opinion that Sheha discloses the functionality recited in claim 43, and thus, Sheha in view of Ganesh makes obvious claim 43. Sheha discloses that the target, or second, mobile device discussed above can be a wireless telephone: "In the mobile-to-mobile example, as illustrated in FIG. 3, a user placing a telephone call from a mobile device 18 b, such as a cellular telephone or wireless voice-enabled PDA, dials or inputs a telephone number of another mobile device 18 c." Ex. 1041, 10:66-11:3; *see also* 4:59-66. Thus, Sheha discloses the features of claim 43, which depends from claim 42, and therefore, claim 43 is

obvious in view of Sheha and Ganesh.

44. Dependent 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.

140. It is my opinion that Sheha and Ganesh disclose the functionality recited in claim 44, and thus, Sheha in view of Ganesh makes obvious claim 44. Sheha discloses that locations of wireless devices are stored at its ODAS. Ex. 1041, 11:3-8, 11:44-51. In Sheha's system, because the locations are stored at the ODAS, a requesting device would be able to request a location from the ODAS regardless of whether the target device is on or off. *Id.*

141. Ganesh discusses providing location information from a call log when the target device is turned off. Ex. 1049, 7:62-65. Additionally, a person of skill in the art would have a reasonable expectation of success in the obvious combination of Enzmann with Ganesh to allow a device to be located when it is turned off. Thus, it is my opinion that Enzmann alone or in view of Ganesh discloses claim 44.

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

142. It is my opinion that Sheha and Obradovich disclose the functionality

recited in claim 45, and thus, Sheha in view of Ganesh and/or Obradovich makes obvious claim 45. Sheha describes allowing the user of the target device "to prevent or *limit* other calling devices from obtaining position information." Ex. 1041, 5:37-46 (emphasis added). These limitations imply at least two different access levels, limited and unlimited. Sheha's system can also provide "position-specific information, such as latitude and longitude coordinates, address information, and/or location information of varying size and resolution, such as "a metropolitan area, a state within the United States of America, and an international political territory." Ex. 1041, 3:50-55, claim 24. Sheha therefore discloses that the location can be provided according to three enumerated types of geographic region.

143. The use of tiered access levels was a well-known privacy/security feature, including in access sharing prior to March 2002. Configurable settings, such as not sharing location information, sharing location information with the public, sharing location information with friends, sharing location information with family, sharing location information with immediate family, and so forth, were well-known concepts. It would therefore have been obvious in view of common knowledge in the art to establish a plurality of access levels of location access rights in Sheha's system.

144. For example, the Obradovich reference describes access levels in

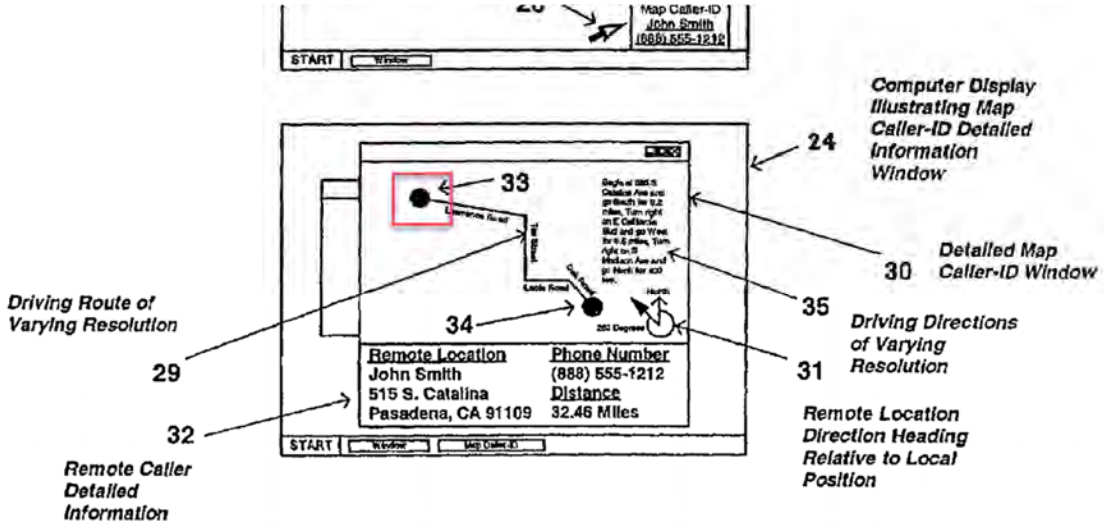
terms of "a security level index," which can be configured by a user. Ex. 1055, 26:29-36. Obradovich describes one example in which an individual with a security index level of seven could only obtain a user's general office number, whereas an individual with a security index level of six could obtain the user's direct dial number. Ex. 1055, 26:46-56. Obradovich therefore provides another example showing that user-configured access levels were known in the art, including to control a level of detail about a user that can be provided. Thus, Sheha, in view of Obradovich and/or common knowledge in the art, render obvious the features of claim 45, which depends from claim 42, and therefore, claim 45 is obvious in view of Sheha in view of Ganesh, alone or further in view of Obradovich.

46. Dependent 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.

145. It is my opinion that Sheha and Ganesh disclose the functionality recited in claim 46, and thus, Sheha in view of Ganesh makes obvious claim 46.

146. Sheha discloses displaying a map with a location marker associated with a location of a second wireless device. Ex. 1041, 4:52-58. "Map Caller-ID information window . . . display[s] 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. Ex. 1041, 9:23-28. As shown in FIG. 5 (reproduced below), the map includes a location marker 33 associated with the location of the caller, which corresponds to the second wireless device in claim 46. Ex. 1041, FIG. 5 and related description.



147. Ganesh also discloses a similar map display, which uses the current location of the target wireless device to display a location marker, star 106 on map 100, as illustrated in Figure 7 below. Ex. 1049, 8:6-16.

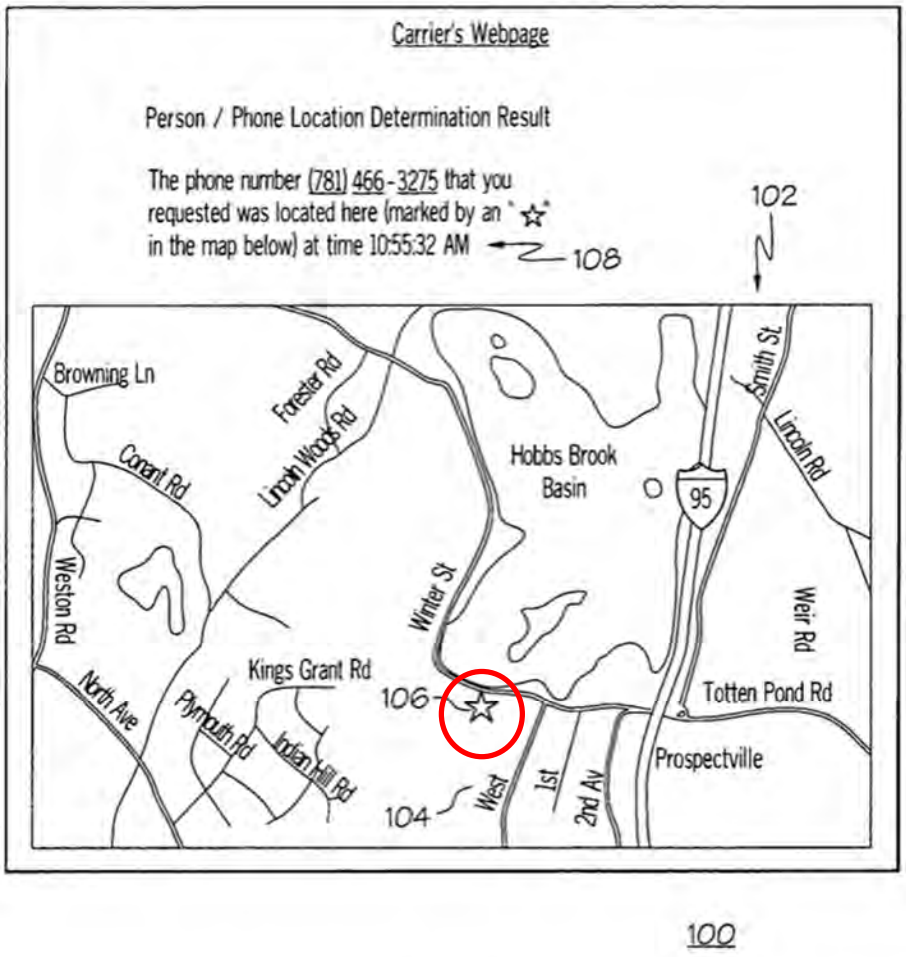


FIG. 7

148. Thus, Sheha and Ganesh render claim 46 obvious.

47. Dependent 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.

149. It is my opinion that Sheha discloses the functionality recited in claim 47, and thus, Sheha in view of Ganesh makes obvious claim 47. Sheha discloses displaying driving directions between the two wireless telephones: the window 30

can display all of the identification information 32 of both the originating and destination users, such as addresses and telephone numbers, and provide driving direction distance information for the optimal route." Ex. 1041, 9:34-39, 4:52-58, FIG. 5. Thus, Sheha suggests the features of claim 47, which depends from claim 42, and therefore, claim 47 is obvious in view of Sheha and Ganesh.

48. Dependent 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.

150. It is my opinion that Sheha and Bedingfield disclose the functionality recited in claim 48, and thus, Sheha in view of Ganesh and Bedingfield makes obvious claim 48.

151. As I discussed above with respect to claim 47, Sheha discloses providing driving directions. Sheha further states that the location information could be used to "provide typical navigational functionality." Ex. 1041, 12:29-30. It is my opinion that those skilled in the art would have known typical navigational functionality to include providing travel time, which is and was then one well-known and conventional type of navigational functionality.

152. Bedingfield describes using location information to provide a travel time ("distance in time" and "travel time"). Ex. 1044, ¶ 53. Thus, Sheha and

Bedingfield disclose the features of claim 48, which depends from claim 42, and therefore, claim 48 is obvious in view of Sheha, Ganesh, and Bedingfield.

49. Dependent 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.

153. It is my opinion that Sheha and Obradovich disclose the functionality recited in claim 49, and thus, Sheha in view of Ganesh and/or Obradovich makes obvious claim 49. As I discussed above with respect to claim 45, Sheha and Obradovich both describe the use of a plurality of levels of access rights for a wireless device, as was well-known in the art. Sheha further describes that the levels can include "latitude and longitude coordinates," which would correspond to an exact location, or "location information of varying size and resolution," such as "a metropolitan area, a state within the United States of America, and an international political territory," which would correspond to an approximate location. Ex. 1041, 3:50-55, claim 24. And, Obradovich explicitly discloses a plurality of configurable access levels, as noted above under claim 45. A person of skill in the art would recognize the utility of varying degrees of location accuracy of precision, such as sharing exact for family and good friends, less so for everybody else, which is a scheme that balances privacy and disclosure when

useful. Thus, Sheha, in view of Obradovich and/or common knowledge in the art render obvious the features of claim 49, which depends from claim 42, and therefore, claim 49 is obvious in view of Sheha in view of Ganesh, alone or further in view of Obradovich.

50. Dependent 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.

154. It is my opinion that Sheha and Obradovich disclose the functionality recited in claim 50. As I discussed above under claims 45 and 49, Sheha and Obradovich both describe the use of a plurality of levels of access rights for a wireless device.

155. Sheha further describes that the levels can include "latitude and longitude coordinates," which would correspond to an exact location, or "location information of varying size and resolution," such as "a metropolitan area, a state within the United States of America, and an international political territory," which would correspond to an approximate location including a city or state. Ex. 1041, 3:50-55, claim 24. And, Obradovich discloses a security index level configured by the user and used to decrease the level of precision shared. Ex. 1055, 26:29 – 36; claim 45, *supra*.

156. Thus, Sheha, in view of Obradovich and/or common knowledge in the art render obvious the features of claim 50, which depends from claim 42, and therefore, claim 50 is obvious in view of Sheha in view of Ganesh, alone or further in view of Obradovich.

51. Dependent 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.

157. It is my opinion that Sheha discloses the functionality recited in claim 51, and thus, Sheha in view of Ganesh makes obvious claim 51. Sheha describes receiving a login and password to identify the wireless telephone – "every telephone account user has a username and password for the ODAS", which is used to identify a user associated with a wireless telephone. Ex. 1041, 8:40-53, 11:55-12:7. Thus, Sheha teaches the features of claim 51, which depends from claim 42, and therefore, claim 51 is obvious in view of Sheha and Ganesh.

52. Dependent 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.

158. It is my opinion that Sheha discloses the functionality recited in claim 52, and thus, Sheha in view of Ganesh makes obvious claim 52. Sheha discloses "a method for entering a telephone number by various means . . . for the purpose of

determining position information associated with the telephone number by searching a networked database." Ex. 1041, 2:64-3:3. Thus, Sheha teaches the features of claim 52, which depends from claim 42, and therefore, claim 52 is obvious in view of Sheha and Ganesh.

53. Dependent 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.

159. It is my opinion that Sheha, alone or in view of Lee, discloses the functionality recited in claim 53, and thus, Sheha and Ganesh, alone or further in view of Lee, makes obvious claim 53. As I discussed above with respect to claim 42, Sheha discloses that a target device can define a specific group of authorized users. The user of the target device can change their privacy settings at any time using the target device, thereby modifying location access rights. Ex. 1041, 5:9-32; 11:61-12:1. Sheha also discloses "allowance of position information transfers only . . . with the device owner's permission." Ex. 1041, 5:38-44. It is my opinion that it would have been obvious to provide an option of some sort, which would be one of a limited number of ways that a user could conceivably allow the position information transfer. Prior to March 25, 2002, displaying options on an interface was well-known and conventional.

160. For example, in FIG. 2D of the Lee reference (reproduced below), a

graphic user interface (GUI) is illustrated that displays options to modify users in a group (276) and access rights for the users in the group (using checkboxes 277). Ex. 1050, FIG. 2D, 16:1-25. The checkboxes 277 shown in FIG. 2D of Lee therefore provide an option to select or deselect different access rights for each user in the group 276 to modify the access rights for each user.

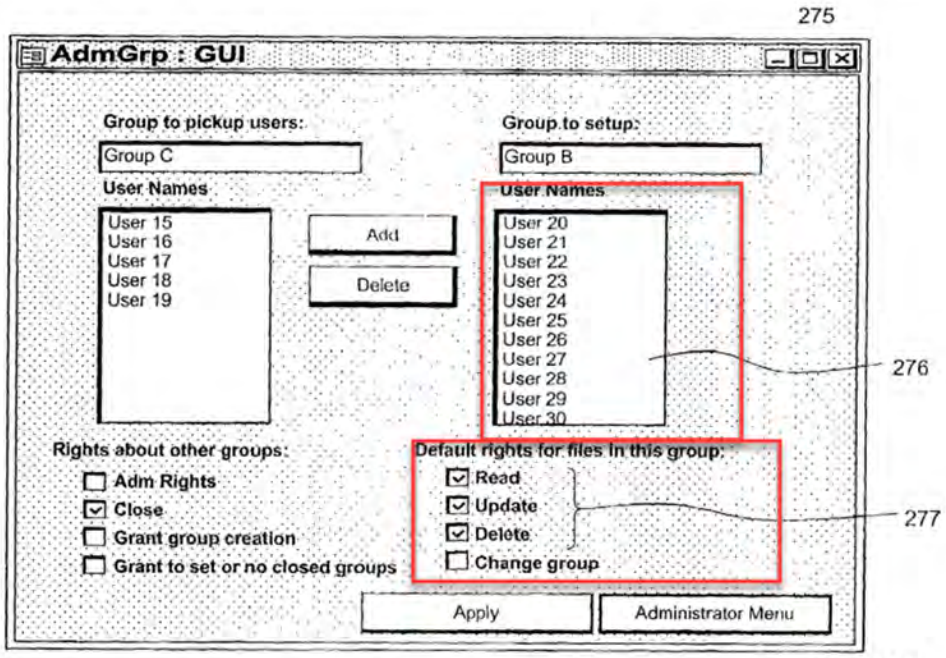


Fig. 2D

161. It is my opinion that it would have been obvious to persons skilled in the art to implement the routine and conventional feature of displaying options as disclosed in Lee to facilitate Sheha's access right configuration. Thus, Sheha and Lee teach the features of claim 53, which depends from claim 42, and therefore, claim 53 is obvious in view of Sheha and Ganesh, alone or further in view of Lee.

54. Dependent 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.

162. It is my opinion that Sheha and Lee disclose the functionality recited in claim 54, and thus, Sheha in view of Ganesh and further in view of Lee makes obvious claim 54. As I discussed above with respect to claim 53, Sheha discloses that a user of a target device can modify a specific group of authorized users. Sheha further discloses the user may terminate another user's location access rights "at anytime." Ex. 1041, 5:12-14. Sheha therefore discloses deleting another user's location access rights.

163. Moreover, terminating the access rights by displaying an option to delete the access rights is disclosed in Lee. As I discussed above with respect to claim 53, Lee FIG. 2D (shown above under claim 53) shows options to delete other user's access rights. For instance, the access rights can be deleted by removing the user and/or deselecting the access right checkbox. Thus, Sheha and Lee teach the features of claim 54, which depends from claim 42, and therefore, claim 54 is obvious in view of Sheha and Ganesh, alone or further in view of Lee.

55. Dependent 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.

164. It is my opinion that Degnbol discloses the functionality recited in

claim 55, and thus, Sheha in view of Ganesh and Degnbol makes obvious claim 55. Degnbol describes alerting the wireless telephone when a wireless device is within a distance of the wireless telephone, using "an ability to specify to be alerted only when certain criteria relating to distance, location, time or date are met. It may also be possible to specify an alternative alerting method." Ex. 1047, 10:19-21. Thus, Degnbol teaches the features of claim 55, which depends from claim 42, and therefore, claim 55 is obvious in view of Sheha and Ganesh and further in view of Degnbol.

56. Dependent 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.

165. It is my opinion that Sheha and Smith disclose the functionality recited in claim 56, and thus, Sheha in view of Ganesh and further in view of Smith makes obvious claim 56. Sheha describes the ability to select a wireless device, such as by manually entering an associated telephone number. 1041, 11:12-15. The use of identifier lists such as digital phonebooks and contact lists was conventional and well-known the art before March 25, 2002. It is therefore my opinion that it would have been obvious to implement an option to select a user from a list as an alternative means of selecting a user in Sheha's system.

166. Displaying a list of users is illustrated in Figure 15A of Smith,

reproduced below. Ex. 1059, FIG. 15A. Smith explains that "[i]n one embodiment of the present invention, the compressed view displays only the name field of the name list as shown in screen 1510 of FIG. 15A. Ex. 1059, 9:43-47.

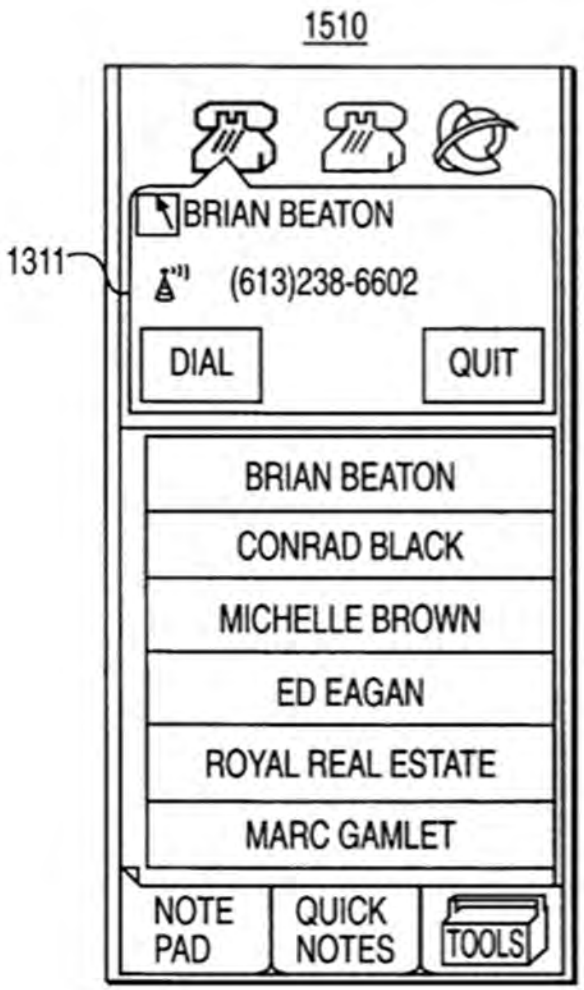


FIG. 15A

167. It is my opinion that an identifier list as shown above, which is described in Smith and was well-known in the art, would have been straightforward and obvious to use as a method for the user of the requesting

device in Sheha to select the target device from this name list instead of manually entering telephone numbers. Thus, Sheha and Smith teach the features of claim 56, which depends from claim 42, and therefore, claim 56 is obvious in view of Sheha and Ganesh, alone or in view of Smith.

57. Dependent 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.

168. It is my opinion that Smith discloses the functionality recited in claim 57, and thus, Sheha in view of Ganesh and Smith makes obvious claim 57. As I discussed above with respect to claim 56, Sheha in view of Ganesh and Smith disclose selecting the target device from an identifier list. Smith further discloses that the identifier list comprises a list of telephone numbers. In the user list of Figure 15A of Smith, shown above, as a user scrolls through the compressed view, the telephone number of each name is displayed in call object 1311. Ex. 1059, 9:19-24, 9:50-57. Thus, Smith teaches the features of claim 57, which depends from claim 42, and therefore, claim 57 is obvious in view of Sheha and Ganesh and further in view of Smith.

58. Dependent 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.

169. It is my opinion that Smith discloses the functionality recited in claim 58, and thus, Sheha in view of Ganesh and Smith makes obvious claim 58. As I discussed above with respect to claim 56, Sheha in view of Ganesh and Smith disclose selecting the target device from an identifier list, such as the compressed view display in Figure 15A of Smith, shown above under claim 56. Smith further discloses that each entry in the list shown in Figure 15A represents a user profile, such as that displayed in the full view shown in Figure 15B, which is reproduced below. Ex. 1059, FIGS. 15A and 15B, 9:43-55, 6:65-7:3, 8:18-19.

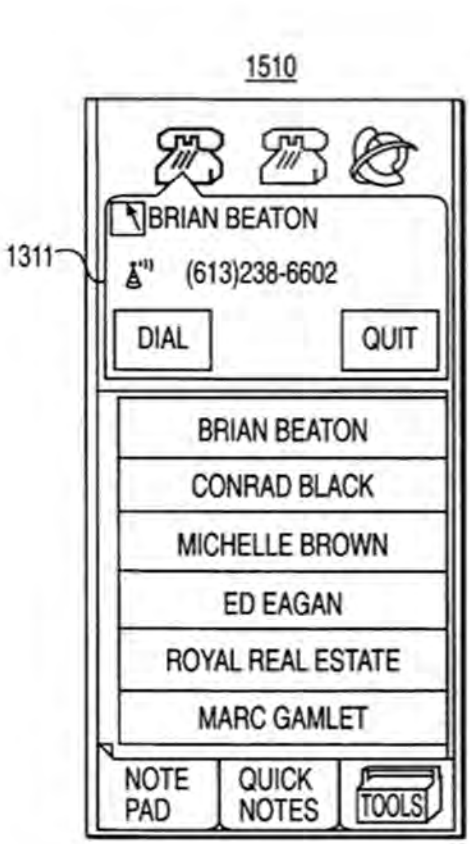


FIG. 15A

FIG. 15B

Thus, Smith discloses the features of claim 58, which depends from claim 42, and therefore, claim 58 is obvious in view of Sheha and Ganesh and further in view of Smith.

59. Dependent claim 59 – The wireless telephone of claim 42, said positioning system comprises a global positioning system.

170. It is my opinion that Sheha discloses the functionality recited in claim 59, and thus, Sheha in view of Ganesh makes obvious claim 59. Sheha describes the positioning system comprising a global positioning system: “The position

information can also be obtained from a combination of an onboard positioning information device 19a, such as a GPS receiver, and a network-assisted approach 21a." Ex. 1041, 10:11-16. Thus, Sheha teaches the features of claim 59, which depends from claim 42, and therefore, claim 59 is obvious in view of Sheha and Ganesh.

60. Dependent claim 60 – The wireless telephone of claim 42, wherein said programming is further capable of displaying a compass.

171. It is my opinion that Sheha discloses the functionality recited in claim 60, and thus, Sheha in view of Ganesh makes obvious claim 60. Sheha discloses displaying a compass. Element 31 in Figure 5 of Sheha (reproduced below with annotation) shows a compass with a "direction heading information relative to location position information." Ex. 1041, 9:30-32, FIG. 5, 4:52-58 (describing displaying maps on a mobile device specifically).

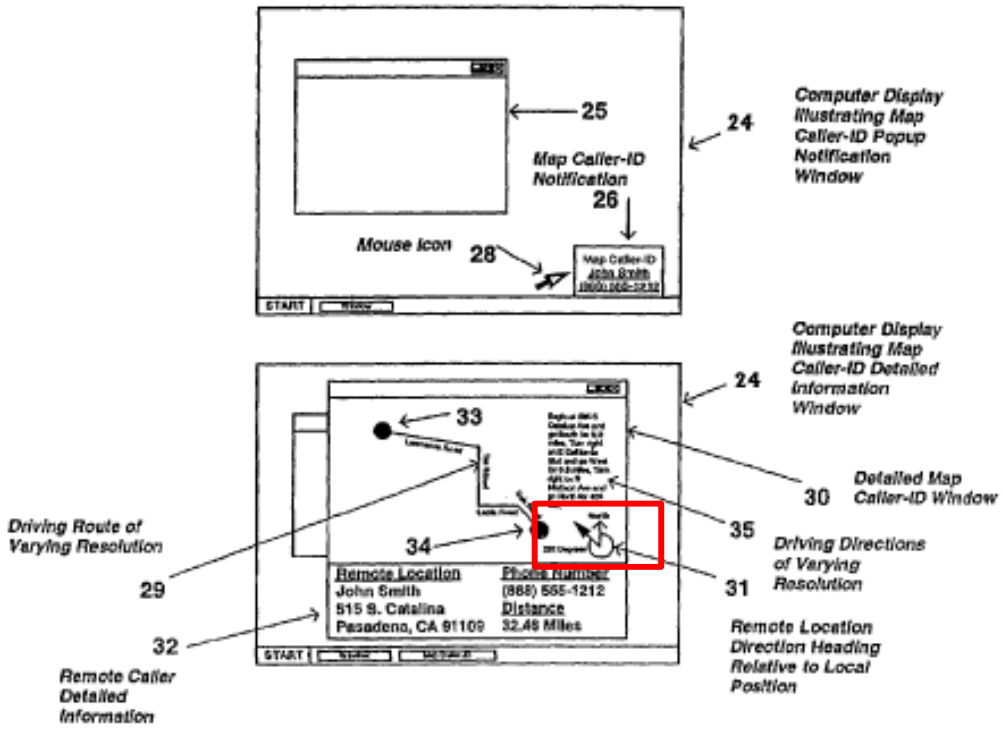


FIG. 5

172. Thus, Sheha discloses the features of claim 60, which depends from claim 42, and therefore, claim 60 is obvious over Sheha in view of Ganesh.

61. Dependent 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.

173. It is my opinion that Sheha discloses the functionality recited in claim 61, and thus, Sheha in view of Ganesh makes obvious claim 61. As I discussed

above with respect to claim 60, Sheha discloses displaying "direction heading information relative to location position information." Ex. 1041, 9:30-32, FIG. 5, 4:52-58. This directional heading information, circled in FIG. 5 of Sheha as shown below, is a directional arrow indicative of the relative locations of the located and locating devices in Sheha.

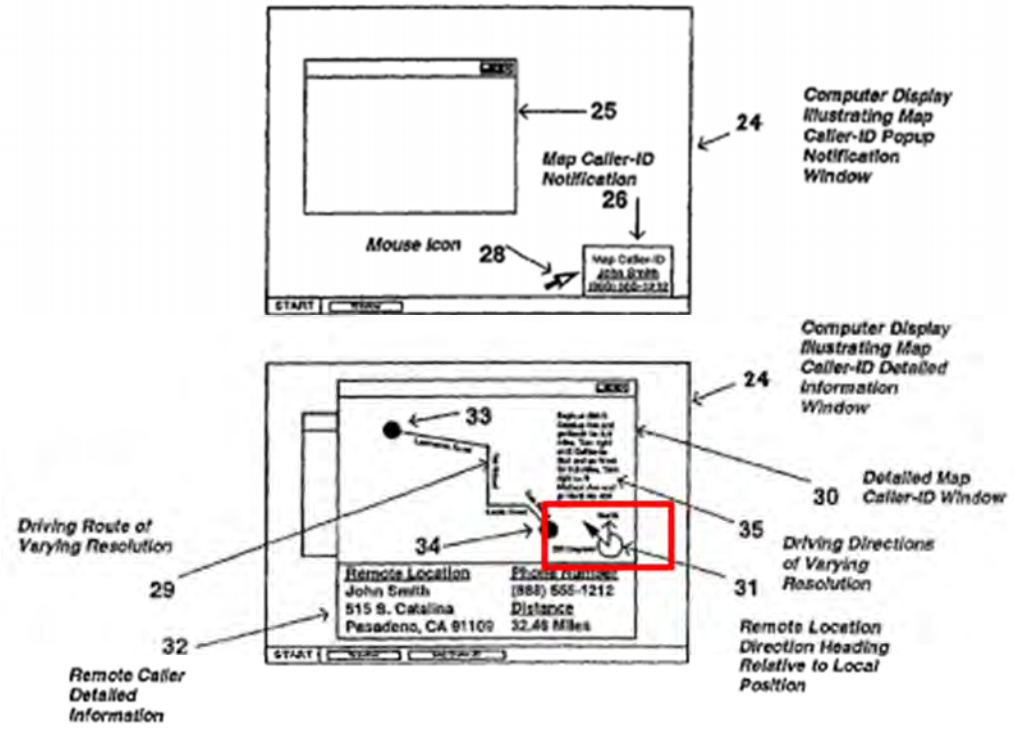


FIG. 5

174. Thus, Sheha discloses the features of claim 61, which depends from claim 42, and therefore, claim 61 is obvious over Sheha in view of Ganesh.

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

175. It is my opinion that Degnbol discloses the functionality recited in claim 62, and thus, Sheha in view of Ganesh and Degnbol makes obvious claim 62. As I discussed above with respect to claim 55, Sheha in view of Ganesh and Degnbol discloses setting location-based alerts associated with a first wireless device on a second wireless device. Degnbol provides examples of setting location alerts associated with the target wireless device on the requesting wireless device, such as a husband and wife who each want to be alerted when the other enters a given area on their route home. Ex. 1047, 13:17-21, 20:24-28. Thus, Degnbol discloses the features of claim 62, which depends from claim 42, and therefore, claim 62 is obvious over Sheha in view of Ganesh and further in view of Degnbol.

63. Dependent 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.

176. It is my opinion that Sheha and Lee disclose the functionality recited in claim 63, and thus, Sheha in view of Ganesh, alone or in further view of Lee makes obvious claim 63. In Sheha's system, an online database and application server (ODAS) determines position information of a destination mobile device and

updates each mobile device with the other's position information. Ex. 1041, 11:20-54, 7:21-22. Sheha also describes "allowing any remote device to request position information for any specified amount of time." *Id.*, 5:44-46. Sheha therefore discloses 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. Displaying an option was a well-known manner of accepting user configuration information at the time, and would have been an obvious way to facilitate allowing the user to configure access rights. As I discussed above with respect to claims 53 and 54, displaying options to modify access rights is both well-known and disclosed in the Lee reference. Thus, Sheha and Lee disclose the features of claim 63, which depends from claim 42, and therefore, claim 63 is obvious over Sheha in view of Ganesh, alone or further in view of Lee.

64. Dependent 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.

177. It is my opinion that Degnbol discloses the functionality recited in claim 64, and thus, Sheha in view of Ganesh and Degnbol makes obvious claim 64. As I discussed above under claims 55 and 62, Degnbol discloses providing an alert when a second device enters a geographic area, such alerting a spouse when the other enters a given area on their route home. Ex. 1047, 13:17-21, 20:24-28. Thus,

Degnbol discloses the features of claim 64, which depends from claim 42, and therefore, claim 64 is obvious over Sheha in view of Ganesh and further in view of Degnbol.

65. Dependent 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.

178. It is my opinion that Sheha discloses the functionality recited in claim 65, and thus, Sheha in view of Ganesh makes obvious claim 65. Sheha describes location access permissions, which can be provided by the wireless devices to the ODAS server. Ex. 1041, 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." *Id.*, 5:31 – 46. In the case where the transfer is terminated manually, the user grants permission to obtain location information until it is revoked. Therefore, it is my understanding that until and if there is manual intervention, Sheha's system grants location access for an indefinite time period. Thus, Sheha discloses the features of claim 65, which depends from claim 42, and therefore, claim 65 is obvious over Sheha in view of Ganesh.

66. Dependent 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.

179. It is my opinion that Sheha discloses the functionality recited in claim 66, and thus, Sheha in view of Ganesh makes obvious claim 66. As I discussed above with respect to claim 65, Sheha describes a remote server, or ODAS, which can control location sharing between wireless telephones. Sheha also describes "allowing any remote device to request position information for any specified amount of time." Ex. 1041, 5:44-46. Thus, Sheha discloses the features of claim 66, which depends from claim 42, and therefore, claim 66 is obvious over Sheha in view of Ganesh.

67. Dependent claim 67 – The wireless telephone of claim 42, wherein said programming is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.

180. It is my opinion that Degnbol's disclose the functionality recited in claim 67, and thus, Sheha in view of Ganesh and Degnbol makes obvious claim 67. As I have discussed above, Sheha's system locates devices, and sends transmissions to one device upon locating another device. Ex. 1041, 12:1-7.

181. Degnbol describes transmitting an alert to a wireless telephone when another wireless device locates it. Degnbol describes a scenario in which a

"position report" is given to a communication device of "User A" which includes "the current locations of 'A' and 'B.'" Ex. 1047, 20:23-21:4. "At the same time, a message is sent to User 'B', informing him that he has been the subject of an alert to another user. Ex. 1047, 21:4-6. Transmitting alerts was well-known at the time, and it was also known to transmit alerts specifically related to being located as a security or privacy function. It therefore would have been straightforward to a person skilled in the art to incorporate such functionality into Sheha's system. Thus, Degnbol discloses the features of claim 67, which depends from claim 42, and therefore, claim 67 is obvious over Sheha in view of Ganesh and further in view of Degnbol.

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

182. It is my opinion that Sheha and Degnbol disclose the functionality recited in claim 68, and thus, Sheha in view of Ganesh and Degnbol makes obvious claim 68. As I discussed above, Sheha's system is capable of receiving and displaying location information of one device to another device. Sheha lists various devices that can be located, including a "wireless telephone, a personal digital assistant, and a portable computer." Ex. 1041, claim 12. A watch is one obvious choice of a device that could be located. At the time of filing of the '117 Patent, watches were well-known portable devices, and it was common for watches

to include location functionality.

183. Degnbol describes "determining the position of one or more units in the set" where units in the set can be "wristwatches." Ex. 1047, 7:4-17, *see also* 4:29-31, claim 10. Given that Sheha discloses receiving and displaying the location of various devices, it would have been obvious to a person skilled in the art to use Sheha's system to receive and display the location of any suitable device, such as a watch, as disclosed in Degnbol. A person skilled in the art would have had a reasonable expectation of success in doing so, given that Sheha's system is already configured to receive and display location information from various devices, and the type of device located has little bearing on that functionality. Thus, Sheha and Degnbol disclose the features of claim 68, which depends from claim 42, and therefore, claim 68 is obvious over Sheha in view of Ganesh and further in view of Degnbol.

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

184. It is my opinion that Sheha and discloses the functionality recited in claim 69, and thus, Sheha in view of Ganesh makes obvious claim 69. As I discussed above with respect to claim 68, Sheha's system is capable of receiving and displaying location information of one device to another device. Sheha lists various devices that can be located, including "wireless telephone, a personal

digital assistant, and a portable computer." Ex. 1041, claim 12. A radio is one obvious choice of a device that could be located. At the time of filing of the '117 Patent, radios were well-known portable devices, and it was known for radios to include location functionality in certain circumstances.

185. Further, locating a radio is described in Lelievre. Lelievre discloses a radio that is "location-aware" and can "transmit[] location information, including its present location" to an external device. Ex. 1059, ¶ 47, FIG. 5. Given Sheha's description of locating various types of devices, it would have been obvious to a person of skill in the art to use a system such as Sheha's to locate a radio, as described in Lelievre. Thus, Sheha and Lelievre disclose the features of claim 69, which depends from claim 42, and therefore, claim 69 is obvious over Sheha in view of Ganesh and further in view of Lelievre.

70. Dependent claim 70 – The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a car.

186. It is my opinion that Sheha discloses the functionality recited in claim 70. Sheha describes receiving and displaying a location of various devices, as I discussed above with respect to claims 68 and 69.

187. Sheha describes "pass[ing] any or all of that information to an additional navigation or computing device, such as an in-vehicle navigation system or a mobile computer, in order for that additional navigation or computing device

to make better use of the acquired position information, such as for improved route calculation and/or improved display." Ex. 1041, 3:37-49. FIGS. 6 and 7 of Sheha show such a system including an in-vehicle mobile navigation device. Ex, 1041, FIGS. 6-7. FIG. 7 (reproduced below) shows a mobile navigation device 45 in a motor vehicle 39b, connected to the server 3 from which location information can be received. Ex, 1041, FIGS. 6-7,12:57-13:31.

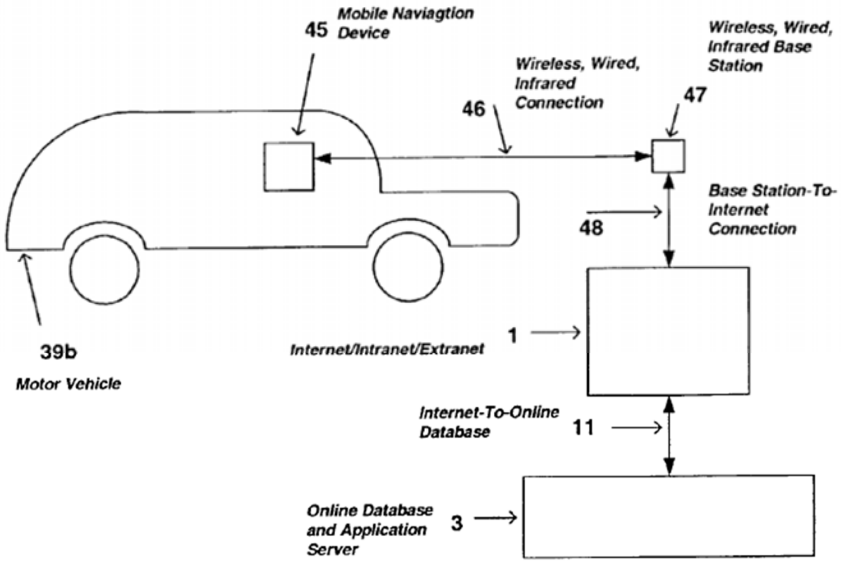
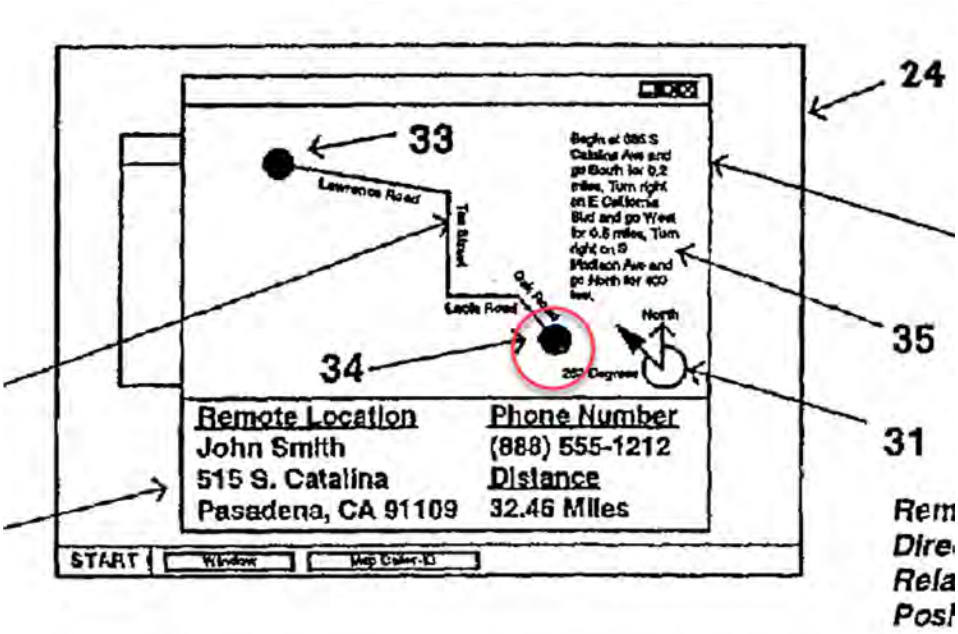


FIG. 7

188. As shown in FIG. 5 of Sheha (reproduced in part below with annotation), displayed information includes a map location 34 of the destination telephone number, which is the location of the vehicle in the in-vehicle navigation system implementation. Ex. 1041, FIG. 5, 9:23-28.



189. Therefore, Sheha's system receives and displays the location of a car. Thus, Sheha discloses the features of claim 70, which depends from claim 42, and therefore, claim 70 is obvious over Sheha in view of Ganesh.

71. Dependent 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.

190. It is my opinion that Sheha and Bedingfield disclose the functionality recited in claim 71, and thus, Sheha in view of Ganesh and Bedingfield makes obvious claim 71. Sheha describes receiving and displaying direction-related information: "The ODAS . . . updates each mobile device with the other's position

information, thus providing real-time driving directions and route information." Ex. 1041, 11:44-51. This can include "driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." Ex. 1041, 9:30-39; FIG. 5. Therefore, Sheha's system can display different information useful for navigational purposes.

191. Bedingfield describes displaying information indicating time to reach one location from another location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving. Bedingfield discusses presenting information such as "a distance in time when driving, a distance in time when walking, a distance in time when bicycling, and so on." Ex. 1044, ¶¶ 53-54. Bedingfield lists at least two of the types of travel enumerated in claim 13, "walking" and "driving." *Id.*

192. It would have been obvious to a person skilled in the art to enhance Sheha's system with travel time information. Sheha describes adjusting the displayed route information based on different factors such as time of day. Travel time information via different modes as described in Bedingfield and well-known at the time would have been an obvious extension of the different factors used for displaying directional information described in Sheha. A person skilled in the art would have had a reasonable expectation of success in adding Bedingfield's travel time functionality to Sheha's system, which would only require minor and routine

programming modifications. Therefore, Sheha and Bedingfield disclose the functionality recited in claim 71, which depends from claim 42, and thus, Sheha in view of Ganesh and Bedingfield makes obvious claim 71

72. Dependent 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.

193. It is my opinion that claim 72 is obvious in view of Sheha and Ganesh, alone or in combination with Degnbol and/or Smith. Sheha's system can store information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. Ex. 1041, 11:51-12:1.

194. Phone book functionality was common on mobile wireless devices, such as cellular telephones, before March 25, 2002. For example, both Degnbol and Smith disclose conventional phone book functionality. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. Smith describes "a name list with corresponding telephone numbers." Ex. 1059, 9:4-6. Smith FIGS. 13A and 13B are reproduced below, and show such a name list displayed.

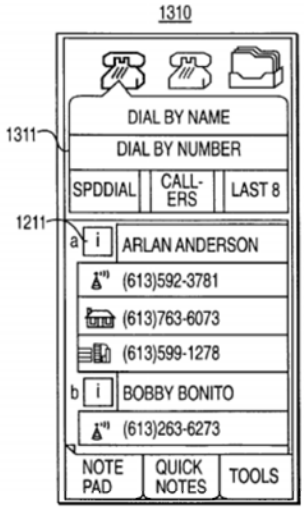


FIG. 13A

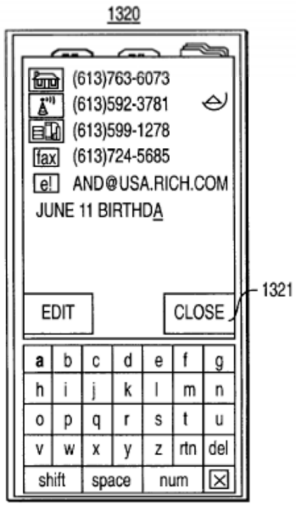


FIG. 13B

195. It is my opinion that a person skilled in the art would have been motivated to modify Sheha's system to include phone book functionality with a reasonable expectation of success. Sheha's system includes a group database correlating privacy settings and to identified users. Including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks. Thus, Degnbol and Smith disclose the features of claim 72, which are also suggested by Sheha's

disclosure. Claim 72 depends from claim 42.

196. Therefore, claim 72 is obvious over Sheha in view of Ganesh, alone or further in view of Degnbol and/or Smith.

73. Independent claim 73

197. It is my opinion that claim 73 is anticipated by Sheha.

a. *Claim 73 Preamble – A wireless telephone comprising:*

198. As described above with respect to the preamble of claim 1, Sheha discloses a wireless telephone. Thus, Sheha discloses the features of the preamble of claim 73.

b. *Claim 73 [a] – a processor;*

199. As described above with respect to claim 1a, Sheha discloses a processor. Thus, Sheha discloses claim 73a.

c. *Claim 73 [b] – a positioning system for determining a location of said wireless telephone; and*

200. As described above with respect to claim 1b, Sheha discloses a positioning system for determining a location of a wireless telephone. Thus, Sheha discloses claim 73b.

d. *Claim 73 [c] – memory storing programming capable of:*

201. As described above with respect to claim 1c, Sheha discloses a memory. Thus, Sheha discloses claim 73c.

e. ***Claim 73 [d] – providing said location to a remote system, wherein said location is operable of being requested by a second wireless device outside of a call for communication between said wireless telephone and said second wireless device;***

202. Sheha discloses providing location of a wireless telephone to a remote system, and that location can be requested by another wireless device outside of a call. Sheha describes "the mobile device . . . send[ing] . . . position information to the ODAS." Ex. 1041, 10:48-50. The ODAS of Sheha's system is a server and is remote from the wireless telephone, as described above with respect to claim 1[d]. Ex 1041, 7:22-23, FIG. 3. Sheha further states that "A mobile or landline device can also request position information of another mobile or landline device . . . without having to initiate a telephone call." Ex. 1041, 11:55-58. Thus, Sheha discloses claim 73d.

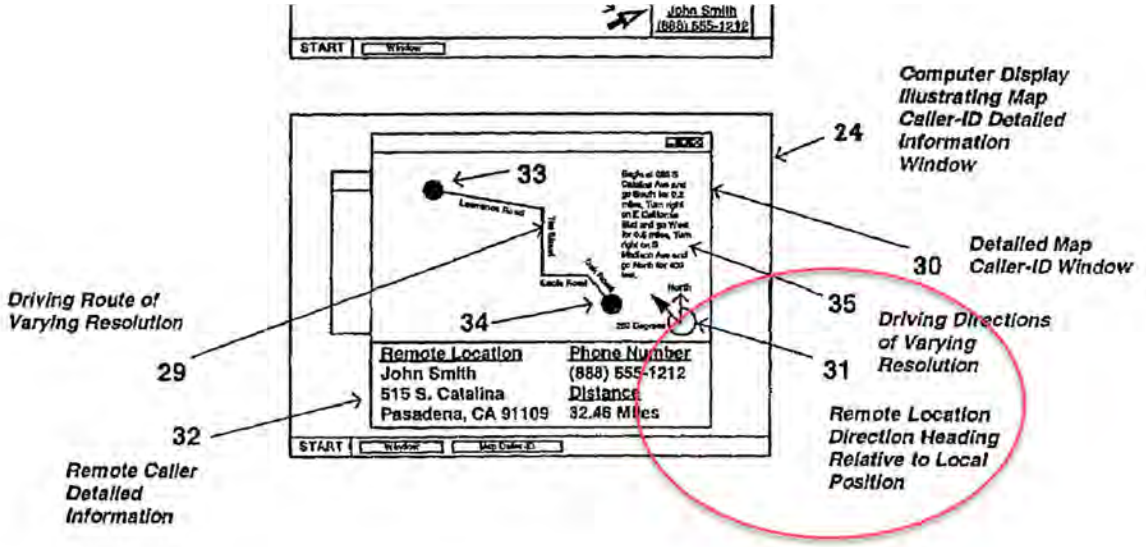
f. ***Claim 73 [e] – providing a permission for said second wireless device to access location information about said location, said permission operable of being stored in said remote system, wherein said remote system is located remotely from said wireless telephone and said second wireless device, said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call,***

203. Sheha describes providing permission for other wireless devices to access location information: "users can define a group of specific users that have access to this information." Ex. 1041, 11:63-65. The permission information is

stored by the ODAS in a "group database." Ex. 1041, 11:55-12:4. Sheha also describes providing the location information to the second wireless device in accordance with the permissions: "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." Ex. 1041, 11:55-12:4. Sheha also discloses providing location information from a remote system to a wireless outside of a call. As described above with respect to claim 73[d], Sheha describes the ability for a mobile device to request location information outside a call, and the ODAS then returns the location information outside a call. Ex. 1041, 11:55-12:4. Sheha therefore discloses every element of claim 73e.

g. ***Claim 73 [f] – wherein said programming of said wireless telephone is further operable of providing a first map provided with respect to said location.***

204. Sheha discloses a wireless telephone operable of providing a first map with respect to said location. Sheha states that "navigational information, such as . . . a map . . . can be displayed on the mobile telephone." Ex. 1041, 4:52-58. FIG. 5 of Sheha (reproduced below with annotation) shows a map relative to the local position of the user device displaying the map, e.g., with respect to "said location" of the wireless telephone displaying the map as recited in claim 73f. Ex. 1041, FIG. 5, 9:23-49. Sheha states that in some embodiments, such a map is displayed on a mobile telephone. Ex. 1041, 4:52-58.



205. Sheha therefore anticipates independent claim 73.

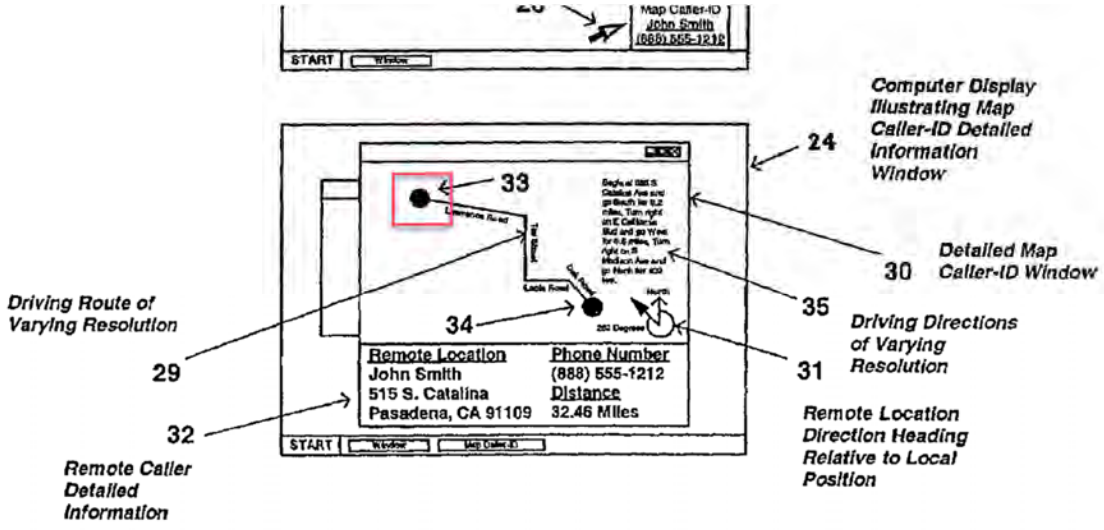
74. Dependent claim 74 – The wireless telephone of claim 73, wherein said second wireless device comprises a wireless telephone.

206. It is my opinion that Sheha discloses the features of claim 74, and thus claim 74 is anticipated by Sheha. Sheha describes a "mobile-to-mobile application" in which both devices are wireless telephones. Ex. 1041, 4:59-66, 10:66-11:9. Thus, Sheha anticipates claim 74.

75. Dependent claim 75 – The wireless telephone of claim 73, wherein said programming is further capable of displaying a map with a location marker associated with a location of said second wireless device.

207. It is my opinion that Sheha discloses the features of claim 75, and thus claim 75 is anticipated by Sheha. FIG. 5 of Sheha is reproduced in part below with

the location marker 33 circled. As shown in Sheha FIG. 5, a map displayed on the user's device (analogous to the wireless telephone that displays a map in claim 75) includes a location marker 33 associated with the location of a remote caller (analogous to the second wireless device whose location is being shown in claim 75). Ex. 1041, FIG. 5, 9:23-28.



Sheha states that in some embodiments, such a map is displayed on a mobile telephone. Ex. 1041, 4:52-58. Thus, Sheha anticipates claim 75.

76. Dependent claim 76 – The wireless telephone of claim 73, wherein said programming is further capable of removing said permission, by said wireless telephone, for said second wireless device to obtain said location.

208. It is my opinion that claim 76 is obvious in view of, Sheha. Sheha discloses "a user request[] to terminate the transfer" of location access rights,

which can be due to manual intervention." Ex. 1041, 5:34-39. It is my opinion that, based on this language, person skilled in the art would have understood this to mean intervention via the granting wireless telephone to remove the permission. Thus, Sheha makes obvious claim 76.

77. Dependent claim 77 – The wireless telephone of claim 73, wherein said positioning system is operable to receive signals from a plurality of positioning satellites, and said location is operable to be updated by said positioning system, and said programming is further capable of providing said updated location to said remote system.

209. It is my opinion that claim 77 is anticipated by Sheha. Sheha describes obtaining the location of a wireless telephones using GPS: "The position information can also be obtained from . . . a GPS receiver." Ex. 1041, 10:11-13. Sheha also describes providing the updated location to the provided to the ODAS (remote system). Ex. 1041, 10:48-50. GPS receivers by nature identify location by receiving signals from multiple positioning satellites, which was well-known to persons skilled in the art when the '117 Patent was filed. Any GPS receiver would have to receive multiple signals to function, therefore the "plurality of positioning satellites" is implied in Sheha's GPS receiver. Thus, claim 77 is anticipated by Sheha.

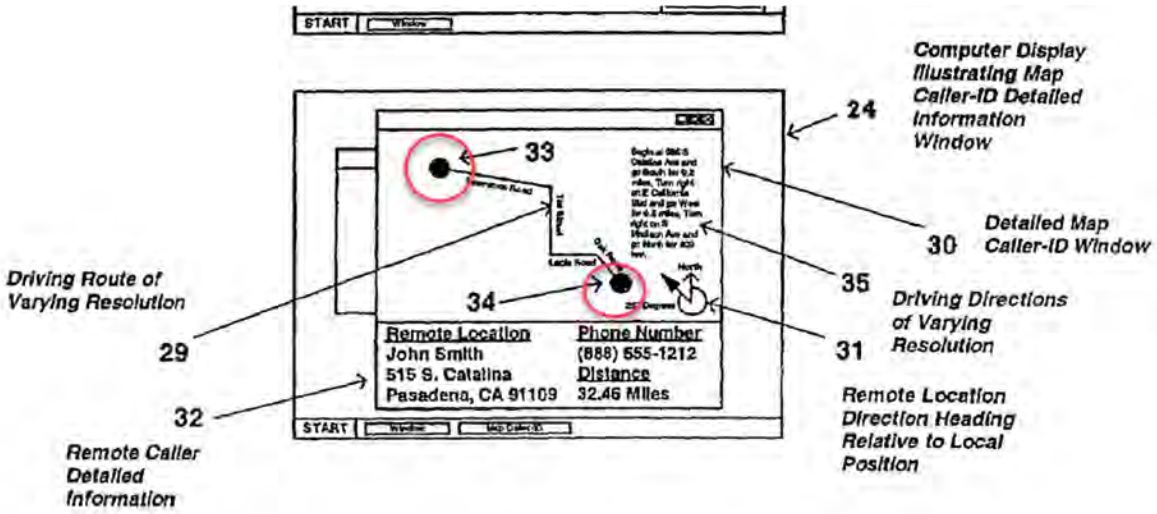
78. Dependent claim 78 –The wireless telephone of claim 73, wherein said programming is further capable of receiving an alert when said second wireless device is within a distance of said wireless telephone.

210. It is my opinion that claim 78 is obvious over Sheha and Degnbol. Degnbol discloses a wireless telephone receiving an alert when a second wireless device is within a certain distance. "For example, user 'A' may choose to configure the system so that he only receives alerts when a Buddy comes within the range of 500 meters." Ex. 1047, 11:10-11. "The location of users 'A' and 'B' is determined by reference to the position of their personal wireless communication unit, such as a mobile telephone." Ex. 1047, 3:11-13). As discussed above with respect to claim 6, it is my opinion that a person skilled in the art would have been motivated to incorporate location-based alerts as disclosed in Degnbol to enhance Sheha's system for sharing location information. Thus, Sheha and Degnbol render claim 78 obvious.

79. Dependent claim 79 – The wireless telephone of claim 73, wherein said programming is further capable of displaying said location of said wireless telephone relative to a second location of said second wireless device.

211. It is my opinion that Sheha anticipates claim 79. FIG. 5 of Sheha (reproduced in part below) shows a Caller ID Detailed Information Window displaying the location of the two wireless telephones relative to one another. Sheha explains, "The detailed Map Caller-ID information window . . . display[s]

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." Ex. 1041, 9:23-28.



212. The "user's location position information, such as a map location 34 of the destination telephone number" in Sheha FIG. 5 corresponds to the device displaying the map (e.g., said location of said wireless telephone in claim 79). See Ex. 1041, 9:23-39, 6:52-56. The map location 33 of the remote caller corresponds to the remote device (e.g., the second location of said second wireless device in claim 79). See Ex. 1041, 6:52-56, 9-23-28. As shown in FIG. 5, the locations 33 and 34 are shown relative to one another. Ex. 1041, FIG. 5. Sheha states that in some embodiments, such a map can be displayed on a mobile telephone. Ex. 1041, 4:52-58. Sheha therefore anticipates claim 79.

80. Dependent claim 80 – The wireless telephone of claim 73, wherein said programming is further capable of setting location alerts associated with said second wireless device.

213. It is my opinion that claim 80 is obvious in view of Sheha and Degnbol. As described above with respect to claim 6, Degnbol discloses configurable location alerts, and it would have been obvious and straightforward to include such configurable location alerts in Sheha's system. In particular, Degnbol describes "[c]onfiguration options" that "may include an ability to specify to be alerted only when certain criteria relating to distance, location, time or date are met." Ex. 1047, 10:17-23. Thus, Sheha in view of Degnbol makes obvious claim 80.

81. Dependent claim 81 – The wireless telephone of claim 73, wherein said programming is further capable of assigning said permission for a specific period of time.

214. As described above under claim 5, Sheha discloses instructing a remote server to allow users to access a location of a wireless telephone for only a specific period of time and anticipates claim 5.

82. Dependent claim 82 – The wireless telephone of claim 73, wherein said programming is further capable of being alerted when said second wireless device enters a geographic region.

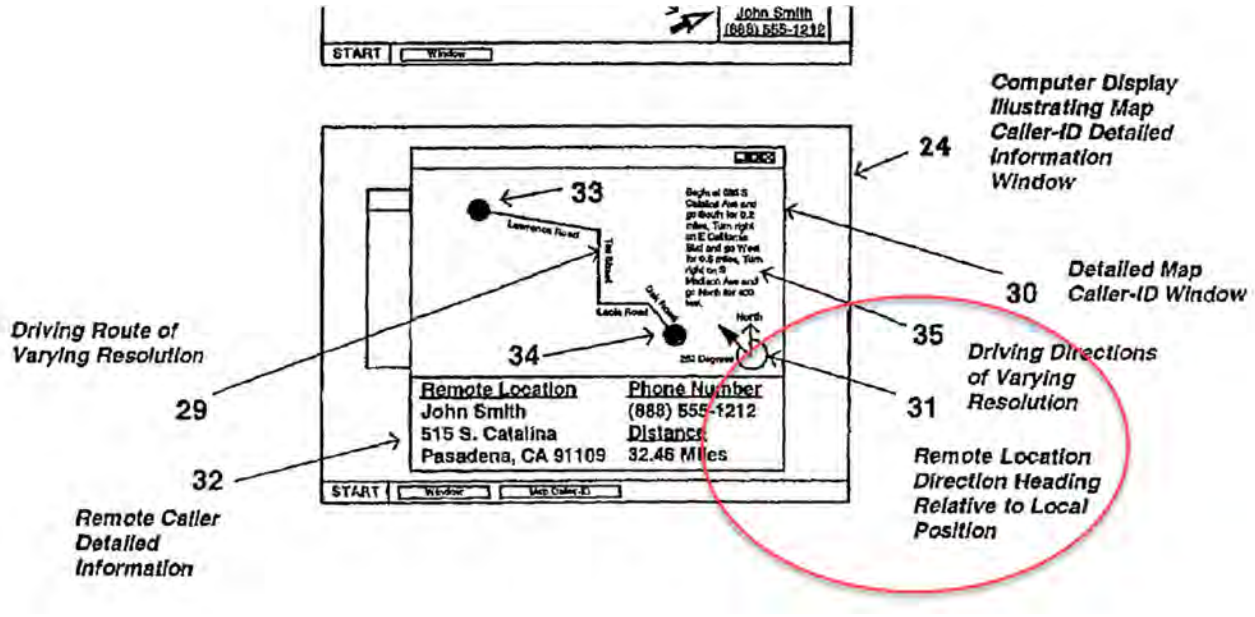
215. As described above under claim 8 and claim 6, Degnbol describes sending alerts based on a location of another wireless telephone, including based

on when a wireless device enters a geographic region. Thus, Sheha in view of Degnbol makes obvious claim 82.

83. Dependent claim 83 – The wireless telephone of claim 73, wherein said programming is further capable of displaying said first map from a perspective of said first wireless device, said map identifying said location of said wireless telephone and a location of said second wireless device.

216. It is my opinion that Sheha anticipates claim 83. As described above with respect to claims 75 and 79, Sheha discloses displaying a map identifying the location of the wireless telephone and the location of the second wireless device. Ex. 1041, FIG. 5 (reproduced in part below).

217. Claim 83 refers to "said first wireless device" for the first time. It is assumed that this is meant to refer to the wireless telephone. As described above with respect to claim 79, the user's location 34 of the destination telephone number in Sheha FIG. 5 corresponds to the device displaying the map (e.g., said location of said wireless telephone / said first wireless device in claim 83), and the map location 33 of the remote caller corresponds to the remote device (e.g., the location of said second wireless device in claim 83).



218. In FIG. 5 of Sheha, the map is from perspective of the local position (the first wireless device in claim 83), as can be seen from the circled portion of FIG. 5, above, showing that the map information is "relative to local position." Ex. 1041, FIG. 5. Sheha therefore anticipates claim 83.

84. Dependent claim 84 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

219. It is my opinion that Sheha discloses or makes obvious claim 84. Sheha describes location access permissions, which can be provided by the wireless devices to the ODAS server. Ex. 1041, 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." Ex. 1041, 5:3-46. In the latter embodiment, the user grants permission to other devices to obtain location information until it is revoked, making the general case taught by Sheha to be allowing the specified users access rights for an indefinite time period. Therefore, the ability to grant access indefinitely is implied in Sheha's disclosure. Even if it were not implied, the ability to grant access indefinitely was a routine and well-known concept at the time. Sheha therefore anticipates, or at least makes obvious, claim 8.

85. Dependent claim 85 – The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.

220. See claim 84.

86. Dependent claim 86 – The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote 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.

221. See claim 5.

87. Dependent claim 87 – The wireless telephone of claim 73, wherein said programing is further capable of receiving an alert when a user of said list of users locates said wireless telephone.

222. See claim 9.

88. Dependent claim 88 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a watch.

223. See claim 10.

89. Dependent claim 89 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a radio.

224. See claim 11.

90. Dependent claim 90 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a car.

225. See claim 12.

91. Dependent claim 91 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

226. See claim 13.

92. Dependent claim 92 – The wireless telephone of claim 73, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

See claim 14.

B. Ground 2: Claims 1-92 are unpatentable as obvious over Enzmann, alone or in combination with Tobin, McNulty, Degnbol,

Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, Curbow, and/or Bedingfield

227. The Enzmann patent renders obvious a wireless telephone configured to provide its location to a remote server and manage users able to obtain its location as recited in claim 1. The Enzmann patent also renders obvious a wireless telephone configured to obtain and display a location of another wireless telephone based on access rights as recited in claim 15, including receiving a login and password and providing them to a remote server, and based on the login and password and determined access rights, receiving and displaying the wireless telephone location.

228. The Enzmann patent also renders obvious a wireless telephone configured to obtain a location-based event notification as recited in claim 29, including receiving a login, selecting a location-based event based on a location of a second wireless telephone, and receiving the location-based event notification based on location access rights. The Enzmann patent also renders obvious a wireless telephone configured to obtain a location of another wireless device based on access rights as recited in claim 42, including requesting the location from a remote server, requesting location access rights from the remote server, and receiving the location of the wireless device from the server based on the access rights. Enzmann also renders obvious a wireless telephone configured to provide

its location to a remote system and provide permission for other devices to access the location as recited in claim 73, including doing so outside of a call.

229. Enzmann also discloses many of the elements recited in the various dependent claims. To the extent Enzmann may not explicitly disclose certain features of claims 1-92, Tobin, McNulty, Degnbol, Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, Curbow, and/or Bedingfield disclose these features. It is my opinion that the combination of Enzmann with Tobin, McNulty, Degnbol, Smith, Carey, Ganesh, Obradovich, Lee, Smith, Lelievre, Curbow, and/or Bedingfield renders claims 1-92 obvious.

1. Independent claim 1

230. It is my opinion that claim 1 is obvious over Enzmann.

a. *Claim 1 Preamble – A wireless telephone comprising:*

231. To the extent the preamble is limiting, Enzmann discloses "[w]ireless handheld devices" such as "pagers and cellular telephones." Ex. 1040, 2:52-54. Thus, Enzmann discloses the features of the preamble of claim 1.

b. *Claim 1 [a] – a processor;*

232. Enzmann discloses a "processor." Ex. 1040, 1:66. Although the processor is not specifically described with respect to the wireless device, it is implied that a processor is included in the wireless device to perform computing operations. It was standard, routine, and conventional before March 25, 2002 for

wireless telephones to include a processor. Thus, Enzmann discloses claim 1a.

c. *Claim 1 [b] – a positioning system for determining a location of said wireless telephone; and*

233. Enzmann discloses a positioning system for determining a location of said wireless telephone. Enzmann is directed to a "location system" that "provides the location information . . . of a handheld device. . . . An example of a suitable location system in the handheld devices is a GPS." (Ex. 1040, 4:24 – 38; Ex. 1021, ⁋ []).1040 Thus, Enzmann discloses claim 1b.

d. *Claim 1 [c] – memory storing programming capable of:*

234. Enzmann discloses a "memory." Ex. 1040, 5:28-38. Although the memory is not specifically described with respect to the wireless device, it is implied that a memory is included in the wireless device to store programming. It was standard, routine, and conventional before March 25, 2002 for wireless telephones to include a memory storing programming. Thus, Enzmann discloses claim 1c.

e. *Claim 1 [d] – providing said location of said wireless telephone to a remote server;*

235. Enzmann discloses providing the location of a wireless telephone to a remote server. Enzmann describes "provid[ing] the locations of the plurality of network devices . . . e.g., position coordinates, of a handheld device, which indicates where a network user is located." Ex. 1040, 4:16-23. The "user wireless

network 102 returns the location information . . . to location server 100." Ex. 1040, 8:60-62. The "user wireless network 102 is in communication with a location system 120 that . . . includes . . . handheld location systems 122 . . . provisioned in wireless handheld devices 104." Ex. 1040, 4:15-32). Therefore, in Enzmann, the location of each wireless telephone is provided by the wireless handheld device to the location server. The location server is remote from the wireless telephone at least because the location server is separate from and in communication with the wireless devices over a network. Ex. 1040, 2:52-58, FIG. 1 (reproduced below).

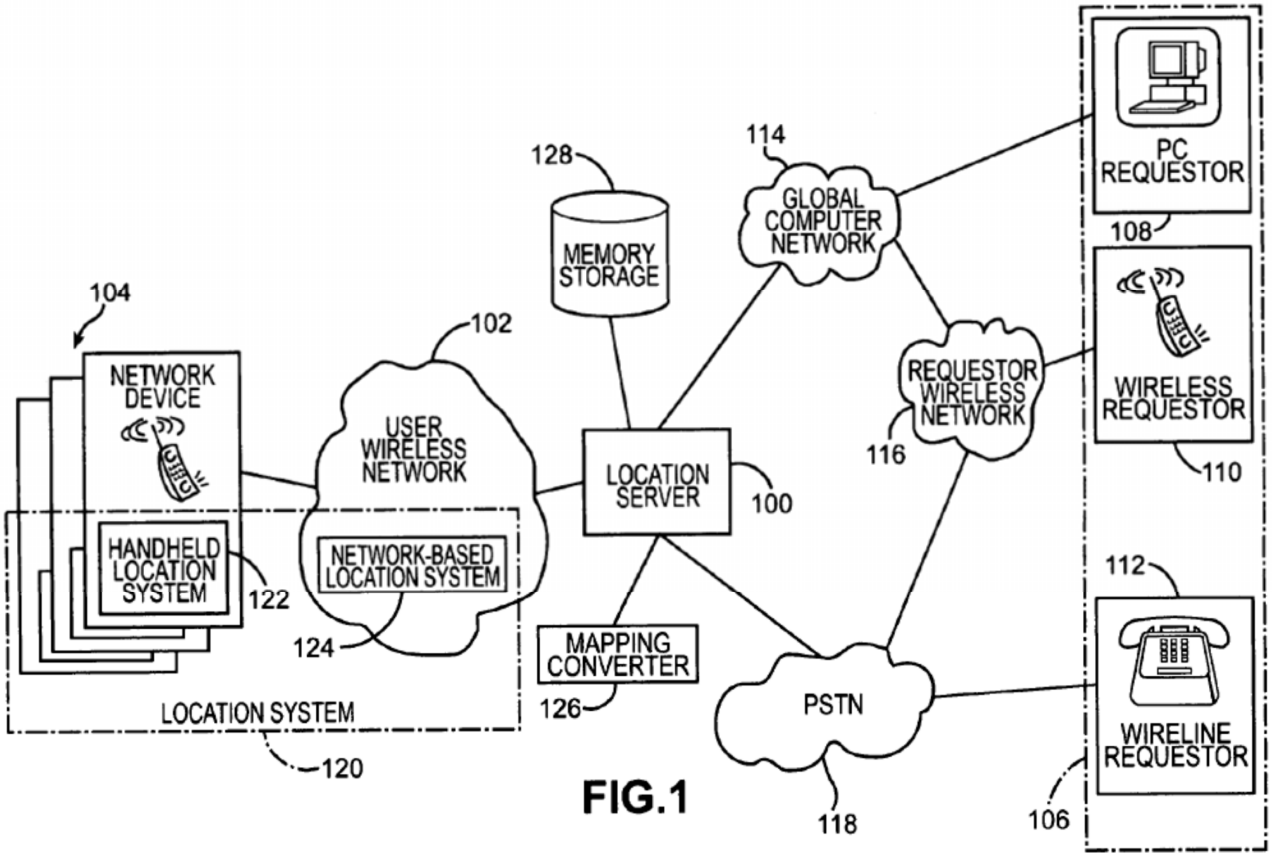


FIG.1

236. Thus, Enzmann discloses claim 1d.

f. ***Claim 1 [e] – instructing said remote server to change a list of users on said remote server for a profile associated with said wireless telephone that are allowed to access said location by way of said remote server providing said location from said remote server to at least one of said users of said list of users, wherein each user of said list of users is representative of one of a plurality of wireless telephones; and***

237. Enzmann discloses instructing a remote server to change a list of users on said remote server for a profile associated with a wireless telephone that are allowed to access said location by way of said remote server providing said location from said remote server to at least one of said users of said list of users, wherein each user of said list of users is representative of one of a plurality of wireless telephones. Enzmann describes giving "the network user control of who can receive his location information. The network user provides the service with a list of authorized requestors who may receive the user's location information." Ex. 1040, 2:34-38. The "list of authorized users" of Enzmann is equivalent to the "profile" of claim 1 of the '117 Patent, since both are described as lists of users that can access location information. In Enzmann, the "list is stored in location server 100 and the users are representative of respective wireless telephones. Ex. 1040, 7:12-24, 2:3-7; 9:9-14.

238. A person skilled in the art at the time of filing of the '117 Patent

would have understood that Enzmann's disclosure of providing a list of users who may receive the user's location information teaches "chang[ing] a list of users." Since establishing the list is a change, changing the list of users is implied in Enzmann, and Enzmann discloses the features of claim 1e.

239. Moreover, as described above with respect to Ground 1 for claim 1, it would have been obvious to include the ability to update the list to add users as needed, as was conventional in contexts such as contact lists. Enzmann therefore also renders obvious claim 1e.

g. *Claim 1 [f] – receiving and displaying directional information to one of said plurality of wireless telephones, wherein said directional information is representative of directions between said location and a second location associated with said one of said plurality of wireless telephones.*

240. Enzmann describes a "mapping converter" that can convert coordinates to "displayable information" such as an address. Ex. 1040, 4:38-55. This implies that the "displayable . . . mapping . . . information" would be displayed. In view of Enzmann's description of displayable mapping information, it would have been obvious to a person skilled in the art to have such displayable mapping information be displayed and include well-known types of mapping information such as directions between the locations of wireless devices. A person skilled in the art would have been motivated to include directions to help the user

navigate to the provided location. Enzmann also describes receiving the directional information to wireless telephones: "the desired end result is to deliver displayable location information to the plurality of requestors." Ex. 1040, 4:57-5:2. The information is provided to "the devices [i.e., wireless telephones] of the plurality of requestors." *Id.*, 3:12-16, 6:27.

241. Providing mapping information such as directions between devices was a routine, well-known concept at the time of filing of the '117 Patent. For example, displaying directions between devices is disclosed in Tobin, McNulty, and Bedingfield. Ex. 1061, FIG. 1C, ¶ 28; Ex. 1054, FIG. 15, 14:16-15:17; Ex. 1044, ¶ 36. Reproduced below are FIG. 1C of Tobin and FIG. 15 of McNulty, both of which show the common functionality of displaying directions between devices. Given the conventionality of displaying directions, it is my opinion that doing so would have been obvious in view of Enzmann's discussion of providing displayable mapping information.

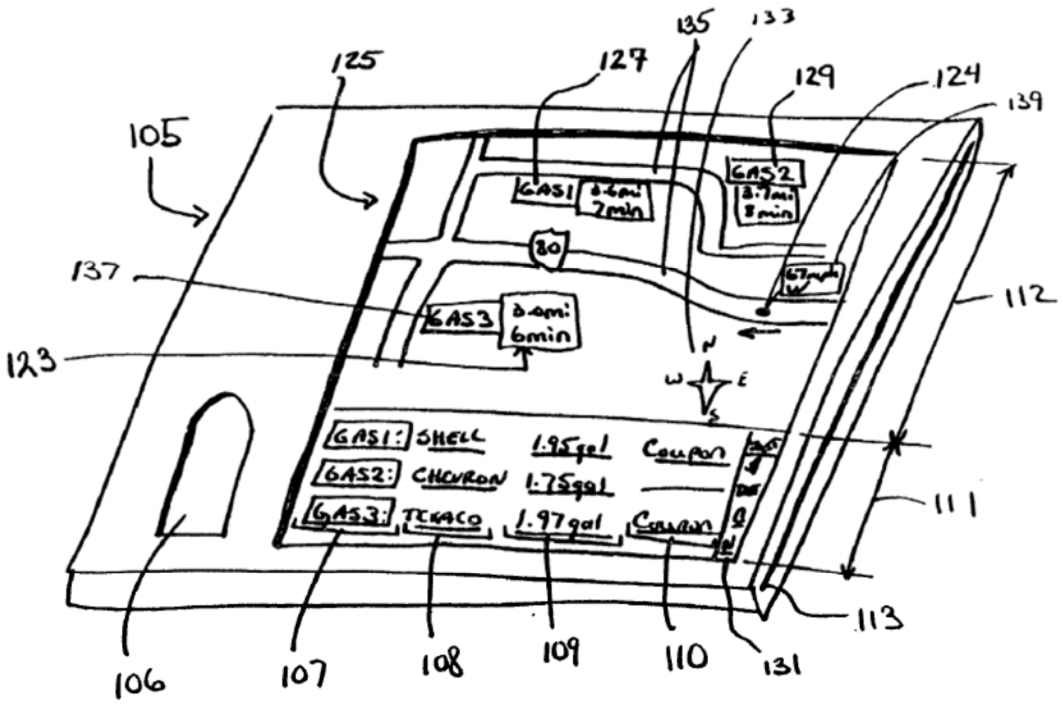
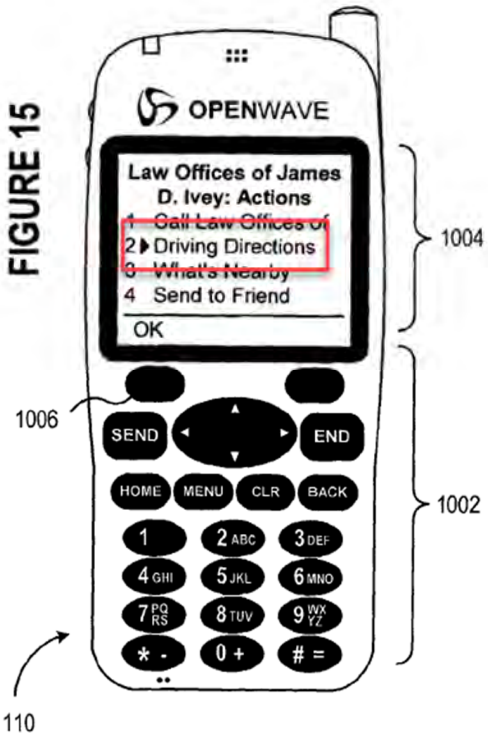

135
133
125
127
129
124
139
105
GAS1
GAS2
80
137
GAS3
112
123
N
W
E
S
GAS1: SHELL 1.95gal Coupon
GAS2: CHEVRON 1.75gal
GAS3: TEXACO 1.97gal Coupon
111
113
106
107
108
109
110
131

FIG. 1C



242. Therefore, every element of claim 1 is obvious in view of Enzmann.

2. Dependent claim 2 – The wireless telephone of claim 1, wherein said programming capable of instructing said remote server to change a list of users comprises programming capable of instructing said remote server to add an additional user to said list of users.

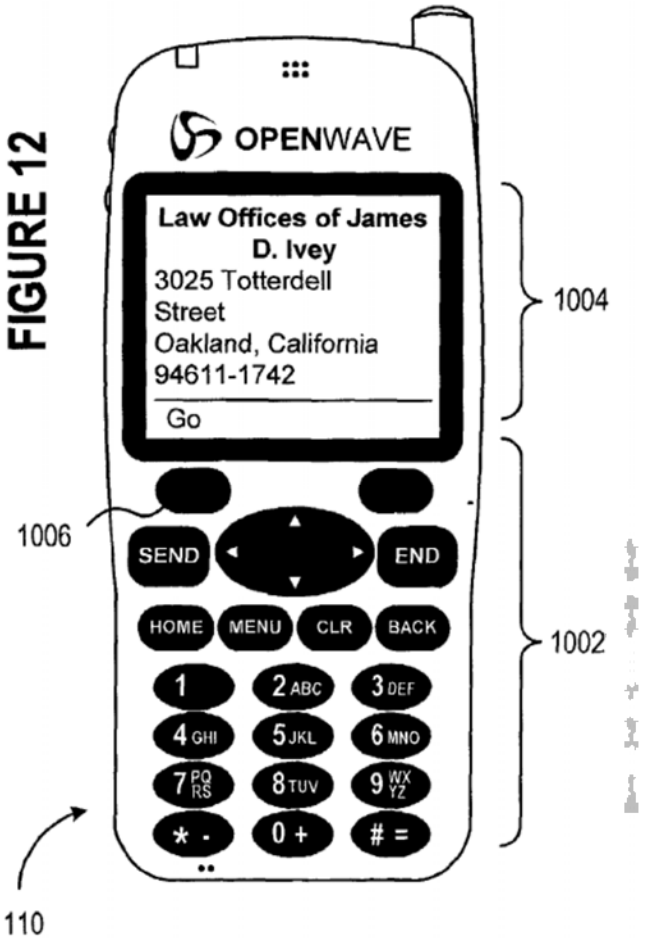
243. It is my opinion that claim 2 is made obvious by Enzmann, alone or in view of McNulty. As described above with respect to claim 1e, Enzmann describes establishing a list of users authorized to access location information, and in view of this disclosure it is implied to add users to the list. Further, as described above with respect to Ground 1 for clam 2, McNulty describes adding users to a list, and this

was routine and conventional. Persons skilled in the art would have been motivated to allow a user to update the list established in Enzmann to provide better control over permissions for other users, such as described in McNulty. Thus, Enzmann and McNulty make obvious claim 2.

3. Dependent claim 3 – The wireless telephone of claim 1, wherein said programming is further capable of displaying the name of said second location.

244. It is my opinion that claim 3 is obvious over Enzmann view of McNulty. Enzmann discloses use of "displayable information" such as an address. Ex. 1040, 4:38-55. Adding the name of the second location would have been an obvious type of "displayable information" to include. There is nothing unusual or inventive about displaying the name of a location.

245. McNulty discloses displaying the name of the second location, as shown in FIG. 12, reproduced below. Ex. 1054, FIG. 12; see also FIG. 44. McNulty describes, "the name attribute is listed at the top and displayed in bold text and the street address, city, state, and postal code attributes are arranged to represent an address in a standard address format." Ex. 1054, 12:58-64.



246. Given Enzmann's disclosure of displayable information related to device location, it would have been obvious to display well-known forms of displayable information related to location, such as displaying the name of the second location as described in McNulty. One skilled in the art would have had a reasonable expectation of success since displaying the name of the second location would only involve routine programming based on the information already used in Enzmann's system. Thus, Enzmann and McNulty make obvious claim 3.

4. Dependent claim 4 – The wireless telephone of claim 1, wherein said programming is further capable of displaying the distance between said first wireless telephone and said one of said plurality of wireless telephones.

247. It is my opinion that claim 4 is obvious over Enzmann view of Tobin. As described above, Enzmann describes a "mapping converter" that can convert coordinates to "displayable information" such as an address. Ex. 1040, 4:38-55.

248. Further, Tobin explicitly discloses displaying distances: "shown on the map are real-time distance . . . information for each service vendor . . . . The distance information displays the approximate distance in miles or kilometers separating user device 105 from the service vendor." Ex. 1061, ¶ 28, see also FIG. 1C. This was a well-known and routine functionality at the time.

249. Given Enzmann's disclosure of displayable information related to device location, it would have been obvious to display well-known forms of displayable information related to location, such as displaying the distance as described in Tobin. One skilled in the art would have had a reasonable expectation of success since displaying the distance would only involve routine programming based on the information already used in Enzmann's system. Thus, Enzmann and Tobin make obvious claim 4.

5. Dependent claim 5 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

250. It is my opinion that claim 5 is obvious over Enzmann. Enzmann describes storing lists of authorized users. Ex. 1040, 5:28-38. Enzmann also discloses that an unauthorized requestor may still obtain permission to receive a targeted wireless device's position. Ex. 1040, 7:26-58. Enzmann describes a scenario in which "the location query service prompts a network user each time an unauthorized requestor asks for location information." Ex. 1040, 2:42-45. Given that in the latter case, the requestor is otherwise unauthorized, it is my understanding that there would be some sort of automatic termination of the permission, meaning that the permission is for a specific period of time. Thus, Enzmann makes obvious claim 5.

6. Dependent claim 6 – The wireless telephone of claim 1, wherein said programming is further capable of receiving an alert regarding a user of said list of users based on a location of a wireless telephone associated with said user.

251. It is my opinion that claim 6 is obvious over Enzmann, alone or in view of Degnbol. Enzmann describes locating devices and transmitting various related information between the devices. In some examples, this information is provided based on a location of the user – **"**A user could have an instant messaging

service configured to display only the friends of that user who are in the same city as the user." Ex. 1040, 9:4-24.

252. As described above with respect to Ground 1 for claim 6, Degnbol discloses receiving an alert based on a location of a wireless telephone associated with the user. Ex. 1047, 18:27-33, 10:17-33. The users in Degnbol are part of a list of users – a Buddy List. 9:32 – 34.

253. In light of Enzmann's disclosure of location sharing including based on location criteria, a person skilled in the art would be motivated to implement Degnbol's alerts to enhance the process. A person skilled in the art would have understood that sending alerts based on device location, as described in Degnbol, would have been an effective enhancement to Enzmann's system. It would have only required routine and conventional programming provide an alert based on the location to Enzmann's system, which is already configured to share locations based on where the devices are located. Thus, Enzmann, alone or in view of Degnbol, makes obvious claim 6.

7. Dependent claim 7 – The wireless telephone of claim 6, wherein said programming is further capable of requesting said remote server to provide said alert.

254. It is my opinion that claim 7 is obvious over Enzmann in view of Degnbol. Degnbol discloses the features of claim 6, as described above. Enzmann describes requesting a remote server to provide the alert – "A user could have an

instant messaging service configured to display only the friends of that user who are in the same city as the user . . . . Using the present invention to obtain the location information would save the user from having to send a message to the friend asking for the location of the friend." Ex. 1040, 9:17-30. The location server 100 providing the service is remote from the wireless devices 104, as described above with respect to claim 1d. Thus, Enzmann and Degnbol make obvious claim 7.

8. Dependent claim 8 – The wireless telephone of claim 7, wherein said alert is geographic area-based, said programming is further capable of specifying said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said list of users is within said geographic area.

255. It is my opinion that claim 8 is obvious in view of Enzmann and Degnbol. As I discussed above under Ground 1 for claim 8, Degnbol discloses geographic area-based alerts. I have also discussed above how such alerts were conventional functionality. It would have been obvious and straightforward to implement such alerts in a system such as Enzmann's. Thus, Enzmann and Degnbol make obvious claim 8.

9. Dependent claim 9 – The wireless telephone of claim 1, wherein said programing is further capable of receiving an alert when a user of said list of users locates said wireless telephone.

256. It is my opinion that claim 9 is obvious in view of Enzmann and

Degnbol. As I discussed above under Ground 1 for claim 9, Degnbol discloses sending an alert when a wireless telephone is located. Ex. 1047, 21:4-6. Incorporating such alerts would have been an obvious and straightforward modification to a system such as Enzmann's. Thus, Enzmann and Degnbol make obvious claim 9.

10. Dependent claim 10 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a watch.

257. It is my opinion that claim 10 is obvious in view of Enzmann and Degnbol. As I discussed above under claim 1, Enzmann's system is capable of receiving and displaying location information of one device to another device. Enzmann lists several devices that can be located, including pagers and cellular phones. Ex. 1040, 5:40-41.

258. Further, as I discussed above under Ground 1 for claim 10, Degnbol discloses determining a location of a watch. Ex. 1047, 7:4-17, 4:29 – 31, claim 10. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious to a person skilled in the art to implement a watch, per Degnbol, as the located device. Thus, Enzmann and Degnbol make obvious claim 10.

11. Dependent claim 11 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a radio.

259. It is my opinion that claim 11 is obvious in view of Enzmann and Lelievre. As I discussed above under claims 1 and 10, Enzmann's system is capable of receiving and displaying location information of various types of devices. In light of Enzmann's teachings to receive and display the location of various devices, it would have been obvious to receive and display the location of any suitable device, such as a radio, which was a well-known type of portable device at the time.

260. Lelievre discloses locating a radio, as described above under Ground 1 for claim 11. Given Enzmann's description of locating any suitable device, and Lelievre's description of locating a radio, it would have been obvious to a person of skill in the art to locate a radio using a system such as Enzmann's. Enzmann and Lelievre therefore render claim 11 obvious.

12. Dependent claim 12 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying a location of a car.

261. It is my opinion that Enzmann and Curbow make claim 12 obvious. As I discussed above under claims 1 and 10, Enzmann's system is capable of receiving and displaying location information of different types of devices.

262. Further, Curbow discloses displaying a location of a car. Curbow

describes an "automobile equipped with a Global Positioning System (GPS) receiver and an on-board computer . . . configured to transmit the automobile's location and direction of motion to a central server." The automobile's location can then be output. Ex. 1046, Abstract. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious and straightforward to implement various devices that were commonly located, such as a car, as described in Curbow, as the located device. Thus, Enzmann and Curbow make obvious claim 12.

13. Dependent claim 13 – The wireless telephone of claim 1, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

263. It is my opinion that Enzmann and Bedingfield render obvious claim 13. As I discussed above under Ground 1 for claim 13, Bedingfield discloses displaying travel times using different modes of transportation, including walking, bicycling and driving. Ex. 1044, ¶¶ 53-54. It would have been obvious and straightforward to a person skilled in the art to enhance Enzmann's system with travel time information, which was common functionality. Thus, Enzmann and Bedingfield make obvious claim 13.

14. Dependent claim 14 – The wireless telephone of claim 1, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

264. It is my opinion claim 14 is made obvious by Enzmann, alone or in view of Degnbol and/or McNulty. The location server of Enzmann can store information associated with a user such as location or preferences, as well as return location information to a requestor. Ex. 1040, 8:22-24, 7:24-25, 8:65-67. Enzmann's system is therefore capable of downloading user information from a remote system.

265. And, as I discussed above under Ground 1 for claim 14, downloading a user's phone book was a well-known concept, and is disclosed in Degnbol and McNulty. It would have been obvious to a person skilled in the art to that downloading user information as disclosed in Enzmann could include downloading a phone book, which was both well-known at the time and explicitly shown in Degnbol and McNulty. Thus, Enzmann, alone or in view of Degnbol and/or McNulty, makes obvious claim 14.

15. Independent claim 15

266. It is my opinion that claim 15 is obvious over Enzmann, alone or in combination with Smith and/or Carey.

a. *Claim 15 Preamble – A wireless telephone comprising:*

267. To the extent the preamble is limiting, Enzmann discloses "[w]ireless handheld devices" such as "pagers and cellular telephones." Ex. 1040, 2:52-54. Thus, Enzmann discloses the features of the preamble of claim 15.

b. *Claim 15 [a] – a processor;*

268. Enzmann discloses a "processor." Ex. 1040, 1:66. Although the processor is not specifically described with respect to the wireless device, some sort of processor would need to be included in the wireless device to perform computing operations. It was standard, routine, and conventional before March 25, 2002 for wireless telephones to include a processor. Thus, Enzmann discloses claim 15a.

c. *Claim 15 [b] – a positioning system for determining a location of said wireless telephone; and*

269. Enzmann discloses a positioning system for determining a location of said wireless telephone. Enzmann is directed to a "location system" that provides the location information . . . of a handheld device. . . . An example of a suitable location system in the handheld devices is a GPS." (Ex. 1040, 4:28-38). Thus, Enzmann discloses claim 15b.

d. *Claim 15 [c] – memory storing programming capable of:*

270. Enzmann discloses a "memory." Ex. 1040, 5:28-38. Although the

memory is not specifically described with respect to the wireless device, it is implied that a memory is included in the wireless device to store programming. It was standard, routine, and conventional before March 25, 2002 for wireless telephones to include a memory storing programming. Thus, Enzmann discloses claim 15c.

e. *Claim 15 [d] – displaying a plurality of users, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones;*

271. Enzmann describes displaying a plurality of users: "A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user." Ex. 1040, 9:17-19. The users are associated with different wireless telephones. *Id.*, 3:53-61, 5:39-41.

272. As I discussed above with respect to Ground 1 for claim 15d, Smith discloses conventional "name list" functionality. Ex. 1059, 9:44-48, FIG. 15A. It is my opinion that it would have been obvious to include the ordinary and ubiquitous functionality of a user list in the Enzmann wireless devices. Thus, Enzmann discloses claim 15d, alone or in view of Smith.

f. *Claim 15 [e] – receiving a first manual input in a form of a selection of one of said plurality of users;*

273. As I discussed above with respect to claim 15d, Enzmann and Smith describe displaying users associated with different wireless telephones. And, Smith

explicitly describes manual selection of one of the users, as I pointed out above with respect to Ground 1 for claim 15e. Thus, Enzmann discloses claim 15e, alone or in view of Smith.

g. *Claim 15 [f] – receiving an input in a form of a login and a second manual input in a form of a password;*

274. Enzmann describes receiving input of a login and password: "a requestor submits a location query . . . [which] includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password." Ex. 1040, 6:42-45. A person skilled in the art would understand that such information would generally be manually entered, as was the standard way of providing such information. It was routine to manually enter a login and password. For example, Carey discloses a "wireless instant messaging sign on window [that] includes data fields for entry of the user's screen name 202 and password." Ex. 1045, 7:67-8:10, FIG. 8 (below)).

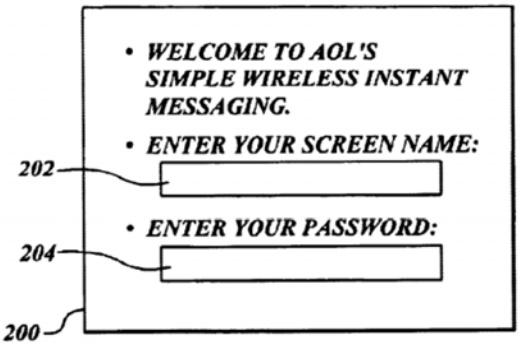


Fig. 8

275. Thus, Enzmann discloses claim 15f, alone or in view of Carey.

h. ***Claim 15 [g] – providing said login and said password to a remote server for use in determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, said determining including identifying a user of said wireless telephone using said login, determining said password is associated with said login, and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said wireless telephone,***

276. Enzmann describes providing the login and password to a remote server for determining whether to allow access of location information for a wireless telephone:

> As shown in step 200, a requestor submits a location query to location server 100. The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service. Alternately, only the network user pays for the service and gives her authorized requestors a password to gain access to the service.

Ex. 1040, 6:41 – 50, *see also* 7:12 – 21.

277. As I discussed above with respect to Ground 1, this claim element essentially describes a login process using a login and password. After the user is logged in, the system can then determine whether the person they are attempting to locate has granted access to their location information. As I discussed above with

respect to claims 15e and 15f, Enzmann describes that a user can provide identifying information and a password to access location services provided by the Enzmann system. Enzmann's location server 100 is remote from the wireless devices 104 at least because it is a different device than the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, 2:58-60, FIG. 1. Thus, Enzmann discloses claim 15g.

i. ***Claim 15 [h] – assigning location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining said location of said wireless telephone;***

278. In the '117 patent, assigning location access rights is described in terms of an initial user configuration. Ex. 1007, FIG. 10, 2:60 – 62, 9:16 – 26, 2:5 – 13. Enzmann describes such a user configuration: "the present invention gives the network user control of who can receive his location information. The network user provides the service with a list of authorized requestors who may receive the user's location information." Ex. 1040, 2:34 – 38. Thus, Enzmann discloses claim 15h.

j. ***Claim 15 [i] – receiving said location information for said one of said plurality of wireless telephones from a server; and***

279. Enzmann states: "in step 214, location server 100 returns the location information of the network user back to the requestor." Ex. 1040, 8:65-67. Once

the location server provides the location information to the requestor (a wireless telephone), in turn, the requestor would receive the location information returned by the server. Given Enzmann's disclosure of the server returning the location information to the requestor, it is implied that the requestor then receives the location information. Thus, Enzmann discloses or makes obvious claim 15i.

k. *Claim 15 [j] – displaying said location information.*

280. Enzmann discloses displaying location information. For example, Enzmann describes "translating the raw data to a displayable message, easily comprehended by a typical requestor." Ex. 1040, 8:49-53. Enzmann also describes "display[ing] only the friends of that user who are in the same city as the user." *Id.*, 9:17-19. Thus, Enzmann discloses claim 15j.

16. Dependent claim 16 – The wireless telephone of claim 15, wherein said programming is further capable of displaying an option to obtain directions from said first wireless telephone to said one of said plurality of wireless telephones associated to said selected one of said plurality of users.

281. It is my opinion that Tobin discloses the features of claim 16, and thus claim 16 is obvious over Enzmann and Tobin, alone or in combination with Smith and/or Carey. In claim 16, a "first wireless telephone" is mentioned for the first time. In absence of a previous reference to a first wireless telephone in claim 15 or 16, this is being interpreted as referring to the "wireless telephone" of claim 15.

282. As I discussed above with respect to claim 15j, Enzmann discloses or

suggests displaying location information associated with users. One obvious example of displayable location information associated with a user is directions. For example, Tobin discloses displaying an option to obtain directions: "When a driving directions icon or hyperlink is activated, the user device 105 retrieves the directions." Ex. 1061, ¶ 36. Thus, Tobin discloses the features of claim 16. Claim 16 depends from claim 15 and is therefore obvious in view of Enzmann in view of Tobin, alone or further in view of Smith and/or Carey.

17. Dependent claim 17 – The wireless telephone of claim 15, wherein said programming is further capable of receiving a manual input for modifying said location access rights.

283. It is my opinion that Enzmann and Smith disclose the features of claim 17, and thus claim 17 is obvious over Enzmann, Smith, and/or Carey. Enzmann states: "The network user provides the service with a list of authorized requestors who may receive the user's location information." Ex. 1040, 2:34-40. As I discussed above with respect to Ground 1, a person skilled in the art would have understood that such input would be generally provided manually, e.g., as disclosed in Smith. Thus, Smith discloses the features of claim 17. Claim 17 depends from claim 15 and is therefore obvious in view of Enzmann in view of Smith, alone or further in view of Carey.

18. Dependent claim 18 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

284. It is my opinion that Enzmann discloses the features of claim 18, and thus claim 18 is obvious over Enzmann, Smith, and/or Carey. Enzmann's system stores lists of authorized users. Ex. 1040, 5:28-38. Users, while in a list, are permitted to obtain a wireless device's position. *Id.*, 7:19-21. Based on this description in Enzmann, it is my understanding that the permission would persist indefinitely while a user is on the list. Thus, Enzmann discloses the features of claim 18. Claim 18 depends from claim 15 and is therefore obvious in view of Enzmann, alone or further in view of Smith and/or Carey.

19. Dependent claim 19 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for only a specific period of time.

285. It is my opinion that Enzmann discloses the features of claim 19, and thus claim 19 is obvious over Enzmann, alone or in combination with Smith and/or Carey. Enzmann describes storing lists of authorized users. Ex. 1040, 5:28-38. Enzmann also discloses that an unauthorized requestor may still obtain permission to receive a targeted wireless device's position. Ex. 1040, 7:26-58. Enzmann describes a scenario in which "the location query service prompts a network user

each time an unauthorized requestor asks for location information." Ex. 1040, 2:42-45. Given that in the latter case, the requestor is otherwise unauthorized, it is my understanding that there would be some sort of automatic termination of the permission, meaning that the permission is for a specific period of time. Thus, Enzmann discloses the features of claim 19. Claim 19 depends from claim 15 and is therefore obvious in view of Enzmann, alone or further in view of Smith and/or Carey.

20. Dependent claim 20 – The wireless telephone of claim 15, wherein said programming is further capable of receiving an alert regarding a user of said plurality of users based on a location of a wireless telephone associated with said user of said plurality of users.

286. It is my opinion that Enzmann and Degnbol disclose the features of claim 20, and thus claim 20 is obvious over Enzmann and Degnbol, alone or in combination with Smith and/or Carey. As I discussed above, Enzmann describes locating devices and transmitting related information between the devices. Enzmann describes scenarios in which the location information is provided based on a location of the user. For example, "A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user." Ex. 1040, 9: 4-24.

287. As I discussed above with respect to Ground 1 for claim 20, Degnbol discloses receiving an alert based on a location of a wireless telephone associated

with the user, which would be a straightforward addition to a system such as Enzmann's that locates devices and shares their location information. Thus, Enzmann and Degnbol disclose the features of claim 20. Claim 20 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol, alone or further in view of Smith and/or Carey.

21. Dependent claim 21 – The wireless telephone of claim 20, wherein said programming is further capable of requesting said remote server to provide said alert.

288. It is my opinion that Enzmann and Degnbol disclose the features of claim 21. As I discussed above with respect to claim 20, Enzmann in view of Degnbol discloses the features of claim 20. Degnbol also describes providing the alerts via a processor after a user request at setup, as I have discussed above with respect to Ground 1 for claim 21.

289. Enzmann describes requesting a remote server to provide the alert – "A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user . . . . Using the present invention to obtain the location information would save the user from having to send a message to the friend asking for the location of the friend." Ex. 1040, 9:17-30. The location server 100 providing the service is remote from the wireless devices 104, as I discussed above with respect to claim 15g. Thus, Enzmann and Degnbol disclose the features of claim 21. Claim 21 depends from claim 15 and is

therefore obvious in view of Enzmann in view of Degnbol, alone or further in view of Smith and/or Carey.

22. Dependent claim 22 – The wireless telephone of claim 21, wherein said alert is geographic area-based, said programming is further capable of specifying said geographic area, and said alert indicates that said location of said wireless telephone associated with said user of said plurality of users is within said geographic area.

290. It is my opinion that Degnbol discloses the features of claim 22, and thus claim 22 is obvious over Enzmann and Degnbol, alone or in combination with Smith and/or Carey. As I discussed above with respect to Ground 1 for claim 22, Degnbol discloses geographic area-based alerts. Providing alerts was a conventional feature and would have been an obvious addition to the location sharing of Enzmann. Thus, Degnbol discloses the features of claim 22. Claim 22 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol, alone or further in view of Smith and/or Carey.

23. Dependent claim 23 – The wireless telephone of claim 15, wherein said programing is further capable of receiving an alert when a user of said plurality of users locates said wireless telephone.

291. It is my opinion that Degnbol discloses the features of claim 23, and thus claim 23 is obvious over Enzmann and Degnbol, alone or in combination with Smith and/or Carey. As I discussed above with respect to Ground 1 for claim 23, Degnbol describes receiving an alert when a wireless telephone is located, and

such alerts would be an obvious addition to a system such as Enzmann's. Thus, Degnbol discloses the features of claim 23. Claim 23 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol, alone or further in view of Smith and/or Carey.

24. Dependent claim 24 – wherein said programming is further capable of receiving and displaying a location of a watch.

292. It is my opinion that Enzmann and Degnbol disclose the features of claim 24, and thus claim 24 is obvious over Enzmann and Degnbol, alone or in combination with Smith and/or Carey. As I discussed above with respect to claim 15j, Enzmann's system is capable of receiving and displaying location information of one device to another device. Enzmann lists several devices that can be located, including pagers and cellular phones. Ex. 1040, 5:40-41.

293. As I discussed above under Ground 1, Degnbol discloses determining a location of a watch. Ex. 1047, 7:4-17, 4:29 – 31, claim 10. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious to a person skilled in the art to implement a watch, per Degnbol, as the located device. Thus, Enzmann and Degnbol disclose the features of claim 24. Claim 24 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol, alone or further in view of Smith and/or Carey.

25. Dependent claim 25 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a radio.

294. It is my opinion that Enzmann and Lelievre disclose the features of claim 25, and thus claim 25 is obvious over Enzmann and Lelievre, alone or in combination with Smith and/or Carey. As I discussed above with respect to claims 1 and 24, Enzmann's system is capable of receiving and displaying locations of various types of devices. In light of Enzmann's teachings to receive and display the location of various devices, it would have been obvious to receive and display the location of any suitable device, such as a radio, which was a well-known type of portable device at the time. Displaying the location of a radio would have been an obvious and straightforward addition to a system such as Enzmann's.

295. Lelievre explicitly lists a radio as an example located device type, as described above under Ground 1 for claim 11. Given Enzmann's description of locating any suitable device, and Lelievre's description of locating a radio, it would have been obvious to a person of skill in the art to locate a radio using a system such as Enzmann's. Thus, Enzmann and Lelievre disclose the features of claim 25. Claim 25 depends from claim 15 and is therefore obvious in view of Enzmann in view of Lelievre, alone or further in view of Smith and/or Carey.

26. Dependent claim 26 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying a location of a car.

296. It is my opinion that Curbow discloses the features of claim 26, and thus claim 26 is obvious over Enzmann and Curbow, alone or in combination with Smith and/or Carey.

297. Curbow discloses displaying a location of a car. Curbow describes an "automobile equipped with a Global Positioning System (GPS) receiver and an on-board computer . . . configured to transmit the automobile's location and direction of motion to a central server." The automobile's location can then be output. Ex. 1046, Abstract. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious and straightforward to implement various devices that were commonly located, such as a car, as described in Curbow, as the located device. Thus, Enzmann and Curbow disclose the features of claim 26. Claim 26 depends from claim 15 and is therefore obvious in view of Enzmann in view of Curbow, alone or further in view of Smith and/or Carey.

27. Dependent claim 27 – The wireless telephone of claim 15, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

298. It is my opinion that Bedingfield discloses the features of claim 27,

and thus claim 27 is obvious over Enzmann and Bedingfield, alone or in combination with Smith and/or Carey. As I discussed above with respect to Ground 1 for claim 27, Bedingfield discloses displaying travel times via various modes. Displaying travel times was a well-known concept. Since Enzmann describes use of displayable information, displaying travel times would be an obvious and straightforward feature to implement in Enzmann's system. Thus, Bedingfield discloses the features of claim 27. Claim 27 depends from claim 15 and is therefore obvious in view of Enzmann in view of Bedingfield, alone or further in view of Smith and/or Carey.

28. Dependent claim 28 – wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

299. It is my opinion that Enzmann, Degnbol and Smith disclose the features of claim 28, and thus claim 28 is obvious over Enzmann in view of Smith, Degnbol and/or Carey. The location server of Enzmann can store information associated with a user such as location or preferences and return location information to a requestor. Ex. 1040, 8:22-24, 7:24-2, 8:65 – 67. Downloading a user's phone book was a well-known concept at the time, and would be an obvious extension of the server-based user information disclosed in Enzmann.

300. As I discussed above with respect to Ground 1 for claim 28, Smith

and Degnbol disclose conventional phone book functionality including downloading a phone book corresponding to a user of the wireless telephone from a remote system. Thus, it would have been obvious to a person skilled in the art to extend the download of user information disclosed in Enzmann to also download a phone book, which was both well-known at the time and explicitly shown in Degnbol and Smith. Thus, Enzmann, Degnbol and Smith disclose the features of claim 28. Claim 28 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol and Smith, alone or further in view of Carey.

29. Independent claim 29

301. It is my opinion that claim 29 is obvious over Enzmann in view of Degnbol, alone or further in view of Carey. .

a. *Claim 29 Preamble – A wireless telephone comprising:*

302. See claim 15 preamble.

b. *Claim 29 [a] – a processor;*

303. See claim 15a.

c. *Claim 29 [b] – a positioning system for determining a location of said wireless telephone; and*

304. See claim 15b.

d. *Claim 29 [c] – memory storing programming capable of:*

305. See claim 15c.

e. ***Claim 29 [d] – receiving user information comprising a manually entered login associated with a user of said wireless telephone and a manually entered password associated with said login;***

306. It is my opinion that Enzmann and Carey each disclose the features of claim 29d. As I discussed above with respect to claim 15f, Enzmann discloses receiving a manually entered user login and password, alone or in view of Carey. The location server 100 of Enzmann is remote from the wireless devices 104, as described above with respect to claim 15g. Thus, claim 29d is obvious over Enzmann, alone or in view of Carey.

f. ***Claim 29 [e] – providing said location for recording on a remote system in association with said user information;***

307. It is my opinion that Enzmann discloses the features of claim 29e. Enzmann describes the user wireless network (via wireless handheld devices) returning the location information to the location server, which "records a device's location in a location database." Ex. 1040, 4:15-32, 8:60-62, 23-24; Ex. 1003, ¶ []). The location server in Enzmann is remote from the wireless devices 104, as I discussed above with respect to claim 15g. Thus, claim 29e is disclosed by Enzmann.

g. ***Claim 29 [f] – selecting a location-based event that is based, at least in part, on a location of a second wireless telephone, wherein said location-based event is operable to be manually pre-selected from a list of at least three types of location-based events; and***

308. It is my opinion that Enzmann and Degnbol make obvious the features of claim 29f, alone or further in view of Carey. Enzmann discloses the use of location-based events that a user can configure: "A user could have an instant messaging service configured to display only the friends of that user who are in the same city as the user." Ex. 1040, 9:4-24. As to manual selection of a location-based events from a list, it was conventional and common to configure computing devices such as wireless telephones to allow a user to manually select items from a list, and doing so to configure the location-based events described in Enzmann would have been obvious to a person skilled in the art.

309. As I discussed above with respect to Ground 1, Degnbol describes pre-selecting from three or more types of location-based events, and it was conventional to do so manually, e.g., as described in Carey. It is my opinion that it would have been obvious to a person skilled in the art to include several selectable location-based events in Enzmann's system, which already is operable to allow user configuration of location-based events. Therefore, Enzmann in view of Degnbol make obvious claim 29f, alone or further in view of Carey.

h. ***Claim 29 [g] – receiving a location-based event notification corresponding to said selected location-based event as a result of, at least in part, location access rights of said wireless telephone from said second wireless telephone,***

310. It is my opinion that Enzmann discloses claim 29g. As I discussed above under claim 29f, Enzmann discloses receiving a location-based event notification. In the method described in Enzmann, the location server determines whether the requestor is an authorized requestor at step 202, identifying location access rights. After that, the location of the requestor is determined at 214. Ex. 1040, FIG. 2, 7:12-24, 8:65-76, 9:17-30. It is therefore my understanding that operations involving the location of the requestor, such as receiving a location-based event, are performed at least in part on location access rights in the methods described in the Enzmann patent. Thus, claim 29g is disclosed by Enzmann.

i. ***Claim 29 [h] – wherein a first one of said at least three types of location-based events is, at least in part, region-based, and a second one of said at least three types of location-based events is, at least in part, distance-based.***

311. It is my opinion that Enzmann, alone or in view of Degnbol, makes obvious claim 29h. As I discussed above under claim 29f, Enzmann describes a location-based event based on a friend being in the same city. Since the location-based event is based on city, an example of a region, Enzmann discloses the use of a region-based location-based event. Ex. 1040, 9:4-24. It would have been obvious

to a person skilled in the art to use other related sorts of location-based events, such as based on distance, which was a well-known concept before March 25, 2002.

312. For example, as I discussed above under Ground 1, the Degnbol reference describes several types of location-based events including and distance-based events. It would have been obvious to a person skilled in the art to include several selectable location-based events such as region-based and distance-based ones in Enzmann's system, which already is operable to provide configuration of location-based events. Thus, Enzmann, alone or in view of Degnbol, makes obvious claim 29h.

313. Claim 29 is therefore obvious over Enzmann in view of Degnbol, alone or further in view of Carey.

30. Dependent claim 30 – The wireless telephone of claim 29, wherein said first wireless device comprises a global positioning system that is operable to provide said location.

314. It is my opinion that Enzmann discloses the features of claim 30. In Enzmann's system, "wireless handheld devices 104 may include handheld location systems 122, such as GPSs integral to the devices." Ex. 1040, 5:48-50. The GPS is operable to provide the location: "user wireless network 102 uses location system 120," which includes the GPS, "to determine the location of the specified network device" *Id.*, 7:63-65, s*ee also* 4:15-19, 5:48-50. Thus, Enzmann discloses the

features of claim 30. Claim 30 depends from claim 15 and is therefore obvious in view of Enzmann in view of Degnbol.

31. Dependent claim 31 – The wireless telephone of claim 29, wherein said programming is further capable of displaying a display screen on said wireless telephone, after receiving said location-based event notification, that includes a first selectable option for providing a map associated with said location of said second wireless telephone.

315. It is my opinion that claim 31 is obvious over Enzmann in view of Degnbol and further in view of Tobin. Enzmann discloses use of "displayable information" such as an address. Ex. 1040, 4:38-55. One common method of providing displayable information was via a map on a display screen.

316. For example, the Tobin reference describes "receiving an activate command from the user that selects a . . . map to display." Ex. 1061, ¶ 56.

317. As I discussed above with respect to claim 29f, Degnbol describes providing a location-based event notification, which can include information about the distance or location of the target user. Ex. 1047, 5:16-20. Both providing distance information and event notifications were conventional, and it is therefore my opinion that it would have been obvious and straightforward for a person skilled in the art to configure a system such as Enzmann's to provide an option to view directions after a location-based event notification, such as described by Degnbol and further in view of Tobin. Claim 31 is therefore obvious in view of

Enzmann in view of Degnbol and further in view of Tobin.

32. Dependent claim 32 – The wireless telephone of claim 29, wherein said programming is further capable of displaying after receiving said location-based event notification a travel time between a location of said wireless telephone and a location of said second wireless telephone.

318. It is my opinion that claim 32 is obvious over Enzmann in view of Degnbol and further in view of Tobin. As I discussed above with respect to Ground 1 for claim 32, Tobin discloses providing a travel time between locations. I also pointed out above with respect to claim 29, that Degnbol discloses receiving a location-based event notification. It would have been obvious to a person skilled in the art to then display other related useful information, such as a travel time as disclosed in Tobin. It would have been obvious to a person skilled in the art to display the travel time after the location-based event notification, since once the location-based event notification is received, a user may want to see related useful information such as the travel time. Claim 32 is therefore obvious in view of Enzmann in view of Degnbol and further in view of Tobin.

33. Dependent claim 33 – The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

319. See claim 18.

34. Dependent Claim 34 – The wireless telephone of claim 29, wherein said programming is further capable of instructing said remote system to allow a user of said second wireless telephone to access said location of said wireless telephone for only a specific period of time.

320. See claim 19.

35. Dependent claim 35 – The wireless telephone of claim 29, wherein said programming is further capable of specifying said region, and said region-based location-based event indicates that said location of said second wireless telephone is within said region.

321. It is my opinion that claim 35 is obvious over Enzmann in view of Degnbol. Degnbol discloses the features of claim 35, as I discussed above with respect to Ground 1 for claim 35. I also discussed above with respect to claim 29f that it would have been obvious to a person skilled in the art to enhance Enzmann's system via location-based events that can be configured by a user, which was common functionality. Claim 35 is therefore obvious in view of Enzmann in view of Degnbol.

36. Dependent claim 36 – The wireless telephone of claim 29, wherein said programing is further capable of receiving an alert when a user of said second wireless telephone locates said wireless telephone.

322. See claim 23.

37. Dependent Claim 37 – The wireless telephone of claim 29, wherein said programing is further capable of receiving and displaying a location of a watch.

323. See claim 24.

38. Dependent claim 38 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a radio.

324. See claim 25.

39. Dependent claim 39 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying a location of a car.

325. See claim 26.

40. Dependent claim 40 – The wireless telephone of claim 29, wherein said programming is further capable of receiving and displaying information indicating time to reach a second location associated with said second wireless telephone from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

326. See claim 27.

41. Dependent claim 41 – The wireless telephone of claim 29, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

327. See claim 28.

42. Independent claim 42

328. It is my opinion that claim 42 is obvious over Enzmann in view of Ganesh.

a. *Claim 42 Preamble – A wireless telephone comprising:*

329. To the extent the preamble is limiting, Enzmann discloses "[w]ireless

handheld devices" such as "pagers and cellular telephones." Ex. 1040, 2:52-54. Thus, Enzmann discloses the features of the preamble of claim 42.

b. *Claim 42 [a] – a processor;*

330. Enzmann discloses a "processor." Ex. 1040, 1:66. Although the processor is not specifically described with respect to the wireless device, some sort of processor would need to be included in the wireless device to perform computing operations. It was standard, routine, and conventional before March 25, 2002 for wireless telephones to include a processor. Thus, Enzmann discloses the features of claim 42a.

c. *Claim 42 [b] – a positioning system for determining a location of said wireless telephone; and*

331. Enzmann discloses a positioning system for determining a location of said wireless telephone. Enzmann is directed to a "location system" that provides the location information . . . of a handheld device. . . . An example of a suitable location system in the handheld devices is a GPS." ." Ex. 1040, 4:24-38. Thus, Enzmann discloses the features of claim 42b.

d. *Claim 42 [c] – a memory storing programming capable of:*

332. Enzmann discloses a "memory." Ex. 1040, 5:28-38. Although the memory is not specifically described with respect to the wireless device, it is implied that a memory is included in the wireless device to store programming. It

was standard, routine, and conventional before March 25, 2002 for wireless telephones to include a memory storing programming. Thus, Enzmann renders obvious the features of claim 42c.

e. ***Claim 42 [d] – requesting a location of a second wireless device from a server located remotely from said wireless telephone and said second wireless device;***

333. Enzmann discloses requesting a location of a second wireless device from a remote server. In particular, "a requestor submits a location query to location server 100. The query includes at least an identification . . . of the network user about whom the requestor desires location information." Ex. 1040, 6:41-50. As shown in FIG. 1 of Enzmann, reproduced below, the location server 100 is remote from the requestor (e.g., wireless requestor 110) and the network user about whom the requestor desires location information (e.g., network device 104). Ex. 1040, 2:58-60; FIG. 1.

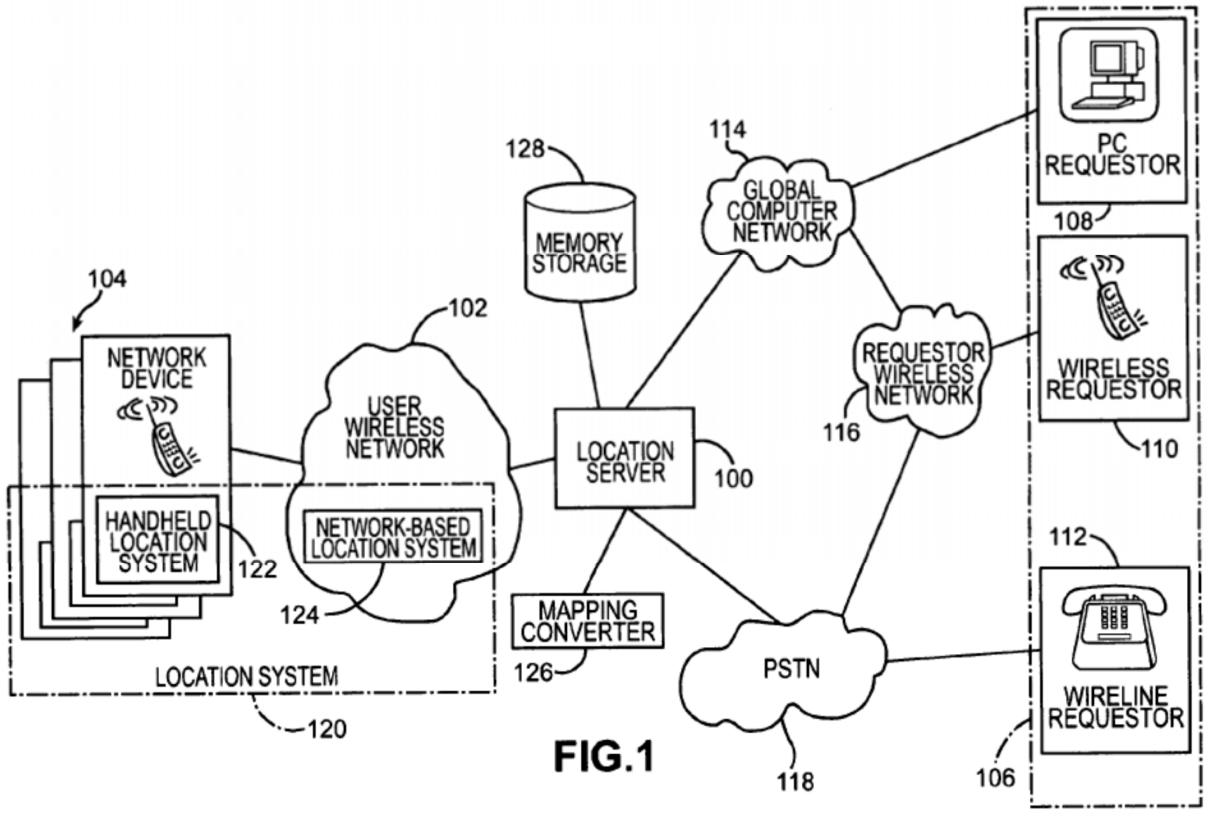


FIG.1

334. Thus, Enzmann discloses the features of claim 42d.

f. ***Claim 42 [e] – 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;***

335. Enzmann discloses determining whether the requestor (wireless device) has location access rights for the target device: "location server 100 determines whether the requestor is an authorized requestor and whether the network user in question accepts requests from unauthorized off-list requestors to

view the network user's location information." Ex. 1040, 7:12-24. Enzmann also discloses requesting location access rights if not already granted: "If the requestor is unauthorized, but the network user does entertain requests to release location information, in step 204 b, location server 100 asks the network user if the requestor can receive the network user's location information." *Id.*, 7:39-53.

336. As I discussed above with respect to Ground 1 for claim 42e, Ganesh discloses displaying an option to try again after determining that the telephone does not have location access rights for a wireless device. Thus, Enzmann in view of Ganesh makes obvious the features of claim 42e.

g. *Claim 42 [f] – transmitting a request to said server that said location access rights be assigned for said wireless telephone by said second wireless device; and*

337. As I discussed above with respect to claim element 42e, Enzmann discloses that after determining that the requesting device lacks location access rights, the server can request that location access rights be assigned to the requesting device by the target device. The user may then "choose[] to release her location information to the requester," and "server 100 proceeds with determining the location information of the wireless device." Ex. 1040, 7:50-53.

338. As I discussed above with respect to Ground 1 for claim 42f, Ganesh discloses such a request being sent from a user device to a server. Thus, Enzmann in view of Ganesh makes obvious the features of claim 42e.

h. *Claim 42 [g] – receiving said location of said second wireless device from said server dependent upon said access rights.*

339. Enzmann states, "If, in step 204 b, the network user chooses to release her location information to the requester, in step 204 d, location server 100 proceeds with determining the location information of the wireless device." Ex. 1040, 7:50-53. The location is then received by the other wireless device. *Id.*, 8:65-67. Thus, Enzmann discloses receiving a location of a wireless device from a server dependent upon access rights. Thus, Enzmann discloses the features of claim 42g.

43. Dependent claim 43 – The wireless telephone of claim 42, wherein said second wireless device is a second wireless telephone.

340. It is my opinion that Enzmann discloses the functionality recited in claim 43, and thus, Enzmann in view of Ganesh makes obvious claim 43. Enzmann discloses that the wireless devices can be wireless telephones: "Wireless handheld devices 104 operate over user wireless network 102. Familiar examples include pagers and cellular telephones." Ex. 1040, 5:39-41. Thus, Enzmann discloses the features of claim 43, which depends from claim 42, and therefore, claim 43 is obvious in view of Enzmann and Ganesh.

44. Dependent 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.

341. It is my opinion that Enzmann, alone or in combination with Ganesh, discloses the functionality recited in claim 44, and thus, Enzmann in view of Ganesh makes obvious claim 44. Enzmann discloses that locations of wireless devices are stored at its location database. Ex. 1040, 7:20-36. In Enzmann's system, because the locations are stored at the location database, a requesting device could request a location regardless of whether the target device is on or off, by retrieving the location information from the location database. Further, Ganesh discusses providing location information from a call log when the target device is turned off, as I discussed above with respect to Ground 1 for claim 44. Thus, claim 44 is obvious in view of Enzmann and Ganesh.

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

342. It is my opinion that Enzmann, alone or in combination with Obradovich, discloses the functionality recited in claim 45, and thus, Enzmann in view of Ganesh, alone or further in view of Obradovich, makes obvious claim 45. Enzmann discloses that the location access rights include access levels: "Location

server 100 executes the service logic of the present invention, including . . . confirming the access levels of requestors 106." Ex. 1040, 5:3-6.

343. Further, as I discussed above with respect to Ground 1, claim 45, Obradovich describes a plurality of access levels, or security level indexes, and tiered access levels, including at the location level, were a well-known security and privacy mechanism prior to March 2002. Thus, Obradovich discloses the well-known features of claim 45, which depends from claim 42, and therefore, claim 45 is obvious in view of Enzmann and Ganesh, alone or further in view of Obradovich.

46. Dependent 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.

344. It is my opinion that Enzmann and Ganesh disclose the functionality recited in claim 46, and thus, Enzmann in view of Ganesh makes obvious claim 46. Enzmann discloses "provid[ing] the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located." Ex. 1040, 4:24-26. Displaying a location marker was a well-known and obvious way to provide position information.

345. As I discussed above in Ground 1 claim 46, Ganesh discloses the use of the current location of the target device to display a location n marker, star 106

on map 100 in Figure 7 below. Ex. 1049, FIG. 7, 8:6-16.

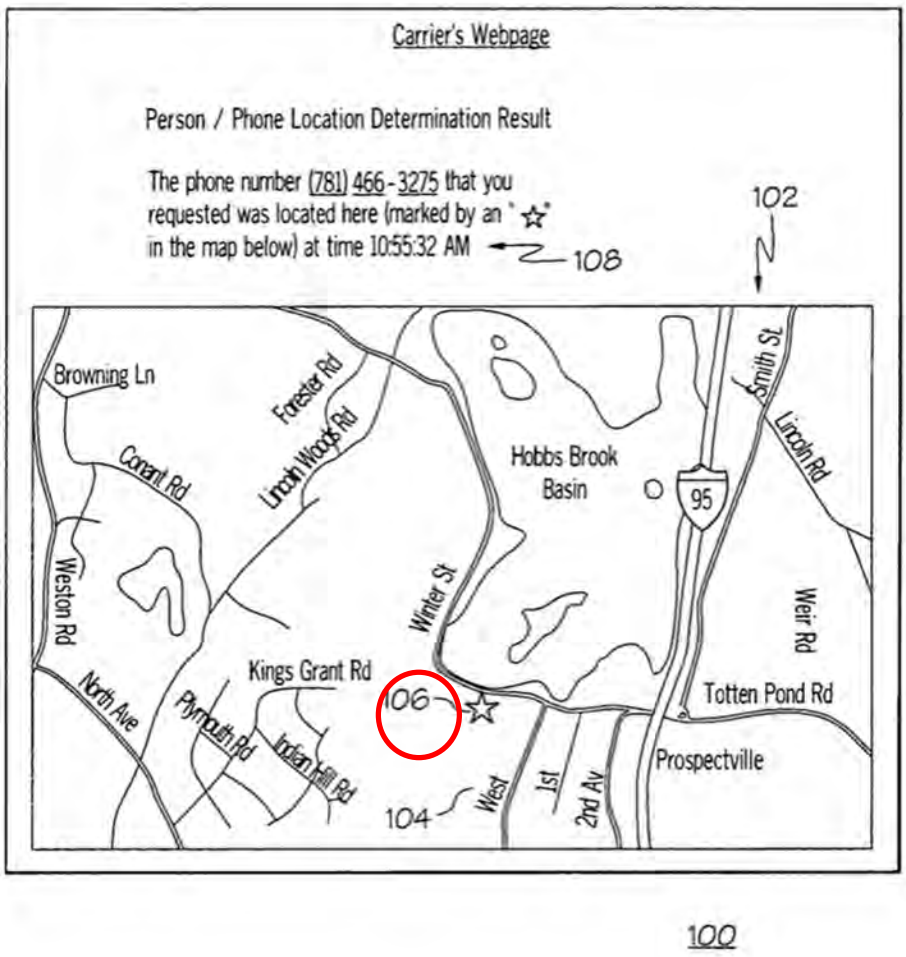


FIG. 7

346. Thus, claim 46 is rendered obvious by Enzmann and Ganesh.

47. Dependent 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.

347. It is my opinion that Bedingfield discloses the functionality recited in claim 47, and thus, Enzmann in view of Ganesh and Bedingfield makes obvious

claim 47. Bedingfield discloses the use of location information to provide directions to a target location: "the user could select and activate the network address so that a web page associated with the advertiser is presented to the user (e.g., a web page with cost or product stock information, business hours, driving directions, etc.)." Ex. 1044, ¶ 36. Thus, Bedingfield discloses the features of claim 47, which depends from claim 42, and therefore, claim 47 is obvious in view of Enzmann and Ganesh and further in view of Bedingfield.

48. Dependent 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.

348. It is my opinion that Bedingfield discloses the functionality recited in claim 48, and thus, Enzmann in view of Ganesh and Bedingfield makes obvious claim 48. As I have shown above with respect to Ground 1, Bedingfield discloses providing a travel time between locations. Thus, Bedingfield discloses the features of claim 48, which depends from claim 42, and therefore, claim 48 is obvious in view of Enzmann and Ganesh and further in view of Bedingfield.

49. Dependent 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.

349. It is my opinion that Enzmann and Obradovich disclose the functionality recited in claim 49, and thus, Enzmann in view of Ganesh and Obradovich makes obvious claim 49. As I discussed above with respect to claim 45, Enzmann in view of Obradovich teaches the use of a plurality of levels of access rights for a wireless device, and tiered access levels, including at the location level, were a well-known security and privacy mechanism prior to March 2002.

350. Enzmann further discloses that the location can be provided in different ways, such as "x-y position coordinates," e.g., an exact location, as well as approximate location such as "a street address, building name, or area name." Ex. 1040, 3:6-12. Thus, Enzmann and Obradovich disclose the features of claim 49, which depends from claim 42, and therefore, claim 49 is obvious in view of Enzmann and Ganesh and further in view of Obradovich.

50. Dependent 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.

351. It is my opinion that Enzmann and Obradovich disclose the functionality recited in claim 50, and thus, Enzmann in view of Ganesh and Obradovich makes obvious claim 50. As I discussed above with respect to claims 45 and 49, Enzmann and Obradovich disclose using levels of access rights including approximate location. Enzmann also describes providing an "area name." Ex. 1040, 3:12. City and state are obvious types of area names, and providing varying degrees of granularity or precision would have been expected by a person skilled in the art in location-based access rights. Thus, Enzmann and Obradovich disclose the features of claim 50, which depends from claim 42, and therefore, claim 50 is obvious in view of Enzmann and Ganesh and further in view of Obradovich.

51. Dependent 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.

352. It is my opinion that Enzmann discloses the functionality recited in claim 51, and thus, Enzmann in view of Ganesh and makes obvious claim 51. Enzmann describes receiving a login and password for identification: "The query

includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password." Ex. 1040, 6:41-50. Login using a username and password was conventional and well-known well before March 25, 2002. Thus, Enzmann discloses the features of claim 50, which depends from claim 42, and therefore, claim 50 is obvious in view of Enzmann and Ganesh.

52. Dependent 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.

353. It is my opinion that Enzmann discloses the functionality recited in claim 52, and thus, Enzmann in view of Ganesh and makes obvious claim 52. Enzmann discloses requesting location via telephone number: "a requestor submits a location query to location server 100. The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information." Ex. 1040, 6:41-45. To "identify the network user that the requestor wishes to locate . . . . , the requestor can give a telephone number." *Id.*, 6:66-7:2. This can be via input received: "For example . . . . the requestor could initiate the query using a graphical user interface . . . [or] the requestor could initiate the query using a menu driven interface or a series of key sequence inputs." *Id.*, 6:51-65. Thus, Enzmann discloses the features of claim 52,

which depends from claim 42, and therefore, claim 52 is obvious in view of Enzmann and Ganesh.

53. Dependent 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.

354. It is my opinion that Enzmann discloses the functionality recited in claim 53, and thus, Enzmann in view of Ganesh and makes obvious claim 53. Enzmann discloses that a target device can define a list of authorized users, and that the user of the target device has "control of who can receive his location information," thereby modifying location access rights. Ex. 1040, 2:34-36, 5:28-34. Displaying an interface element to enable a user to modify the access was one of a limited number of ways to achieve this goal, and be the most obvious way to do so in my opinion. It would have been obvious to display an option using said first wireless device to modify location access rights for a requesting device. Thus, Enzmann renders obvious the features of claim 52, which depends from claim 42, and therefore, claim 52 is obvious in view of Enzmann and Ganesh.

54. Dependent 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.

355. It is my opinion that Enzmann, alone or in view of Lee, discloses the functionality recited in claim 54, and thus, Enzmann in view of Ganesh, alone or

further in view of Lee, makes obvious claim 54. As I discussed above with respect to claim 53, Enzmann discloses that a target device can modify a specific group of authorized users using the target device.

356. As I discussed above under Ground 1, claim 54, Lee discloses displaying an option to delete a user's access rights. This would have been an obvious way to enable modification of authorized users in a system such as Enzmann's. Thus, Enzmann and Lee make obvious the features of claim 54, which depends from claim 42, and therefore, claim 54 is obvious in view of Enzmann and Ganesh, alone or further in view of Lee.

55. Dependent 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.

357. It is my opinion that Degnbol discloses the functionality recited in claim 55, and thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 55. As I discussed above under Ground 1, Degnbol discloses alerting the wireless telephone when a wireless device is within a distance of it, and alerting was a conventional functionality that would have been obvious to use in a system such as Enzmann's. Thus, Degnbol discloses the features of claim 55, which depends from claim 42, and therefore, claim 55 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

56. Dependent 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.

358. It is my opinion that Smith discloses the functionality recited in claim 61, and thus, Enzmann in view of Ganesh and Smith makes obvious claim 51. As I discussed above under Ground 1, displaying identifier lists such as digital phonebooks and contact lists was well known the art, including the identifier list taught by Smith in Figure 15A (shown below). Ex. 1059, 9:43-47.

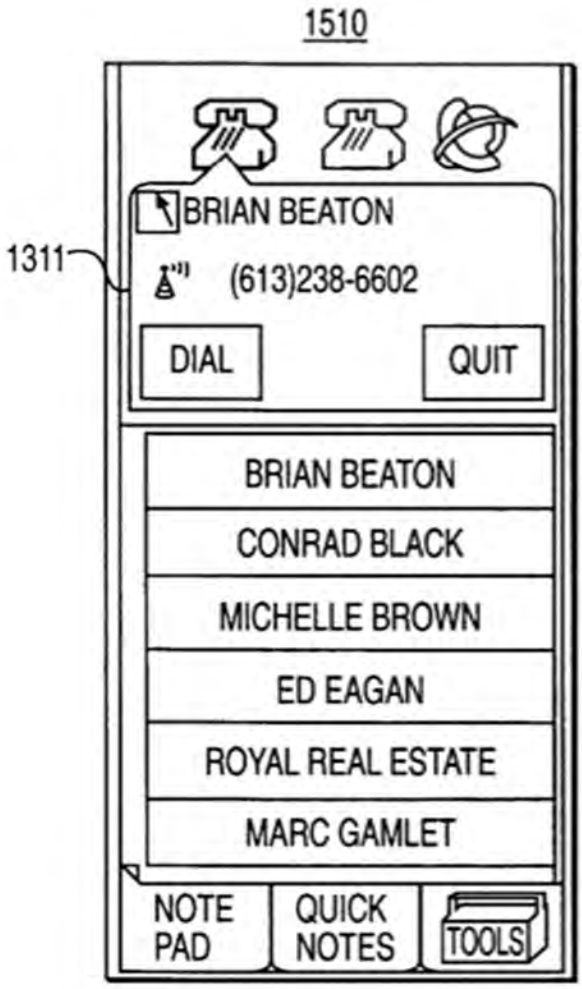


FIG. 15A

359. It would have been straightforward to incorporate such an identifier list into a system such as Enzmann's, and a person skilled in the art would have been motivated to use conventional functionality into Enzmann's system so that the user could easily select the target device from this name list. Thus, Smith discloses the features of claim 56, which depends from claim 42, and therefore, claim 56 is obvious in view of Enzmann and Ganesh and further in view of Smith.

57. Dependent 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.

360. It is my opinion that Smith discloses the functionality recited in claim 57, and thus, Enzmann in view of Ganesh and Smith makes obvious claim 57. As I discussed above with respect to claim 56, Enzmann in view of Ganesh and Smith disclose displaying an option to select the target device from an identifier list. As I also discussed above, with respect to Ground 1 for claim 57, Smith discloses the conventional functionality of an identifier list that includes a list of telephone numbers. Ex. 1059, 9:43-49. Thus, Smith discloses the features of claim 57, which depends from claim 42, and therefore, claim 57 is obvious in view of Enzmann and Ganesh and further in view of Smith.

58. Dependent 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.

361. It is my opinion that Smith discloses the functionality recited in claim 58, and thus, Enzmann in view of Ganesh and Smith makes obvious claim 58. As I discussed above under claim 56, Enzmann in view of Ganesh and Smith disclose selecting the target device from an identifier list, such as the compressed view display in Figure 15A of Smith. Smith also states that each entry in the list shown

in Figure 15A represents a user profile, such as that displayed in the full view shown in Figure 15B, reproduced below. Ex. 1059, FIGS. 15A-15B, 9:43-55 1003, 6:65-7:3, 8:18-19, FIGS. 11A, 11B.

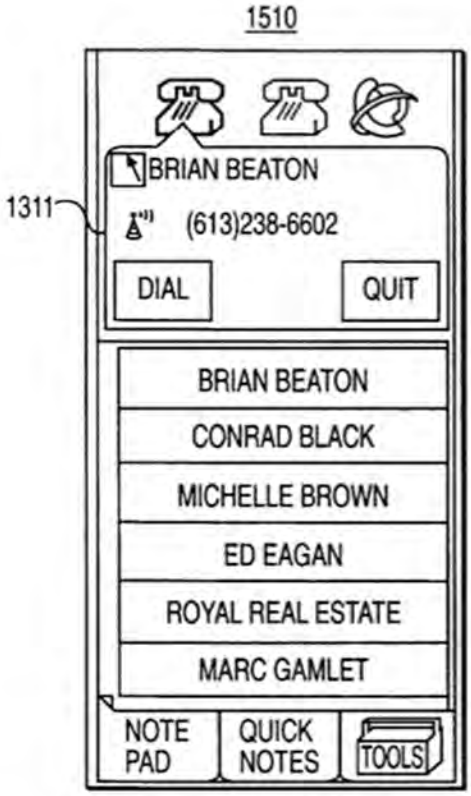


FIG. 15A

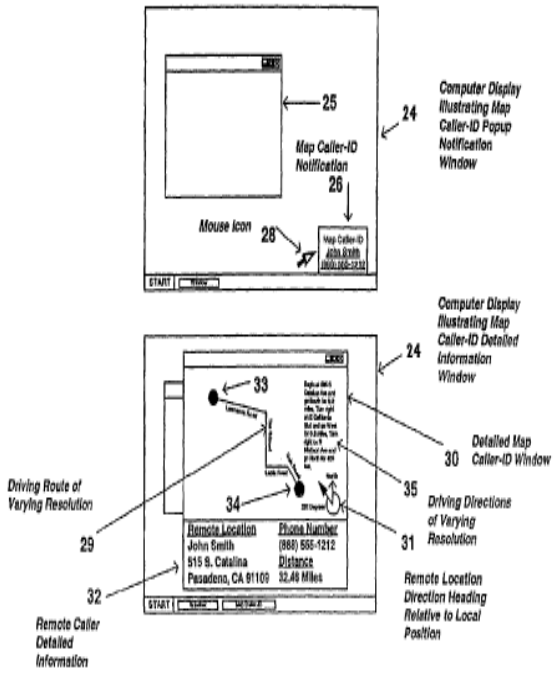


FIG. 5

Thus, Smith discloses the features of claim 58, which depends from claim 42, and therefore, claim 58 is obvious in view of Enzmann and Ganesh and further in view of Smith.

59. Dependent claim 59 – The wireless telephone of claim 42, said positioning system comprises a global positioning system.

362. It is my opinion that Enzmann discloses the functionality recited in claim 59, and thus, Enzmann in view of Ganesh makes obvious claim 59. Enzmann describes the positioning system being a global positioning system: a "location system" provides the location information . . . of a handheld device. . . . An example of a suitable location system in the handheld devices is a GPS." ." Ex. 1040, 4:24-38. Thus, Enzmann discloses the features of claim 59, which depends from claim 42, and therefore, claim 59 is obvious in view of Enzmann and Ganesh and further in view of Smith.

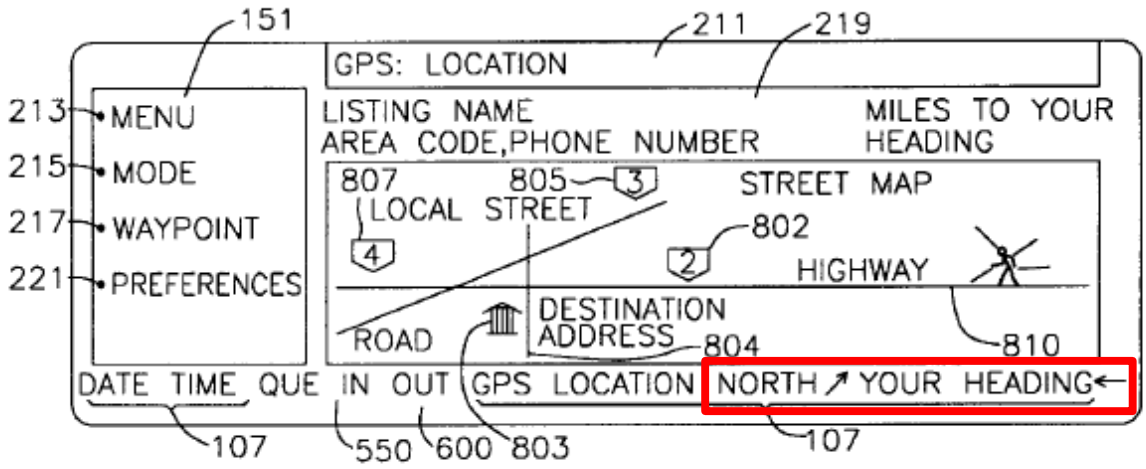
60. Dependent claim 60 – The wireless telephone of claim 42, wherein said programming is further capable of displaying a compass.

363. It is my opinion that Enzmann and Obradovich disclose the functionality recited in claim 60, and thus, Enzmann in view of Ganesh and Obradovich makes obvious claim 60. Enzmann describes a "mapping converter" that can convert coordinates to "displayable information" such as an address. Ex. 1040, 4:38-55.

364. Displaying compass-related information in mobile devices has long been known in the art. For example, Obradovich discloses a communication device with mobile phone functionality in which "location, heading and *north*, is also

displayed." Ex. 1055, FIG. 8 (below), 10:54-55 (*emphasis added*), 7:13-22, 13:1-2. A person skilled in the art would recognize that the arrow showing north is an implementation of a displayable compass.

FIG.8

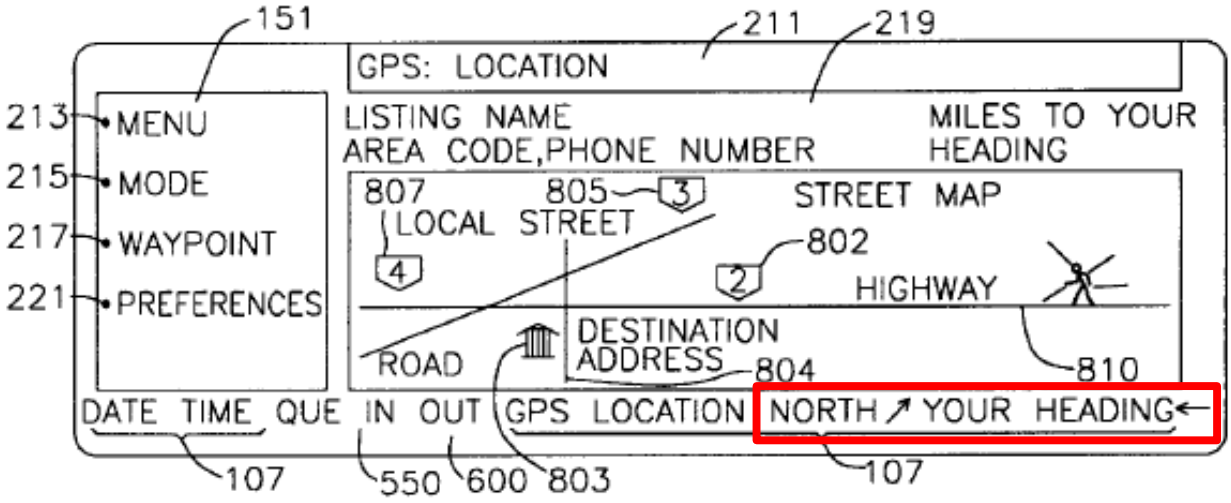


365. Based on Obradovich's disclosure of a compass and Enzmann's discussion of mapping information, it would have been apparent to a person skilled in the art that the mapping information could include a compass. Thus, Enzmann and Obradovich teach the features of claim 60, which depends from claim 42, and therefore, claim 60 is obvious in view of Enzmann and Ganesh and further in view of Obradovich.

61. Dependent 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.

366. It is my opinion that Enzmann, alone or in combination with Obradovich, discloses the functionality recited in claim 61. As I discussed above under claim 60, Enzmann describes a "mapping converter" that can convert coordinates to "displayable information" such as an address. Ex. 1040, 4:38-55. Displaying a directional arrow representative of the direction of the target device with respect to the location of the requestor would have been obvious based on Obradovich, which displays "an arrow pointing to north and an arrow indicating direction of device travel." (Ex. 1003, ¶XX, Ex. 1055, 9:59 – 60, Fig. 8).

FIG.8



367. Thus, Obradovich discloses the features of claim 61, which depends from claim 42, and therefore, claim 61 is obvious in view of Enzmann and Ganesh and further in view of Obradovich.

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

368. It is my opinion that Degnbol discloses the functionality recited in claim 62, and thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 62. As I discussed above at Ground 1, claims 62 and 55, Degnbol discloses setting location alerts associated with a wireless device, and this was conventional functionality that would have been obvious to incorporate in a system such as Enzmann's. Thus, Degnbol discloses the features of claim 62, which depends from claim 42, and therefore, claim 62 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

63. Dependent 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.

369. It is my opinion that Enzmann, alone or in combination with Lee, discloses the functionality recited in claim 63, and thus, Enzmann in view of

Ganesh and further in view of Lee makes obvious claim 63. Enzmann describes storing lists of authorized users. Ex. 1040, 5:28-38. Enzmann also discloses that an unauthorized requestor may still obtain permission to receive a targeted wireless device's position. Ex. 1040, 7:26-58. Enzmann describes a scenario in which "the location query service prompts a network user each time an unauthorized requestor asks for location information." Ex. 1040, 2:42-45. Given that in the latter case, the requestor is otherwise unauthorized, it is my understanding that there would be some sort of automatic termination of the permission, meaning that the permission is for a specific period of time.

370. As I discussed above with respect to Ground 1 for claims 63 and 53, displaying an option to modify rights is both well-known and disclosed in Lee. For example, Lee FIG. 2D (reproduced below) shows a GUI with options to modify users in a group (276) and access rights for the users in the group (using checkboxes 277). Ex. 1050, FIG. 2D, 16:1-25.

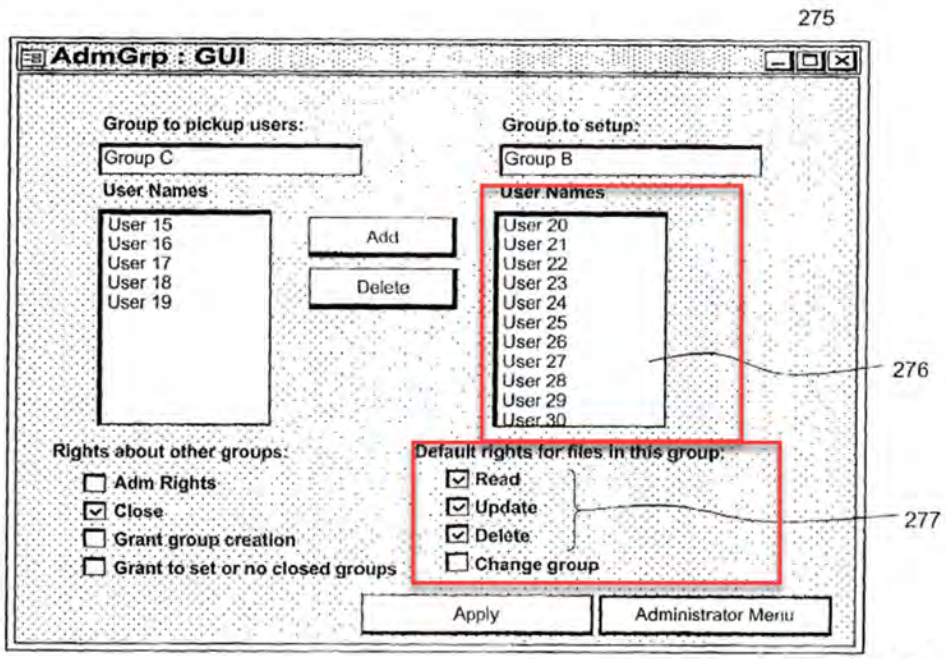


Fig. 2D

371. It is my opinion that it would have been obvious to persons skilled in the art to implement the routine and conventional feature of displaying options as disclosed in Lee to facilitate Enzmann's access right configuration. Thus, Enzmann and Lee make obvious the features of claim 63, which depends from claim 42, and therefore, claim 63 is obvious in view of Enzmann and Ganesh and further in view of Lee.

64. Dependent 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.

372. It is my opinion that Enzmann, alone or in combination with Degnbol,

discloses the functionality recited in claim 64, and thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 64. Enzmann describes providing an alert based on a friend being in the same city, which is a geographic area. Ex. 1040, 9:4-24.

373. Degnbol describes notifying a user when another pre-selected user enters a pre-determined area or proximity to a particular location. Ex. 1047, Abstract. The users can establish various different alert triggers, such as when a buddy comes within a certain range. *Id.*, 11:5-11. "Each predetermined range may be associated with a geographic area, such as a continent, country, district, city, co-ordinate range or a street." *Id.*, 6:6-8. Thus, Enzmann and Degnbol make obvious the features of claim 63, which depends from claim 42, and therefore, claim 63 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

65. Dependent 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.

374. It is my opinion that Enzmann discloses the functionality recited in claim 65, and thus, Enzmann in view of Ganesh makes obvious claim 65. Enzmann's system stores lists of authorized users. Ex. 1040, 5:28-38. Users, while in a list, are permitted to obtain a wireless device's position. Ex. 1040, 7:19-21. This list is provided by the network user to the location server, thus requesting the

server to allow on-list devices to obtain the position. Based on this description in Enzmann, it is my understanding that the permission would, unless specifically instructed otherwise, persist indefinitely while a user is on the list. Thus, Enzmann makes obvious the features of claim 65, which depends from claim 42, and therefore, claim 65 is obvious in view of Enzmann and Ganesh.

66. Dependent 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.

375. It is my opinion that Enzmann discloses the functionality recited in claim 66, and thus, Enzmann in view of Ganesh makes obvious claim 66. As I described above with respect to claim 63, Enzmann discloses allowing a device to access location for a specific amount of time. As described in Enzmann, the permission for a specific period of time occurs in response to an instruction from the wireless device to the server, when the user requests temporary location access rights for a user that is not otherwise on the list of authorized users. Ex. 1040, 7:19-21. This involves the wireless telephone instructing the server, e.g., by instructing the server to add a user to the access list then remove them. S*ee* Ex. 1040, 7:19-21. Thus, Enzmann makes obvious the features of claim 66, which depends from claim 42, and therefore, claim 66 is obvious in view of Enzmann and Ganesh.

67. Dependent claim 67 – The wireless telephone of claim 42, wherein said programming is further capable of receiving an alert when a user of said second wireless device locates said wireless telephone.

376. It is my opinion that Degnbol discloses the functionality recited in claim 67, and thus, Enzmann in view of Ganesh and Degnbol makes obvious claim 67. As described above with respect to Ground 1, Degnbol discloses receiving an alert when a wireless telephone is located. As I have also discussed above, alerts were well-known and it would have been obvious to a person skilled in the art to deliver Enzmann's location information using Degnbol's alerts. Thus, Enzmann and Degnbol make obvious the features of claim 67, which depends from claim 42, and therefore, claim 67 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

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

377. It is my opinion that Enzmann and Degnbol disclose the functionality recited in claim 68, and thus, Enzmann in view of Ganesh and/or Degnbol makes obvious claim 68. Enzmann's system is capable of receiving and displaying location information of one device to another device. Enzmann lists several devices that can be located, including pagers and cellular phones. Ex. 1040, 5:40-41.

378. As I discussed above under Ground 1, Degnbol discloses determining a location of a watch. Ex. 1055, 7:4-17, 4:29 – 31, claim 10. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious to a person skilled in the art to implement a watch, per Degnbol, as the located device. Thus, Enzmann and Degnbol make obvious the features of claim 68, which depends from claim 42, and therefore, claim 68 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

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

379. It is my opinion that Enzmann discloses the functionality recited in claim 69, and thus, Enzmann in view of Ganesh makes obvious claim 69. As I discussed above with respect to claim 68, Enzmann's system is capable of receiving and displaying locations of various types of devices. In light of Enzmann's teachings to receive and display the location of various devices, it would have been obvious to receive and display the location of any suitable device, such as a radio, which was a well-known type of portable device at the time.

380. Lelievre discloses locating a radio, as described above under Ground 1 for claim 69. Given Enzmann's description of locating any suitable device, and Lelievre's description of locating a radio, it would have been obvious to a person of skill in the art to locate a radio using a system such as Enzmann's. Thus,

Enzmann and Lelievre make obvious the features of claim 69, which depends from claim 42, and therefore, claim 69 is obvious in view of Enzmann and Ganesh and further in view of Lelievre.

70. Dependent claim 70 – The wireless telephone of claim 42, wherein said programming is further capable of receiving and displaying a location of a car.

381. It is my opinion that Enzmann and Curbow disclose the functionality recited in claim 70, and thus, Enzmann in view of Ganesh and further in view of Curbow makes obvious claim 69. Curbow discloses displaying a location of a car. Curbow describes an "automobile equipped with a Global Positioning System (GPS) receiver and an on-board computer . . . configured to transmit the automobile's location and direction of motion to a central server." The automobile's location can then be output. Ex. 1046, Abstract. In view of Enzmann's disclosure of displaying location information of various devices, it would have been obvious and straightforward to implement various devices that were commonly located, such as a car, as described in Curbow, as the located device. Thus, Enzmann and Curbow disclose the features of claim 70, which depends from claim 42, and therefore, claim 68 is obvious in view of Enzmann and Ganesh and further in view of Curbow.

71. Dependent 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.

382. It is my opinion that Bedingfield discloses the functionality recited in claim 71, and thus, Enzmann in view of Ganesh and Bedingfield makes obvious claim 71. As I discussed above with respect to Ground 1, Bedingfield discloses displaying travel times via various modes. Displaying travel times was a well-known concept. Since Enzmann describes use of displayable information, displaying travel times would be an obvious and straightforward feature to implement in Enzmann's system. Thus, Enzmann and Bedingfield make obvious the features of claim 71, which depends from claim 42, and therefore, claim 71 is obvious in view of Enzmann and Ganesh and further in view of Degnbol.

72. Dependent 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.

383. It is my opinion that Smith discloses the functionality recited in claim 72, and thus, Enzmann in view of Ganesh and Smith makes obvious claim 72. The location server of Enzmann can store information associated with a user such as location or preferences and return location information to a requestor. Ex. 1040,

8:22-24, 7:24-2, 8:65 – 67. Thus, Enzmann's system is "capable" of downloading user information from a remote system. Downloading a user's phone book was a well-known concept at the time, and would be an obvious extension of the server-based user information disclosed in Enzmann.

384. As I discussed above with respect to Ground 1 for claim 28, both Degnbol and Smith disclose downloading a phone book corresponding to a user of the wireless telephone from a remote system. Thus, it would have been obvious to a person skilled in the art to extend the download of user information disclosed in Enzmann to also download a phone book, which was both well-known at the time and explicitly shown in Degnbol and Smith. Thus, Enzmann, Degnbol, and Smith make obvious the features of claim 72, which depends from claim 42, and therefore, claim 72 is obvious in view of Enzmann and Ganesh and further in view of Degnbol and/or Smith.

73. Independent claim 73

385. It is my opinion that claim 73 is obvious over Enzmann.

a. *Claim 73 Preamble – A wireless telephone comprising:*

386. As described above with respect to claim 1 preamble, Enzmann discloses wireless telephones. Thus, Enzmann discloses the features of the preamble of claim 73.

b. ***Claim 73 [a] – a processor;***

387. As described above with respect to claim 1[a], Enzmann discloses a processor. Thus, Enzmann discloses the features of claim 73a.

c. ***Claim 73 [b] – a positioning system for determining a location of said wireless telephone; and***

388. As described above with respect to claim 1[b], Enzmann discloses a positioning system for determining a location of a wireless telephone. Thus, Enzmann discloses the features of claim 73b.

d. ***Claim 73 [c] – memory storing programming capable of:***

389. As described above with respect to claim 1[c], Enzmann discloses a memory storing programming. Thus, Enzmann discloses the features of claim 73c.

e. ***Claim 73 [d] – providing said location to a remote system, wherein said location is operable of being requested by a second wireless device outside of a call for communication between said wireless telephone and said second wireless device;***

390. As I discussed above under claim 1[d], Enzmann discloses providing a location of a wireless device to a remote system. Enzmann also describes the ability to retrieve the location outside of a call. Ex. 1040, 7:63-8:10. Thus, Enzmann discloses the features of claim 73c.

f. ***Claim 73 [e] – providing a permission for said second wireless device to access location information about said location, said permission operable of being stored in said remote system, wherein said remote system is located remotely from said wireless telephone and said second wireless device, said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call,***

391. Enzmann discloses providing permission for other wireless devices to access location information: "the present invention gives the network user control of who can receive his location information. The network user provides the service with a list of authorized requestors who may receive the user's location information." Ex. 1040, 2:34-38. The "service" is remote from the wireless device because it is executed by the location server 100, which is remote from the wireless devices 104 at least because it is a different device than the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, 5:3, 2:58-60, FIG. 1. The location server can store the permission information. Ex. 1040, 7:23-25.

392. Enzmann also describes providing location information to another wireless device in accordance with the permission: "location server 100 returns the location information of the network user back to the requestor" at block 214 after verifying the permission at blocks 202 – 204d. Ex. 1040, 8:65-67, FIG. 2. Providing the location is not restricted to a call in Enzmann, as noted above

regarding claim 73d. Thus, Enzmann discloses the features of claim 73e.

g. *Claim 73 [f] – wherein said programming of said wireless telephone is further operable of providing a first map provided with respect to said location.*

393. Enzmann describes a mapping converter that can convert coordinates to displayable information such as an address. Ex. 1040, 4:38-55. If Enzmann's system is generating this displayable information, it would only make sense to actually display the displayable information. As I discussed above under claim 1[f], displaying maps was common and well-known well before March 2002. Therefore, in view of Enzmann's discussion of providing displayable information, it would have been obvious in view of Enzmann and common knowledge in the art to provide the displayable information in the form of a map with respect to the location.

394. It is thus my opinion that Enzmann renders obvious claim 73f and that claim 73 as a whole is obvious in view of Enzmann.

74. Dependent claim 74 – The wireless telephone of claim 73, wherein said second wireless device comprises a wireless telephone.

395. It is my opinion that claim 74 is obvious over Enzmann. Enzmann discloses that the located device can be a wireless telephone: "Location system 120 provides the location information, e.g., position coordinates, of a handheld device," where "handheld devices . . . include . . . cellular telephones." Ex. 1040, 4:24-26,

5:39-41. It is thus my opinion that Enzmann discloses the features of claim 74.

75. Dependent claim 75 – The wireless telephone of claim 73, wherein said programming is further capable of displaying a map with a location marker associated with a location of said second wireless device.

396. It is my opinion that Claim 75 is obvious in view of Enzmann and Tobin. Enzmann discloses "provid[ing] the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located." Ex. 1040, 4:24-26. Using a location marker to provide the location information was a standard and well-known way to provide location information.

397. Tobin discloses displaying a location marker on a map. FIG. 1C of Tobin (below) shows "a local area map . . . show[ing] the positions of roads 135, service vendors 137, 127, and 129, and position 124 of user device 105." Ex. 1061, ⁋ 28. Location markers 137, 127, and 129 show target locations on the map that are provided to the wireless device. *Id.*

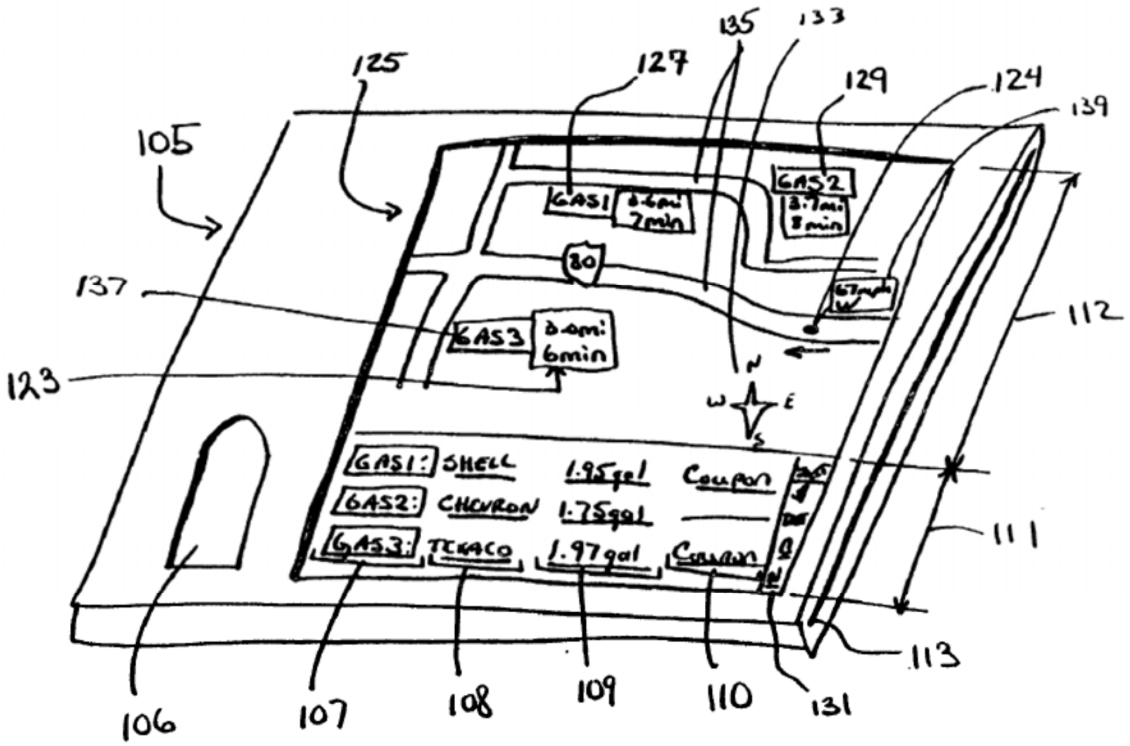


FIG. 1C

398. Thus, Enzmann and Tobin render claim 75 obvious.

76. Dependent claim 76 – The wireless telephone of claim 73, wherein said programming is further capable of removing said permission, by said wireless telephone, for said second wireless device to obtain said location.

399. It is my opinion that claim 76 is obvious over Enzmann, alone or in combination with Degnbol. Enzmann describes "a list that the network user provides. The list indicates which people (requesters) have access to the network user's location information." Ex. 1040, 7:19-21. As I discussed above under Ground 1 for claim 76, the ability to remove permissions was well-known. For

example, Degnbol describes the standard feature of removing users from a buddy list: Moreover, Degnbol explicitly discloses removing users from a buddy list: "The Buddy List may be altered by the user at will, adding or deleting buddies and setting various preferences. This can be done . . . directly from the handset of the users cellular phone." Ex. 1047, 9:32-10:3. Thus, Enzmann, alone or in view of Degnbol, renders claim 76 obvious.

77. Dependent claim 77 – The wireless telephone of claim 73, wherein said positioning system is operable to receive signals from a plurality of positioning satellites, and said location is operable to be updated by said positioning system, and said programming is further capable of providing said updated location to said remote system.

400. It is my opinion that claim 77 is obvious in view of Enzmann. Enzmann describes obtaining the location of a wireless telephones using GPS: "wireless handheld devices will provide the location of callers using . . . global positioning systems (GPSs) within the handheld devices." Ex. 1040, 1:36-40, *see also* 4:16 – 23. As I discussed above under claim 1[d], the location is provided to a remote system in Enzmann. And, as I discussed above under Ground 1 for claim 77, it was well-known that determining locations via GPS involves receiving signals from multiple positioning satellites. Thus, Enzmann renders claim 77 obvious.

78. Dependent claim 78 –The wireless telephone of claim 73, wherein said programming is further capable of receiving an alert when said second wireless device is within a distance of said wireless telephone.

401. It is my opinion that claim 78 is obvious in view of Enzmann and Degnbol. As I discussed above under Ground 1 for claim 78, Degnbol discloses receiving an alert when a second wireless device is within a distance of the wireless telephone. There would be no difficulty in implementing well-known alerting functionality in Enzmann's system. Thus, Enzmann and Degnbol render claim 78 obvious.

79. Dependent claim 79 – The wireless telephone of claim 73, wherein said programming is further capable of displaying said location of said wireless telephone relative to a second location of said second wireless device.

402. It is my opinion that Claim 79 is obvious in view of Enzmann and Tobin. As I discussed above under claim 75, Tobin discloses displaying locations. The location 124 of the wireless device is shown in FIG. 1C along with target locations 137, 127, and 129, as shown below. Ex. 1061, ¶ 28, FIG. 1C.

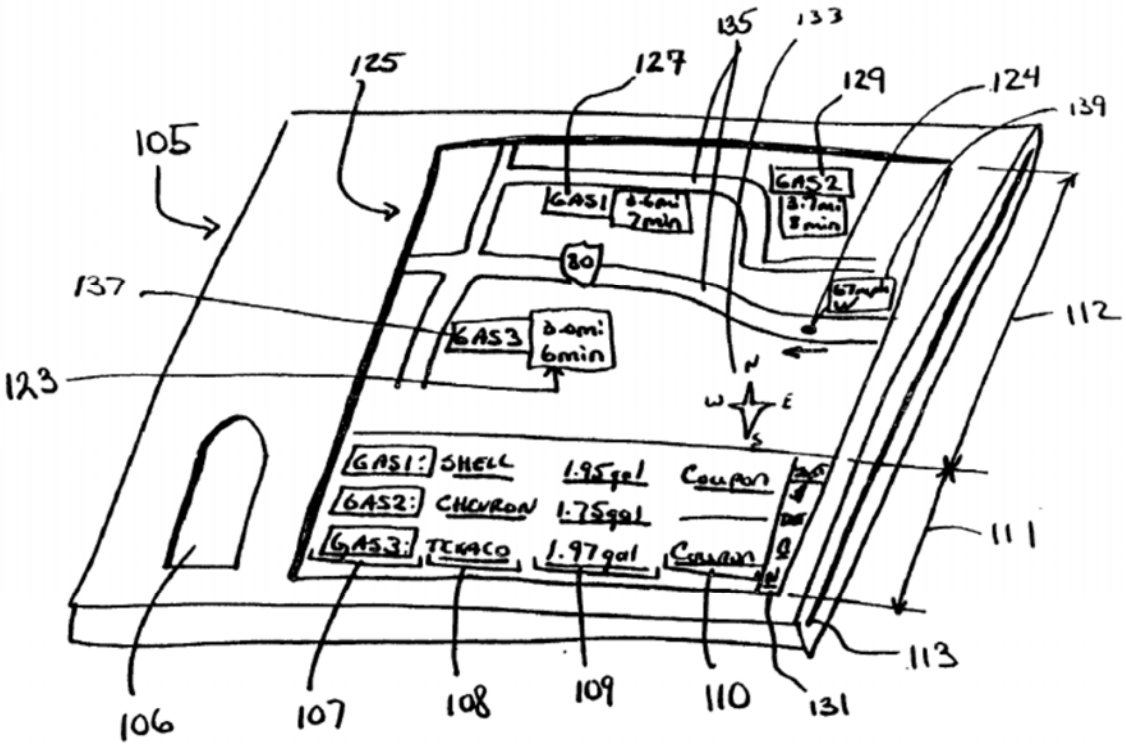


FIG. 1C

403. As I discussed above, in view of Enzmann's description of displayable mapping information, it would have been obvious to a person skilled in the art to have such displayable mapping information be displayed and include well-known types of mapping information, such as a relative locations. Thus, Enzmann and Tobin render claim 79 obvious.

80. Dependent claim 80 – The wireless telephone of claim 73, wherein said programming is further capable of setting location alerts associated with said second wireless device.

404. It is my opinion that Enzmann and Degnbol make claim 80 obvious.

As I discussed above under Ground 1 for claim 80, Degnbol discloses setting location alerts associated with a second wireless device. It would have been obvious and straightforward to add such alerts to Enzmann's system, which is configured to identify and provide locations of wireless devices. Thus, Enzmann and Degnbol render claim 80 obvious.

81. Dependent claim 81 – The wireless telephone of claim 73, wherein said programming is further capable of assigning said permission for a specific period of time.

405. As I discussed above under claim 5, it is my opinion that assigning permission for a specific period of time is obvious in view of Enzmann.

82. Dependent claim 82 – The wireless telephone of claim 73, wherein said programming is further capable of being alerted when said second wireless device enters a geographic region.

406. As I discussed above under claim 8, it is my opinion that Enzmann and Degnbol disclose a wireless telephone capable of being alerted when a second wireless device enters a geographic region.

83. Dependent claim 83 – The wireless telephone of claim 73, wherein said programming is further capable of displaying said first map from a perspective of said first wireless device, said map identifying said location of said wireless telephone and a location of said second wireless device.

407. It is my opinion that claim 83 is obvious in view of Enzmann and Tobin. As I discussed above under claims 75 and 79, Tobin discloses displaying a

map identifying the location of the wireless device and the location of the second wireless device. The map is from the perspective of the first wireless device, as shown in FIG. 1C (shown above under claims 75 and 79). Ex. 1047, FIG. 1C. As I discussed above, it would have been obvious to display various types of well-known displayable information in Enzmann's system, which generates displayable information for presenting a location. Thus, Enzmann and Tobin render claim 83 obvious.

84. Dependent claim 84 – The wireless telephone of claim 1, wherein said programming is further capable of instructing said remote server to allow at least one of said users to access said location of said wireless telephone for an indefinite period of time.

408. It is my opinion that Enzmann makes obvious claim 84. Enzmann describes storing a list of authorized users. Ex. 1040, 5:28-38. While a user is included in a list of authorized users, that user is permitted to obtain a wireless device's position. Ex. 1040, 7:19-21. Since there is no end time to this permission, I would interpret this as allowing those on the list to access the location for an indefinite period of time. Thus, Enzmann renders claim 84 obvious.

85. Dependent claim 85 – The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote server to allow a user of said second wireless device to access said location of said wireless telephone for an indefinite period of time.

409. As I discussed above under claim 84, it is my opinion that Enzmann

discloses instructing a remote server to allow a user of a wireless device to access said location of a wireless telephone for an indefinite period of time. Thus, Enzmann renders claim 85 obvious.

86. Dependent claim 86 – The wireless telephone of claim 73, wherein said programming is further capable of instructing said remote 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.

410. As I discussed above under claim 5, it is my opinion that Enzmann discloses instructing a remote server to allow a user of a wireless device to access said location of a wireless telephone for only a specific period of time. Thus, Enzmann renders claim 86 obvious.

87. Dependent claim 87 – The wireless telephone of claim 73, wherein said programing is further capable of receiving an alert when a user of said list of users locates said wireless telephone.

411. As I discussed above under claim 9, it is my opinion that the features in claim 87 are obvious in view of Enzmann and Degnbol.

88. Dependent claim 88 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a watch.

412. As I discussed above under claim 10, it is my opinion that the features in claim 88 are obvious in view of Enzmann and Degnbol.

89. Dependent claim 89 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a radio.

413. As I discussed above under claim 11, it is my opinion that receiving and displaying a location of a radio is obvious in view of Enzmann.

90. Dependent claim 90 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying a location of a car.

414. As I discussed above under claim 12, it is my opinion that Enzmann and Curbow disclose a wireless telephone capable of receiving and displaying a location of a car. Thus, Enzmann and Curbow render claim 90 obvious.

91. Dependent claim 91 – The wireless telephone of claim 73, wherein said programming is further capable of receiving and displaying information indicating time to reach said second location from said location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

415. As I discussed above under claim 13, it is my opinion that Enzmann and Bedingfield disclose the features of claim 91. Thus, Enzmann and Bedingfield render claim 91 obvious.

92. Dependent claim 92 – The wireless telephone of claim 73, wherein said programming is further capable of downloading from a remote system associated with said remote server a phone book corresponding to a user of said wireless telephone.

416. As I discussed above under claim 14, it is my opinion that Enzmann, alone or with McNulty, disclose the features of claim 92. Thus, Enzmann, alone or

in view of McNulty, renders claim 92 obvious.

DECLARATION OF DAVID H. WILLIAMS

APPENDIX 8

TABLE OF CONTENTS

I. U.S. Patent No. 11,246,024

A. Summary of the ’024 Patent

1. I have been informed that the earliest priority date to which the Patent Owner may claim the ’024 Patent is entitled to is March 25, 2002.

2. The ’024 Patent relates to systems and methods for remotely determining a device’s location. Ex. 1008, 1:18-20. As the patent explains, the Global Positioning System (GPS) was developed to determine the location of a receiver using satellites. *Id.*, 1:21-27. GPS systems had been integrated into cellular phones, but the location of devices determined by GPS signals “are only minimally utilized.” *Id.*, 1:28-31. Thus, the ’024 Patent purports to “better utilize” the location information determined by GPS by permitting one cell phone user to obtain location information from another user’s cell phone. *Id.*, 1:31-33, 1:38-43.

3. The patent describes a system where “any cell phone in network 100 may locate a different cell phone, as long as access to location information is allowed, through the utilization of positioning satellites 110, 112, and 114,” and every user may assign rights (e.g., govern the security) to whom may or may not locate him/her.” *Id.*, 4:24-27, 4:56-58.

4. Figure 2 (below) shows “flow chart 200 of a simplified locating feature constructed in accordance with the principles of the present invention.” 4:48-50.

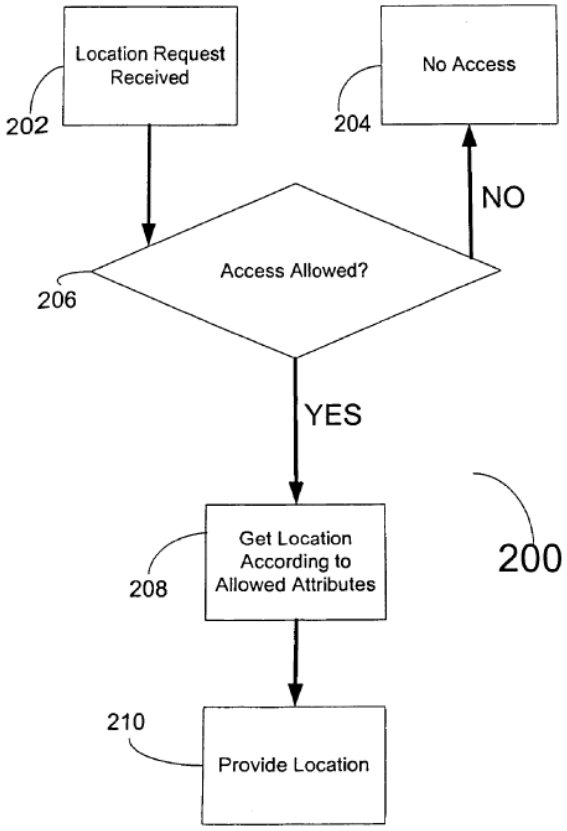


FIG. 2

5. The specification describes:

> Step 202 initiates when a user requests the location of another user's cell phone. Step 206 evaluates if the user initiating the location request has the rights to access the location of the desired user...If access has been given by a particular user that allows for the requesting user to locate that particular user, step 208 is initiated and the allowed location information is provided to the user in step 210.

Id., 4:50-65.

6. The location of a user's cell phone may be retrieved from "a remote database, facility, distribution center, or any other system," which "may periodically request the location of a cell phone user with a positioning system and

store this information" or "obtain a user's locations when a request is made for that user's location, providing the requesting user has access to the requested user's location." *Id.*, 5:7-26.

7. The amount of information provided is limited to what information the requesting user has access rights to because a user may give or modify access to location rights to another user. *Id.*, 7:26-27, 8:64-9:2, Figs. 8-10. And the user may select what information a specific user may access. *Id.*, 9:3-13; Fig. 10.

8. A user may also set up alerts so that he or she is alerted when another user's phone is at a certain location or within a certain distance. *Id.*, 9:14-17, 9:19-23; Figs. 11-12.

9. In addition, a "login feature" may be used such that "user profiles would be used as the locating identifier and the devices into which these profiles are logged into (recognized by) would allow for the user to be located." *Id.*, 9:43-46. As shown below in Figure 13, a user may log into a locating device and then use the internet to locate another user. *Id.*, 9:49-51.

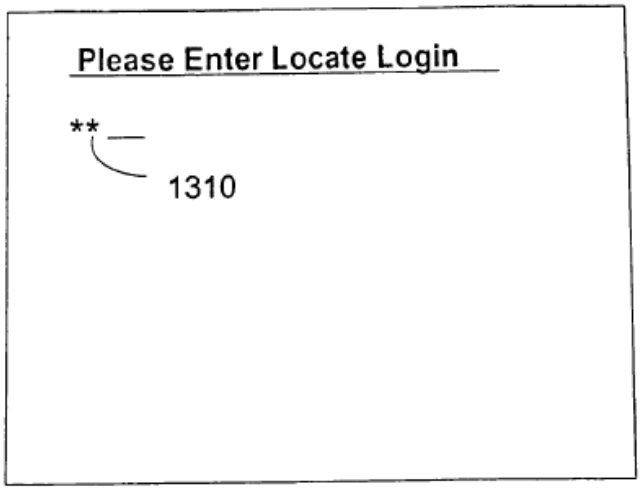


FIG. 13

10. Figure 17 (below) is a flowchart of a locating feature according to the purported invention. *Id.*, 11:33-34.

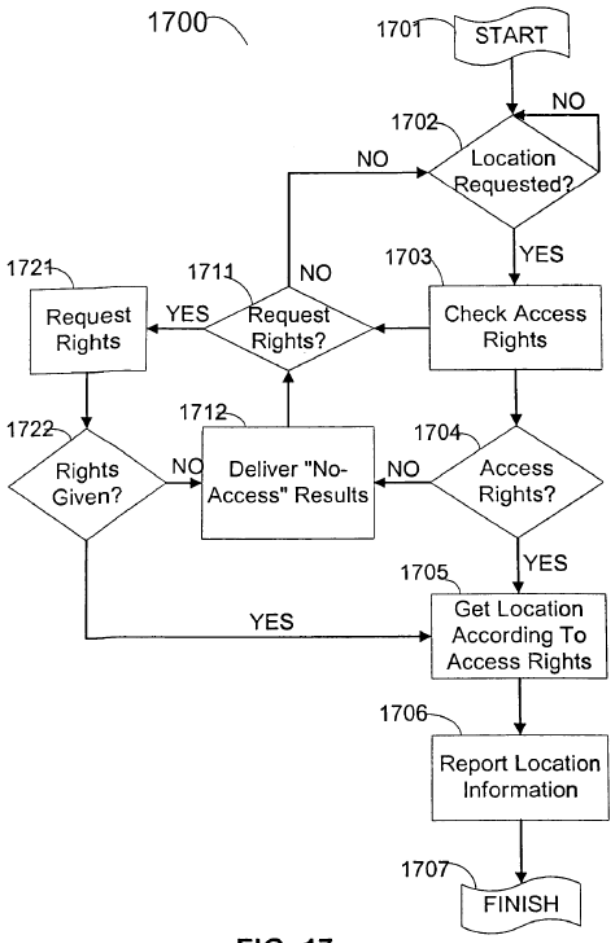


FIG. 17

11. The locating feature "starts at step 1701 and waits at step 1702 until a location is requested." *Id.*, 11:34-36. A location may be requested by a cell phone user wanting to locate a friend by locating that friend's cell phone. *Id.*, 11:38-40. "Alternatively, a device may be triggered to request a location of a mobile device when an event occurs." *Id.*, 11:40-41.

12. After a location is requested, access rights to the requested location for the requesting device and/or user are checked at step 1703 by making "a call to

a database storing a list of assigned access rights for the requested device/user and finding if any access rights were assigned to the requestor's identity" or a direct call to the requested device/user." *Id.*, 11:45-52. Then, at step 1704, it is determined whether the requestor has been assigned access rights to obtain the requested device/user's location. *Id.*, 11:53-54. If the requestor has access rights, step 1705 is initiated and location information is provided to the requestor. *Id.*, 11:62-64. But, if the requestor has not been assigned access rights, then step 1712 may be initiated and the requestor is informed that he or she does not have access rights to obtain the location information. *Id.*, 12:9-13. Then, "step 1711 asks the requester if the requestor would like to request access rights." *Id.*, 12:15-16. If the requestor does not want to request access rights, the system may return to step 1702. *Id.*, 12:16-18. Alternatively, access rights may be requested at step 1721. *Id.*, 12:18-19. Then, if access rights are given, step 1705 may be initiated. *Id.*, 12:19-21.

B. Relevant Prosecution History of the '024 Patent

13. Application 11/841,765, which led to the '024 Patent, was prosecuted for 14 years. Ex. 1018. Throughout prosecution, the Applicant repeatedly argued that the prior art did not disclose "sending a signal from a first wireless device to a device with location information and then sending a signal from the device to a second wireless device without location information." *E.g.*, Ex. 1018, at 87. The

Examiner did not find these arguments persuasive, explaining such a limitation "would read on an ordinary wireless phone call" because "[w]hen one makes a wireless call the location of the device is known to the system, however, the system does not pass this along to the called device, it only sends the call signal along, which lets the called device know that a calling party wishes to make a connection." *Id.* at 149. The applicant did not amend the claims, and the Examiner continued rejecting the claims over numerous prior art references. *E.g.*, *id.* at 156-67, 174-77, 181-92, 198-203, 207-18, 224-30.

14. After unsuccessfully arguing for the patentability of the claims for nearly fifteen years, and conducting an interview with the Examiner in October 2021, in its October 30, 2021 response, applicant cancelled its pending claims and added new claims. *Id.* at 628-45. The Examiner subsequently allowed claims because:

> The independent claims are system claims modeled after allowed method claims in Applicant's other patents as follows:
>
> System claim 26, of the instant application, is modeled after method claim 30 of patent 8,374,575;
>
> System claim 49, of the instant application, is modeled after method claim 1 of patent 9,204,283; and
>
> System claim 70, of the instant application, is modeled after method claim 1 of patent 9,635,540.

Id. at 1375.

II. Claims of the ’024 Patent

1. A system comprising:

a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of:

obtaining a location of a first wireless telephone;

changing, at the direction of said first wireless telephone, a list of users for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

transmitting said location to at least one of said users of said list of users over said communications network;

determining a second location associated with one of said plurality of wireless telephones; and

providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said second location and said location.

2. The system of claim 1, wherein said changing comprises adding an additional user to said list of users.

3. The system of claim 1, where said remote system is further capable of transmitting the address of said location to said at least one of said users of said list of users.

4. The system of claim 1, where said remote system is further capable of determining a third location associated with one of said plurality of wireless telephones.

5. The system of claim 1, where said remote system is further capable of determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones.

6. The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for an indefinite period of time.

7. The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for only a specific period of time.

8. The system of claim 7, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless telephone.

9. The system of claim 1, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone.

10. The system of claim 9, wherein said remote system is further capable of receiving a request for said alert from said one of said plurality of wireless telephones.

11. The system of claim 10, wherein said alert is geographic area-based and said remote system is further capable of alerting said one of said plurality of wireless telephones when said location of said first wireless telephone is within a geographic area specified by said one of said plurality of wireless telephones.

12. The system of claim 1, wherein said remote system is further capable of transmitting an alert to said first wireless telephone when said one of said plurality of wireless telephones locates said first wireless telephone.

13. The system of claim 1, wherein said remote system is further capable of storing a history of locations of said first wireless telephone.

14. The system of claim 13, wherein said transmitting said location to at least one of said users of said list of users over said communications network comprises transmitting to said at least one of said users a location from said history of locations when said first wireless telephone is turned off.

15. The system of claim 1, wherein said remote system is further capable of providing said location to a device utilized by one of said users of said list of users after said one of said users of said list of users utilizes said device to input a login and password for said one of said list of users into a website.

16. The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch.

17. The system of claim 16, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch.

18. The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer.

19. The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio.

20. The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car.

21. The system of claim 1, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system.

22. The system of claim 1, wherein said remote system is further capable of providing to said one of said plurality of wireless telephones information indicating time to reach said location from said second location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

23. The system of claim 1, wherein said remote system is further capable of:

storing a phone book corresponding to a user of said first wireless telephone; and

downloading said phone book to a new wireless telephone of said user.

24. A system comprising:

a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of:

receiving from a first wireless telephone over said communications network a selection of one of a plurality of users, said selection corresponding to a user of said first wireless telephone manually selecting said one of said plurality of users from a display of said first wireless telephone, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones;

receiving from said first wireless telephone information indicative of a login and a password;

determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, wherein said determining includes identifying said user of said first wireless telephone using said information indicative of said login and password and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephone;

determining whether said user of said first wireless telephone has assigned location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining a location of said first wireless telephone; and

transmitting over said communications network said location information to said first wireless telephone.

25. The system of claim 24, wherein said remote system is further capable of receiving a selection from said first wireless telephone that modifies said location access rights assigned by said user of said first wireless telephone to said one of said plurality of wireless telephones.

26. The system of claim 24, wherein said remote system is further capable of transmitting said location of said first wireless telephone to said one of said plurality of wireless telephones associated with said selected one of said plurality of users.

27. The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for an indefinite period of time.

28. The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for only a specific period of time.

29. The system of claim 28, wherein said remote system is further capable of receiving an indication of said specific period of time from said one of said plurality of wireless telephones.

30. The system of claim 24, wherein said remote system is further capable of transmitting an alert to said first wireless telephone based on said location information for said one of said plurality of wireless telephones.

31. The system of claim 30, wherein said remote system is further capable of receiving a request for said alert from said first wireless telephone.

32. The system of claim 31, wherein said alert is geographic area-based and said remote system is further capable of alerting said first wireless telephone when a location of said one of said plurality of wireless telephones is within a geographic area specified by said first wireless telephone.

33. The system of claim 24, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones when said first wireless telephone locates said one of said plurality of wireless telephones.

34. The system of claim 24, wherein said remote system is further capable of storing a history of locations of said one of said plurality of wireless telephones.

35. The system of claim 34, wherein said transmitting said location information to said first wireless telephone comprises transmitting to said first wireless telephone a location from said history of locations when said one of said plurality of wireless telephones is turned off.

36. The system of claim 24, wherein said remote system is further capable of providing said location information to another device utilized by said user of said first wireless device after said user utilizes said another device to input said login and said password into a website.

37. The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch.

38. The system of claim 37, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch.

39. The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer.

40. The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio.

41. The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car.

42. The system of claim 24, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system.

43. The system of claim 24, wherein said remote system is further capable of providing to said first wireless telephone information indicating time to reach a location of said one of said plurality of wireless telephones from said location of said first wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

44. The system of claim 24, wherein said remote system is further capable of:

storing a phone book corresponding to a user of said first wireless telephone; and

downloading said phone book to a new wireless telephone of said user.

45. A system comprising:

a remote system comprising a server, the remote system capable of communicating with a first wireless device and a second wireless device over a communications network and further capable of:

receiving a request for a location of said first wireless device from said second wireless device;

determining that said second wireless device does not have location access rights for said first wireless device;

after determining that said second wireless device does not have said location access rights for said first wireless device, receiving a request from said second wireless device that said location access rights be assigned for said second wireless device by said first wireless device;

receiving from said first wireless device an assignment of said location access rights for said first wireless device to said second wireless device;

storing said location access rights; and

providing said location to said second wireless device dependent upon said location access rights.

46. The system of claim 45, wherein said first wireless device and said second wireless device are cellular phones.

47. The system of claim 45, wherein said location access rights include the ability to obtain said location, wherein said location is provided to said second wireless device from said server even when said first wireless device is off.

48. The system of claim 45, wherein said location access rights comprise a plurality of access levels.

49. The system of claim 45, wherein said remote system is further capable of providing to said second wireless device directions from a location of said second wireless device to said location of said first wireless device.

50. The system of claim 45, wherein said remote system is further capable of providing to said second wireless device a travel time to said location.

51. The system of claim 45, 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 first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device.

52. The system of claim 45, 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 first wireless device, and said approximate location comprises a city or state.

53. The system of claim 45, wherein said remote system is further capable of receiving a login and password from said second wireless device to identify a user of said second wireless device.

54. The system of claim 45, wherein said remote system is further capable of:

receiving a request from said first wireless device to modify said location access rights for said second wireless device; and

modifying said location access rights for said second wireless device based on said request.

55. The system of claim 45, wherein said remote system is further capable of:

receiving a request from said first wireless device to delete said location access rights for said second wireless device; and

deleting said location access rights for said second wireless device based on said request.

56. The system of claim 45, wherein said remote system is further capable of filtering information about said location such that only a portion of location

information associated with said location is transmitted to said second wireless device.

57. The system of claim 45, wherein said remote system is further capable of alerting said second wireless device when said first wireless device is within a distance of second wireless device.

58. The system of claim 45, wherein said remote system is further capable of:

receiving a request for a second location of said first wireless device from a non-wireless device, wherein said non-wireless device does not comprise a positioning system; and

providing said second location of said first wireless device to said non-wireless device in response to said request.

59. The system of claim 45, wherein said remote system is further capable of receiving said location of said first wireless device from a positioning system of said first wireless device.

60. The system of claim 45, wherein said remote system is further capable of setting at least one location alert associated with said first wireless device for a user associated with said second wireless device in response to a request from said second wireless device.

61. The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for an indefinite period of time.

62. The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for only a specific period of time.

63. The system of claim 62, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless device.

64. The system of claim 45, wherein said remote system is further capable of transmitting an alert to said second wireless device based on said location of said first wireless device.

65. The system of claim 64, wherein said remote system is further capable of receiving a request for said alert from said second wireless device.

66. The system of claim 65, wherein said alert is geographic area-based and said remote system is further capable of alerting said second wireless device when said location of said first wireless device is within a geographic area specified by said second wireless device.

67. The system of claim 45, wherein said remote system is further capable of transmitting an alert to said first wireless device when said second wireless device locates said first wireless device.

68. The system of claim 45, wherein said remote system is further capable of storing a history of locations of said first wireless device.

69. The system of claim 68, wherein said providing said location to said second wireless device comprises providing to said second wireless device a location from said history of locations when said first wireless device is turned off.

70. The system of claim 45, wherein said remote system is further capable of providing said location to another device utilized by a user of said second wireless device after said user utilizes said another device to input a login and password for said user into a website.

71. The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a watch.

72. The system of claim 71, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch.

73. The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a personal computer.

74. The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a radio.

75. The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a car.

76. The system of claim 45, wherein said remote system is further capable of providing said location of said first wireless device to a credit card authorization system.

77. The system of claim 45, wherein said remote system is further capable of providing to said second wireless device information indicating time to reach said location of said first wireless device from a second location of said second wireless device according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving.

78. The system of claim 45, wherein said remote system is further capable of:

storing a phone book corresponding to a user of said second wireless telephone; and

downloading said phone book to a new wireless telephone of said user.

III. Claim Construction

15. I have been informed and understand that in an *inter partes* review claim terms are construed according to their ordinary and customary meaning as

understood by one of ordinary skill in the art in view of the specification and the prosecution history of the patent.

16. In my opinion the claims of the ’024 Patent use terms that have ordinary and customary meanings in the art and do not use these terms inconsistently with those ordinary and customary meanings. Therefore, it is my opinion that no terms need explicit construction.

IV. Analysis and Identification of How the Claims are Unpatentable

A. Ground 1: Claims 1-78 are unpatentable as obvious over Sheha in view of Obradovich, Ganesh, Degnbol, Bectolsheim, and McDonnell

17. Sheha discloses systems in which wireless devices can determine and share their own location with other devices and users can control access of their location information and request the locations of other devices as recited in independent claims 1, 24, and 45. It also discloses most of the elements recited in the various dependent claims. In addition, Obradovich, Ganesh, Degnbol, Bectolsheim, and McDonnell disclose the features recited in the dependent claims. It is my opinion that claims 1-23 are obvious based on Sheha alone or in combination with one or more of Obradovich, Ganesh, Degnbol, and Bectolsheim; claims 24-44 are obvious based on Sheha in view of Obradovich and/or Ganesh and further in view of one or more of Degnbol and Bectolsheim; and claims 45-78 are obvious based on Sheha alone or in combination with one or more of

Obradovich, Ganesh, Degnbol, McDonnell, and Bectolsheim.

1. Independent Claim 1

a. *Claim 1pre – "A system comprising"*

18. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a system that provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet." Ex. 1041, Abstract.

b. *Claim 1a – "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of obtaining a location of a first wireless telephone"*

19. Sheha discloses this limitation. Sheha employs a remote system with a server—application server or "ODAS." Ex. 1041, 11:3-8, 11:44-51. The remote system in Sheha communicates with wireless telephones over a communications network and obtains a location of those wireless telephones. *Id.*, Abstract, 10:66-11:3, 11:23-26; 11:32-35.

20. Sheha's system can operate in multiple configurations, including a mobile-to-mobile configuration, mobile-to-landline configuration, and landline-to-

landline configuration. *Id.*, 2:60-63. The "objective of each of these systems is the same, to determine either or both of the local and remote devices' position information." *Id.*, 4:13-18. A mobile-to-mobile configuration is illustrated in Figure 3 (below), where both mobile devices 18b-c communicate with the wireless network 22 via their respective wireless connections 20b-c.

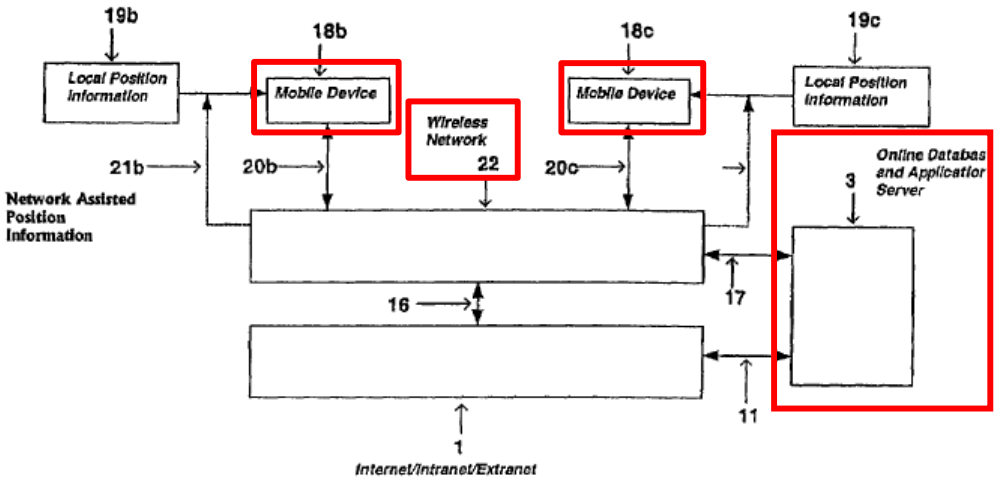


FIG. 3

21. Sheha discloses that the mobile devices shown in Figure 3 can be cellular telephones or wireless voice-enabled PDAs. *Id.*, 10:66-11:3. Sheha discloses that the ODAS communicates with mobile device 18b, for example, "through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17." *Id.*, 11:23-26; 11:32-35 ("In another embodiment, the ODAS 3 requests position information from the destination

mobile device 18 c. This request, after reaching the wireless network 22, is sent across the wireless connection 20 c to the mobile device 18 c."). "The ODAS 3 receives both the originating and destination telephone numbers, users' account information, and position information for both mobile devices 18 b and 18 c." *Id.*, 11:20-23.

22. Thus, it is my opinion that Sheha discloses this limitation.

c. *Claim 1b – "changing, at the direction of said first wireless telephone, a list of users for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"*

23. Sheha discloses this limitation. Sheha's system can change, at the direction of the wireless telephone, a list of users allowed to access the telephone's location. Sheha's system has privacy settings that "allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:38-46, 11:63-12:4. In particular, Sheha's system permits a user to create a "profile associated with said first wireless telephone" in the form of a "caller user group," which "consist[s] 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," i.e., being associated with a wireless telephone. *Id.*, claim 1. Each identified user is representative of one of a plurality of wireless telephones, as Sheha

references defining a list of "users" and "calling devices" interchangeably. *Id.*, 5:38-46, 11:63-12:4, claim 1.

24. Sheha describes storing information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. For example, "users can define a group of specific users that have access to this information...by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." *Id.*, 11:61-12:1. These privacy settings can be used in landline-to-landline, mobile-to-landline, and mobile-to-mobile scenarios. *Id.*, 12:4-7.

25. Sheha also discloses that such a change at the system can be made at the direction of the wireless telephone. For example, the user in Sheha can terminate position transfer "at anytime," "choose not to reveal its local position," and "enable position transfer permissions at anytime," and can do so manually through the device. Ex. 1041, 5:12-20, 5:33-38.

26. In addition, because Sheha discloses that the user of a first wireless telephone has the authority to "define" a list of users who are allowed to access their location, and further discloses that the user may change these privacy settings to "enable position transfer permissions at anytime and for any period of time," it is my opinion that Sheha discloses that the list may be changed at the direction of the first

wireless telephone. Ex. 1041, 5:9-20, 11:61-12:1. .

27. Thus, it is my opinion that Sheha discloses this limitation.

d. *Claim 1c – "transmitting said location to at least one of said users of said list of users over said communications network"*

28. Sheha discloses this limitation. Sheha discloses transmitting the location of the target device from the server to the requesting device over a communications network. The ODAS communicates with mobile device 18b "through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17." Ex. 1041, 11:23-26; 11:32-35. And "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." *Id.*, 12;1-7.

29. Thus, it is my opinion that Sheha discloses this limitation.

e. *Claim 1d – "determining a second location associated with one of said plurality of wireless telephones"*

30. Sheha discloses this limitation. Sheha discloses determining a second location associated with one of said plurality of second devices. Sheha discloses that position information for a requesting mobile device and a target mobile device may be obtained. Ex. 1041, 4:22-26, 5:47-63, 7:35-39, 9:23-39, Fig. 5 (labels 33-34). For example, "the ODAS 3 requests position information from the destination

mobile device 18 c." Ex. 1041, 11:32-33. Thus, Sheha's system is able to determine locations of multiple devices. In addition, a POSITA would understand Sheha's system can determine any number of locations associated with those devices.

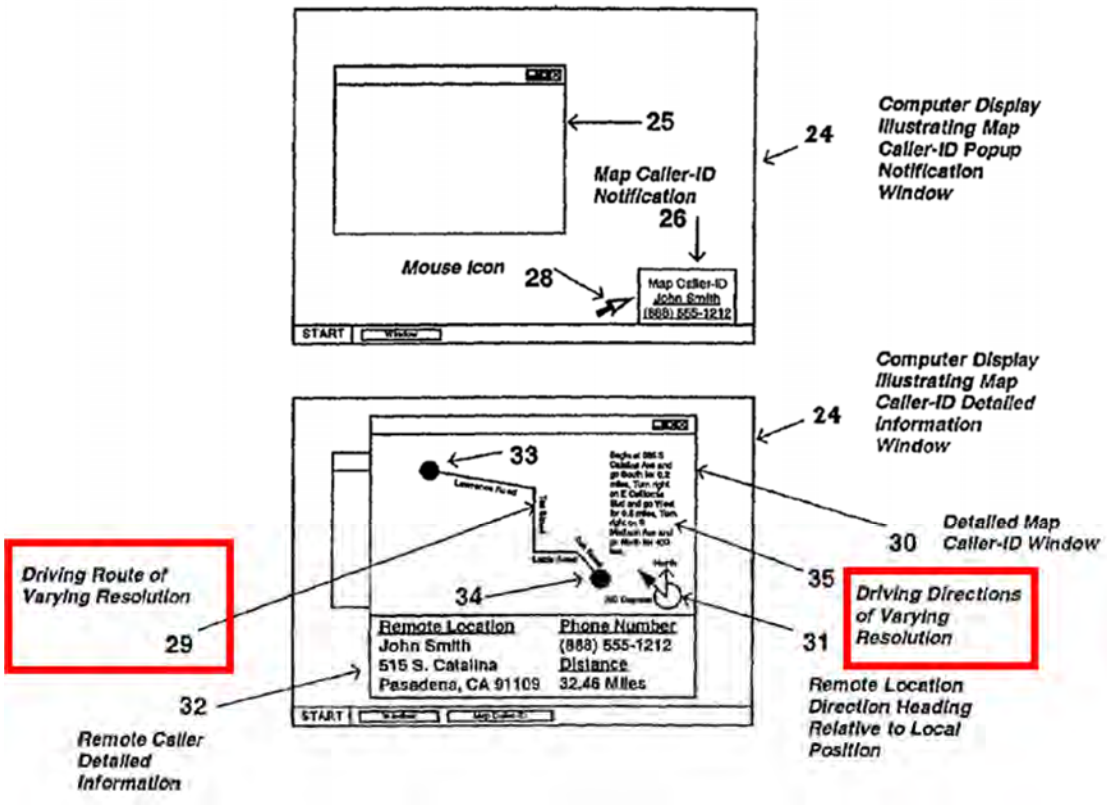
31. Thus, it is my opinion that Sheha discloses this limitation.

f. *Claim 1e – "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said second location and said location"*

32. Sheha also discloses this limitation. Sheha's system can provide directional information to a wireless device providing directions between obtained locations of the wireless phones. This is done with Sheha's ODAS. Ex. 1041, Abstract, 5:21-26. For example, Sheha discloses requesting a remote mobile device's location "to obtain driving directions to that device." *Id.*, 5:21-26. Specifically, Sheha explains that if both wireless telephones grant access to their respective position information, this location information "can be used for real-time driving directions or collaboration purposes." *Id.*, 5:32-34. Sheha discloses the server (ODAS) can calculate and provide this directional information. *Id.*, 12:32-37.

33. Sheha further describes that its system "periodically updates each mobile device with the other's position information, thus providing real-time

driving directions and route information" (*id.*, 11:49-51) and provides "to the receiver, one of routing information for traveling between the location of the caller and the location of the receiver, mapping information of the location of the caller or of the location of the receiver, and relative position information showing both the location of the caller and the location of the receiver" (*id.*, claim 2). *See also id.*, 5:2-9 ("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, for the performance of various operations, such as mapping and calculating driving directions."), claim 2 ("providing, to the receiver, one of routing information for traveling between the location of the caller and the location of the receiver"), claim 14, claim 29 ("wherein said routing information includes one of graphical mapping information, text information, and turn-by-turn direction information"). Sheha's system is able to "provide driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." *Id.*, 9:34-39; Fig. 5.



34. It is my opinion that Sheha discloses this limitation, and that Sheha discloses claim 1.

2. Claim 2 – "The system of claim 1, wherein said changing comprises adding an additional user to said list of users."

35. Sheha discloses this limitation. Sheha discloses a mobile device user can add an additional user to a list of users with access to its location information. Specifically, users define a group of users who have access to location information. Ex. 1041, 11:63-12:7 ("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."). This functionality includes adding additional users to the list of authorized users.

36. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 2.

3. Claim 3 – "The system of claim 1, where said remote system is further capable of transmitting the address of said location to said at least one of said users of said list of users."

37. Sheha discloses this limitation. For example, Sheha discloses transmitting the address of the location of the mobile device to the requesting mobile device. Ex. 1041, 9:34-39 ("Additionally, the window 30 can display all of the identification information 32 of both the originating and destination users, such as addresses and telephone numbers, and provide driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage."), claim 7 ("the caller position information includes one of graphical mapping information, GPS information, longitudinal and latitudinal information, altitude information, and address information").

38. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 3.

4. Claim 4 – "The system of claim 1, where said remote system is further capable of determining a third location associated with one of said plurality of wireless telephones."

39. Sheha discloses this limitation. As described for claim 1d, Sheha discloses position information for any number of mobile devices may be obtained, which would include a third location associated with one of said plurality of wireless telephones.

40. The '024 Patent does not define "third location." Ex. 1008. A POSITA would understand the plain and ordinary meaning of "third location" in the claim is a location that is distinct from the first location (location of first wireless telephone) and the second location (location of one of the plurality of wireless telephones).

41. Sheha discloses determining a third location in at least two ways.

42. First, for mobile devices in motion, each device continuously determines and sends its updated position to the ODAS 3 and to the other mobile device:

> The mobile device 18c then preferably forwards its current position information back to the ODAS 3. In one embodiment, prior to the destination mobile device 18c receiving the telephone call from the originating mobile device 18b, the wireless network sends the position information, obtained from the ODAS 3, in the form of a Map Caller-ID, as previously described. In this embodiment, both the originating and destination mobile device receive the Map Caller-ID information. 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.

Ex. 1041, 11:37-51. Thus, after determining the location of the target device twice, each time a mobile device updates its location, it is determining a third location associated with one of the plurality of wireless telephones.

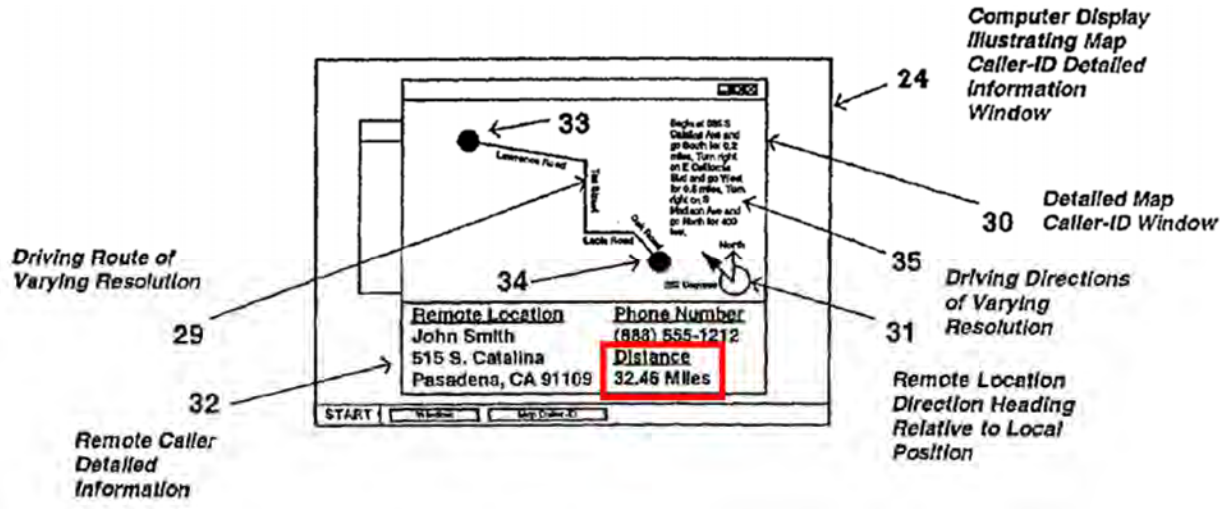
43. Second, Sheha discloses that a mobile device can request another device's position information without having to initiate a telephone call. *Id.*, 11:55-58 ("A mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call."). Here, while mobile phone A is on a call and sharing location information with a mobile device B, Sheha discloses that it can also request the location of mobile device C, and that mobile device C can determine a third location.

44. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 4.

5. Claim 5 – "The system of claim 1, where said remote system is further capable of determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones."

45. Sheha discloses this limitation. Sheha's system determines a distance

between wireless devices and displaying a distance from the requesting mobile device to the location information of the target device. As shown below in Figure 5, the display window provides the total driving distance between two locations, including distances to travel in miles or feet on each road, in driving directions 35. Ex. 1041, 9:30-34 ("The window 30 can also display remote location direction heading information relative to local position information 31 in addition to elevation, line-of-sight distances, and curved Earth line-of-sight distances."), Fig. 5.



46. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 5.

6. Claim 6 – "The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for an indefinite period of time."

47. Sheha discloses this limitation. Sheha describes storing information

that correlates position information to a telephone number in a group database, and storing information regarding which users are authorized to receive another user's location information. For example, "users can define a group of specific users that have access to this information...by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:61-12:1. These privacy settings can be used in landline-to-landline, mobile-to-landline, and mobile-to-mobile scenarios. *Id.*, 12:4-7. Thus, Sheha discloses that a permission to access location information about a target mobile device may be stored at the remote system.

48. Sheha's system determines which users may access such information based on privacy settings and provides authorized location information to an authorized requestor. *Id.*, 11:63-12:1; 12:4-7. The authorization of specific users that have access to location information in Sheha may be for an indefinite period of time. For example, Sheha describes that the user can "enable position transfer permissions at anytime and for any period of time," (*id.*, 5:16-18), which includes an indefinite period of time.

49. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 6.

7. Claim 7 – "The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for only a specific period of time."

50. Sheha discloses this limitation because it discloses that permissions may be established for a defined period of time. For example, Sheha states "[t]he duration of the position information transfer can be governed by a defined transfer period that can be set prior to the start of the transfer or at any time thereafter." Ex. 1041, 3:4-13. Sheha also states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." *Id.*, 5:11-18.

51. Further, as discussed in claim 6, Sheha discloses the remote system is capable of storing access rights (privacy settings) in a group database.

52. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 7.

8. Claim 8 – "The system of claim 7, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless telephone."

53. Sheha discloses this limitation. Sheha discloses the limitation in claim 8 as it discloses the wireless telephone can specify the time period of access rights, which is then provided as an indication to the remote server. Specifically, Sheha states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." Ex. 1041, 5:11-18. The phone sends the access rights to the server and in turn, the remote server in Sheha receives this indication of the time period of access rights and stores it with the privacy settings.

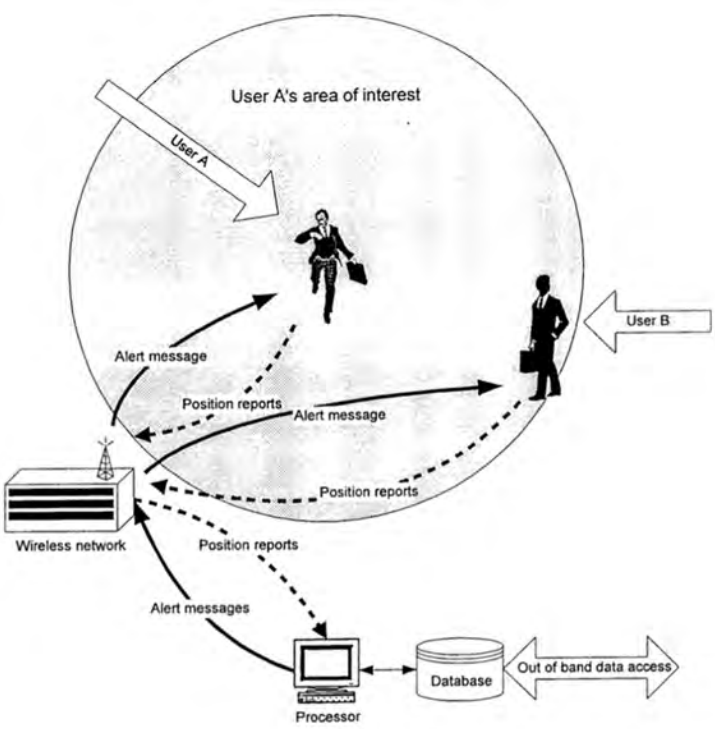
54. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 8.

9. Claim 9 – "The system of claim 1, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone."

55. Sheha alone or in view of Degnbol renders this limitation obvious. In

Sheha's system, the mobile devices can continually update their position to the server, for example, for the system to calculate directions and distance between devices. Ex. 1041, 7:44-51, 9:30-39. Sheha discloses its system can send notifications to the mobile devices, which a POSITA would understand is inclusive of alerts, and that such notifications may include location information. Ex. 1041, 9:4-22. For example, Sheha describes an embodiment where "the mobile device Map Caller-ID notification is sent to the mobile device as a conventional Caller-ID message is sent, except additional information is added to the original message." *Id.*, 10:27-30. Thus, it would have been understood that Sheha's system was "capable of transmitting an alert to said one of said plurality of wireless telephones" as it monitors locations of devices and transmits location information among devices in the form of notifications, and an alert is a form of notification.

56. Further, to the extent this claim requires transmitting an alert based on a specific location of the first wireless phone, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a user is within a certain distance of that location, as shown in Figure 1 below:



57. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-23, 17:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

58. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Sheha's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert can also allow the user of

the requesting device to visually search for the user of the target device, if they move into close range.

59. As stated above, a POSITA would have known that Sheha's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Sheha's system already determines the positions of users' devices and distance between them. Further, Sheha discloses the ability to send various types of notifications, which are inclusive of alerts. Thus, a POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

60. Thus, it is my opinion that Sheha alone or in view of Degnbol renders this limitation obvious, and Sheha alone or in view of Degnbol renders claim 9 obvious.

10. Claim 10 – "The system of claim 9, wherein said remote system is further capable of receiving a request for said alert from said one of said plurality of wireless telephones."

61. Sheha in view of Degnbol renders obvious this limitation. Sheha discloses a wireless telephone may request the location of a second wireless phone.

Ex. 1041, 4:62-66, Claim 47. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request. To the extent Sheha does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices and system in Sheha had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

62. A POSITA looking to expand Sheha's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Sheha based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 9.

63. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol renders claim 10 obvious.

11. Claim 11 – "The system of claim 10, wherein said alert is geographic area-based and said remote system is further capable of alerting said one of said plurality of wireless telephones when said location of said first wireless telephone is within a geographic area specified by said one of said plurality of wireless telephones."

64. Sheha in view of Degnbol renders obvious this limitation. As set forth for claims 9 and 10, it is my opinion that Sheha in view of Degnbol renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone. Degnbol further discloses that the alert may be geographic area-based so the system alerts the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047, 3:23-24, 13:19-21, claims 29-30. A POSITA would have been motivated to combine Sheha and Degnbol with a reasonable expectation of success, as set forth in claims 9 and 10.

65. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol renders obvious claim 11.

12. Claim 12 – "The system of claim 1, wherein said remote system is further capable of transmitting an alert to said first wireless telephone when said one of said plurality of wireless telephones locates said first wireless telephone."

66. Sheha in view of Degnbol renders obvious this limitation. As I explain above, Sheha's system transmits location information among devices and sends notifications to the devices with location information. Ex. 1041, 12:1-7. To the

extent Sheha does not expressly disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Sheha's system has this capability as set forth in claim 9.

67. Further, it would have been obvious to include such a capability based on Degnbol. For example, Degnbol discloses "[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). A POSITA would have been motivated to incorporate this functionality in Sheha's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

68. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol renders claim 12 obvious.

13. Claim 13 – "The system of claim 1, wherein said remote system is further capable of storing a history of locations of said first wireless telephone."

69. Sheha alone or in view of Ganesh renders this limitation obvious. Sheha discloses storing locations obtained from a wireless telephone on the ODAS, a remote system. Ex. 1041, 3:50-61, Fig. 3. Sheha's system is capable of storing at least the last location obtained, and thus is capable of storing a history of locations of a wireless device. Ex. 1041, 3:50-61.

70. To the extent Sheha does not expressly disclose storing a history of locations, including this capability in Sheha's system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains "[t]he one of cell sites 22 and the particular sector identifies the particular one of coverage areas 26" so "the potential location area is predicted to be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Sheha's system to include this capability with a reasonable expectation of success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for

example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

71. Thus, it is my opinion that Sheha alone or in view of Ganesh renders obvious this limitation, and Sheha alone or in view Ganesh renders claim 13 obvious.

14. Claim 14 – "The system of claim 13, wherein said transmitting said location to at least one of said users of said list of users over said communications network comprises transmitting to said at least one of said users a location from said history of locations when said first wireless telephone is turned off."

72. Sheha in view of Ganesh renders this limitation obvious. As explained for claim 13, Sheha, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Sheha does not expressly disclose transmitting a location from a history of locations when a wireless device is off, Sheha's system could transmit a stored location even when the phone is turned off.

73. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be

utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Sheha could transmit location information even when a device is off, as described in Ganesh, because Sheha's system has stored location information and would have been capable of sending that information when the phone is off.

74. Thus, it is my opinion that Sheha in view of Ganesh renders this limitation obvious, and Sheha in view of Ganesh renders claim 14 obvious.

15. Claim 15 – "The system of claim 1, wherein said remote system is further capable of providing said location to a device utilized by one of said users of said list of users after said one of said users of said list of users utilizes said device to input a login and password for said one of said list of users into a website."

75. Sheha in combination with Obradovich and/or Ganesh renders this limitation obvious. Sheha discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a login and password into a website via his or her device. Sheha describes that "every telephone account user has a username and password for the ODAS 3," and that the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols. Ex. 1041, 8:40-53; 11:55-12:7.

76. To the extent Sheha does not expressly disclose how a username and password are entered, doing so on a device via a website was routine and

conventional, and thus a POSITA would have understood that this functionality could be included in Sheha's system. For example, Obradovich describes entering a login and password on a device via a website for user authentication. Ex. 1055, 26:38-45 ("When the home site is contacted by another individual, the other individual provides an identifier, such as the individual's name to the home Site. In one embodiment the other individual also provides a password to the home site So that the home site may authenticate the identity of the individual. Based on the identity of the individual, preferably authenticated, the home site determines the other individual's security level index."). Likewise, Ganesh describes an example where a requester logs in to a web page and the system determines whether the user is valid. Ex. 1049, 5:1-29 ("FIG. 3 shows a diagram of a first web page, or a log-in web page 40, supplied by a service provider of wireless communication network 20 (FIG. 1). Log-in web page 40 is accessed when a requesting party enters a Uniform Resource Locator (URL) for log-in web page 40. The URL describes the type of access method being used (for example, http) and the server location which hosts the Web site of which log-in web page 40 is a part of. Log-in web page 40 is a fill-in form that includes a requester log-in section 42 having a Login field 44 and a Password field 46...At query task 52, process 36 determines whether the log-in attempt detected at query task 48 is being performed by a valid system user."). Because Sheha's system describes using a mobile device to request

the location of another device, it would have been obvious to a POSITA that this request could include inputting a login and password into a website on the device.

77. Thus, it is my opinion that Sheha in view of Obradovich and/or Ganesh renders this limitation obvious, and Sheha in view of Obradovich and/or Ganesh renders claim 15 obvious.

16. Claim 16 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch."

78. Sheha in combination with Degnbol renders this limitation obvious. As explained for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device. While Sheha describes its system in the context of mobile phones and landline phones, Sheha's system "determines local and/or remote position information of devices that are not always associated by telephone numbers, but IP addresses or the like, and which can obtain such position information instantaneously and share it, by means of authentication and authorization protocols, without requiring any prior configuration." Ex. 1041, 2:50-56; *see also id.*, claims 50, 52. Thus, a POSITA would understand Sheha's system is not limited to use with telephones; rather, it may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network.

79. Further, using Sheha's system to store and transmit a location of a

watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Sheha and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Sheha's system could likewise transmit a location of a watch to the first wireless telephone device, with a reasonable expectation of success.

80. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol renders claim 16 obvious.

17. Claim 17 – "The system of claim 16, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

81. Sheha in combination with Degnbol renders this limitation obvious . As explained above in claim 16, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Sheha explain that their remote systems are capable of communicating with devices over a communications network. Ex. 1041, Abstract, 11:3-8, 11:44-51, Figure 3; Ex. 1047, 5:7-11. The devices in both Degnbol and Sheha determine their locations via a position system (e.g., GPS), and sends the location information to the system over a communications network. Ex. 1041, 10:5-16, 11:16-20; Ex. 1047, 5:7-11. Thus, a

POSITA would have understood that Sheha's system had the capability to communicate with and obtain location information of a watch per Degnbol.

82. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol renders obvious claim 17.

18. Claim 18 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer."

83. Sheha discloses this limitation. Sheha's remote system is capable of storing and transmitting to said first wireless telephone a location of a personal computer. Ex. 1041, claim 50. Specifically, Sheha states "transmitting to the communication device of the second user the position information of the communication device of the first user." *Id.*, claim 50. Sheha also states that the communication device may be "a personal computer." *Id.*, claims 52-53.

84. Thus, it is my opinion that Sheha discloses this limitation, and Sheha discloses claim 18.

19. Claim 19 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio."

85. Sheha in view of Obradovich renders obvious this limitation. As explained for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device for a variety of devices, including wireless and landline phones, personal digital assistants, and

personal computers. *See* Ex. 1041, claim 12. To the extent not expressly described in Sheha, a POSITA would have known Sheha's system could be used to obtain, store, and transmit location information for any position-enabled device connected to a network, including a radio.

86. Further, storing and transmitting the location of a radio to the first wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs), such as to be displayed on a map along a route. *Id.*, 19:38-14:25. 1055

87. Both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Sheha's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Sheha's system to do so as this would have been within the capabilities of the devices and system disclosed in

Sheha and a routine implementation.

88. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and Sheha in view of Obradovich renders claim 19 obvious.

20. Claim 20 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car."

89. Sheha in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device. Sheha also discloses the use of its system with a mobile navigation device 45 in a car 39b. Ex. 1041, 12:57-13:31, Fig. 7. While Sheha describes its system in the context of mobile phones and landline phones, it would have been obvious to a POSITA that the system in Sheha was capable of storing and transmitting a location of a car to a wireless phone given it connects to and communicates with a mobile navigation device in a car, such as by a wireless connection, to obtain position information.

90. Further, including this capability in Sheha's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals

in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

91. A POSITA would have known that Sheha's system could likewise transmit a location of a car to the first wireless telephone device, and would have been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

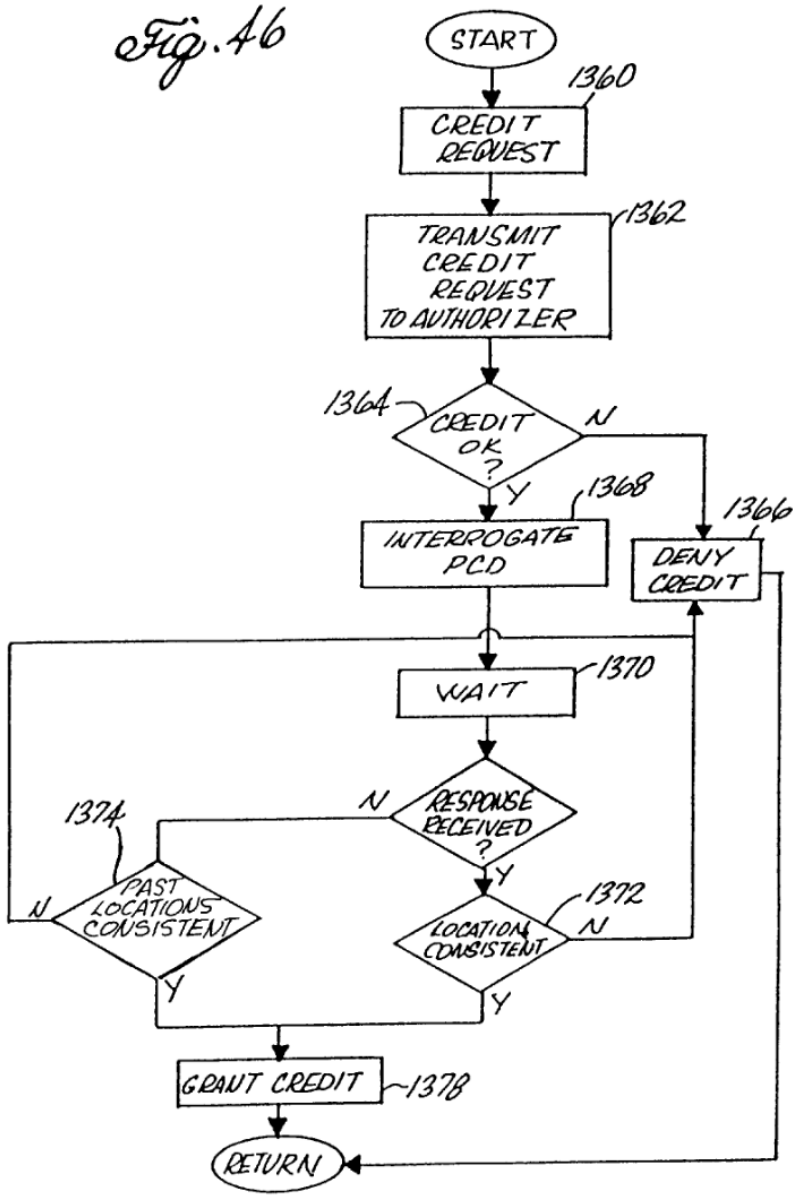
92. Thus, it is my opinion that Sheha in view of Obradovich renders this

limitation obvious, and Sheha in view of Obradovich renders claim 20 obvious.

21. Claim 21 – "The system of claim 1, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system."

93. Sheha in view of Obradovich renders obvious this limitation. Sheha discloses obtaining and transmitting location information to an authorized requesting device. Ex. 1041, 12:1-7. To the extent Sheha does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Sheha's system had such capability because it obtains and transmits location information of a device to another device, which could include a credit card authorization system.

94. Further, including this capability in Sheha' system would have been obvious based on Obradovich, which describes transmitting a location of a wireless device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

95. A POSITA would have been motivated to use Sheha's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Sheha's system because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

96. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and Sheha in view of Obradovich renders claim 21 obvious.

22. Claim 22 – "The system of claim 1, wherein said remote system is further capable of providing to said one of said plurality of wireless telephones information indicating time to reach said location from said second location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

97. Sheha in view of Bectolsheim renders this limitation obvious. Sheha discloses a system capable of providing to said second wireless device a travel time to said location. For example, Sheha discloses "providing real-time location information, maps, routing, and direction finding." Ex. 1041, 1:16-22. Further, Sheha's system "provide[s] the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information obtained using the methods previously described." Ex. 1041, 3:29-37. Because Sheha's system obtains this information, it is capable of calculating and

providing time to reach a location. While this does not specifically reference travel time, a POSITA knows that travel time is standard navigational information that would be of interest to someone intending to follow a route to a destination. Thus, to the extent that Sheha does not disclose the claimed "travel time," it would have been obvious to a POSITA to modify Sheha to determine and provide travel time information from the requesting device to the target device.

98. Moreover, calculating a travel time and doing so for different types of travel, including subway, walking, running, and driving, would have been obvious based on Bectolsheim. Bectolsheim is cited as prior art in Sheha and describes calculating and providing routes for driving, public transportation, and walking, and combinations thereof. Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Sheha's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Further, both Sheha and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124 may include sensors 125 or other components that sense the speed, orientation,

direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1041, Abstract, 10:5-16. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Sheha and Bectolsheim.

99. Thus, it is my opinion that Sheha in view of Bectolsheim renders this limitation obvious, and claim 22 is obvious based on Sheha in view of Bectolsheim.

23. Claim 23 – "The system of claim 1, wherein said remote system is further capable of: storing a phone book corresponding to a user of said first wireless telephone; and downloading said phone book to a new wireless telephone of said user."

100. Sheha alone or in combination with Obradovich and/or Degnbol renders obvious this limitation. Sheha's system stores telephone numbers and privacy settings correlated to those numbers in a group database and downloads data, including phone numbers, to a mobile device. Ex. 1041, 3:50-59, 11:51-12:1. To the extent Sheha does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Sheha's system was capable of including this functionality given Sheha describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users, and the ability of the mobile devices in Sheha's system to download data containing telephone

numbers. *Id.*, 11:63-12:1, 3:50-59 ("It is still a further object of this invention to provide means for downloading a predefined set of data containing telephone numbers correlated to position-specific information, such as latitude and longitude coordinates address information, and/or map information of varying size and resolution, from a networked server to a mobile device. The data transfer can occur via a wireless link, such as a cellular telephone or Bluetooth connection, via an infrared connection, or via a dedicated wired connection, such as a serial or USB connection.").

101. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Sheha's system to include such functionality with a reasonable expectation of success given Sheha's system includes a group database correlating privacy settings to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

102. Thus, it is my opinion that Sheha alone or in combination with

Obradovich and/or Degnbol renders this limitation obvious, and claim 23 is obvious based on Sheha alone or in view of Degnbol and/or Obradovich.$$

24. Independent Claim 24

a. *Claim 24pre – "A system comprising"*

103. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a system that provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet." Ex. 1041, Abstract.

b. *Claim 24a – "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network"*

104. Sheha discloses this element. Sheha employs a remote system with a server—application server or "ODAS." Ex. 1041, 11:3-8, 11:44-51. The remote system in Sheha communicates with wireless telephones over a communications network and obtains a location of those wireless telephones. *Id.*, Abstract, 10:66-11:3, 11:23-26; 11:32-35. Specifically, Sheha describes its system provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a

mobile telecommunications network, a computer network, or the Internet." *Id.*, Abstract.

105. Sheha's system can operate in multiple configurations, including a mobile-to-mobile configuration, mobile-to-landline configuration, and landline-to-landline configuration. *Id.*, 2:60-63. The "objective of each of these systems is the same, to determine either or both of the local and remote devices' position information." *Id.*, 4:13-18. A mobile-to-mobile configuration is illustrated in Figure 3 (below), where both mobile devices 18b-c communicate with the wireless network 22 via their respective wireless connections 20b-c.

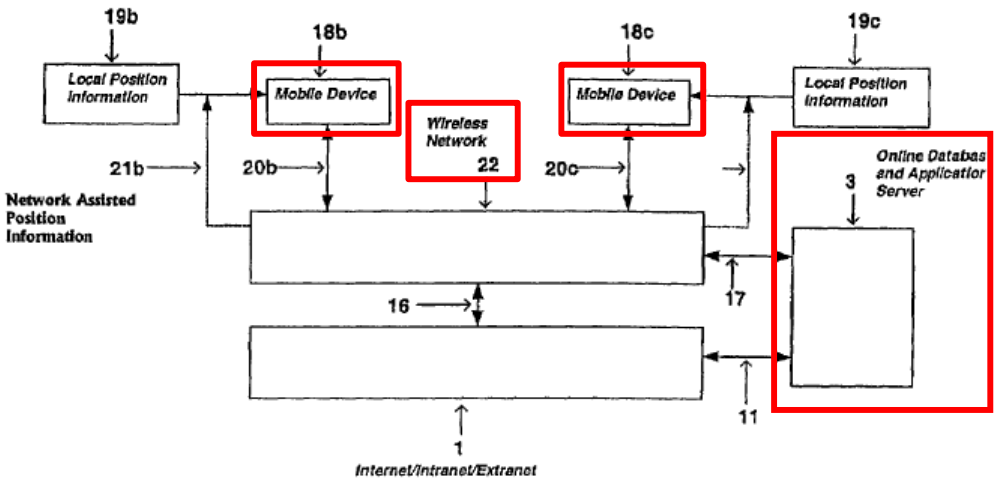


FIG. 3

106. Sheha discloses that the mobile devices shown in Figure 3 can be cellular telephones or wireless voice-enabled PDAs. *Id.*, 10:66-11:3. Sheha

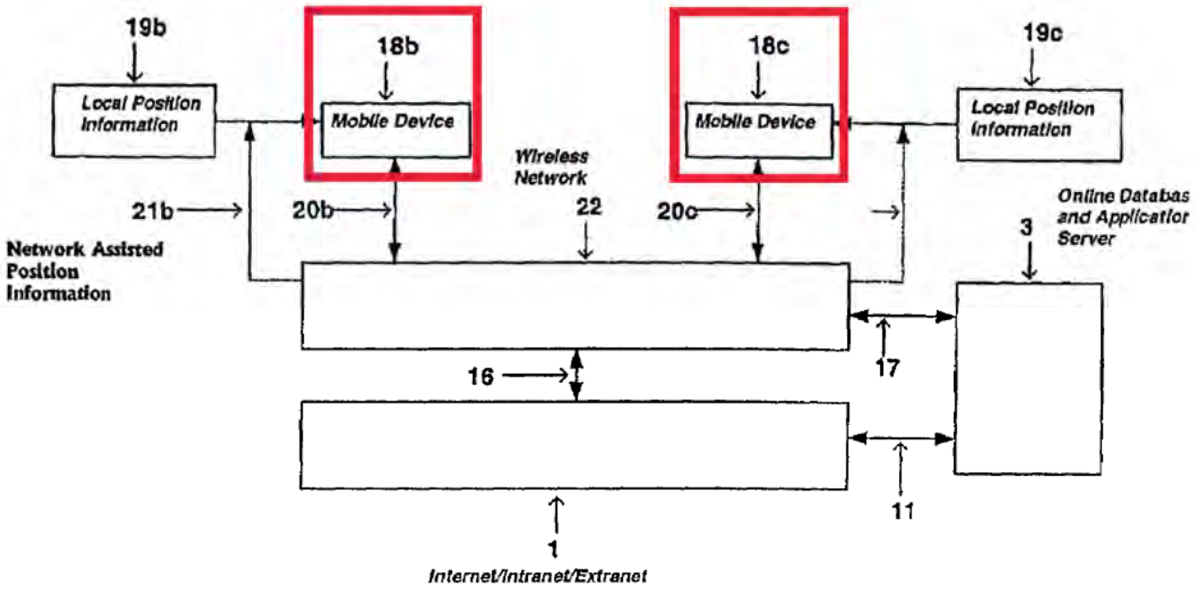
discloses that the ODAS communicates with mobile device 18b, for example, "through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17." *Id.*, 11:23-26; 11:32-35 ("In another embodiment, the ODAS 3 requests position information from the destination mobile device 18 c. This request, after reaching the wireless network 22, is sent across the wireless connection 20 c to the mobile device 18 c."). "The ODAS 3 receives both the originating and destination telephone numbers, users' account information, and position information for both mobile devices 18 b and 18 c." *Id.*, 11:20-23.

107. Thus, it is my opinion that Sheha discloses this limitation.

c. ***Claim 24b – "further capable of receiving from a first wireless telephone over said communications network a selection of one of a plurality of users, said selection corresponding to a user of said first wireless telephone manually selecting said one of said plurality of users from a display of said first wireless telephone, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones"***

108. Sheha alone or in view of Obradovich renders obvious this limitation. Sheha discloses a system that can receive requests for location information of a wireless device from another wireless device and determine the requested location information. A mobile-to-mobile configuration is illustrated in Figure 3, where both mobile devices 18b-c communicate with the wireless network 22 via their

respective wireless connections 20b-c, and the Online Database and Application Server (ODAS) also communicates with the wireless network 22.



109. Sheha describes that a user can dial or input a telephone number of another device to request its location information. Ex 1041, 9:40-43. Sheha also discloses that its wireless devices provide "a method for entering a telephone number by various means such as by using numeric, alphanumeric, speech-enabled interface, or software Application Interface (API), or the like, for the purpose of determining position information associated with the telephone number by searching a networked database." *Id.*, 2:64-3:3; claim 54 ("A system for providing position information of a first user to a second user using a telecommunications network, said first and second users each using a communication device for communicating with each other via the telecommunication network, said system

comprising: means for receiving, from the communication device of the first user, a request for position information of the second user"). To the extent Sheha does not expressly describe "manually selecting said one of said plurality of users from a display of said first wireless telephone," allowing users to view lists of contacts on their mobile devices was well known at the time of Sheha. For example, Obradovich describes this conventional functionality as "DIRECTORY," and explains "[p]ressing the DIRECTORY touchpoint 413 displays an alphabetical listing (not shown) of phone numbers stored on-board." Ex. 1055, 14:8-15.

110. Thus, to the extent Sheha does not explicitly disclose manually selecting a user on a display screen, a POSITA would have known mobile devices at the time had such capability, as Obradovich discloses. Further, a POSITA would have been motivated to include this functionality in Sheha's system to improve the user interface and ease of selecting a user to locate in Sheha's system, especially when a user is doing so on a mobile device as a user may not recall or have the target user's phone number readily accessible. A POSITA would have had a reasonable expectation of success because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

111. Thus, it is my opinion that Sheha alone or in view of Obradovich renders this limitation obvious.

d. *Claim 24c – "receiving from said first wireless telephone information indicative of a login and a password"*

112. Sheha discloses this element. Sheha discloses functionality for authenticating and verifying the identity of users of a device. Specifically, Sheha describes that "every telephone account user has a username and password for the ODAS 3," and that the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols. Ex. 1041, 8:40-53; *see also id*. at 11:55-12:7; claim 54 ("a request for position information of the second user, said request including identification information of the first user to uniquely identify the first user").

113. To the extent Sheha does not expressly disclose how a username and password are entered, doing so on a device was routine and conventional, and thus a POSITA would have understood that this functionality could be included in Sheha's system. For example, Obradovich describes entering a login and password on a device via a website for user authentication. Ex. 1055, 26:38-45 ("When the home site is contacted by another individual, the other individual provides an identifier, such as the individual's name to the home Site. In one embodiment the other individual also provides a password to the home site So that the home site may authenticate the identity of the individual. Based on the identity of the individual, preferably authenticated, the home site determines the other

individual's security level index."). Likewise, Ganesh describes an example where a requester logs in to a web page and the system determines whether the user is valid. Ex. 1049, 5:1-29 ("FIG. 3 shows a diagram of a first web page, or a log-in web page 40, supplied by a service provider of wireless communication network 20 (FIG. 1). Log-in web page 40 is accessed when a requesting party enters a Uniform Resource Locator (URL) for log-in web page 40. The URL describes the type of access method being used (for example, http) and the server location which hosts the Web site of which log-in web page 40 is a part of. Log-in web page 40 is a fill-in form that includes a requester log-in section 42 having a Login field 44 and a Password field 46...At query task 52, process 36 determines whether the log-in attempt detected at query task 48 is being performed by a valid system user."). Because Sheha's system describes using a mobile device to request the location of another device, it would have been obvious to a POSITA that this request could include inputting a login and password on the device to make it easy for the user to access and use Sheha's system.

114. Thus, it is my opinion that Sheha in view of Obradovich and/or Ganesh renders this limitation obvious.

e. ***Claim 24d – "determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, wherein said determining includes identifying said user of said first wireless telephone using said information indicative of said login and password and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephone"***

115. Sheha discloses this claim element. Sheha discloses using authentication and authorization functionality to determine whether to allow a requesting device to access a target device's location information. As discussed above, Sheha discloses that users provide their username and password as a part of Sheha's authorization and authentication protocols to confirm their identity and that "using the authorization and authentication protocols a user can request the position of a mobile device." Ex. 1041, 8:40-53, 12:1-7.

116. Sheha's authentication and authorization procedure includes identifying the user of the requesting device based on a login and password and then determining whether the target device's user has provided the identified user such access rights. For example, Sheha discloses that "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." *Id.*, 12:1-7; *see also id.*, claims 4, 35, 54.

117. Thus, it is my opinion that Sheha discloses this limitation.

f. *Claim 24e – "determining whether said user of said first wireless telephone has assigned location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining a location of said first wireless telephone"*

118. Sheha discloses this claim element. In addition to determining whether the requesting user has authorization to receive the target device's location, Sheha's system determines whether the requesting user has assigned location access rights to target user. Ex. 1041, 11:65-12:7, claims 13, 45. Generally, Sheha discloses "utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information" so that "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." *Id.*, 11:65-12:7. Sheha also describes determining whether the requesting device has provided access rights to the target device such that the target device could receive location information of the requesting device. *See id.*, claim 4 ("The method of claim 2, wherein the receiver [requestor] information further includes a receiver user group consisting of a plurality of group members pre-defined by the receiver, each group member of the receiver user group being a user of the telecommunication network, said method

further comprising the steps of verifying whether the caller [target] is a member of the receiver user group; and transmitting, to the caller, the position information of the receiver."); claim 13 ("means for retrieving a caller position information, said caller position information indicating a location of the caller; and means for transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group,"); claim 45.

119. Thus, it is my opinion that Sheha discloses this limitation.

g. *Claim 24f – "transmitting over said communications network said location information to said first wireless telephone"*

120. Sheha discloses this claim element. Sheha discloses transmitting the location of the target device from the server to the requesting device over a communications network. For example, Sheha describes "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." Ex. 1041, 12:1-7. And as explained above, the ODAS in Sheha's system communicates with mobile device 18b, for example, "through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17." *Id.*, 11:23-26; 11:32-35.

121. Thus, it is my opinion that Sheha discloses this claim limitation, and Sheha in view of Obradovich and/or Ganesh renders obvious claim 24.

25. Claim 25 – "The system of claim 24, wherein said remote system is further capable of receiving a selection from said first wireless telephone that modifies said location access rights assigned by said user of said first wireless telephone to said one of said plurality of wireless telephones."

122. Sheha alone, or in view of Degnbol renders this limitation obvious. Sheha discloses that a user can modify its permission settings via a mobile device. For example, Sheha states that the requesting device can terminate position transfer "at anytime," "choose not to reveal its local position," and "enable position transfer permissions at anytime," and can do so manually through the device. Ex. 1041, 5:12-20. In addition, Sheha discloses "[o]nce a user requests to terminate the transfer, either after a pre-defined time period ends or abruptly due to manual intervention by either party, the position transfer is prefer ably terminated by the system." *Id.*, 5:33-38. Thus, the user can modify location access rights (terminate access rights) via the mobile phone.

123. Further, to the extent Sheha does not specify how a selection that modifies the list of authorized requestors is directed, a POSITA would have known that changing the privacy settings (list of users allowed to access said location) in Sheha could be done by selecting a modification as this was routine and conventional and within the capabilities of the devices described in Sheha. For example, Degnbol describes a "Buddy List" for location sharing that "may be altered by the user at will, adding or deleting buddies and setting various preferences" and "can be done in

several ways; e.g. directly from the handset of the users cellular phone." Ex. 1047, 9:33-10:3. The mobile telephones in Sheha could likewise direct the changing of the list of users allowed to access its location, as this was well-known and within the capabilities of mobile phones at the time of Sheha.

124. Thus, it is my opinion that Sheha alone, or in view of Degnbol renders this limitation obvious, and claim 25 is obvious based on Sheha in combination with Obradovich and/or Ganesh or in combination with Obradovich, Ganesh, and/or Degnbol.

26. Claim 26 – "The system of claim 24, wherein said remote system is further capable of transmitting said location of said first wireless telephone to said one of said plurality of wireless telephones associated with said selected one of said plurality of users."

125. Sheha discloses this limitation. Sheha discloses transmitting the location of one device from the server to another device: "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." Ex. 1041, 12:1-7. Sheha explains "the ODAS 3 requests position information from the destination mobile device 18 c." *Id.*, 11:32-33. The ODAS can provide any number of locations to any number of requesting mobile devices.

126. Thus, it is my opinion that Sheha discloses this limitation, and claim 26 is obvious based on Sheha in combination with Obradovich and/or Ganesh.

27. Claim 27 – "The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for an indefinite period of time."

127. Sheha discloses this limitation. Sheha describes storing information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. For example, "users can define a group of specific users that have access to this information...by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:61-12:1. These privacy settings can be used in landline-to-landline, mobile-to-landline, and mobile-to-mobile scenarios. *Id.*, 12:4-7. Thus, Sheha discloses that a permission to access location information about a target mobile device may be stored at the remote system.

128. Sheha's system determines which users may access such information based on privacy settings and provides authorized location information to an authorized requestor. *Id.*, 11:63-12:1; 12:4-7. The authorization of specific users that have access to location information in Sheha may be for an indefinite period of time. For example, Sheha describes that the user can "enable position transfer permissions at anytime and for any period of time." *Id.*, 5:16-18. A POSITA would recognize that the ability to set a time period—e.g. limit the duration of access—

implies that no time period, i.e., an indefinite period of time, is also an option.

129. Thus, it is my opinion that Sheha discloses this limitation, and claim 27 is obvious based on Sheha in combination with Obradovich and/or Ganesh.

28. Claim 28 – "The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for only a specific period of time."

130. Sheha discloses this limitation as it discloses that permissions may be established for a defined period of time. For example, Sheha states "[t]he duration of the position information transfer can be governed by a defined transfer period that can be set prior to the start of the transfer or at any time thereafter." Ex. 1041, 3:4-13. Sheha also states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." *Id.*, 5:11-18.

131. Further, as discussed in claim 27, Sheha discloses the remote system is capable of storing access rights (privacy settings) in a group database.

132. Thus, it is my opinion that Sheha discloses this limitation, and Sheha

in combination with Obradovich and/or Ganesh renders claim 28 obvious.

29. Claim 29 – "The system of claim 28, wherein said remote system is further capable of receiving an indication of said specific period of time from said one of said plurality of wireless telephones."

133. Sheha discloses this limitation. Sheha discloses the wireless telephone can specify the time period of access rights, which is then provided as an indication to the remote server. Specifically, Sheha states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." Ex. 1041, 5:11-18. The phone sends the access rights to the server and in turn, the remote server in Sheha receives this indication of the time period of access rights and stores it with the privacy settings.

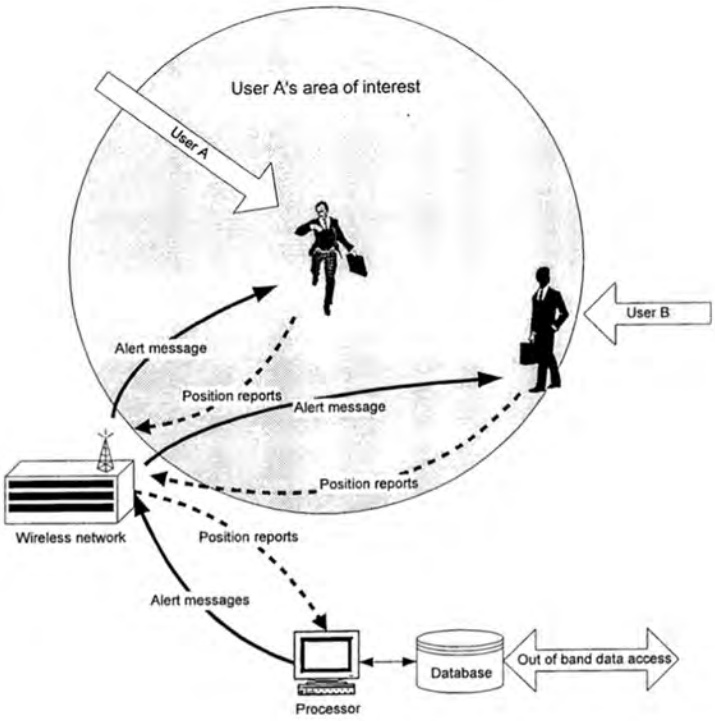
134. Thus, it is my opinion that Sheha discloses this limitation, and claim 29 is obvious based on Sheha in combination with Obradovich and/or Ganesh.

30. Claim 30 – "The system of claim 24, wherein said remote system is further capable of transmitting an alert to said first wireless telephone based on said location information for said one of said plurality of wireless telephones."

135. Sheha alone or in view of Degnbol renders this limitation obvious. In

Sheha's system, the mobile devices can continually update their position to the server, for example, for the system to calculate directions and distance between devices. Ex. 1041, 7:44-51, 9:30-39. Sheha discloses its system can send notifications to the mobile devices, which a POSITA would understand is inclusive of alerts, and that such notifications may include location information. Ex. 1041, 9:4-22. For example, Sheha describes an embodiment where "the mobile device Map Caller-ID notification is sent to the mobile device as a conventional Caller-ID message is sent, except additional information is added to the original message." *Id.*, 10:27-30. Thus, it would have been understood that Sheha's system was "capable of transmitting an alert to said one of said plurality of wireless telephones" as it monitors locations of devices and transmits location information among devices in the form of notifications, and an alert is a form of notification.

136. Further, to the extent this claim requires transmitting an alert based on a specific location of the first wireless phone, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a user is within a certain distance of that location, as shown in Figure 1 below:



137. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

138. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Sheha's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert can also allow the user of

the requesting device to visually search for the user of the target device, if they move into close range.

139. As stated above, a POSITA would have known that Sheha's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Sheha's system already determines the positions of users' devices and distance between them. Further, Sheha discloses the ability to send various types of notifications, which is inclusive of alerts. Thus, a POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

140. Thus, it is my opinion that Sheha alone or in view of Degnbol renders this limitation obvious, and claim 30 is obvious based on Sheha in combination with Obradovich and/or Ganesh, or in view of Degnbol and Obradovich and/or Ganesh.

31. Claim 31 – "The system of claim 30, wherein said remote system is further capable of receiving a request for said alert from said first wireless telephone."

141. Sheha in combination with Degnbol renders obvious this limitation.

Sheha discloses a wireless telephone may request the location of a second wireless phone. Ex. 1041, 4:62-66, Claim 47. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request. To the extent Sheha does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices in Sheha had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

142. A POSITA looking to expand Sheha's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Sheha based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 30.

143. Thus, it is my opinion that Sheha in view of Degnbol renders this

limitation obvious, and claim 31 is obvious based on Sheha in combination with Degnbol and Obradovich and/or Ganesh.

32. Claim 32 – "The system of claim 31, wherein said alert is geographic area-based and said remote system is further capable of alerting said first wireless telephone when a location of said one of said plurality of wireless telephones is within a geographic area specified by said first wireless telephone."

144. Sheha in view of Degnbol renders obvious this claim limitation. As set forth for claims 30 and 31, it is my opinion that Sheha in view of Degnbol renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone. Degnbol further discloses that the alert may be geographic area-based so the system alerts the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047, 3:23-24, 13:19-21, claims 29-30. A POSITA would have been motivated to combine Sheha and Degnbol with a reasonable expectation of success, as set forth in claims 9 and 10.

145. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 32 is obvious based on Sheha in combination with Degnbol and Obradovich and/or Ganesh.

33. Claim 33 – "The system of claim 24, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones when said first wireless telephone locates said one of said plurality of wireless telephones."

146. Sheha in view of Degnbol renders this limitation obvious. As I explain above, Sheha's system transmits location information among devices and sends notifications to the devices with location information. Ex. 1041, 12:1-7. While Sheha does not expressly disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Sheha's system has this capability as set forth in claim 30.

147. Further, it would have been obvious to include such a capability based on Degnbol. For example, Degnbol discloses "[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). A POSITA would have been motivated to incorporate this functionality in Sheha's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both

references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

148. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 33 is obvious based on Sheha in combination with Degnbol and Obradovich and/or Ganesh.

34. Claim 34 – "The system of claim 24, wherein said remote system is further capable of storing a history of locations of said one of said plurality of wireless telephones."

149. Sheha alone or in combination with Ganesh renders this limitation obvious. Sheha discloses storing locations obtained from a wireless telephone on the ODAS, a remote system. Ex. 1041, 3:50-61, Fig. 3. Sheha's system is capable of storing at least the last location obtained, and thus is capable of storing a history of locations of a wireless device. Ex. 1041, 3:50-61.

150. To the extent Sheha does not expressly disclose storing a history of locations, including this capability in Sheha's system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains "[t]he one of cell sites 22 and the particular sector identifies the

particular one of coverage areas 26" so "the potential location area is predicted to be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Sheha's system to include this capability with a reasonable expectation of success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

151. Thus, it is my opinion that Sheha alone or in combination with Ganesh renders this limitation obvious, and claim 34 is obvious based on Sheha in combination with Obradovich and/or Ganesh.

35. Claim 35 – "The system of claim 34, wherein said transmitting said location information to said first wireless telephone comprises transmitting to said first wireless telephone a location from said history of locations when said one of said plurality of wireless telephones is turned off."

152. Sheha in view of Ganesh renders this limitation obvious. As explained for claim 34, Sheha, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Sheha does not expressly disclose transmitting a location from a history of locations when a wireless device is off, Sheha's system could transmit a stored location even when the phone is

turned off.

153. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Sheha could transmit location information even when a device is off, as described in Ganesh, because Sheha's system has stored location information and would have been capable of sending that information when the phone is off.

154. Thus, it is my opinion that Sheha in view of Ganesh renders this limitation obvious, and Sheha in view of Obradovich and Ganesh renders obvious claim 35.

36. Claim 36 – "The system of claim 24, wherein said remote system is further capable of providing said location information to another device utilized by said user of said first wireless device after said user utilizes said another device to input said login and said password into a website."

155. Sheha alone or in combination with Obradovich and/or Ganesh renders this limitation obvious. Sheha discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a

login and password into a website via his or her device. Sheha describes that "every telephone account user has a username and password for the ODAS 3" and that the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols. Ex. 1041, 8:40-53; 11:55-12:7.

156. To the extent Sheha does not expressly disclose how a username and password are entered, doing so on a device via a website was routine and conventional, and thus a POSITA would have understood that this functionality could be included in Sheha's system. For example, Obradovich describes entering a login and password on a device via a website for user authentication. Ex. 1055, 26:38-45 ("When the home site is contacted by another individual, the other individual provides an identifier, such as the individual's name to the home Site. In one embodiment the other individual also provides a password to the home site So that the home site may authenticate the identity of the individual. Based on the identity of the individual, preferably authenticated, the home site determines the other individual's security level index."). Likewise, Ganesh describes an example where a requester logs in to a web page and the system determines whether the user is valid. Ex. 1049, 5:1-29 ("FIG. 3 shows a diagram of a first web page, or a log-in web page 40, supplied by a service provider of wireless communication network 20 (FIG. 1). Log-in web page 40 is accessed when a requesting party enters a Uniform Resource Locator (URL) for log-in web page 40. The URL

describes the type of access method being used (for example, http) and the server location which hosts the Web site of which log-in web page 40 is a part of. Log-in web page 40 is a fill-in form that includes a requester log-in section 42 having a Login field 44 and a Password field 46...At query task 52, process 36 determines whether the log-in attempt detected at query task 48 is being performed by a valid system user."). Because Sheha's system describes using a mobile device to request the location of another device, it would have been obvious to a POSITA that this request could include inputting a login and password into a website on the device.

157. Thus, it is my opinion that Sheha alone or in view of Obradovich and/or Ganesh renders this limitation obvious, and Sheha in view of Obradovich and/or Ganesh renders claim 36 obvious.

37. Claim 37 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch."

158. Sheha in combination with Degnbol renders this limitation obvious. As explained for claims 24f and 26, Sheha's system is capable of storing and transmitting location information of one device to another device. While Sheha describes its system in the context of mobile phones and landline phones, Sheha's system "determines local and/or remote position information of devices that are not always associated by telephone numbers, but IP addresses or the like, and which can obtain such position information instantaneously and share it, by means of

authentication and authorization protocols, without requiring any prior configuration." Ex. 1041, 2:50-56. Thus, a POSITA would understand Sheha's system is not limited to use with telephones; rather, it may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network.

159. Further, using Sheha's system to store and transmit a location of a watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Sheha and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Sheha's system could likewise transmit a location of a watch to the first wireless telephone device, with a reasonable expectation of success.

160. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol and Obradovich and/or Ganesh renders claim 37 obvious.

38. Claim 38 – "The system of claim 37, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

161. Sheha in view of Degnbol renders this limitation obvious. As I

explained above in claim 37, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Sheha explain that their remote systems are capable of communicating with devices over a communications network. Ex. 1041, Abstract, 11:3-8, 11:44-51, Figure 3; Ex. 1047, 5:7-11. The devices in both Degnbol and Sheha determine their locations via a positioning system (e.g., GPS), and sends the location information to the system over a communications network. Ex. 1041, 10:5-16, 11:16-20; Ex. 1047, 5:7-11. Thus, a POSITA would have understood that Sheha's system had the capability to communicate with and obtain location information of a watch per Degnbol.

162. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and Sheha in view of Degnbol and Obradovich and/or Ganesh renders claim 38 obvious.

39. Claim 39 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer."

163. Sheha discloses this limitation. Sheha's remote system is capable of storing and transmitting to said first wireless telephone a location of a personal computer. Ex. 1041, claim 50. Specifically, Sheha states "transmitting to the communication device of the second user the position information of the communication device of the first user." *Id.* Sheha also states that communication device may be "a personal computer." *Id.*, claims 52-53.

164. Thus, it is my opinion that Sheha discloses this limitation, and Sheha in combination with Obradovich and/or Ganesh renders claim 39 obvious.

40. Claim 40 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio."

165. Sheha in view of Obradovich renders this limitation obvious. As explained for claims 24f and 34, Sheha's system is capable of storing and transmitting location information of one device to another device for a variety of devices, including wireless and landline phones, personal digital assistants, and personal computers. *See* Ex. 1041, claim 12. To the extent not expressly described in Sheha, a POSITA would have known Sheha's system could be used to obtain, store, and transmit location information for any position-enabled device connected to a network, including a radio.

166. Further, storing and transmitting the location of a radio to the first wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs),

such as to be displayed on a map along a route. *Id.*, 19:38-14:25. 1055

167. Both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Sheha's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Sheha's system to do so as this would have been within the capabilities of the devices and system disclosed in Sheha and a routine implementation.

168. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 40 is obvious based on Sheha in combination with Obradovich or with Obradovich and Ganesh.

41. Claim 41 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car."

169. Sheha in view of Obradovich renders this limitation obvious. As explained for claim 24f, Sheha's system is capable of storing and transmitting location information of one device to another device. Sheha also discloses the use of its system with a mobile navigation device 45 in a car 39b. Ex. 1041, 12:57-13:31, Fig. 7. While Sheha describes its system in the context of mobile phones and landline phones, it would have been obvious to a POSITA that the system in

Sheha was capable of storing and transmitting a location of a car to a wireless phone given it connects to and communicates with a mobile navigation device in a car, such as by a wireless connection, to obtain position information.

170. Further, including this capability in Sheha's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

171. A POSITA would have known that Sheha's system could likewise transmit a location of a car to the first wireless telephone device, and would have been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

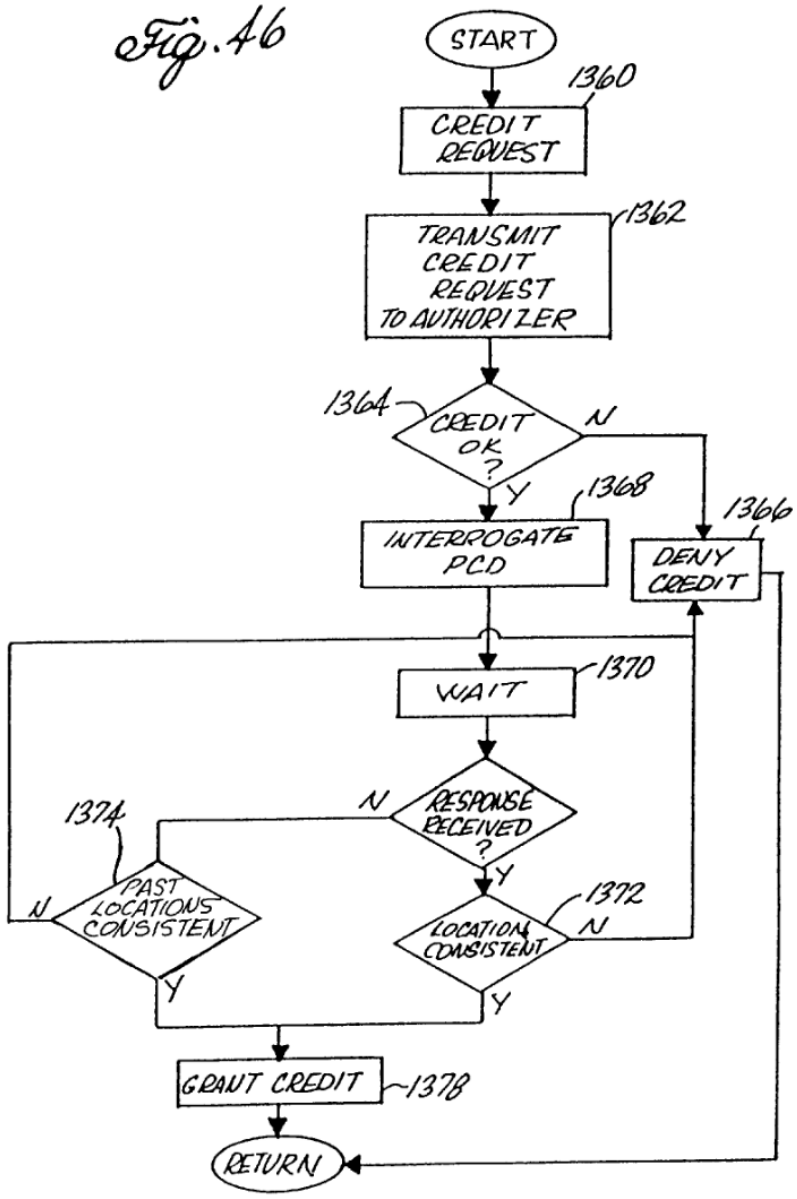
172. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 41 is obvious based on Sheha in view of Obradovich or in view of Obradovich and Ganesh.

42. Claim 42 – "The system of claim 24, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system."

173. Sheha in view of Obradovich renders this limitation obvious. Sheha discloses obtaining and transmitting location information to an authorized requesting device. Ex. 1041, 12:1-7. While Sheha does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Sheha's system had such capability because it obtains and transmits location information of a device to another device, which

could include a credit card authorization system.

174. Further, including this capability in Sheha' system would have been obvious based on Obradovich, which describes transmitting a location of a wireless device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

175. A POSITA would have been motivated to use Sheha's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Sheha's system because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

176. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 42 is obvious based on Sheha in combination with Obradovich or in combination with Obradovich and Ganesh.

43. Claim 43 – "The system of claim 24, wherein said remote system is further capable of providing to said first wireless telephone information indicating time to reach a location of said one of said plurality of wireless telephones from said location of said first wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

177. Sheha in view of Bectolsheim renders this limitation obvious. Sheha discloses a system capable of providing to said second wireless device a travel time to said location. For example, Sheha discloses "providing real-time location information, maps, routing, and direction finding." Ex. 1041, 1:16-22. Further, Sheha's system "provide[s] the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information obtained using the methods previously described." Ex. 1041, 3:29-37.

Because Sheha's system obtains this information, it is capable of calculating and providing time to reach a location. While this does not specifically reference travel time, a POSITA knows that travel time is standard navigational information that would be of interest to someone intending to follow a route to a destination. Thus, to the extent that Sheha does not disclose the claimed "travel time," it would have been obvious to a POSITA to modify Sheha to determine and provide travel time information from the requesting device to the target device.

178. Moreover, calculating a travel time and doing so for different types of travel, including subway, walking, running, and driving, would have been obvious based on Bectolsheim. Bectolsheim is cited as prior art in Sheha and describes calculating and providing routes for driving, public transportation, and walking, and combinations thereof. Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Sheha's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Further, both Sheha and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124

may include sensors 125 or other components that sense the speed, orientation, direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1041, Abstract, 10:5-16. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Sheha and Bectolsheim.

179. Thus, it is my opinion that Sheha in view of Bectolsheim renders this limitation obvious, and claim 43 is obvious based on Sheha in combination with Bectolsheim and Obradovich and/or Ganesh.

44. Claim 44 – "The system of claim 24, wherein said remote system is further capable of: storing a phone book corresponding to a user of said first wireless telephone; and downloading said phone book to a new wireless telephone of said user."

180. Sheha alone or in combination with Obradovich and/or Degnbol renders this limitation obvious. Sheha's system stores telephone numbers and privacy settings correlated to those numbers in a group database and downloads data, including phone numbers, to a mobile device. Ex. 1041, 3:50-59, 11:51-12:1 To the extent Sheha does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Sheha's system was capable of including this functionality given Sheha describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users, and the ability

of the mobile devices in Sheha's system to download data containing telephone numbers. *Id.*, 11:63-12:1, 3:50-59 ("It is still a further object of this invention to provide means for downloading a predefined set of data containing telephone numbers correlated to position-specific information, such as latitude and longitude coordinates address information, and/or map information of varying size and resolution, from a networked server to a mobile device. The data transfer can occur via a wireless link, such as a cellular telephone or Bluetooth connection, via an infrared connection, or via a dedicated wired connection, such as a serial or USB connection.").

181. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Sheha's system to include such functionality with a reasonable expectation of success given Sheha's system includes a group database correlating privacy settings to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

182. Thus, it is my opinion that Sheha alone or in combination with Obradovich and/or Degnbol renders this limitation obvious, and claim 44 is obvious based on Sheha in combination with Obradovich, Ganesh, and/or Degnbol.$

45. Independent Claim 45

a. *Claim 45pre – "A system comprising"*

183. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Sheha discloses the preamble. Sheha discloses a system that provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet." Ex. 1041, Abstract.

b. *Claim 45a – "a remote system comprising a server, the remote system capable of communicating with a first wireless device and a second wireless device over a communications network and"*

184. Sheha discloses this claim element. Sheha employs a remote system with a server—application server or "ODAS." Ex. 1041, 11:3-8, 11:44-51. The remote system in Sheha communicates with wireless telephones over a communications network and obtains a location of those wireless telephones. *Id.*,

Abstract, 10:66-11:3, 11:23-26; 11:32-35. Sheha describes its system provides "real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet." *Id.*, Abstract.

185. Sheha's system can operate in multiple configurations, including a mobile-to-mobile configuration, mobile-to-landline configuration, and landline-to-landline configuration. *Id.*, 2:60-63. The "objective of each of these systems is the same, to determine either or both of the local and remote devices' position information." *Id.*, 4:13-18. A mobile-to-mobile configuration is illustrated in Figure 3 (below), where both mobile devices 18b-c communicate with the wireless network 22 via their respective wireless connections 20b-c.

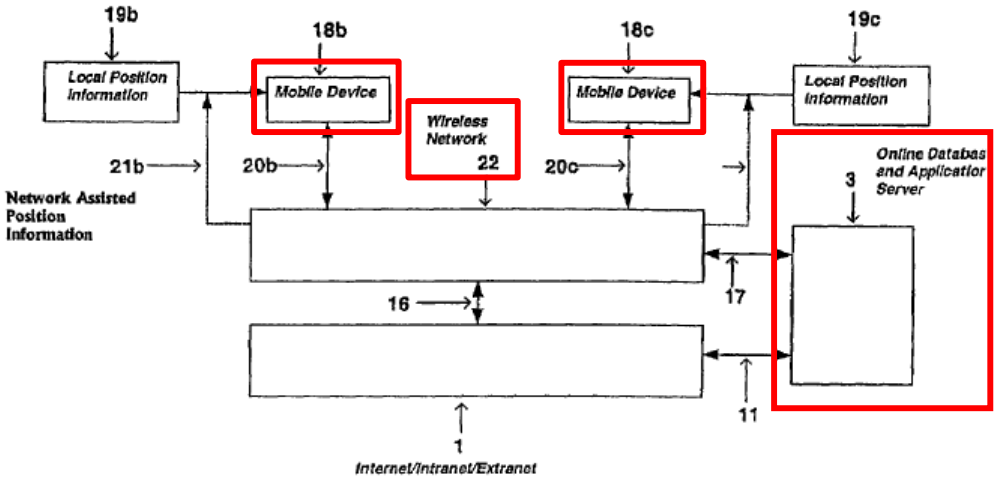


FIG. 3

186. Sheha discloses that the mobile devices shown in Figure 3 can be cellular telephones or wireless voice-enabled PDAs. *Id.*, 10:66-11:3. Sheha discloses that the ODAS communicates with mobile device 18b, for example, "through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17." *Id.*, 11:23-26; 11:32-35 ("In another embodiment, the ODAS 3 requests position information from the destination mobile device 18 c. This request, after reaching the wireless network 22, is sent across the wireless connection 20 c to the mobile device 18 c."). "The ODAS 3 receives both the originating and destination telephone numbers, users' account information, and position information for both mobile devices 18 b and 18 c." *Id.*, 11:20-23.

187. Thus, it is my opinion that Sheha discloses this limitation.

c. *Claim 45b – "further capable of receiving a request for a location of said first wireless device from said second wireless device"*

188. Sheha discloses this claim element. Sheha's system receives a request from a second wireless phone ("requesting device") for the location of a first wireless phone ("target device"): "if 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." Ex. 1041, 4:62-66, Claim 47.

189. Thus, it is my opinion that Sheha discloses this limitation.

d. *Claim 45c – "determining that said second wireless device does not have location access rights for said first wireless device"*

190. Sheha discloses this claim element. Sheha describes a system that determines whether a requesting device has permission from the user of the target device to receive position information of the target device. Ex. 1041, 5:21-32, 5:38-41; 10:17-26, 11:63-12:7, claims 47, 54. Sheha also discloses that mobile devices can have privacy settings that "prevent or limit other calling devices from obtaining position information." *Id.*, 5:38-41; 10:17-26, 11:63-12:7, claim 47.

191. Further, Sheha discloses a scenario where a requesting mobile device is determined not to have location access rights to the target device. For example, upon receiving a location request from a requesting device without location access

rights, Sheha discloses that the server can query the target device "for permission on whether the position request can be granted based on criteria such as duration of request." *Id.*, 5:21-32. This scenario necessarily requires that the system has determined the requesting device does not to have location access rights.

192. Thus, it is my opinion that Sheha discloses this limitation.

e. ***Claim 45d – "after determining that said second wireless device does not have said location access rights for said first wireless device, receiving a request from said second wireless device that said location access rights be assigned for said second wireless device by said first wireless device"***

193. Sheha renders this limitation obvious. In Sheha's system, a mobile device provides permission to another mobile device to obtain its location. Ex. 1041, 11:63-12:4. After determining that the requesting device does not have location access rights, the server in Sheha's system can present the request for location access rights to the target device. Ex. 1041, 5:21-32. For example, Sheha discloses "a user can initiate a position request by entering a unique identification token, such as an e-mail address," and "[t]he server queries the remote party of the position request for permission on whether the position request can be granted based on criteria such as duration of request." Ex. 1041, 5:24-32. A POSITA would understand that this could occur after the system has determined the requesting device does not have access rights. Further, a POSITA would

understand that the second device could make the request for location access rights as it has already made the request once.

194. Thus, it is my opinion that Sheha renders obvious this limitation.

f. *Claim 45e – "receiving from said first wireless device an assignment of said location access rights for said first wireless device to said second wireless device"*

195. Sheha alone or in view of Degnbol renders obvious this claim element. Sheha discloses that a user "can define a group of specific users that have access to this information" so that "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." Ex. 1041, 11:63-12:7. In addition, Sheha discloses that a user can assign location access rights via a mobile device. For example, Sheha states that the requesting device can terminate position transfer "at anytime," "choose not to reveal its local position," and "enable position transfer permissions at anytime," and can do so manually through the device. Ex. 1041, 5:12-20. In addition, Sheha discloses "[o]nce a user requests to terminate the transfer, either after a pre-defined time period ends or abruptly due to manual intervention by either party, the position transfer is prefer ably terminated by the system." *Id.*, 5:33-38. Thus, the user can modify location access rights (terminate access rights) via the mobile phone.

196. Further, to the extent Sheha does not specify how an assignment is

made, a POSITA would have known that changing the privacy settings (list of users allowed to access said location) in Sheha could be done at the direction of the first wireless telephone as this was routine and conventional and within the capabilities of the devices and system described in Sheha. For example, Degnbol describes a "Buddy List" for location sharing that "may be altered by the user at will, adding or deleting buddies and setting various preferences" and "can be done in several ways; e.g. directly from the handset of the users cellular phone." Ex. 1047, 9:33-10:3. The mobile telephones in Sheha could likewise direct the changing of the list of users allowed to access its location, as this was well-known and within the capabilities of mobile phones at the time of Sheha.

197. Thus, it is my opinion that Sheha alone or in view of Degnbol renders this limitation obvious.

g. *Claim 45f – "storing said location access rights"*

198. Sheha discloses this claim element. Sheha describes storing information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. For example, "users can define a group of specific users that have access to this information...by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:61-12:1. These privacy settings can be used in landline-to-landline, mobile-to-

landline, and mobile-to-mobile scenarios. *Id.*, 12:4-7. Thus, Sheha discloses that a permission to access location information about a target mobile device may be stored at the remote system.

199. Thus, it is my opinion that Sheha discloses this limitation.

h. *Claim 45g – "providing said location to said second wireless device dependent upon said location access rights"*

200. Sheha discloses this claim element. Sheha discloses its system provides location information to another device according to a user's privacy settings after determining the identity of the second device and corresponding authorization settings of the second device with respect to location information. Specifically, Sheha discloses "[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device." Ex. 1041, 12:1-7.

201. Thus, it is my opinion that Sheha discloses this limitation, and claim 45 is obvious based on Sheha alone or in view of Degnbol.

46. Claim 46 – "The system of claim 45, wherein said first wireless device and said second wireless device are cellular phones."

202. Sheha discloses this claim limitation. Sheha discloses mobile-to-mobile examples in which the devices are cell phones communicating with the ODAS (remote server). Ex. 1041, 10:66-11:3 ("In the mobile-to-mobile example,

as illustrated in FIG. 3, a user placing a telephone call from a mobile device 18 b, such as a cellular telephone or wireless voice-enabled PDA, dials or inputs a telephone number of another mobile device 18 c."), 11:23-26; 11:32-35.

203. Thus, Sheha discloses this limitation, and claim 46 is obvious based on Sheha alone or in view of Degnbol.

47. Claim 47 – "The system of claim 45, wherein said location access rights include the ability to obtain said location, wherein said location is provided to said second wireless device from said server even when said first wireless device is off."

204. Sheha in view of Ganesh renders this limitation obvious. As explained for claim 45, Sheha describes that a device may grant or deny access to its location by establishing privacy settings or a group of authorized users. Ex. 1041, 5:37-45, 10:20-26. This corresponds to at least two different access rights, one of which permits access to the location information for the device. Thus, Sheha discloses several different access rights that may be used, at least one of which permits access to location information for the device.

205. In addition, as explained for claims 13 and 34, Sheha discloses that locations of wireless devices are stored at its ODAS. Ex. 1041, 11:3-8, 11:44-51. Further, because the locations are stored at the ODAS, a requesting device can request a target device location regardless of whether the target device is on or off. Ex. 1041, 11:3-8, 11:44-51. Thus, it is my opinion that a POSITA would

recognize the ability to get the target wireless device's location via the server even if the target device is off. Further, while the location might be an "old" location, e.g. the last known location, it still would be a location about the target device, as required by claim 47, which does not require that the location provided be the current or most recent location.

206. To the extent Sheha does not expressly disclose transmitting a location when a wireless device is off, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Sheha could transmit location information even when a device is off, as described in Ganesh, because Sheha's system has stored location information and would have been capable of sending that information when the phone is off. Thus, a POSITA would understand Sheha's location access rights include the ability of a requesting device to obtain a target device's location and could include obtaining that location when the target device is off.

207. Thus, it is my opinion that Sheha in view of Ganesh renders this

limitation obvious, and claim 47 is obvious based on Sheha in combination with Ganesh or in combination with Ganesh and Degnbol.

48. Claim 48 – "The system of claim 45, wherein said location access rights comprise a plurality of access levels."

208. Sheha discloses this claim limitation. Sheha describes privacy settings related to access of location information and different access levels related to such location information. Sheha describes that "each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:37-40. The privacy settings "can include allowance of position information transfers only when a voice or video connection is established and/or only with the device owner's permission. Other settings may include allowing any remote device to request position information for any specified amount of time." *Id.*, 5:40-45; 10:20-26 ("[T]he privacy configuration also includes settings such as the option to never send position information, or to send position information while receiving and/or sending calls, and whether the transfer of position information should be allowed only for an instance or for a given period of time."). Each of these options represents a different access level, such as transferring location information, transferring location information "only when a voice or video connection is established" or "only for a given period of time," and not transferring location information. Sheha discloses the target device's

permission to location information may include different access levels.

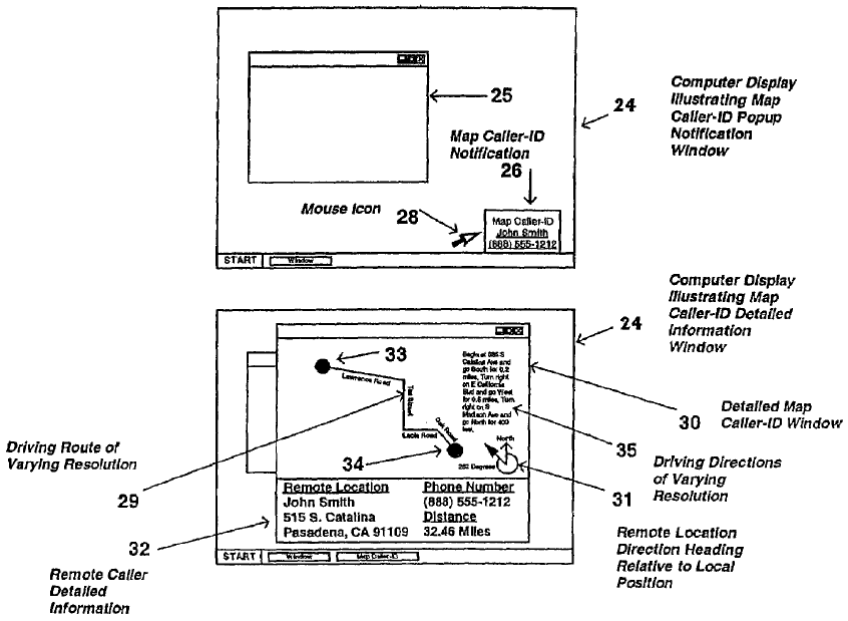
209. Thus, it is my opinion that Sheha discloses this limitation, and claim 48 is obvious based on Sheha alone or in combination with Degnbol.

49. Claim 49 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device directions from a location of said second wireless device to said location of said first wireless device."

210. Sheha discloses this claim limitation. Sheha's system can provide directional information to a wireless device providing directions between obtained locations of the wireless phones. This is done with Sheha's ODAS. Ex. 1041, Abstract, 5:21-26. For example, Sheha discloses requesting a remote mobile device's location "to obtain driving directions to that device." *Id.*, 5:21-26. Specifically, Sheha explains that if both wireless telephones grant access to their respective position information, this location information "can be used for real-time driving directions or collaboration purposes." *Id.*, 5:32-34. Sheha discloses the server (ODAS) can calculate and provide this directional information. *Id.*, 12:32-37.

211. Sheha further describes that its system "periodically updates each mobile device with the other's position information, thus providing real-time driving directions and route information" (*id.*, 11:49-51) and provides "to the receiver, one of routing information for traveling between the location of the caller

and the location of the receiver, mapping information of the location of the caller or of the location of the receiver, and relative position information showing both the location of the caller and the location of the receiver" (*id.*, claim 2). *See also id.*, 5:2-9 ("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, for the performance of various operations, such as mapping and calculating driving directions."), claim 2 ("providing, to the receiver, one of routing information for traveling between the location of the caller and the location of the receiver"), claim 14, claim 29 ("wherein said routing information includes one of graphical mapping information, text information, and turn-by-turn direction information"). Sheha's system is able to "provide driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage." *Id.*, 9:34-39; Fig. 5.



212. Thus, it is my opinion that Sheha discloses this limitation, and claim 49 is obvious based on Sheha alone or in combination with Degnbol.

50. Claim 50 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device a travel time to said location."

213. Sheha alone or in view of Obradovich renders obvious this claim limitation. Sheha discloses that its system can provide various types of position and navigational information, including "the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information." Ex. 1041, 3:29-37; *see also id.*, 1:16-22. While this does not specifically reference travel time, a POSITA knows that travel

time is standard navigational information that would be of interest to someone intending to follow a route to a destination. Thus, to the extent that Sheha does not disclose the claimed "travel time," it would have been obvious to a POSITA to modify Sheha to determine and provide travel time information from the requesting device to the target device.

214. Moreover, Obradovich describes how a personal communication device could determine a travel time, including based on traffic speed information and distance information, along a route or route segments. Ex. 1055, 2:60-63, 22:47-54, 22:55-65, Fig. 47. Because travel time is basic information of interest to anyone traveling a route to a destination, a POSITA would have been motivated to modify Sheha to determine and provide travel time according to the teachings in Obradovich.

215. Thus, it is my opinion that Sheha alone or in view of Obradovich renders this limitation obvious, and claim 50 is obvious based on Sheha alone or in combination with Degnbol and/or Obradovich.

51. Claim 51 – "The system of claim 45, 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 first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device."

216. Sheha in view of Obradovich and McDonnell renders this limitation

obvious. As described for claim 48, devices in Sheha's system can set location access rights with a plurality of access levels. Ex. 1041, 5:37-45, 10:20-26. For example, Sheha describes "each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:37-40. The privacy settings "can include allowance of position information transfers only when a voice or video connection is established and/or only with the device owner's permission" and "allowing any remote device to request position information for any specified amount of time." *Id.*, 5:40-45; *see also id.*, 10:20-26. Thus, Sheha discloses the mobile device's permission may include different access levels, such as transferring location information, transferring location information "only when a voice or video connection is established" or "only for a given period of time," and not transferring location information. Ex. 1041,5:37-46, 10:20-26;

217. In addition, Sheha describes different specificity of location information can be obtained and shared. Ex. 1041, claim 17 ("The system of claim 13, wherein the caller position information includes one of graphical mapping information, GPS information, longitudinal and latitudinal information, altitude information, and address information."); claim 24 ("The system of claim 13, wherein the location of the caller is one of a metropolitan area, a state within the United States of America, and an international political territory."); claim 8 ("The method of claim 1, wherein the caller position information includes position

information of a fixed location nearby the location of the caller.").

218. To the extent Sheha does not expressly disclose one of said plurality of levels of access rights comprise the exact location of said first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device, this would have been obvious based on Obradovich and McDonnell. Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to data by assigning "security level indexes for each item of information to information" and "which security level index each such other individual should be provided." Ex. 1055, 26:29-36. Obradovich teaches each item of geographic location information can be made available only to specific levels of access rights. Ex. 1055, 26:28-35. Obradovich also identifies examples of geographic information such as latitude, longitude, street address, or site names. *Id.*, 26:24-27. McDonnell describes a system that allows a mobile device user to obscure its location information to a specified accuracy level before sending it to a requesting service provider. Ex. 1053, Abstract, 6:44-52, 8:30-45 ("...because of privacy concerns, the user of the mobile entity does not want the Service System to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit as a quality of Service parameter in data package Q1..."). In McDonnell's system, "upon request...from mobile entity 20 [a mobile device], location server 79 returns...the

location L of the mobile entity in an encrypted package P," where the encrypted package "contains an identifier for the mobile entity...and an indicator of the accuracy of the location data provided." Ex. 1053, 8:8-15. Thus, when the mobile entity sends the encrypted location data to the service system, the service system has decryption entity decrypt the data based on the information in the package P so it "can reliably limit the accuracy of the location data it returns to the level specified by the mobile entity." *Id.*, 8:46-53.

219. Sheha's system allows a user to specify various types of permissions for obtaining a mobile device's location information. Accordingly, a POSITA aware of Obradovich's security level index and the accuracy limiting capabilities of McDonnell would be motivated to incorporate such functionality into Sheha's system to allow a user to have more complete control over their location information. For example, a user may allow precise location for some people, such as family or friends, to enable a requesting device to navigate to their location; however, for other types of requesters, such as shopping or advertising services (such as the Yellow Pages, described in McDonnell), they may wish to provide less accurate location information as McDonnell describes. Ex. 1055, 26:29-36; Ex. 1053, 3:1-16, 8:30-45, 9:45-55. Thus, a POSITA would be motivated to modify Sheha to incorporate Obradovich's and McDonnell's functionalities to restrict different requesters to different levels of location accuracy.

220. Thus, it is my opinion that Sheha in view of Obradovich and McDonnell renders this limitation obvious, and claim 51 is obvious based on Sheha in combination with Obradovich and McDonnell, or with Obradovich, McDonnell, and Degnbol.

52. Claim 52 – "The system of claim 45, 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 first wireless device, and said approximate location comprises a city or state."

221. Sheha in view of Obradovich and McDonnell renders obvious this claim limitation. As I explained for claim 51, Sheha in view of Obradovich and McDonnell discloses a plurality of levels of access rights related to providing approximate and specific location information to tailor the degree of specificity to the closeness of the relationship. In addition, Sheha's system is able to obtain and transmit city and state location information to a requesting device, as opposed to exact location information such as GPS coordinates. Ex. 1041, claim 24 ("wherein the location of the caller is one of a metropolitan area, a state within the United States of America, and an international political territory"). Likewise, Sheha's system is able to obtain and provide "position information of a fixed location nearby the location of the caller." Ex. 1041, claim 8. It would have been obvious to provide a city or state as approximate location information to specified users having that access level.

222. Thus, for the reasons set forth in claim 51, it is my opinion that Sheha in view of Obradovich and McDonnell renders this limitation obvious, and claim 52 is obvious based on Sheha in combination with Obradovich and McDonnell, or with Obradovich, McDonnell, and Degnbol.

53. Claim 53 – "The system of claim 45, wherein said remote system is further capable of receiving a login and password from said second wireless device to identify a user of said second wireless device."

223. Sheha in view of Obradovich and/or Ganesh renders this limitation obvious. Sheha discloses functionality for authenticating and verifying the identity of users of a device. Specifically, Sheha describes that "every telephone account user has a username and password for the ODAS 3," and that the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols. Ex. 1041, 8:40-53; *see also id*. at 11:55-12:7; claim 54 ("a request for position information of the second user, said request including identification information of the first user to uniquely identify the first user").

224. To the extent Sheha does not expressly disclose how a username and password are entered, doing so on a device was routine and conventional, and thus a POSITA would have understood that this functionality could be included in Sheha's system. For example, Obradovich describes entering a login and password on a device via a website for user authentication. Ex. 1055, 26:38-45 ("When the

home site is contacted by another individual, the other individual provides an identifier, such as the individual's name to the home Site. In one embodiment the other individual also provides a password to the home site So that the home site may authenticate the identity of the individual. Based on the identity of the individual, preferably authenticated, the home site determines the other individual's security level index."). Likewise, Ganesh describes an example where a requester logs in to a web page and the system determines whether the user is valid. Ex. 1049, 5:1-29 ("FIG. 3 shows a diagram of a first web page, or a log-in web page 40, supplied by a service provider of wireless communication network 20 (FIG. 1). Log-in web page 40 is accessed when a requesting party enters a Uniform Resource Locator (URL) for log-in web page 40. The URL describes the type of access method being used (for example, http) and the server location which hosts the Web site of which log-in web page 40 is a part of. Log-in web page 40 is a fill-in form that includes a requester log-in section 42 having a Login field 44 and a Password field 46...At query task 52, process 36 determines whether the log-in attempt detected at query task 48 is being performed by a valid system user."). Because Sheha's system describes using a mobile device to request the location of another device, it would have been obvious to a POSITA that this request could include inputting a login and password on the device.

225. Thus, it is my opinion that Sheha in view of Obradovich and/or

Ganesh renders this limitation obvious, and claim 53 is obvious based on Sheha in combination with Obradovich and/or Ganesh or in combination with Degnbol and Obradovich and/or Ganesh.

54. Claim 54 – "The system of claim 45, wherein said remote system is further capable of: receiving a request from said first wireless device to modify said location access rights for said second wireless device; and modifying said location access rights for said second wireless device based on said request."

226. Sheha discloses this limitation. Sheha discloses that a user can modify its permission settings via a mobile device. For example, Sheha states that the requesting device can terminate position transfer "at anytime," "choose not to reveal its local position," and "enable position transfer permissions at anytime," and can do so manually through the device. Ex. 1041, 5:12-20. In addition, Sheha discloses "[o]nce a user requests to terminate the transfer, either after a pre-defined time period ends or abruptly due to manual intervention by either party, the position transfer is prefer ably terminated by the system." *Id.*, 5:33-38. Thus, the user can modify location access rights (terminate access rights) via the mobile phone, and Sheha's system then modifies the location access rights for another user, based on the request from the mobile phone.

227. Thus, it is my opinion that Sheha discloses this limitation, and claim 54 is obvious based on Sheha alone or in combination with Degnbol.

55. Claim 55 – "The system of claim 45, wherein said remote system is further capable of: receiving a request from said first wireless device to delete said location access rights for said second wireless device; and deleting said location access rights for said second wireless device based on said request."

228. Sheha discloses this limitation. As described for claim 54, Sheha's system can change, at the direction of the wireless telephone, a list of users allowed to access the telephone's location. This change can include deleting location access rights for the device. Ex. 1041, 5:15-20 ("The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active."). Sheha describes "each device has privacy settings that allow the device to prevent or limit other calling devices from obtaining position information." Ex. 1041, 5:38-42. This termination of transfer of position information can be done manually *Id.*, 5:33-38.

229. Thus, it is my opinion that Sheha discloses this limitation, and claim 55 is obvious based on Sheha alone or in combination with Degnbol.

56. Claim 56 – "The system of claim 45, wherein said remote system is further capable of filtering information about said location such that only a portion of location information associated with said location is transmitted to said second wireless device."

230. Sheha alone or in combination with Obradovich renders obvious this limitation. Sheha's system transmits information about a device's location according to a user's privacy settings. Ex. 1041, 11:63-12:4, 8:47-50. Because Sheha's system determines authorization and sends only authorized information, a POSITA would understand the claimed filtering is within Sheha's capabilities and implicitly performed by Sheha's system.

231. Further, to the extent Sheha does not expressly disclose filtering information about a device's location such that only a portion of location information is transmitted to another device, this would have been obvious based on Obradovich. As I explained for claims 51 and 52, Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to data by assigning "security level indexes for each item of information to information" and "which security level index each such other individual should be provided." Ex. 1055, 26:29-36. A POSITA would understand that this necessarily means the system in Obradovich filters information based on security level indexes and transmits only a portion of the available information.

232. A POSITA would have been motivated to include filtering location

information and transmitting only a portion of location information in Sheha's system based on Obradovich to enhance the privacy settings available to a user as set forth for claims 51 and 52. Further, because Sheha's system already implicitly filters location information based on privacy settings, a POSITA would have had a reasonable expectation of success in adding the filtering functionality described in Obradovich to Sheha's system.

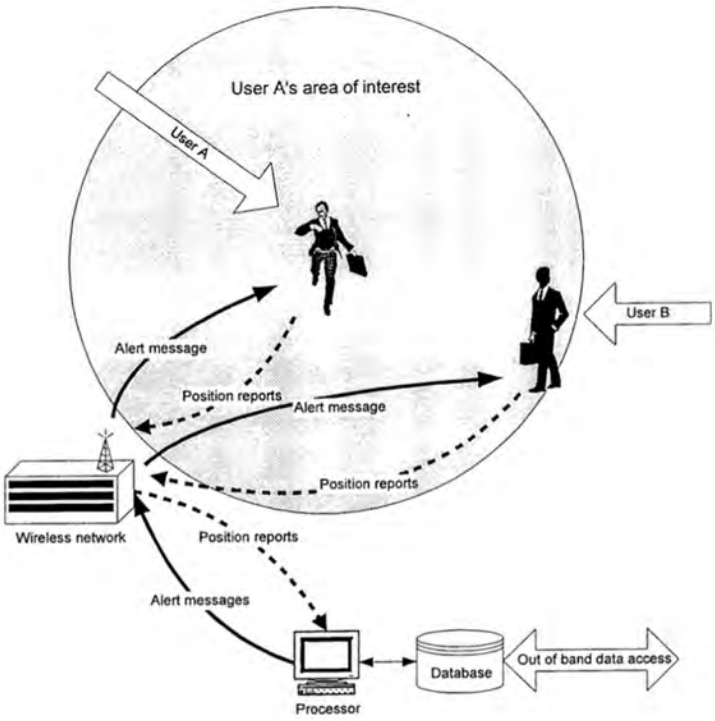
233. Thus, Sheha alone, or in combination with Obradovich, renders this limitation obvious, and claim 56 is obvious based on Sheha alone or in combination with Degnbol and/or Obradovich.

57. Claim 57 – "The system of claim 45, wherein said remote system is further capable of alerting said second wireless device when said first wireless device is within a distance of second wireless device."

234. Sheha in view of Degnbol renders this limitation obvious. In Sheha's system, the mobile devices can continually update their position to the server, for example, for the system to calculate directions and distance between devices. Ex. 1041, 7:44-51, 9:30-39. Sheha discloses its system can send notifications to the mobile devices, which a POSITA would understand is inclusive of alerts, and that such notifications may include location information. Ex. 1041, 9:4-22. For example, Sheha describes an embodiment where "the mobile device Map Caller-ID notification is sent to the mobile device as a conventional Caller-ID message is

sent, except additional information is added to the original message." *Id.*, 10:27-30. Thus, it would have been understood that Sheha's system was "capable of alerting said second wireless device when said first wireless device is within a distance of said second wireless device" as it monitors locations of devices and transmits location information among devices in the form of notifications.

235. To the extent Sheha does not expressly disclose that its system alerts the second wireless telephone based on a specific location of the first wireless device, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



236. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

237. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Sheha's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert can also allow the user of

the requesting device to visually search for the user of the target device, if they move into close range.

238. As stated above, a POSITA would have known that Sheha's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Sheha's system already determines the positions of users' devices and distance between them. Further, Sheha discloses the ability to send various types of notifications, which is inclusive of alerts. Thus, a POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

239. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 57 is obvious based on Sheha in combination with Degnbol.

58. Claim 58 – "The system of claim 45, wherein said remote system is further capable of: receiving a request for a second location of said first wireless device from a non-wireless device, wherein said non-wireless device does not comprise a positioning system; and providing said second location of said first wireless device to said non-wireless device in response to said request."

240. Sheha discloses this limitation. Sheha discloses receiving a request for a location of a wireless device from a non-wireless device that does not have a positioning system. For example, Sheha discloses a system in which a landline can request the position of a wireless device and the system provides location information to the landline. Ex. 1041, 5:25-34, 9:61-10:4, 10:44-52. Sheha explains "the ODAS 3 requests position information from the destination mobile device 18 c." Ex. 1041, 11:32-33. The ODAS can provide any number of locations to any number of requesting mobile devices.

241. Thus, it is my opinion that Sheha discloses this limitation, and claim 58 is obvious based on Sheha alone or in combination with Degnbol.

59. Claim 59 – "The system of claim 45, wherein said remote system is further capable of receiving said location of said first wireless device from a positioning system of said first wireless device."

242. Sheha discloses this limitation. Sheha discloses that the wireless devices operating in its system can include positioning systems, such as GPS, to determine their locations. Ex. 1041, 10:5-16, 11:16-20. For example, Sheha states

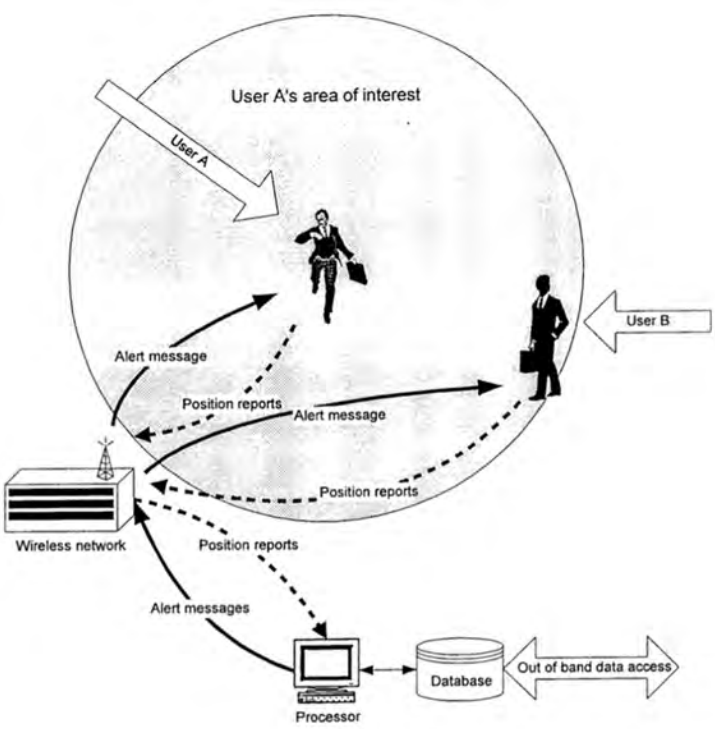
"position information is calculated, prior to the transfer, by means of an onboard positioning information device 19b that is connected to the mobile device 18b," and the ODAS receives position information for mobile device 18b. Ex. 1041, 11:15-23.

243. Thus, it is my opinion that Sheha discloses this element, and claim 59 is obvious based on Sheha alone or in combination with Degnbol.

60. Claim 60 – "The system of claim 45, wherein said remote system is further capable of setting at least one location alert associated with said first wireless device for a user associated with said second wireless device in response to a request from said second wireless device."

244. Sheha in view of Degnbol renders this limitation obvious. Sheha discloses a wireless telephone may request the location of a second wireless phone. Ex. 1041, 4:62-66, Claim 47. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request. To the extent Sheha does not expressly describe devices requesting a location based alert, this would have been obvious based on Degnbol.

245. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



246. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-23, 17:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.* Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

247. A POSITA would have been motivated to incorporate the location-

based alerts taught by Degnbol to expand Sheha's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert can also allow the user of the requesting device to visually search for the user of the target device, if they move into close range.

248. Further, a POSITA would have known that Sheha's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Sheha's system already determines the positions of users' devices and distance between them and its mobile devices can continually update their position to the server, for example, for the system to calculate directions and distance between devices. Ex. 1041, 7:44-51, 9:30-39. Further, a POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

249. Thus, it is my opinion that Sheha in view of Degnbol renders this

limitation obvious, and claim 60 is obvious based on Sheha in combination with Degnbol.

61. Claim 61 – "The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for an indefinite period of time."

250. Sheha discloses this limitation. Sheha describes storing information that correlates position information to a telephone number in a group database, and further can establish which users may access such information. For example, "users can define a group of specific users that have access to this information...by utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information." Ex. 1041, 11:63-12:1. These privacy settings can be used in landline-to-landline, mobile-to-landline, and mobile-to-mobile scenarios. *Id.*, 12:4-7. Thus, Sheha discloses that a permission to access location information about a target mobile device may be stored at the remote system.

251. Sheha's system determines which users may access such information based on privacy settings and provides authorized location information to an authorized requestor. Ex. 1041, 11:53-12:7. The authorization of specific users that have access to location information in Sheha may be for an indefinite period of

time. For example, Sheha describes that the user can "enable position transfer permissions at anytime and for any period of time" (*id.*, 5:16-18), which includes an indefinite period of time

252. Thus, it is my opinion that Sheha discloses this limitation, and claim 61 is obvious based on Sheha alone or in combination with Degnbol.

62. Claim 62 – "The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for only a specific period of time."

253. Sheha discloses this limitation. Sheha discloses that permissions may be established for a defined period of time. For example, Sheha states "[t]he duration of the position information transfer can be governed by a defined transfer period that can be set prior to the start of the transfer or at any time thereafter." Ex. 1041, 3:4-13. Sheha also states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." *Id.*, 5:11-18.

254. Further, as discussed in claim 61, Sheha discloses the remote system

is capable of storing access rights (privacy settings) in a group database.

255. Thus, it is my opinion that Sheha discloses this limitation, and claim 62 is obvious based on Sheha alone or in combination with Degnbol.

63. Claim 63 – "The system of claim 62, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless device."

256. Sheha discloses this limitation. Sheha discloses the wireless telephone can specify the time period of access rights, which is then provided as an indication to the remote server. Specifically, Sheha states "[t]he period setting can be set for the duration of the call or for a predetermined length of time, and the position transfer can be terminated by the calling or receiving device at anytime. The calling local mobile device can also choose not to reveal its local position to the destination remote mobile device for privacy purposes at anytime and can conversely enable position transfer permissions at anytime and for any period of time or as long as the call is active." Ex. 1041, 5:11-18. The phone sends the access rights to the server and in turn, the remote server in Sheha receives this indication of the time period of access rights and stores it with the privacy settings.

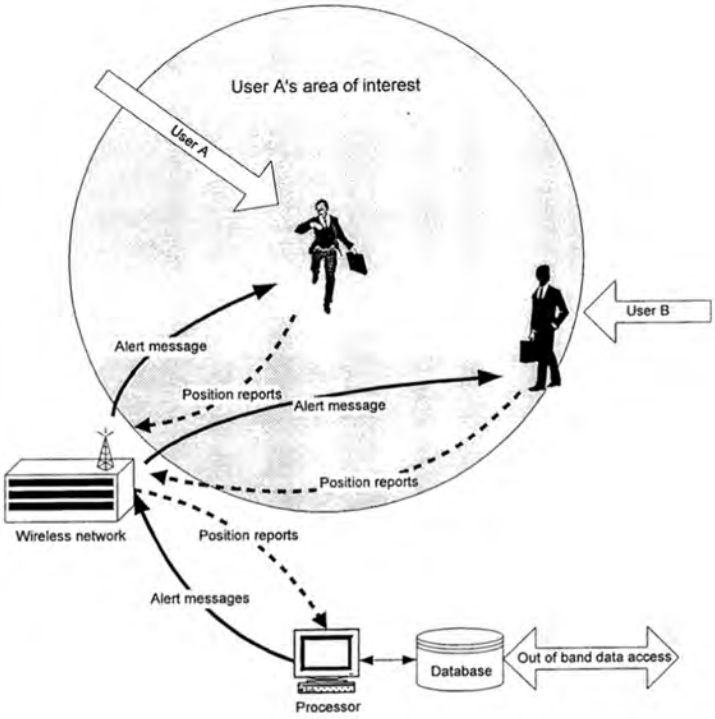
257. Thus, it is my opinion that Sheha discloses this limitation, and claim 63 is obvious based on Sheha alone or in combination with Degnbol.

64. Claim 64 – "The system of claim 45, wherein said remote system is further capable of transmitting an alert to said second wireless device based on said location of said first wireless device."

258. Sheha alone or in view of Degnbol renders this limitation obvious. In Sheha's system, the mobile devices can continually update their position to the server, for example, for the system to calculate directions and distance between devices. Ex. 1041, 7:44-51, 9:30-39. Sheha discloses its system can send notifications to the mobile devices, which a POSITA would understand is inclusive of alerts, and that such notifications may include location information. Ex. 1041, 9:4-22. For example, Sheha describes an embodiment where "the mobile device Map Caller-ID notification is sent to the mobile device as a conventional Caller-ID message is sent, except additional information is added to the original message." *Id.*, 10:27-30. Thus, it would have been understood that Sheha's system was "capable of transmitting an alert to said one of said plurality of wireless telephones" as it monitors locations of devices and transmits location information among devices in the form of notifications, and an alert is a form of notification.

259. Further, to the extent this claim requires transmitting an alert based on a specific location of the first wireless phone, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user

is within a certain distance of that location, as shown in Figure 1 below:



260. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

261. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Sheha's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile

device who may also be moving. In addition, the alert can also allow the user of the requesting device to visually search for the user of the target device, if they move into close range.

262. As stated above, a POSITA would have known that Sheha's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Sheha's system already determines the positions of users' devices and distance between them. Further, Sheha discloses the ability to send various types of notifications, which is inclusive of alerts. Thus, a POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

263. Thus, it is my opinion that Sheha alone or in view of Degnbol renders this limitation obvious, and claim 64 is obvious based on Sheha alone or in combination with Degnbol.

65. Claim 65 – "The system of claim 64, wherein said remote system is further capable of receiving a request for said alert from said second wireless device."

264. Sheha in view of Degnbol renders this limitation obvious. Sheha

discloses a wireless telephone may request the location of a second wireless phone. Ex. 1041, 4:62-66, Claim 47. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request. To the extent Sheha does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices in Sheha had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

265. A POSITA looking to expand Sheha's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Sheha based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 64.

266. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 65 is obvious based on Sheha in combination with

Degnbol.

66. Claim 66 – "The system of claim 65, wherein said alert is geographic area-based and said remote system is further capable of alerting said second wireless device when said location of said first wireless device is within a geographic area specified by said second wireless device."

267. Sheha in view of Degnbol renders this limitation obvious. As set forth for claims 64 and 65, it is my opinion that Sheha in view of Degnbol renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone. Degnbol further discloses that the alert may be geographic area-based so the system alerts the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047, 3:23-24, 13:19-21, claims 29-30. A POSITA would have been motivated to combine Sheha and Degnbol with a reasonable expectation of success, as set forth in claims 65 and 65.

268. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 66 is obvious based on Sheha in combination with Degnbol.

67. Claim 67 – "The system of claim 45, wherein said remote system is further capable of transmitting an alert to said first wireless device when said second wireless device locates said first wireless device."

269. Sheha in view of Degnbol renders this limitation obvious. As I explain

above, Sheha's system transmits location information among devices and sends notifications to the devices with location information. Ex. 1041, 12:1-7. To the extent Sheha does not expressly disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Sheha's system has this capability as set forth in claim 64.

270. Further, it would have been obvious to include such a capability based on Degnbol. For example, Degnbol discloses "[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). A POSITA would have been motivated to incorporate this functionality in Sheha's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Sheha with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

271. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 67 is obvious based on Sheha in combination with Degnbol.

68. Claim 68 – "The system of claim 45, wherein said remote system is further capable of storing a history of locations of said first wireless device."

272. Sheha alone or in view of Ganesh renders obvious this limitation. Sheha discloses storing locations obtained from a wireless telephone on the ODAS, a remote system. Ex. 1041, 3:50-61, Fig. 3. Sheha's system is capable of storing at least the last location obtained, and thus is capable of storing a history of locations of a wireless device. Ex. 1041, 3:50-61.

273. To the extent Sheha does not expressly disclose storing a history of locations, including this capability in Sheha's system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains "[t]he one of cell sites 22 and the particular sector identifies the particular one of coverage areas 26" so "the potential location area is predicted to be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Sheha's system to include this capability with a reasonable expectation of

success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

274. Thus, it is my opinion that Sheha alone or in view of Ganesh renders obvious this limitation, and claim 68 is obvious based on Sheha alone or in combination with Degnbol and/or Ganesh.

69. Claim 69 – "The system of claim 68, wherein said providing said location to said second wireless device comprises providing to said second wireless device a location from said history of locations when said first wireless device is turned off."

275. Sheha in view of Ganesh renders this limitation obvious. As explained for claim 68, Sheha, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Sheha does not expressly disclose transmitting a location from a history of locations when a wireless device is off, Sheha's system could transmit a stored location even when the phone is turned off.

276. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless

communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Sheha could transmit location information even when a device is off, as described in Ganesh, because Sheha's system has stored location information and would have been capable of sending that information when the phone is off.

277. Thus, it is my opinion that Sheha in view of Ganesh renders this limitation obvious, and claim 69 is obvious based on Sheha in combination with Ganesh or in combination with Degnbol and Ganesh.

70. Claim 70 – "The system of claim 45, wherein said remote system is further capable of providing said location to another device utilized by a user of said second wireless device after said user utilizes said another device to input a login and password for said user into a website."

278. Sheha in combination with Obradovich and/or Ganesh renders this limitation obvious. Sheha discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a login and password into a website via his or her device. For example Sheha describes that "every telephone account user has a username and password for the ODAS 3" and that the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols. Ex. 1041, 8:40-53;

11:55-12:7.

279. To the extent Sheha does not expressly disclose how a username and password are entered, doing so on a device via a website was routine and conventional, and thus a POSITA would have understood that this functionality could be included in Sheha's system. For example, Obradovich describes entering a login and password on a device via a website for user authentication. Ex. 1055, 26:38-45 ("When the home site is contacted by another individual, the other individual provides an identifier, such as the individual's name to the home Site. In one embodiment the other individual also provides a password to the home site So that the home site may authenticate the identity of the individual. Based on the identity of the individual, preferably authenticated, the home site determines the other individual's security level index."). Likewise, Ganesh describes an example where a requester logs in to a web page and the system determines whether the user is valid. Ex. 1049, 5:1-29 ("FIG. 3 shows a diagram of a first web page, or a log-in web page 40, supplied by a service provider of wireless communication network 20 (FIG. 1). Log-in web page 40 is accessed when a requesting party enters a Uniform Resource Locator (URL) for log-in web page 40. The URL describes the type of access method being used (for example, http) and the server location which hosts the Web site of which log-in web page 40 is a part of. Log-in web page 40 is a fill-in form that includes a requester log-in section 42 having a

Login field 44 and a Password field 46...At query task 52, process 36 determines whether the log-in attempt detected at query task 48 is being performed by a valid system user."). Because Sheha's system describes using a mobile device to request the location of another device, it would have been obvious to a POSITA that this request could include inputting a login and password into a website on the device.

280. Thus, it is my opinion that Sheha in view of Obradovich and/or Ganesh renders this limitation obvious, and claim 70 is obvious based on Sheha in combination with Obradovich and/or Ganesh or with Degnbol and Obradovich and/or Ganesh.

71. Claim 71 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a watch."

281. Sheha in view of Degnbol renders this limitation obvious. As explained above for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device. While Sheha describes its system in the context of mobile phones and landline phones, Sheha's system "determines local and/or remote position information of devices that are not always associated by telephone numbers, but IP addresses or the like, and which can obtain such position information instantaneously and share it, by means of authentication and authorization protocols, without requiring any prior configuration." Ex. 1041, 2:50-56. Thus, a POSITA would understand Sheha's

system is not limited to use with telephones; rather, it may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network.

282. Further, using Sheha's system to store and transmit a location of a watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Sheha and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Sheha's system could likewise transmit a location of a watch to a wireless telephone device, with a reasonable expectation of success.

283. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 71 is obvious based on Sheha in combination with Degnbol.

72. Claim 72 – "The system of claim 71, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

284. Sheha in view of Degnbol renders this limitation obvious. As explained above in claim 71, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Sheha explain that their remote

systems are capable of communicating with devices over a communications network. Ex. 1041, Abstract, 11:3-8, 11:44-51, Figure 3; Ex. 1047, 5:7-11. The devices in both Degnbol and Sheha determine their locations via a position system (e.g., GPS), and sends the location information to the system over a communications network. Ex. 1041, 10:5-16, 11:16-20; Ex. 1047, 5:7-11. Thus, a POSITA would have understood that Sheha's system had the capability to communicate with and obtain location information of a watch per Degnbol.

285. Thus, it is my opinion that Sheha in view of Degnbol renders this limitation obvious, and claim 72 is obvious based on Sheha in view of Degnbol.

73. Claim 73 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a personal computer."

286. Sheha discloses this limitation. Sheha's remote system is capable of storing and transmitting to said first wireless telephone a location of a personal computer. Ex. 1041, claim 50. Specifically, Sheha states "transmitting to the communication device of the second user the position information of the communication device of the first user." *Id.* Sheha further states that the communication device may be "a personal computer." *Id.*, claims 52-53.

287. Thus, it is my opinion that Sheha discloses this limitation, and claim 73 is obvious based on Sheha alone or in combination with Degnbol.

74. Claim 74 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a radio."

288. Sheha in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device for a variety of devices, including wireless and landline phones, personal digital assistants, and personal computers. *See* Ex. 1041, claim 12. To the extent not expressly described in Sheha, a POSITA would have known Sheha's system could be used to obtain, store, and transmit location information for any position-enabled device connected to a network, including a radio.

289. Further, storing and transmitting the location of a radio to the first wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs), such as to be displayed on a map along a route. *Id.*, 19:38-14:25.

290. Both Sheha and Obradovich utilize generic wireless network server-

side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Sheha's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Sheha's system to do so as this would have been within the capabilities of the devices and system disclosed in Sheha and a routine implementation.

291. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 74 is obvious based on Sheha in combination with Obradovich or in combination with Degnbol and Obradovich.

75. Claim 75 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a car."

292. Sheha in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Sheha's system is capable of storing and transmitting location information of one device to another device. Sheha also discloses the use of its system with a mobile navigation device 45 in a car 39b. Ex. 1041, 12:57-13:31, Fig. 7. While Sheha describes its system in the context of mobile phones and landline phones, it would have been obvious to a POSITA that the system in Sheha was capable of storing and transmitting a location of a car to a wireless phone given it connects to and communicates with a mobile navigation

device in a car, such as by a wireless connection, to obtain position information.

293. Further, including this capability in Sheha's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

294. A POSITA would have known that Sheha's system could likewise transmit a location of a car to the first wireless telephone device, and would have

been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

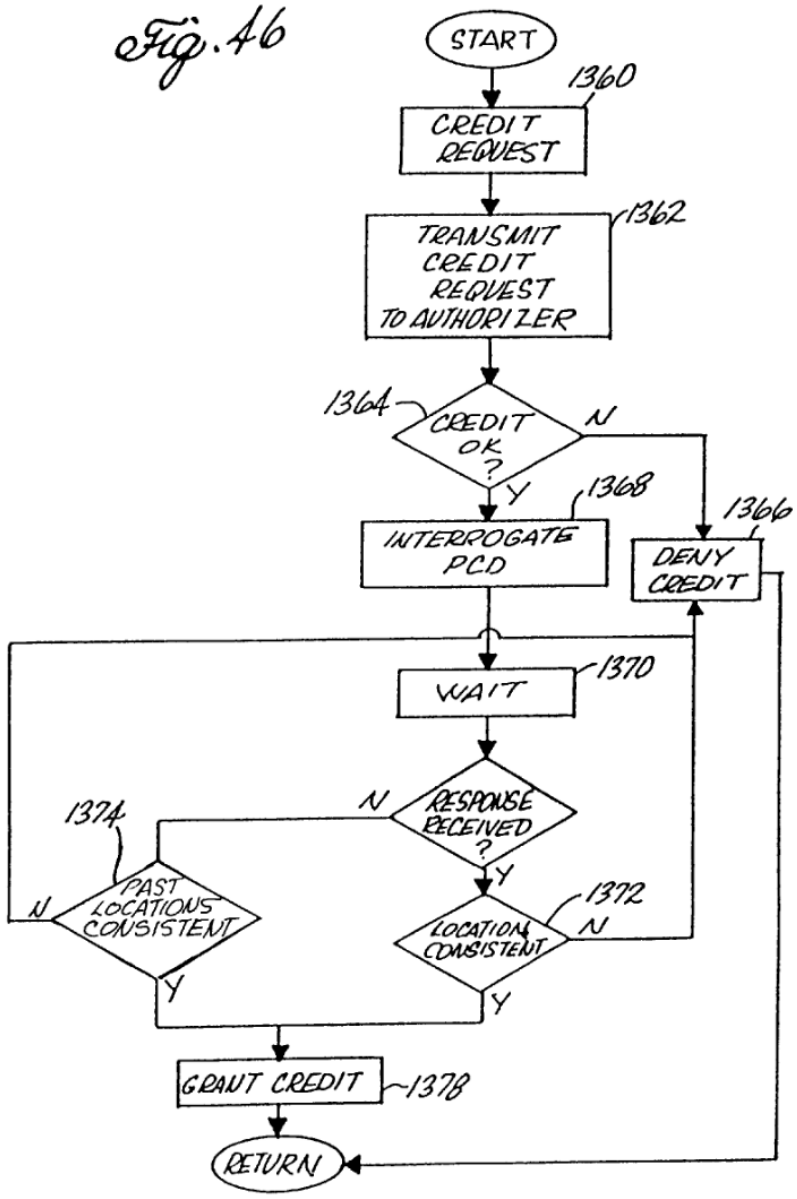
295. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 75 is obvious based on Sheha in combination with Obradovich or in view of Obradovich and Degnbol.

76. Claim 76 – "The system of claim 45, wherein said remote system is further capable of providing said location of said first wireless device to a credit card authorization system."

296. Sheha in view of Obradovich renders this limitation obvious. Sheha discloses obtaining and transmitting location information to an authorized requesting device. Ex. 1041, 12:1-7. To the extent Sheha does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Sheha's system had such capability because it obtains and transmits location information of a device to another device, which could include a credit card authorization system.

297. Further, including this capability in Sheha' system would have been obvious based on Obradovich, which describes transmitting a location of a wireless

device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

298. A POSITA would have been motivated to use Sheha's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Sheha's system because both Sheha and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

299. Thus, it is my opinion that Sheha in view of Obradovich renders this limitation obvious, and claim 76 is obvious based on Sheha in view of Obradovich or in view of Degnbol and Obradovich.

77. Claim 77 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device information indicating time to reach said location of said first wireless device from a second location of said second wireless device according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

300. Sheha in view of Bectolsheim renders this limitation obvious. Sheha discloses a system capable of providing to said second wireless device a travel time to said location. For example, Sheha discloses "providing real-time location information, maps, routing, and direction finding." Ex. 1041, 1:16-22. Further, Sheha's system "provide[s] the calculation of position and route information, such as driving directions, as well as the ability to provide azimuth, elevation, altitude, altitude difference, line-of-sight (LOS) distance, and curved earth LOS distance measurements, between the local and remote positions calculated from the position information obtained using the methods previously described." Ex. 1041, 3:29-37.

Because Sheha's system obtains this information, it is capable of calculating and providing time to reach a location. While this does not specifically reference travel time, a POSITA knows that travel time is standard navigational information that would be of interest to someone intending to follow a route to a destination. Thus, to the extent that Sheha does not disclose the claimed "travel time," it would have been obvious to a POSITA to modify Sheha to determine and provide travel time information from the requesting device to the target device.

301. Moreover, calculating a travel time and doing so for different types of travel, including subway, walking, running, and driving, would have been obvious based on Bectolsheim. Bectolsheim is cited as prior art in Sheha and describes calculating and providing routes for driving, public transportation, and walking, and combinations thereof. Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Sheha's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Further, both Sheha and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124

may include sensors 125 or other components that sense the speed, orientation, direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1041, Abstract, 10:5-16. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Sheha and Bectolsheim.

302. Thus, it is my opinion that Sheha in view of Bectolsheim renders this limitation obvious, and claim 77 is obvious based on Sheha in combination with Bectolsheim or in combination with Bectolsheim and Degnbol.

78. Claim 78 – "The system of claim 45, wherein said remote system is further capable of: storing a phone book corresponding to a user of said second wireless telephone; and downloading said phone book to a new wireless telephone of said user."

303. Sheha alone or in combination with Obradovich and/or Degnbol renders this limitation obvious. Sheha's system stores telephone numbers and privacy settings correlated to those numbers in a group database and downloads data, including phone numbers, to a mobile device. Ex. 1041, 3:50-59, 11:51-12:1. Ex. 1041, 11:63-12:1. To the extent Sheha does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Sheha's system was capable of including this capability given Sheha describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users,

and the ability of the mobile devices in Sheha's system to download data containing telephone numbers. *Id.*, 11:63-12:1, 3:50-59 ("It is still a further object of this invention to provide means for downloading a predefined set of data containing telephone numbers correlated to position-specific information, such as latitude and longitude coordinates address information, and/or map information of varying size and resolution, from a networked server to a mobile device. The data transfer can occur via a wireless link, such as a cellular telephone or Bluetooth connection, via an infrared connection, or via a dedicated wired connection, such as a serial or USB connection.").

304. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Sheha's system to include such functionality with a reasonable expectation of success given Sheha's system includes a group database correlating privacy settings and to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

305. Thus, it is my opinion that Sheha alone or in combination with Obradovich and/or Degnbol renders this limitation obvious, and claim 78 is obvious based on Sheha alone or in combination with Degnbol and/or Obradovich.

B. Ground 2: Claims 1-78 are unpatentable as obvious over Enzmann in view of Obradovich, Ganesh, Degnbol, Bectolsheim, and McDonnell

306. Enzmann discloses systems that enable users of wireless devices to determine and share their own location with other devices, control access of their location information, and request the locations of other devices as recited in independent claims 1, 24, and 45. It also discloses most of the elements recited in the various dependent claims. In addition, Obradovich, Ganesh, Degnbol, McDonnell, and Bectolsheim disclose the features recited in the dependent claims. It is my opinion that claims 1-23 are obvious based on Enzmann in combination with Obradovich or in combination with Obradovich and one or more of Ganesh, Degnbol, and Bectolsheim; claims 24-44 are obvious based on Enzmann alone or in combination with one or more of Obradovich, Ganesh, Degnbol, and Bectolsheim; and claims 45-78 are obvious based on Enzmann alone or in combination with one or more of Obradovich, Ganesh, Degnbol, McDonnell, and Bectolsheim.

1. Independent Claim 1

a. *Claim 1pre – "A system comprising"*

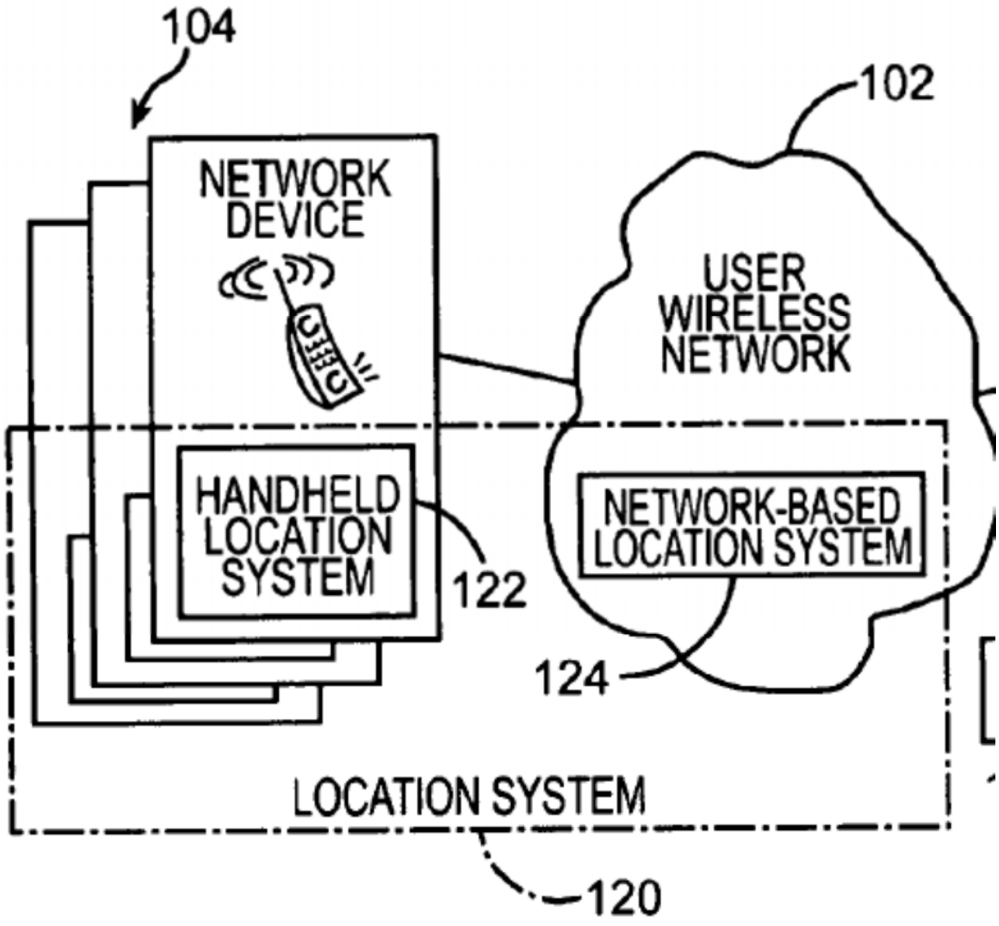
307. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Ex. 1040, 2:3-7 ("The present invention is a location query service for use with a wireless network that tracks the location of network devices. The service provides requesters with the locations of network users, based on the locations of the users' wireless network devices."), 4:25-27 ("Location system 120 provides the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located.").

b. *Claim 1a – "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of obtaining a location of a first wireless telephone"*

308. Enzmann discloses this claim element. Enzmann discloses a system that employs a remote system with a server that communicates with wireless telephones over a communications network and is capable of obtaining their locations. For example, Enzmann describes a system that "includes a user wireless network and a location server" and "[t]he location server is in communication with a plurality of network devices." Ex. 1040, 2:52-55. More specifically, Enzmann provides a location query service for users of wireless handheld devices. Ex. 1040,

3:53-61.

309. Enzmann's system determines the locations of the wireless devices using either location systems incorporated into the wireless devices themselves or using a network-based location system. Ex. 1040, 5:41-50, Fig. 1.



310. Enzmann discloses that suitable wireless handheld devices for its system include pagers and cellular telephones. Ex. 1040, 5:39-41.

311. Thus, it is my opinion that Enzmann discloses this limitation.

c. ***Claim 1b – "changing, at the direction of said first wireless telephone, a list of users for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones"***

312. Enzmann discloses this claim element. Enzmann discloses that, in its system, a user may provide and modify lists of authorized requestors to its system to identify the users who may request their locations. Ex. 1040, 2:35-41, 5:28-34. Enzmann discloses "a preferred embodiment of the present invention gives the network user control of who can receive his location information" and "[t]he network user provides the service with a list of authorized requestors who may receive the user's location information." Ex. 1040, 2:35-41. Enzmann also discloses a user may permit access to an unauthorized user upon receiving a request from the system via his/her mobile device: "To facilitate the alternate preferred embodiment in which a network user responds to off-list requests, wireless handheld devices 104 include messaging capabilities that can communicate a request for access, the identification of the unauthorized requestor, and a response by the network user. For example, such messaging capabilities can be audio-based, text-based, or graphical." Ex. 1040, 5:50-56

313. Thus, it is my opinion that Enzmann discloses this limitation.

d. *Claim 1c – "transmitting said location to at least one of said users of said list of users over said communications network"*

314. Enzmann discloses this claim element. Enzmann discloses that the location server sends the location for the identified user to the requestor. Ex. 1040, 3:1-6 ("According to a preferred method of the present invention, the location server receives a location query for a network user from a requestor, retrieves the user's location from the location system, and forwards the location back to the requestor. Preferably, the location server also confirms that the requestor is authorized to receive the user's location."). Enzmann discloses that this location information is sent over a communications network. *Id.*, 3:53-55 ("The present invention is a location query service for use with a wireless network that tracks the locations of network users.").

315. Thus, it is my opinion that Enzmann discloses this limitation.

e. *Claim 1d – "determining a second location associated with one of said plurality of wireless telephones"*

316. Enzmann discloses this claim element. Enzmann discloses determining a second location associated with one of said plurality of second devices. Enzmann discloses that position information for a requesting mobile device and a target mobile device may be obtained. Ex. 1040, 5:41-50, Fig 1. For example, "[i]n step 206 a, user wireless network 102 uses location system 120 to

determine the location of the specified network device." Ex. 1040, 7:63-65. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann's system is able to determine multiple locations of multiple devices.

317. Thus, it is my opinion that Enzmann discloses this limitation.

f. *Claim 1e – "providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said second location and said location"*

318. Enzmann in combination with Obradovich renders obvious this claim element. Enzmann discloses a mobile device can request and receive a position of another mobile device and transmit directional information in a "displayable form." Ex. 1040, 3:1-6, 3:9-12. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. A POSITA would understand that Enzmann's system would thus be capable of obtaining and providing directional information among locations of wireless devices.

319. To the extent Enzmann does not expressly disclose providing directions to the wireless devices, it does disclose providing, via a mapping converter, location information in a displayable form, which can include an

address. Ex. 1040, 8:60-67, 4:46-56. In addition, Enzmann describes an example where location information could be used to locate a nearby friend and select a nearby convenient restaurant, which implies having at least some directional information. Ex. 1040, 9:15-30. Thus a POSITA would have been motivated to modify Enzmann's system to provide directions among devices to facilitate two people meeting each other. Ex. 1040, 9:4-30. Providing routing functionality in addition to Enzmann's location functionality would have been routine optimization of known functionalities to improve the operability of Enzmann's system.

320. In addition, modifying Enzmann's system to provide directional information would have been obvious based on Obradovich. Obradovich describes providing locations and directional information among devices so "Remote and distant third parties could communicate with each other and, by sending and receiving GPS encoded data, can meet or find each other in remote locations." Ex. 1055, 4:13; *see also id.* at 16:5-17.

321. Thus, it is my opinion that Enzmann in combination with Obradovich renders this limitation obvious, and claim 1 is obvious based on Enzmann in combination with Obradovich.

2. Claim 2 – "The system of claim 1, wherein said changing comprises adding an additional user to said list of users."

322. Enzmann discloses this limitation. As described for claim 1b,

Enzmann discloses a mobile device user can define a group of users who have access to location information and permit access for previously unauthorized requestors. Ex. 1040, 2:35-41, 7:39-43, 7:51-58. Thus, Enzmann's system permits adding additional users to the group of users having access to location information.

323. Thus, it is my opinion that Enzmann discloses this element, and claim 2 is obvious based on Enzmann in combination with Obradovich.

3. Claim 3 – "The system of claim 1, where said remote system is further capable of transmitting the address of said location to said at least one of said users of said list of users."

324. Enzmann discloses this limitation. Enzmann discloses that its system can transmit an address of a mobile device to another mobile device. Ex. 1040, 3:9-12 ("[T]he method further includes translating the location from the raw form to a 'displayable' form (e.g., a street address, building name, or area name."), 4:50-56 ("For example, the database of mapping converter 126 could include an entry associating coordinates 'R-S' (raw information) with the description '101 Park Place' (displayable information).").

325. Thus, it is my opinion that Enzmann discloses this element, and claim 3 is obvious based on Enzmann in combination with Obradovich.

4. Claim 4 – "The system of claim 1, where said remote system is further capable of determining a third location associated with one of said plurality of wireless telephones."

326. Enzmann discloses this limitation. As described for claim 1d,

Enzmann discloses a system that obtains position information for mobile devices. Ex. 1040, 2:3-15, 3:53-61.

327. The '024 Patent does not define "third location." Ex. 1008. A POSITA would understand the plain and ordinary meaning of "third location" in the claim is a location that is distinct from the first location (location of first wireless telephone) and the second location (location of one of the plurality of wireless telephones).

328. Enzmann's system is capable of determining a third location of one of the plurality of mobile because each mobile device continuously updates its location information, such that each time a mobile device updates its location, it is determining a distinct location associated with one of the plurality of wireless telephones. Ex. 1040, 8:14-19, 4:25-27.

329. Thus, it is my opinion that Enzmann discloses this element, and claim 4 is obvious based on Enzmann in combination with Obradovich.

5. Claim 5 – "The system of claim 1, where said remote system is further capable of determining the distance between said first wireless telephone and at least one of said plurality of wireless telephones."

330. Enzmann renders this limitation obvious. Enzmann discloses its wireless devices may be equipped with a GPS receiver, which obtains position coordinates of individual devices, and that such location information could be

shared among devices. Ex. 1040, 4:25-27, 4:37-38, 5:13-20. It was well-known at the time the GPS-enabled devices it describes could determine the distance between devices using known techniques. Thus, a POSITA would have known that Enzmann's system would have been capable of determining the distance between the location information of mobile devices it has obtained.

331. Thus, it is my opinion that Enzmann renders this element obvious, and claim 5 is obvious based on Enzmann in combination with Obradovich.

6. Claim 6 – "The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for an indefinite period of time."

332. Enzmann discloses this limitation. Enzmann's system stores a user's list of authorized users in memory storage 128, which is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. As shown below, the location server 100 is remote from the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, Fig. 1.

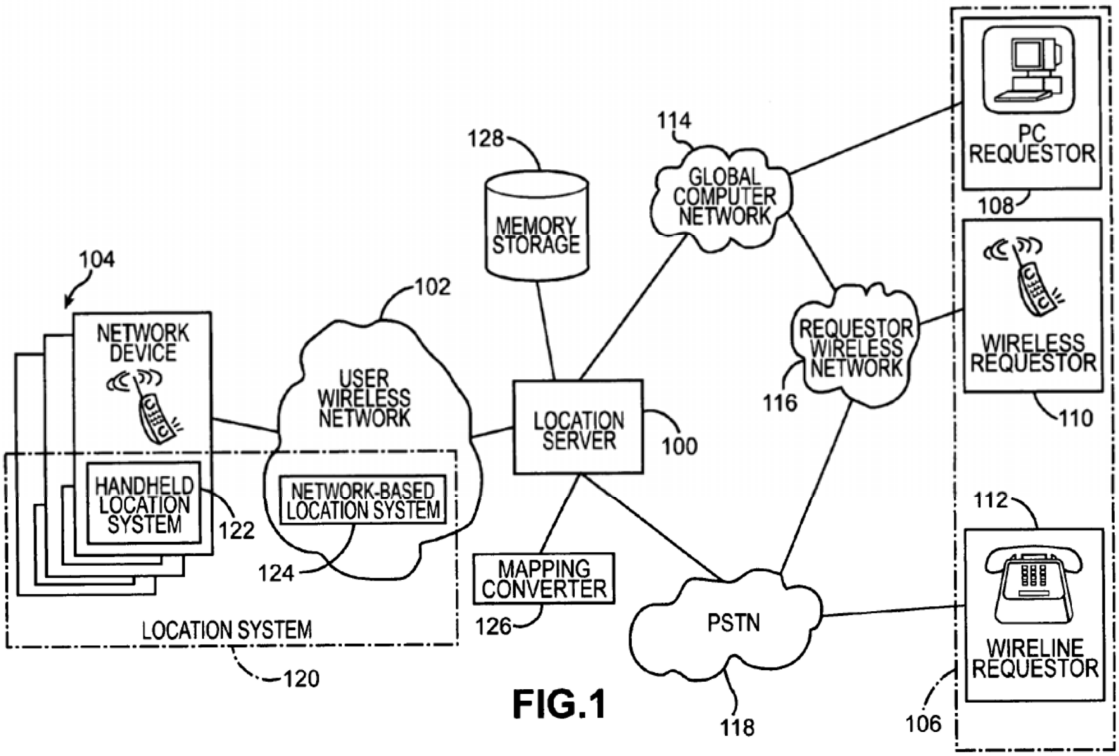


FIG.1

333. While a user is included within list, they are permitted to obtain the user's wireless device's position indefinitely. Thus, the list provides permission for an indefinite period of time.

334. Thus, it is my opinion that Enzmann discloses this element, and claim 6 is obvious based on Enzmann in combination with Obradovich.

7. Claim 7 – "The system of claim 1, wherein said remote system is further capable of storing access rights that allow at least one of said list of users to access said location of said first wireless telephone for only a specific period of time."

335. Enzmann renders this limitation obvious. As discussed for claim 6, Enzmann's system stores the lists of authorized users in remote memory storage 128, which is accessible by the system's location server 100. Ex. 1040, 5:28-38,

Fig. 1. While a user is included within list, they are permitted to obtain the user's wireless device's position.

336. To the extent Enzmann does not expressly disclose access rights that allow a user to access location information for a specific period of time, it would have been obvious to a POSITA that Enzmann had this capability. For example, Enzmann describes an embodiment where the system can query the targeted wireless device to request permission for an unauthorized requestor. Ex. 1040, 7:26-58. If the targeted wireless device approves the request, the Enzmann system receives the approval and, inherently or obviously for the period of time required to obtain and provide the position, permits it to obtain the targeted wireless device's position. Ex. 1040, 7:51-62. Thus, Enzmann discloses that each request for each unauthorized requestor that is approved only lasts for the specific period of time needed for the single position request. Such authorization would be stored at the server for at least the specific period of time. Further, a POSITA would have been motivated to modify Enzmann's system to include this capability so a user can have more granular control over who can receive their location information and when. A POSITA would have had a reasonable expectation of success as this would simply be an additional permission to store on the server.

337. Thus, it is my opinion that Enzmann renders this element obvious, and claim 7 is obvious based on Enzmann in view of Obradovich.

8. Claim 8 – "The system of claim 7, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless telephone."

338. Enzmann discloses this limitation. As discussed for claims 6 and 7, Enzmann discloses a system capable of authorizing access to location information for a specific period of time, which is provided as an indication to the remote server. Enzmann discloses the wireless telephone provides, and thus the system receives, such authorization which indicates the requestor has access for the specific period of time needed for the single position request. Ex. 1040, 5:28-38, Fig. 1. In other words, the system receives, from the wireless telephone, an indication of a user's permission settings.

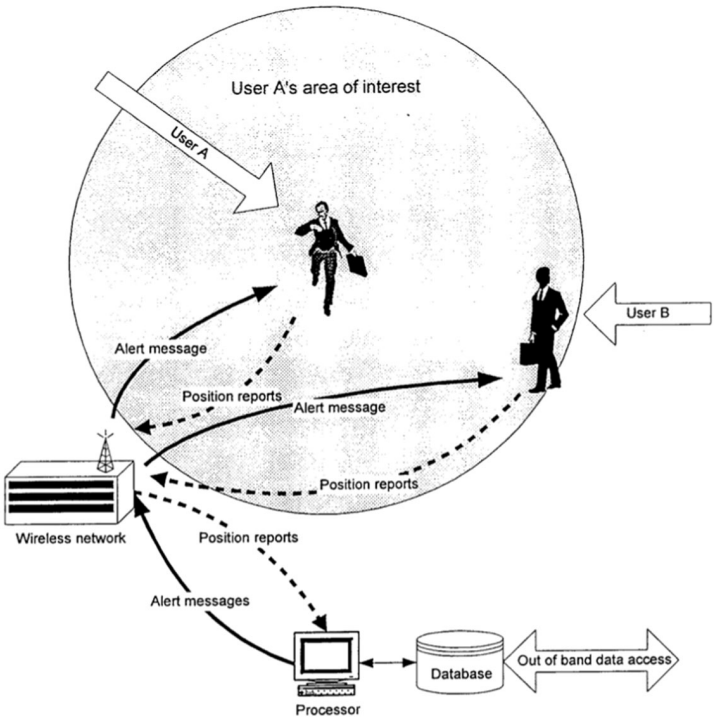
339. Thus, it is my opinion that Enzmann discloses this limitation, and claim 8 is obvious based on Enzmann in combination with Obradovich.

9. Claim 9 – "The system of claim 1, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone."

340. Enzmann in view of Degnbol renders this limitation obvious. In Enzmann's system, the mobile devices can continually update their position to the server, and Enzmann's system can calculate a distance between devices. Ex. 1040, 2:3-7. To the extent Enzmann does not expressly disclose that its system transmits an alert message based on a location of a requesting device, it would have been

obvious that Enzmann's system had this capability as it is capable of monitoring locations of devices and transmitting location information among devices.

341. Further, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



342. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a

user, sends alerts to the user accordingly. *Id.*

343. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Enzmann's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. Indeed, because Enzmann talks about showing a user which of his or her contacts is nearby, extending that functionality to provide alerts, as disclosed in Degnbol, would be an obvious addition. Ex. 1040, 9:15-30.

344. The alert disclosed in Degnbol would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert would aid the user of the requesting device in visually searching for the nearby target device, if they move into close range.

345. As stated above, a POSITA would have known that Enzmann's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Enzmann's system already determines the positions of users' devices and distance between them and sends location information to devices. Further, a POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist

software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

346. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 9 is obvious based on Enzmann in view of Degnbol and Obradovich.

10. Claim 10 – "The system of claim 9, wherein said remote system is further capable of receiving a request for said alert from said one of said plurality of wireless telephones."

347. Enzmann in view of Degnbol renders this limitation obvious. Enzmann discloses that its system provides a location query service for users of wireless handheld devices. Ex. 1040, 3:53-61. Enzmann's system allows a user of a wireless device, e.g., wireless requestor 110, to request the location of another wireless device. Ex. 1040, 6:8-11, Fig. 1. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request.

348. To the extent Enzmann does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices and system in Enzmann had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states

"[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

349. A POSITA looking to expand Enzmann's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Enzmann based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 9.

350. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 10 is obvious based on Enzmann in combination with Degnbol and Obradovich.

11. Claim 11 – "The system of claim 10, wherein said alert is geographic area-based and said remote system is further capable of alerting said one of said plurality of wireless telephones when said location of said first wireless telephone is within a geographic area specified by said one of said plurality of wireless telephones."

351. Enzmann in view of Degnbol renders this limitation obvious. As set forth for claims 9 and 10, it is my opinion that Enzmann in view of Degnbol

renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone.

352. Degnbol further discloses that the alert may be geographic area-based and the system may alert the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047, 3:23-24 ("It is an advantage of the present invention that user "A" can be alerted when user "B" arrives or leaves the defined location(s) or area(s)."), 13:19-21, claims 29-30. A POSITA would have been motivated to combine Enzmann and Degnbol with a reasonable expectation of success, as set forth in claims 9 and 10, to provide geographic-based alerts in Enzmann's system as this could alert a user when a friend is in the area.

353. Thus, it is my opinion that Enzmann in view of Degnbol renders this element obvious, and claim 11 is obvious based on Enzmann in view of Degnbol and Obradovich.

12. Claim 12 – "The system of claim 1, wherein said remote system is further capable of transmitting an alert to said first wireless telephone when said one of said plurality of wireless telephones locates said first wireless telephone."

354. Enzmann in view of Degnbol renders this limitation obvious. As I explain above, Enzmann's system transmits location information among devices. Ex. 1040, 5:3-9; 7:54-58; Fig. 2. To the extent Enzmann does not expressly

disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Enzmann's system had this capability.

355. In addition, it would have been obvious to include such a capability in Enzmann's system based on Degnbol. For example, Degnbol discloses "[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). As set forth for claims 9-11, a POSITA would have been motivated to incorporate this functionality in Enzmann's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

356. Thus, it is my opinion that Enzmann in view of Degnbol renders this element obvious, and claim 12 is obvious based on Enzmann in view of Degnbol

and Obradovich.

13. Claim 13 – "The system of claim 1, wherein said remote system is further capable of storing a history of locations of said first wireless telephone."

357. Enzmann alone or in view of Ganesh renders the limitation of this claim obvious. Enzmann discloses storing locations obtained from a wireless telephone on the memory storage 128, which may be in a remote system. Ex. 1040, 5:28-34 ("In a preferred embodiment of the present invention, location server 100 is in communication with a memory storage 128. Memory storage 128 is a database or other memory storage device that can record relationships between device identifications (e.g., MINs) and network user identifications. In addition, memory storage contains authorized requestor lists for each device identification."). Enzmann states "[a]s another way to avoid a prolonged wait for the transmission providing the location information, in an alternate preferred embodiment, as shown in FIG. 3, the present invention periodically records a device's location in a location database 300. Therefore, instead of activating location system 120 only in response to a request from location server 100, location system 120 of user wireless network 102 periodically updates location database 300 and always has location information available when location server 100 makes a request. In such a case, as shown in step 206b, location server 100 checks location database 300 for the location information of the network user." Ex.

1040, 8:20-32.

358. To the extent Enzmann does not expressly disclose storing a history of locations, including this capability in Enzmann's system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains "[t]he one of cell sites 22 and the particular sector identifies the particular one of coverage areas 26" so "the potential location area is predicted to be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Enzmann's system to include this capability with a reasonable expectation of success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

359. Thus, it is my opinion that Enzmann alone or in view of Ganesh renders obvious this limitation, and claim 13 is obvious based on Enzmann in view of Obradovich or in view of Obradovich and Ganesh.

14. Claim 14 – "The system of claim 13, wherein said transmitting said location to at least one of said users of said list of users over said communications network comprises transmitting to said at least one of said users a location from said history of locations when said first wireless telephone is turned off."

360. Enzmann in view of Ganesh renders this limitation obvious. As explained for claim 13, Enzmann, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Enzmann does not disclose transmitting a location from a history of locations when a wireless device is off, Enzmann's system could transmit this stored location even when the phone is turned off.

361. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Enzmann could transmit location information even when a device is off, as described in Ganesh, because Enzmann's system has stored location information and would have been capable of sending that information when the phone is off.

362. Thus, it is my opinion that Enzmann in view of Ganesh renders this limitation obvious, and claim 14 is obvious based on Enzmann in view of Ganesh and Obradovich.

15. Claim 15 – "The system of claim 1, wherein said remote system is further capable of providing said location to a device utilized by one of said users of said list of users after said one of said users of said list of users utilizes said device to input a login and password for said one of said list of users into a website."

363. Enzmann discloses this limitation. Enzmann discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a login and password. Ex. 1040, 6:41-48 ("As shown in step 200, a requestor submits a location query to location server 100. The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service.").

364. Enzmann discloses entering the username and password may be done on a mobile device through a website: "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device. For example, if the requestor uses a

personal computer 108 linked to location server 100 through global computer network 114, the requestor could initiate the query using a graphical user interface. As another example, if the requestor uses a text messaging wireless device 110 linked to location server 100 through requestor wireless network 116 and global computer network 114, the requestor could initiate the query using a menu driven interface or a series of key sequence inputs." Ex. 1040, 6:51-62. A POSITA would understand a requestor using Enzmann's system inputs their login and password into a website.

365. Thus, it is my opinion that Enzmann discloses this limitation, and claim 15 is obvious based on Enzmann in view of Obradovich.

16. Claim 16 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch."

366. Enzmann in view of Degnbol renders obvious this limitation. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. While Enzmann describes its system in the context of mobile phones, a POSITA would understand Enzmann's system may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

367. Further, using Enzmann's system to store and transmit a location of a

watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Enzmann and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Enzmann's system could likewise transmit a location of a watch to the first wireless telephone device, with a reasonable expectation of success.

368. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 16 is obvious based on Enzmann in view of Degnbol and Obradovich.

17. Claim 17 – "The system of claim 16, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

369. Enzmann in view of Degnbol renders this limitation obvious. As explained above in claim 16, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Enzmann explain that their remote systems are capable of communicating with devices over a communications network. Ex. 1047, 5:7-11; Ex. 1040, 2:52-55, 5:41-50. The devices in both Degnbol and Enzmann communicate with devices over a communications network to obtain position information and that such position information may be provided

by a device's positioning system. Ex. 1040, 2:52-55, 5:41-50; Ex. 1047, 5:7-11. A POSITA would have understood Enzmann's system was capable of doing so with a watch per Degnbol.

370. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 17 is obvious based on Enzmann in view of Degnbol and Obradovich.

18. Claim 18 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer."

371. Enzmann alone or in view of Degnbol renders this limitation obvious. Enzmann's remote system is capable of storing and transmitting location of one device to another device. Ex. 1040, 7:51-58, 8:65-67. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. A POSITA would understand that Enzmann's system could store and transmit the location of a personal computer. It would have been obvious that Enzmann's system could transmit the location of a personal computer to a wireless device at least because it discloses the requesting device may be a personal computer. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

372. Further, using Enzmann's system to store and transmit a location of a PC would have been obvious at least based on Degnbol. Degnbol discloses

determining and storing a location of a PC. Ex. 1047, 4:27-28, 7:14-15, claim 9. A POSITA would have known Enzmann's system could likewise transmit a location of a PC to the first wireless telephone as Enzmann's system works with personal computers because it discloses the requesting device may be a personal computer. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

373. Thus, it is my opinion that Enzmann alone or in view of Degnbol renders this limitation obvious, and claim 18 is obvious based on Enzmann in view of Obradovich or in view of Degnbol and Obradovich.

19. Claim 19 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio."

374. Enzmann in view of Obradovich renders obvious this limitation. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. While Enzmann describes its system in the context of mobile phones and landline phones, using Enzmann's system to store and transmit a location of a radio to the first wireless telephone device would have been obvious and within the capabilities of Enzmann's system.

375. Further, storing and transmitting the location of a radio to the first

wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs), such as to be displayed on a map along a route. *Id.*, 19:38-14:25. 1055

376. Both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Enzmann's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Enzmann's system to do so as this would have been within the capabilities of the devices and system disclosed in Enzmann and a routine implementation.

377. Thus, it is my opinion that this limitation is obvious based on Enzmann in view of Obradovich, and claim 19 is obvious based on Enzmann in combination with Obradovich.

20. Claim 20 – "The system of claim 1, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car."

378. Enzmann in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Further, Enzmann describes prior art vehicle tracking systems that communicate with GPS receivers in vehicles to obtain and monitor vehicle locations. Ex. 1040, 1:55-67. It would have been obvious to a POSITA that the system in Enzmann, which utilizes a network and network based location systems to obtain position information of and communicate with wireless devices, was capable of obtaining, storing, and transmitting a vehicle's location from a GPS-enabled device in the vehicle to a requesting wireless device. Ex. 1040, 4:15-38.

379. Further, including this capability in Enzmann's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic

communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

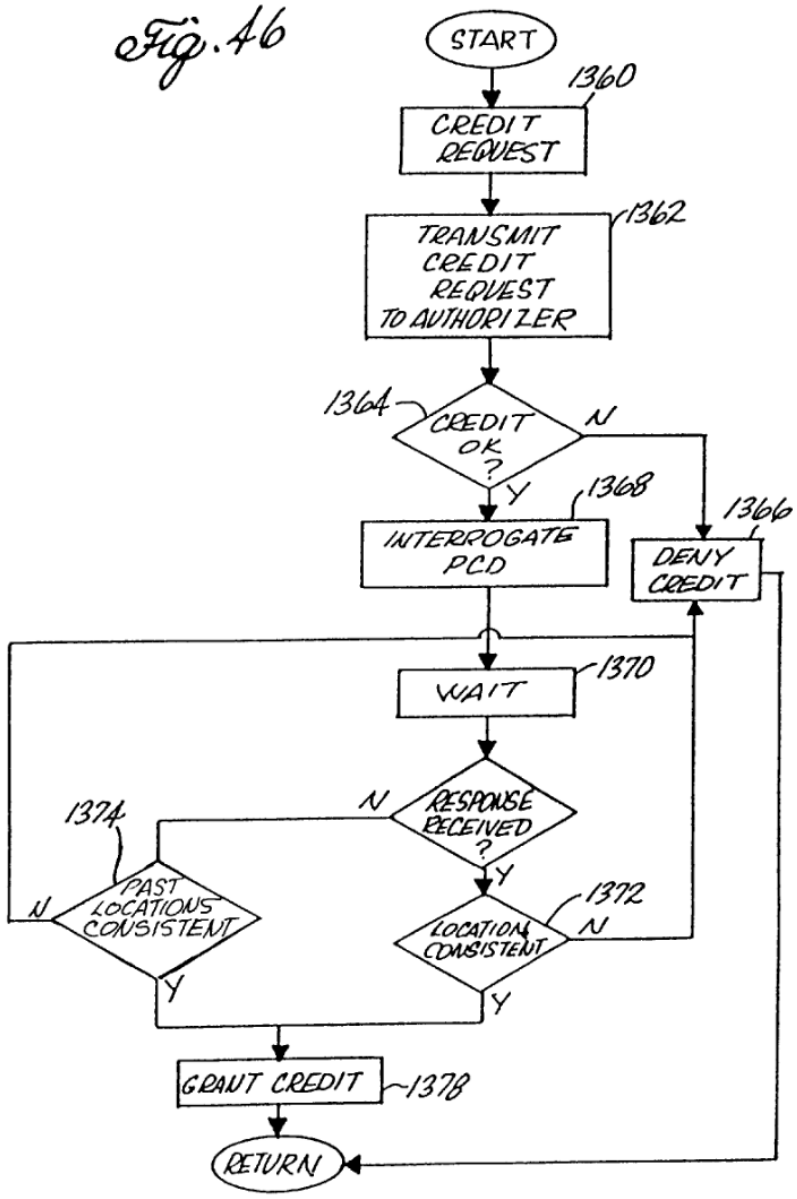
380. A POSITA would have known that Enzmann's system could likewise transmit a location of a car to the first wireless telephone device, and would have been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

381. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation, and Enzmann in view of Obradovich renders claim 20 obvious.

21. Claim 21 – "The system of claim 1, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system."

382. Enzmann in view of Obradovich renders obvious this limitation. Enzmann discloses obtaining and transmitting location information to an authorized requesting device. To the extent Enzmann does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Enzmann's system had such capability because it obtains and transmits location information of a device to another device, which could include a credit card authorization system.

383. Further, including this capability in Enzmann's system would have been obvious based on Obradovich, which describes transmitting a location of a wireless device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

384. A POSITA would have been motivated to use Enzmann's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Enzmann's system because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

385. Thus, it is my opinion that Enzmann in view of Obradovich renders this element, and claim 21 is obvious based on Enzmann in view of Obradovich.

22. Claim 22 – "The system of claim 1, wherein said remote system is further capable of providing to said one of said plurality of wireless telephones information indicating time to reach said location from said second location according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

386. Enzmann in view of Bectolsheim renders this limitation obvious. As discussed above, Enzmann discloses that a mobile device can request and receive a position of another mobile device. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. Because the location server is capable of obtaining two (or more) positions for a mobile device, it could determine its speed and distance to the target device based on the received positions, and compute the travel time from the requestor's location to the target device. While Enzmann does not disclose that its system actually computes a travel

time, this element only requires such calculation "is operable to be made." A POSITA would have known Enzmann's system has this capability.

387. Further, it was known at the time of the Enzmann that systems that could calculate distance and travel time could do so according to multiple types of travel, as shown, for example, in Bectolsheim. Bectolsheim describes calculating and providing routes for driving, public transportation, and walking. See, e.g., Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Enzmann's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Both Enzmann and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124 may include sensors 125 or other components that sense the speed, orientation, direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1040, 8:20-30. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Enzmann and Bectolsheim.

388. Thus, it is my opinion that Enzmann in view of Bectolsheim renders

this limitation obvious, and claim 22 is obvious based on Enzmann in view of Bectolsheim and Obradovich.

23. Claim 23 – "The system of claim 1, wherein said remote system is further capable of: storing a phone book corresponding to a user of said first wireless telephone; and downloading said phone book to a new wireless telephone of said user."

389. Enzmann alone or in combination with Obradovich and/or Degnbol renders this limitation obvious. Enzmann's system stores information correlating position information to a telephone number in a group database, and establishes which users may access such information. Ex. 1040, 5:28-38. While Enzmann does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Enzmann's system was capable of including this capability given Enzmann describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users. The claim simply requires that the system be "capable of" storing a user's phone book and downloading the phone book to a new device. A POSITA would have known that Enzmann's system has this capability given it is able to store location access rights for specific users. A POSITA would have been motivated to modify Enzmann's system to include such functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and

including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

390. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Enzmann's system to include such functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

391. Thus, it is my opinion that Enzmann alone or in combination with Obradovich and/or Degnbol teaches this limitation, and claim 23 is obvious based on Enzmann in combination with Obradovich or in combination with Obradovich and Degnbol.$

24. Independent Claim 24

a. *Claim 24pre – "A system comprising"*

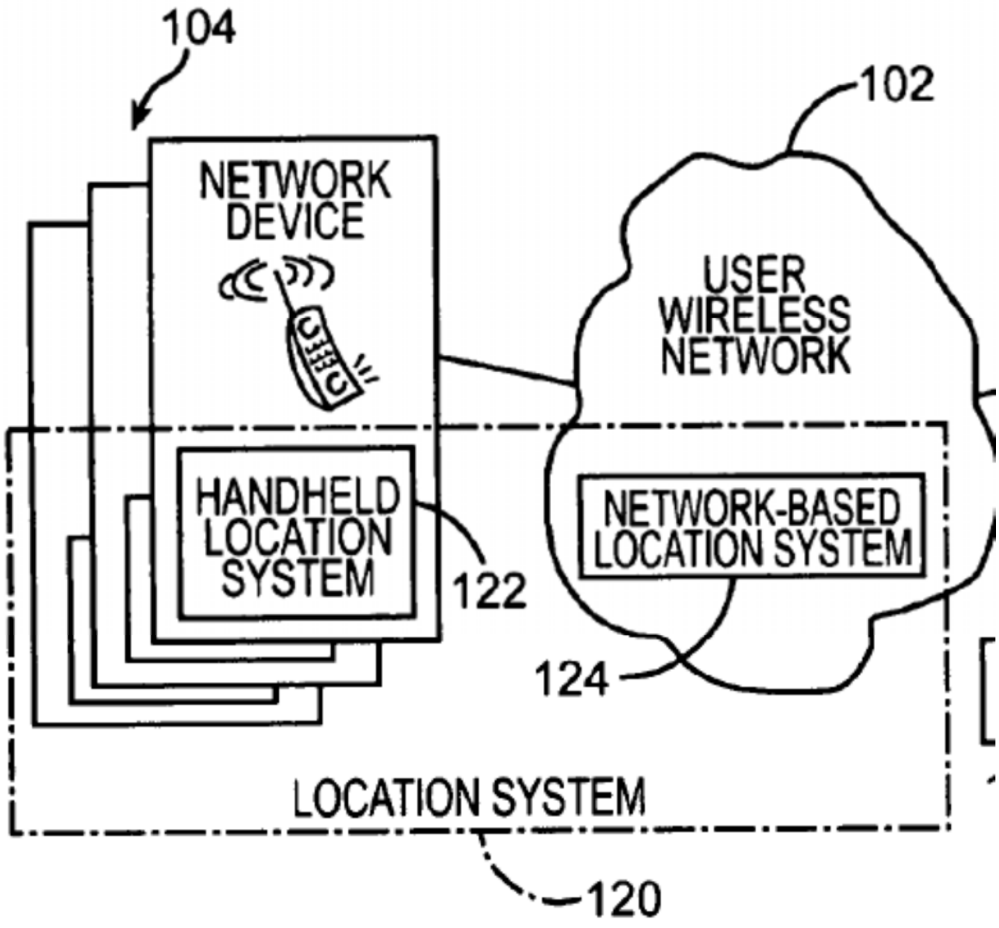
392. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Ex. 1040, 2:3-7 ("The present invention is a location query service for use with a wireless network that tracks the location of network devices. The service provides requesters with the locations of network users, based on the locations of the users' wireless network devices."), 4:25-27 ("Location system 120 provides the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located.").

b. *Claim 24a – "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and"*

393. Enzmann discloses this claim element. Enzmann discloses a system that employs a remote system with a server that communicates with wireless telephones over a communications network and is capable of obtaining their locations. For example, Enzmann describes a system that "includes a user wireless network and a location server" and "[t]he location server is in communication with a plurality of network devices." Ex. 1040, 2:52-55. More specifically, Enzmann provides a location query service for users of wireless handheld devices. Ex. 1040, 3:53-61.

394. Enzmann's system determines the locations of the wireless devices

using either location systems incorporated into the wireless devices themselves or using a network-based location system. Ex. 1040, 5:41-50, Fig. 1.



395. Enzmann discloses that suitable wireless handheld devices for its system include pagers and cellular telephones. Ex. 1040, 5:39-41.

396. Thus, it is my opinion that Enzmann discloses this limitation.

c. ***Claim 24b – "further capable of receiving from a first wireless telephone over said communications network a selection of one of a plurality of users, said selection corresponding to a user of said first wireless telephone manually selecting said one of said plurality of users from a display of said first wireless telephone, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones"***

397. Enzmann alone or in view of Obradovich renders obvious this claim element. Enzmann discloses that its system provides a location query service for users of wireless telephonic devices. Ex. 1040, 3:53-61. Enzmann discloses that its wireless telephonic devices may allow a user to initiate a query using a menu driven interface or a series of key sequence inputs. Ex. 1040, 6:57-62. In addition, Enzmann discloses that devices may provide "a user-friendly interface, e.g., a graphical user interface, through which a requestor can submit a location query." Ex. 1040, 5:64-6:7. Enzmann also discloses that wireless telephonic devices may employ a menu driven interface or a series of key sequence inputs to initiate a location query. Ex. 1040, 6:57-62. It was well-known at the time that Enzmann was filed to allow users to view lists of contacts stored by their wireless telephonic devices. For example, Obradovich describes this conventional functionality as "DIRECTORY," and explains "[p]ressing the DIRECTORY touchpoint 413 displays an alphabetical listing (not shown) of phone numbers stored on-board." Ex. 1055, 14:8-15.

398. A POSITA would have been motivated to modify Enzmann's system to include such functionality to improve the user interface and ease of selecting a user to locate in Enzmann's system, especially when a user is doing so on a mobile device as a user may not recall or have the target user's phone number readily accessible. A POSITA would have had a reasonable expectation of success because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Further, Enzmann's system already discloses that users may use an instant messaging service that can display the user's friends. Ex. 1040, 9:15-27.

399. Thus, it is my opinion that Enzmann alone or in view of Obradovich renders this limitation obvious.

d. *Claim 24c – "receiving from said first wireless telephone information indicative of a login and a password"*

400. Enzmann discloses this claim limitation. Enzmann discloses that a request for a location includes an identification of the requestor and can include a password. Ex. 1040, 6:41-48 ("As shown in step 200, a requestor submits a location query to location server 100. The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which

enables a location query service provider to allow access to the service only by requesters who pay for the service."). Enzmann further states "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device." *Id.*, 6:51-62.

401. Thus, it is my opinion that Enzmann discloses this limitation.

e. ***Claim 24d – "determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, wherein said determining includes identifying said user of said first wireless telephone using said information indicative of said login and password and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephone"***

402. Enzmann discloses this claim element. Enzmann discloses that users may provide lists of authorized requestors to its system to identify the users who may request their locations, and this list may be stored in a memory. Ex. 1040, 2:35-41. When a user requests another user's location, the location server determines whether the user is authorized to obtain the other user's location. Ex. 1040, 3:1-6. In addition, the location request can include both a user identifier and a password, which may be used to identify the user issuing the request. Ex. 1040, 6:41-48. Enzmann states "Location server 100 determines if the requestor is an

authorized requester by consulting memory storage 128, which contains a list that the network user provides. The list indicates which people (requesters) have access to the network user's location information." Ex. 1040, 7:17-22. Thus, the location server receives the identification and password for the requesting user and determines whether they are authorized to receive the location.

403. Therefore, it is my opinion that Enzmann discloses this limitation.

f. *Claim 24e – "determining whether said user of said first wireless telephone has assigned location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining a location of said first wireless telephone"*

404. Enzmann discloses this claim element. As discussed for claim 24d, Enzmann's system determines whether a requestor is authorized to obtain another user's location information. Ex. 1040, 2:39-41, 3:1-6, 7:17-22. Enzmann's system allows users to control who is permitted to access their locations by providing a list of authorized requestors to the system. Ex. 1040, 2:35-41. Enzmann's system could be implemented on a target device, and the target wireless device could have the requestor on its access list permitting the requesting device to access its location. Ex. 1040, 7:26-58.

405. Thus, it is my opinion that Enzmann discloses this limitation.

g. *Claim 24f – "transmitting over said communications network said location information to said first wireless telephone"*

406. Enzmann discloses this claim element. Enzmann discloses that the location server sends the location for the identified user to the requestor. Ex. 1040, 3:1-6 ("According to a preferred method of the present invention, the location server receives a location query for a network user from a requestor, retrieves the user's location from the location system, and forwards the location back to the requestor. Preferably, the location server also confirms that the requestor is authorized to receive the user's location."). Enzmann discloses that this location information is sent over a communications network. *Id.*, 3:53-55 ("The present invention is a location query service for use with a wireless network that tracks the locations of network users.").

407. Thus, it is my opinion that Enzmann discloses this limitation, and claim 24 is obvious based on Enzmann alone or in view of Obradovich.

25. Claim 25 – "The system of claim 24, wherein said remote system is further capable of receiving a selection from said first wireless telephone that modifies said location access rights assigned by said user of said first wireless telephone to said one of said plurality of wireless telephones."

408. Enzmann discloses this limitation. Enzmann discloses that, in its system, a user may provide and modify lists of authorized requestors to its system to identify the users who may request their locations. Ex. 1040, 2:35-41, 5:28-34.

Enzmann also describes that its system can prompt a network user when an unauthorized requestor asks to receive the user's location information and the network user permits or denies access for unauthorized (off-list) requestors. Ex. 1040, 2:42-51, 7:39-43, 7:51-58. The requestors in Enzmann may be wireless telephones. Ex. 1040, 2:3-7, 9:4-14. "To facilitate the alternate preferred embodiment in which a network user responds to off-list requests, wireless handheld devices 104 include messaging capabilities that can communicate a request for access, the identification of the unauthorized requestor, and a response by the network user. For example, such messaging capabilities can be audio-based, text-based, or graphical." Ex. 1040, 5:50-56. Such temporary authorization would be a modification of a user's access rights via the user's device.

409. Thus, it is my opinion that Enzmann discloses this limitation, and claim 25 is obvious based on Enzmann alone or in combination with Obradovich.

26. Claim 26 – "The system of claim 24, wherein said remote system is further capable of transmitting said location of said first wireless telephone to said one of said plurality of wireless telephones associated with said selected one of said plurality of users."

410. Enzmann discloses this limitation. Enzmann discloses transmitting location information of the target device to the requestor. Ex. 1040, 5:3-9; 7:54-58; Fig. 2. Enzmann describes obtaining locations of multiple devices: "[i]n step 206a, user wireless network 102 uses location system 120 to determine the location of

the specified network device." *Id.*, 7:63-65. Enzmann's system can provide any number of locations to any number of requesting mobile devices.

411. Thus, it is my opinion Enzmann discloses this limitation, and claim 26 is obvious based on Enzmann alone or in combination with Obradovich.

27. Claim 27 – "The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for an indefinite period of time."

412. Enzmann discloses this limitation. Enzmann's system stores a user's list of authorized users in memory storage 128, which is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. As shown below, the location server 100 is remote from the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, Fig. 1.

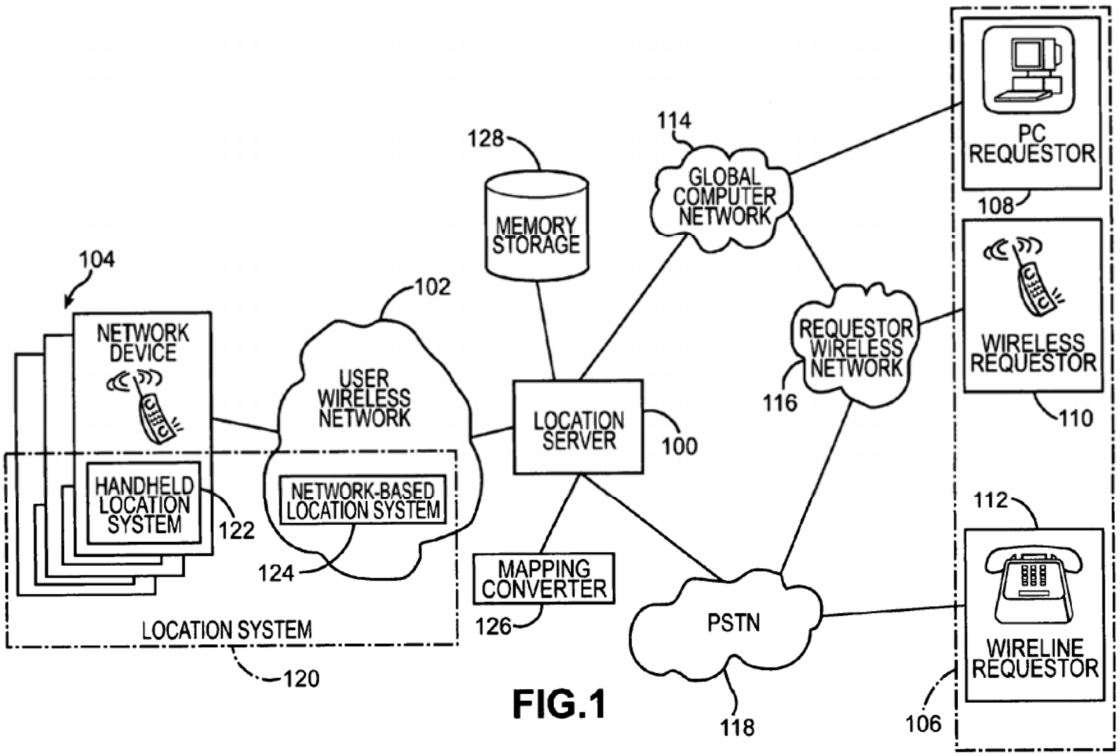


FIG.1

413. While a user is included within list, they are permitted to obtain the user's wireless device's position indefinitely. Thus, the list provides permission for an indefinite period of time.

414. Thus, it is my opinion that Enzmann discloses this limitation, and claim 27 is obvious based on Enzmann alone or in combination with Obradovich.

28. Claim 28 – "The system of claim 24, wherein said remote system is further capable of storing access rights that allow said first wireless telephone to access said location information for said one of said plurality of wireless telephones for only a specific period of time."

415. Enzmann renders obvious this limitation. As discussed for claim 27, Enzmann's system stores the lists of authorized users in memory storage 128,

which is a remote system that is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. While a user is included within list, they are permitted to obtain the user's wireless device's position.

416. To the extent Enzmann does not expressly disclose access rights that allow a user to access location information for a specific period of time, it would have been obvious to a POSITA that Enzmann had this capability. For example, Enzmann describes an embodiment where the system can query the targeted wireless device to request permission for an unauthorized requestor. Ex. 1040, 7:26-58. If the targeted wireless device approves the request, the Enzmann system receives the approval and, inherently or obviously for the period of time required to obtain and provide the position, permits it to obtain the targeted wireless device's position. Ex. 1040, 7:51-62. Thus, Enzmann discloses that each request for each unauthorized requestor that is approved only lasts for the specific period of time needed for the single position request. Such authorization would be stored at the server for at least the specific period of time. Further, a POSITA would have been motivated to modify Enzmann's system to include this capability so as user can have more granular control over who can receive their location information and when. A POSITA would have had a reasonable expectation of success as this would be simply an additional permission to store on the server.

417. Thus, it is my opinion that Enzmann renders this limitation obvious,

and claim 28 is obvious based on Enzmann alone or in combination with Obradovich.

29. Claim 29 – "The system of claim 28, wherein said remote system is further capable of receiving an indication of said specific period of time from said one of said plurality of wireless telephones."

418. Enzmann discloses this limitation. As discussed for claims 27 and 28, Enzmann discloses a system capable of authorizing access to location information for a specific period of time, which is provided as an indication to the remote server. Enzmann discloses the wireless telephone provides, and thus the system receives, such authorization which indicates the requestor has access for the specific period of time needed for the single position request. Ex. 1040, 5:28-38, Fig. 1. In other words, the system receives, from the wireless telephone, an indication of a user's permission settings.

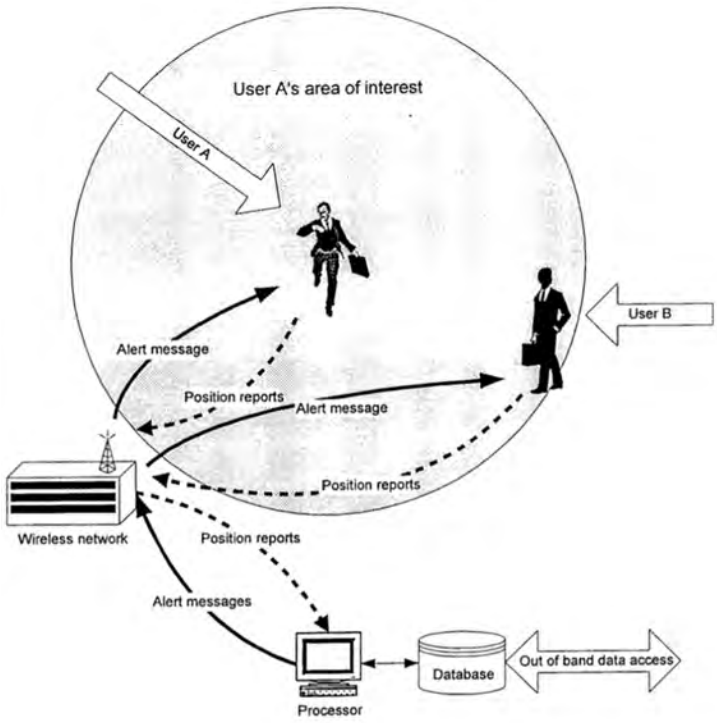
419. Thus, it is my opinion that Enzmann discloses this limitation, and claim 29 is obvious based on Enzmann alone or in combination with Obradovich.

30. Claim 30 – "The system of claim 24, wherein said remote system is further capable of transmitting an alert to said first wireless telephone based on said location information for said one of said plurality of wireless telephones."

420. Enzmann in view of Degnbol renders this limitation obvious. In Enzmann's system, the mobile devices can continually update their position to the server, and Enzmann's system can calculate a distance between devices. Ex. 1040,

2:3-7. To the extent Enzmann does not expressly disclose that its system transmits an alert message based on a location of a requesting device, it would have been obvious that Enzmann's system had this capability as it is capable of monitoring locations of devices and transmitting location information among devices.

421. Further, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



422. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined

distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

423. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Enzmann's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. Indeed, because Enzmann talks about showing a user which of his or her contacts is nearby, extending that functionality to provide alerts, as disclosed in Degnbol, would be an obvious addition. Ex. 1040, 9:15-30.

424. The alert disclosed in Degnbol would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert would aid the user of the requesting device in visually searching for the nearby target device, if they move into close range.

425. As stated above, a POSITA would have known that Enzmann's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Enzmann's system already determines the positions of users' devices and distance between them. Further, a POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol

because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

426. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 30 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

31. Claim 31 – "The system of claim 30, wherein said remote system is further capable of receiving a request for said alert from said first wireless telephone."

427. Enzmann in view of Degnbol renders this limitation obvious. Enzmann discloses that its system provides a location query service for users of wireless handheld devices. Ex. 1040, 3:53-61. Enzmann's system allows a user of a wireless device, e.g., wireless requestor 110, to request the location of another wireless device. Ex. 1040, 6:8-11, Fig. 1. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request.

428. To the extent Enzmann does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices and system in Enzmann had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-

selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

429. A POSITA looking to expand Enzmann's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Enzmann based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 30.

430. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 31 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

32. Claim 32 – "The system of claim 31, wherein said alert is geographic area-based and said remote system is further capable of alerting said first wireless telephone when a location of said one of said plurality of wireless telephones is within a geographic area specified by said first wireless telephone."

431. Enzmann in view of Degnbol renders this limitation obvious. As set

forth for claims 30 and 31, it is my opinion that Enzmann in view of Degnbol renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone.

432. Degnbol further discloses that the alert may be geographic area-based and the system may alert the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047 3:23-24 ("It is an advantage of the present invention that user "A" can be alerted when user "B" arrives or leaves the defined location(s) or area(s)."), 13:19-21, claims 29-30. A POSITA would have been motivated to combine Enzmann and Degnbol with a reasonable expectation of success, as set forth in claims 30 and 31, to provide geographic-based alerts in Enzmann's system as this could alert a user when a friend is in the area.

433. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 32 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

33. Claim 33 – "The system of claim 24, wherein said remote system is further capable of transmitting an alert to said one of said plurality of wireless telephones when said first wireless telephone locates said one of said plurality of wireless telephones."

434. Enzmann in view of Degnbol renders this limitation obvious. As I

explain above, Enzmann's system transmits location information among devices. Ex. 1040, 5:3-9; 7:54-58; Fig. 2. To the extent Enzmann does not expressly disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Enzmann's system had this capability.

435. In addition, it would have been obvious to include such a capability in Enzmann's system based on Degnbol. For example, Degnbol discloses "[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). As set forth for claims 30-32, a POSITA would have been motivated to incorporate this functionality in Enzmann's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

436. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 33 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

34. Claim 34 – "The system of claim 24, wherein said remote system is further capable of storing a history of locations of said one of said plurality of wireless telephones."

437. Enzmann alone or in view of Ganesh renders this limitation obvious. Enzmann discloses its system stores locations obtained from a wireless telephone on memory storage 128, which may be in a remote system. Ex. 1040, 5:28-34 ("In a preferred embodiment of the present invention, location server 100 is in communication with a memory storage 128. Memory storage 128 is a database or other memory storage device that can record relationships between device identifications (e.g., MINs) and network user identifications. In addition, memory storage contains authorized requestor lists for each device identification.").

438. To the extent Enzmann does not expressly disclose storing a history of locations, including this capability in Enzmann's system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains "[t]he one of cell sites 22 and the particular sector identifies the particular one of coverage areas 26" so "the potential location area is predicted to

be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Enzmann's system to include this capability with a reasonable expectation of success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

439. Thus, it is my opinion that Enzmann alone or in view of Ganesh renders this limitation obvious, and claim 34 is obvious based on Enzmann alone or in view of Obradovich and/or Ganesh.

35. Claim 35 – "The system of claim 34, wherein said transmitting said location information to said first wireless telephone comprises transmitting to said first wireless telephone a location from said history of locations when said one of said plurality of wireless telephones is turned off."

440. Enzmann in view of Ganesh renders this limitation obvious. As explained for claim 34, Enzmann, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Enzmann does not expressly disclose transmitting a location from a history of locations when a wireless device is off, Enzmann's system could transmit this stored location even when the phone is turned off.

441. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Enzmann could transmit location information even when a device is off, as described in Ganesh, because Enzmann's system has stored location information and would have been capable of sending that information when the phone is off.

442. Thus, it is my opinion that Enzmann in view of Ganesh renders this limitation obvious, and claim 35 is obvious based on Enzmann in combination with Ganesh or in combination with Ganesh and Obradovich.

36. Claim 36 – "The system of claim 24, wherein said remote system is further capable of providing said location information to another device utilized by said user of said first wireless device after said user utilizes said another device to input said login and said password into a website."

443. Enzmann discloses this limitation. Enzmann discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a login and password. Ex. 1040, 6:41-48 ("As shown in step 200, a requestor submits a location query to location server 100. The query

includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service.").

444. Enzmann discloses entering the username and password may be done on a mobile device through a website: "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device. For example, if the requestor uses a personal computer 108 linked to location server 100 through global computer network 114, the requestor could initiate the query using a graphical user interface. As another example, if the requestor uses a text messaging wireless device 110 linked to location server 100 through requestor wireless network 116 and global computer network 114, the requestor could initiate the query using a menu driven interface or a series of key sequence inputs." Ex. 1040, 6:51-62. A POSITA would understand a requestor using Enzmann's system inputs their login and password into a website.

445. Thus, it is my opinion that Enzmann discloses this limitation, and claim 36 is obvious based on Enzmann alone or in view of Obradovich.

37. Claim 37 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a watch."

446. Enzmann in view of Degnbol renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. While Enzmann describes its system in the context of mobile phones, a POSITA would understand Enzmann's system may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network. Ex. 1040, 3:65-66, 5:39-50, 6:20-27.

447. Further, using Enzmann's system to store and transmit a location of a watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Enzmann and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Enzmann's system could likewise transmit a location of a watch to the first wireless telephone device, with a reasonable expectation of success.

448. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 37 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

38. Claim 38 – "The system of claim 37, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

449. Enzmann in view of Degnbol renders this limitation obvious. As explained above in claim 16, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Enzmann explain that their remote systems are capable of communicating with devices over a communications network. Ex. 1047, 5:7-11; Ex. 1040, 2:52-55, 5:41-50. The devices in both Degnbol and Enzmann communicate with devices over a communications network to obtain position information and that such position information may be provided by a device's positioning system. Ex. 1040, 2:52-55, 5:41-50; Ex. 1047, 5:7-11. A POSITA would have understood Enzmann's system was capable of doing so with a watch per Degnbol.

450. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 38 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

39. Claim 39 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a personal computer."

451. Enzmann alone or in view of Degnbol renders this limitation obvious. Enzmann's remote system is capable of storing and transmitting location of one

device to another device. Ex. 1040, 7:51-58, 8:65-67. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. A POSITA would understand that Enzmann's system could store and transmit the location of a personal computer. It would have been obvious that Enzmann's system could transmit the location of a personal computer to a wireless device at least because it discloses the requesting device may be a personal computer. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

452. Further, using Enzmann's system to store and transmit a location of a PC would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a PC. Ex. 1047, 4:27-28, 7:14-15, claim 9. A POSITA would have known Enzmann's system could likewise transmit a location of a PC to the first wireless telephone, as Enzmann's system works with personal computers because it discloses the requesting device may be a personal computer. Ex. 1040, 364-66, 5:39-50, 6:20-27.

453. Thus, it is my opinion that Enzmann alone or in view of Degnbol renders this limitation obvious, and claim 39 is obvious based on Enzmann in view of Degnbol or in view of Degnbol and Obradovich.

40. Claim 40 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a radio."

454. Enzmann in view of Obradovich renders this element obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. While Enzmann describes its system in the context of mobile phones and landline phones, using Enzmann's system to store and transmit a location of a radio to the first wireless telephone device would have been obvious and within the capabilities of Enzmann's system.

455. Further, storing and transmitting the location of a radio to the first wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs), such as to be displayed on a map along a route. *Id.*, 19:38-14:25. 1055

456. Both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Enzmann's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Enzmann's system to do so as this would have been within the capabilities of the devices and system disclosed in Enzmann and a routine implementation.

457. Thus, it is my opinion that Enzmann in view of Obradovich renders this element obvious, and claim 40 is obvious based on Enzmann in combination with Obradovich.

41. Claim 41 – "The system of claim 24, wherein said remote system is further capable of storing and transmitting to said first wireless telephone a location of a car."

458. Enzmann in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Further, Enzmann describes prior art vehicle tracking systems that communicate with GPS receivers in vehicles to obtain and monitor vehicle locations. Ex. 1040, 1:55-67. It would have been obvious to a POSITA that the system in Enzmann, which utilizes a network and network based location systems to obtain position information of

and communicate with wireless devices, was capable of obtaining, storing, and transmitting a vehicle's location from a GPS-enabled device in the vehicle to a requesting wireless device. Ex. 1040, 4:15-38.

459. Further, including this capability in Enzmann's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

460. A POSITA would have known that Enzmann's system could likewise transmit a location of a car to the first wireless telephone device, and would have been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

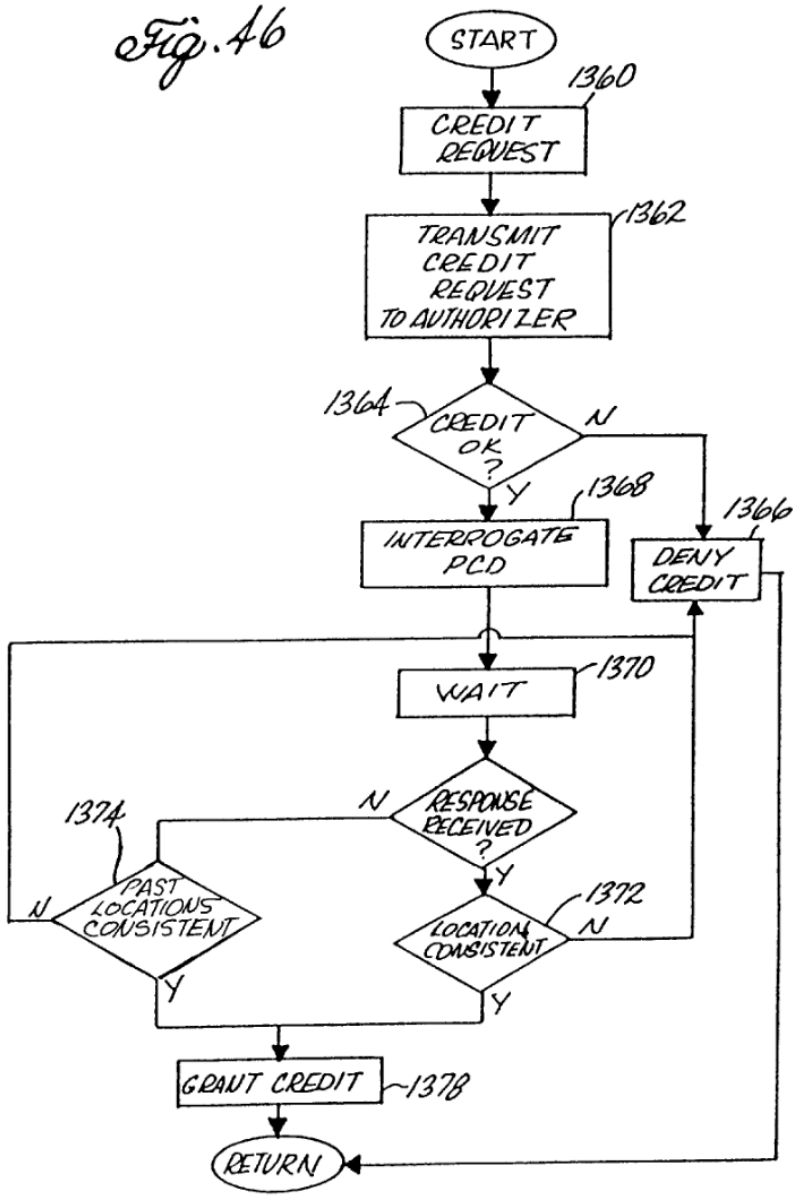
461. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation obvious, and claim 41 is obvious based on Enzmann in combination with Obradovich.

42. Claim 42 – "The system of claim 24, wherein said remote system is further capable of providing said location of said first wireless telephone to a credit card authorization system."

462. Enzmann in view of Obradovich renders this limitation obvious. Enzmann discloses obtaining and transmitting location information to an authorized requesting device. To the extent Enzmann does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Enzmann's system had such capability because it obtains and transmits location information of a device to another device, which

could include a credit card authorization system.

463. Further, including this capability in Enzmann's system would have been obvious based on Obradovich, which describes transmitting a location of a wireless device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

464. A POSITA would have been motivated to use Enzmann's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Enzmann's system because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

465. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation obvious, and claim 42 is obvious based on Enzmann in combination with Obradovich.

43. Claim 43 – "The system of claim 24, wherein said remote system is further capable of providing to said first wireless telephone information indicating time to reach a location of said one of said plurality of wireless telephones from said location of said first wireless telephone according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

466. Enzmann in view of Bectolsheim renders this limitation obvious. As discussed above, Enzmann discloses that a mobile device can request and receive a position of another mobile device. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. Because the location server is capable of obtaining two (or more) positions for a mobile device, it could determine its speed and distance to the target device based on the received positions, and compute the travel time from the requestor's location to the target

device. While Enzmann does not disclose that its system actually computes a travel time, this element only requires such calculation "is operable to be made." A POSITA would have known Enzmann's system has this capability.

467. Further, it was known at the time of the Enzmann that systems that could calculate distance and travel time could do so according to multiple types of travel, as shown, for example, in Bectolsheim. Bectolsheim describes calculating and providing routes for driving, public transportation, and walking. See, e.g., Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Enzmann's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Both Enzmann and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124 may include sensors 125 or other components that sense the speed, orientation, direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1040, 8:20-30. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Enzmann and Bectolsheim.

468. Thus, it is my opinion that this limitation is obvious based on Enzmann in view of Bectolsheim, and claim 43 is obvious based on Enzmann in combination with Bectolsheim or in combination with Bectolsheim and Obradovich.

44. Claim 44 – "The system of claim 24, wherein said remote system is further capable of: storing a phone book corresponding to a user of said first wireless telephone; and downloading said phone book to a new wireless telephone of said user."

469. Enzmann alone or in combination with Obradovich and/or Degnbol renders this limitation obvious. Enzmann's system stores information correlating position information to a telephone number in a group database, and establishes which users may access such information. Ex. 1040, 5:28-38. While Enzmann does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Enzmann's system was capable of including this capability given Enzmann describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users. The claim simply requires that the system be "capable of" storing a user's phone book and downloading the phone book to a new device. A POSITA would have known that Enzmann's system has this capability given it is able to store location access rights for specific users. A POSITA would have been motivated to modify Enzmann's system to include such

functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

470. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Enzmann's system to include such functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

471. Thus, it is my opinion that this limitation is obvious based on Enzmann alone or in combination with Obradovich and/or Degnbol, and claim 44 is obvious based on Enzmann alone or in combination with Obradovich and/or Degnbol.

45. Independent Claim 45

a. *Claim 45pre – "A system comprising"*

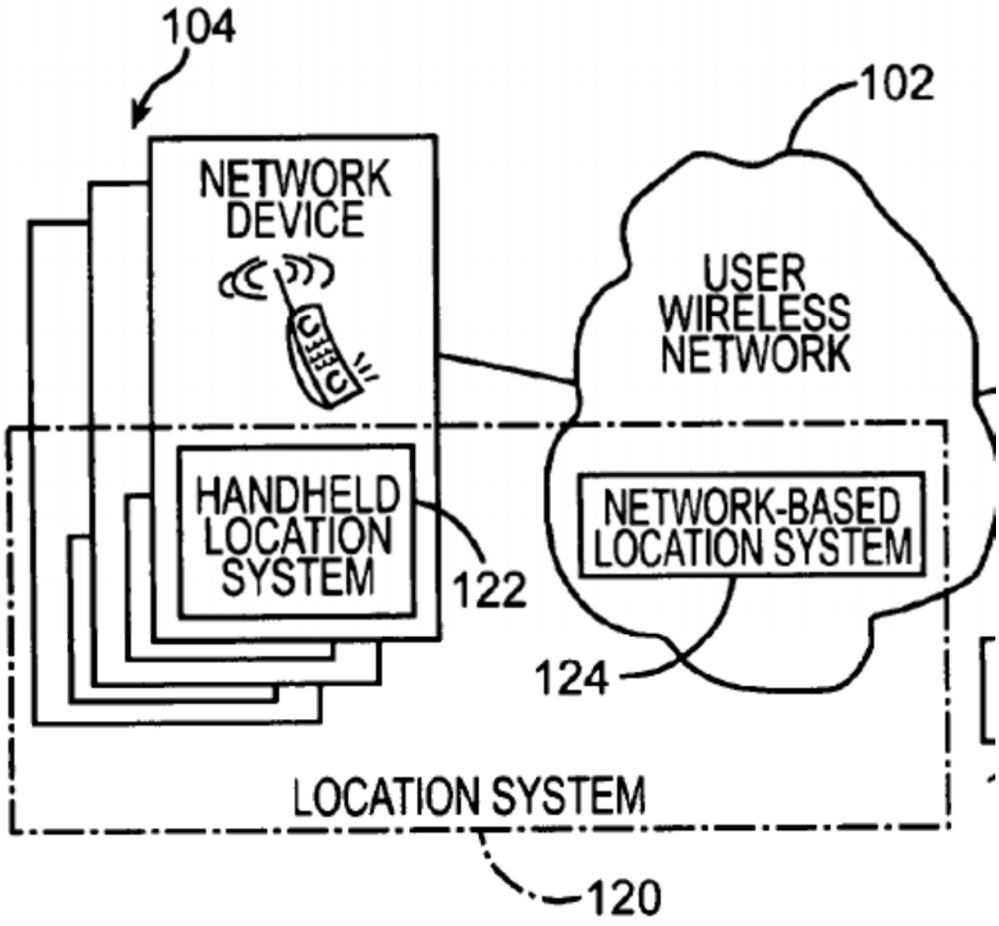
472. I understand that the preamble is not necessarily limiting. In this case, whether or not it is limiting does not affect my opinion as Enzmann discloses the preamble. Ex. 1040, 2:3-7 ("The present invention is a location query service for use with a wireless network that tracks the location of network devices. The service provides requesters with the locations of network users, based on the locations of the users' wireless network devices."), 4:25-27 ("Location system 120 provides the location information, e.g., position coordinates, of a handheld device, which indicates where a network user is located.").

b. *Claim 45a – "a remote system comprising a server, the remote system capable of communicating with a first wireless device and a second wireless device over a communications network and"*

473. Enzmann discloses this claim element. Enzmann discloses a system that employs a remote system with a server that communicates with wireless telephones over a communications network and is capable of obtaining their locations. For example, Enzmann describes a system that "includes a user wireless network and a location server" and "[t]he location server is in communication with a plurality of network devices." Ex. 1040, 2:52-55. More specifically, Enzmann provides a location query service for users of wireless handheld devices. Ex. 1040,

3:53-61.

474. Enzmann's system determines the locations of the wireless devices using either location systems incorporated into the wireless devices themselves or using a network-based location system. Ex. 1040, 5:41-50, Fig. 1.



475. Suitable wireless devices include cellular telephones. Ex. 1040, 5:39-41.

476. Thus, it is my opinion that Enzmann discloses this limitation.

c. *Claim 45b – "further capable of receiving a request for a location of said first wireless device from said second wireless device"*

477. Enzmann discloses this claim element. Enzmann allows a user of a wireless device, e.g., wireless requestor 110, to request the location of another wireless device via a mobile device. Ex. 1040, 3:53-61, 6:8-11, 6:41-65, Fig. 1.

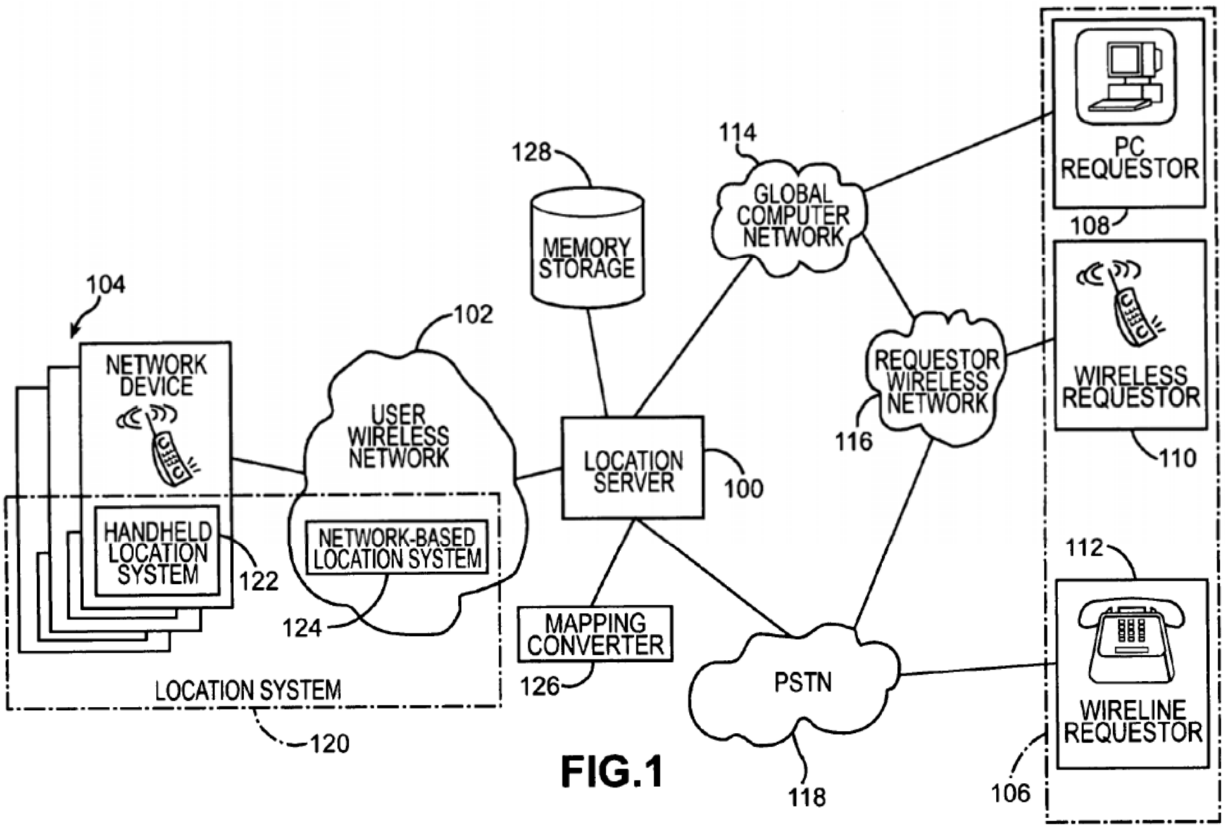


FIG.1

478. Thus, it is my opinion Enzmann discloses this limitation.

d. *Claim 45c – "determining that said second wireless device does not have location access rights for said first wireless device"*

479. Enzmann discloses this claim element. After the Enzmann system receives a position request, it determines whether the requesting mobile device has

permission to receive the position information. Ex. 1040, 7:12-21 ("Once location server 100 has received the query, in step 202, location server 100 determines whether the requestor is an authorized requestor and whether the network user in question accepts requests from unauthorized off-list requestors to view the network user's location information. Location server 100 determines if the requestor is an authorized requester by consulting memory storage 128, which contains a list that the network user provides. The list indicates which people (requesters) have access to the network user's location information."). To the extent a requesting device does not have permission to receive position information, the system would determine that the device does not have location access rights for the first wireless device. Indeed, Enzmann discloses a scenario where the location server consults the access list and determines a requesting mobile device does not have location access rights to the target device, as it is not on the list of authorized requestors. Ex. 1040, 2:24-51, 7:12-19.

480. Thus, it is my opinion Enzmann discloses this limitation.

e. ***Claim 45d – "after determining that said second wireless device does not have said location access rights for said first wireless device, receiving a request from said second wireless device that said location access rights be assigned for said second wireless device by said first wireless device"***

481. Enzmann renders obvious this claim element. Enzmann discloses that

a mobile device can provide permission to another mobile device to request its location. Ex. 1040, 7:39-43. As discussed above, the Enzmann system receives a position request from a wireless device and determines whether the requesting device has access rights, including whether the requesting device does not have such rights. *Id.*, 6:41-45. After the Enzmann system receives a position request and determines a requestor is unauthorized, it can query the targeted mobile device for permission to respond to the position request. Ex. 1040, 2:42-51, 7:39-43. Then, the target device may provide authorization. Ex. 1040, 2:42-51. A POSITA would understand that this request could occur after the system has determined the requesting device does not have access rights. Further, a POSITA would understand that the second device could make the request for location access rights.

482. Thus, it is my opinion Enzmann renders obvious this limitation.

f. *Claim 45e – "receiving from said first wireless device an assignment of said location access rights for said first wireless device to said second wireless device"*

483. Enzmann discloses this claim element. Enzmann discloses a user can "release her location information to the requester" and then "location server 100 proceeds with determining the location information of the wireless device." Ex. 1040, 7:51-58; *see also id.*, 2:42-51, 7:39-43, 7:50-54 ("If, in step 204b, the network user chooses to release her location information to the requester, in step

204d, location server 100 proceeds with determining the location information of the wireless device."). Enzmann discloses a user may permit access to an unauthorized user upon receiving a request from the system via the mobile device: "To facilitate the alternate preferred embodiment in which a network user responds to off-list requests, wireless handheld devices 104 include messaging capabilities that can communicate a request for access, the identification of the unauthorized requestor, and a response by the network user. For example, such messaging capabilities can be audio-based, text-based, or graphical." Ex. 1040, 5:50-56. A POSITA would understand this would be done through the first wireless device.

484. Thus, it is my opinion Enzmann discloses this limitation.

g. *Claim 45f – "storing said location access rights"*

485. Enzmann discloses this claim element. Enzmann's system stores a user's list of authorized users in memory storage 128, which is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. As shown below, the location server 100 is remote from the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, Fig. 1.

486. Thus, it is my opinion Enzmann discloses this limitation

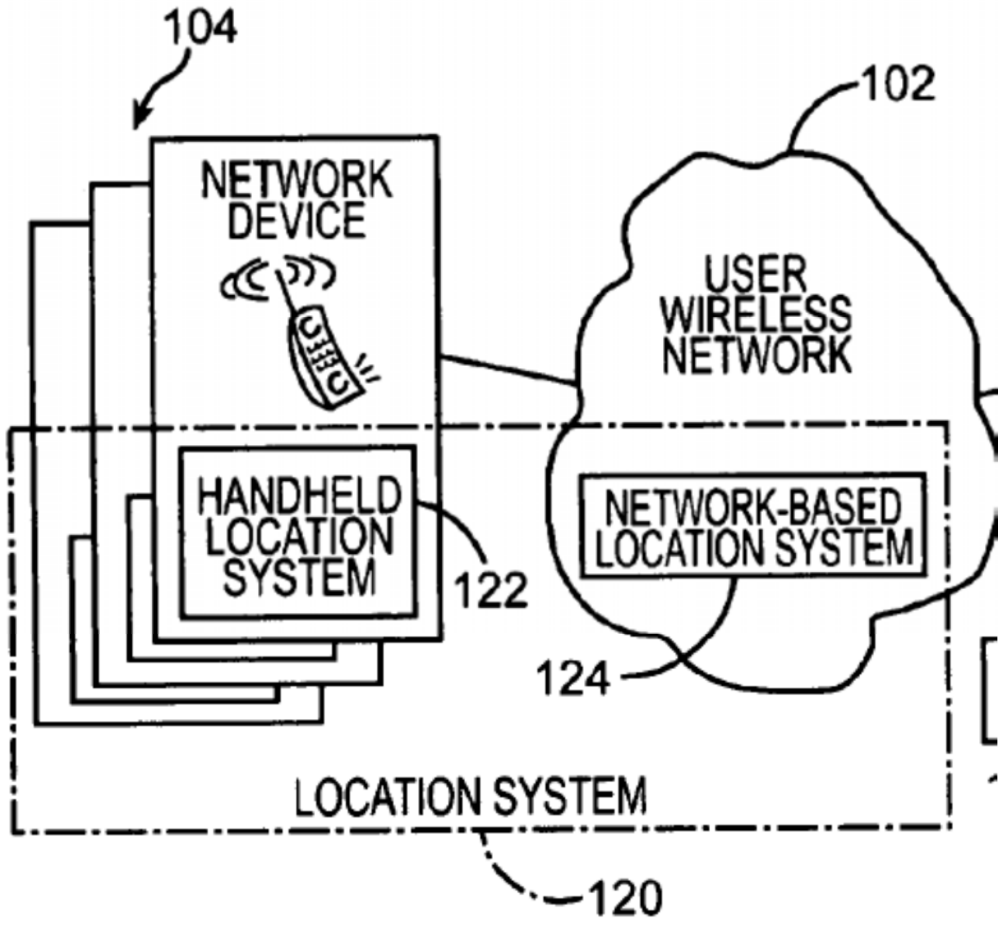
h. *Claim 45g – "providing said location to said second wireless device dependent upon said location access rights"*

487. Enzmann discloses this claim element. Enzmann discloses that the location server sends the location for the identified user to the requestor. Ex. 1040, 3:1-6 ("According to a preferred method of the present invention, the location server receives a location query for a network user from a requestor, retrieves the user's location from the location system, and forwards the location back to the requestor. Preferably, the location server also confirms that the requestor is authorized to receive the user's location."). Enzmann discloses that this location information is sent over a communications network. *Id.*, 3:53-55 ("The present invention is a location query service for use with a wireless network that tracks the locations of network users.").

488. Thus, it is my opinion Enzmann discloses this limitation, and claim 45 is obvious based on Enzmann.

46. Claim 46 – "The system of claim 45, wherein said first wireless device and said second wireless device are cellular phones."

489. Enzmann discloses claim 46. Enzmann describes a system for determining and transmitting the locations of wireless devices, including cell phones. Ex. 1040, 5:39-41, Fig. 1.



490. Thus, Enzmann discloses this claim element, and claim 46 is obvious based on Enzmann.

47. Claim 47 – "The system of claim 45, wherein said location access rights include the ability to obtain said location, wherein said location is provided to said second wireless device from said server even when said first wireless device is off."

491. Enzmann in view of Ganesh renders this limitation obvious. As explained for claim 45, Enzmann describes that a device may grant or deny access to its location by establishing privacy settings or a group of authorized users. Ex.

1040, 2:35-41.

492. In addition, as explained for claims 13 and 34, Enzmann describes at least the last location obtained. Ex. 1040, 5:28-34. Thus, Enzmann's system could transmit this stored location even when the phone is turned off.

493. To the extent Enzmann does not expressly disclose transmitting a location when a wireless device is off, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Enzmann could transmit location information even when a device is off, as described in Ganesh, because Enzmann's system has stored location information and would have been capable of sending that information when the phone is off. Thus, a POSITA would understand Enzmann's location access rights including the ability of a requesting device to obtain a target device's location could include obtaining that location when the target device is off.

494. Thus, it is my opinion that Enzmann in view of Ganesh renders this claim element obvious, and claim 47 is obvious based on Enzmann in combination

with Ganesh.

48. Claim 48 – "The system of claim 45, wherein said location access rights comprise a plurality of access levels."

495. Enzmann in view of Obradovich renders this limitation obvious. Enzmann's system allows users to control who is permitted to access their locations by providing a list of authorized requestors to the system. Ex. 1040, 2:35-41. Enzmann also discloses that, if a requestor is not present in a list of authorized requestors, the Enzmann system can query the targeted wireless device and request permission for the requestor, which permission can be granted or denied. Ex. 1040, 7:26-58.

496. To the extent Enzmann does not expressly disclose the location access rights comprise a plurality of access levels, this would have been obvious based on Obradovich. Obradovich describes a system whereby location information may be provided in terms of latitude and longitude, street addresses, and/or site names. Ex. 1055, 26:25-28. Further, a user "assigns security level indexes for each item of information," such as geographic location information. Ex. 1055, 26:29-30. In addition, the user assigns a security index level to other individuals to indicate what information another individual should be provided. Ex. 1055, 26:32-33. A POSITA would understand Obradovich's system permits a user to assign a plurality of access levels to his/her location information permissions.

497. A POSITA would have been motivated to modify Enzmann to incorporate such functionality to allow a mobile device user to further control his or her privacy settings and permissions. Because a user may want to not only control who has access to his or location information, but also control what type of location information users have access to, one of skill in the art would have been motivated to incorporate the security level index into the privacy settings taught in Enzmann's system.

498. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation obvious, and claim 48 is obvious based on Enzmann in combination with Obradovich.

49. Claim 49 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device directions from a location of said second wireless device to said location of said first wireless device."

499. Enzmann alone or in view of Obradovich renders this limitation obvious. Enzmann discloses a mobile device can request and receive a position of another mobile device and transmit directional information in a "displayable form." Ex. 1040, 3:1-6, 3:9-12. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. A POSITA would

understand that Enzmann's system would thus be capable of obtaining and providing directional information among locations of wireless devices.

500. To the extent Enzmann does not expressly disclose providing directions to the wireless devices, it does disclose providing, via a mapping converter, location information in a displayable form, which can include an address. Ex. 1040, 8:60-67, 4:46-56. In addition, Enzmann describes an example where location information could be used to locate a nearby friend and select a nearby convenient restaurant, which implies having at least some directional information. Ex. 1040, 9:15-30. Thus, a POSITA would have been motivated to modify Enzmann's system to provide directions among devices to facilitate two people meeting each other. Ex. 1040, 9:4-30. Providing routing functionality in addition to Enzmann's location functionality would have been routine optimization of known functionalities to improve the operability of Enzmann's system.

501. In addition, modifying Enzmann's system to provide directional information would have been obvious based on Obradovich. Obradovich describes providing locations and directional information among devices so "Remote and distant third parties could communicate with each other and, by sending and receiving GPS encoded data, can meet or find each other in remote locations." Ex. 1055, 4:13; *see also id.* at 16:5-17.

502. Thus, it is my opinion Enzmann alone or in combination with

Obradovich renders this claim element obvious, and claim 49 is obvious based on Enzmann alone or in combination with Obradovich.

50. Claim 50 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device a travel time to said location."

503. Enzmann alone or in view of Obradovich renders this element obvious. As discussed above, Enzmann discloses that a mobile device can request and receive a position of another mobile device. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. Because the location server is capable of obtaining two (or more) positions for a mobile device, it could determine its speed and distance to the target device based on the received positions, and compute the travel time from the requestor's location to the target device. To the extent Enzmann does expressly not disclose computing a travel time, a POSITA would have known Enzmann's system has this capability.

504. Additionally, it would be obvious to extend Enzmann's location determining functionality to include mapping and navigational functionality, such as determining a travel time to a target device. Obradovich discloses providing a travel time between locations. Ex. 1055, 2:60-63, 22:55-65; Fig. 47. Obradovich states "[t]he PCD therefore is able to make use of the traffic speed information and

the distance information to determine travel times for the various route and route alternative segments. Real time calculation and display of segment travel times accordingly allows the PCD user to accurately determine and estimate travel times to particular destinations over a plurality of different roads and road segments." Ex. 1055, 22:47-54. Because travel time is basic information of interest to anyone in route to a destination, a POSITA would have been motivated to modify Enzmann to determine and provide travel time as described in Obradovich. A POSITA would have been motivated to include a determination of the travel time from the requesting device to the location of the target device with a reasonable expectation of success to enhance the displayable data for the requestor. Both Enzmann and Obradovich describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Enzmann and Obradovich.

505. Thus, it is my opinion that Enzmann alone or in view of Obradovich renders this element obvious, and claim 50 is obvious based on Enzmann alone or in combination with Obradovich.

51. Claim 51 – "The system of claim 45, 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 first wireless device, and another one of said plurality of levels of access rights

comprise an approximate location of said first wireless device."

506. Enzmann in view of Obradovich and McDonnell renders this element obvious. As described for claim 48, devices in Enzmann's system can set location access rights with a plurality of access levels. Ex. 1040, 2:35-41. In Enzmann, "[l]ocation server 100 executes the service logic of the present invention, including . . . confirming the access levels of requestors 106." Ex. 1040, 5:3-6. Enzmann describes obtaining exact location information. Ex 1040, 3:9-12, 4:50-56 ("For example, the database of mapping converter 126 could include an entry associating coordinates 'R-S' (raw information) with the description '101 Park Place' (displayable information)."). This information thus includes both exact location information (address) and approximate location information (e.g., city, state, country).

507. To the extent Enzmann does not expressly disclose one of said plurality of levels of access rights comprise the exact location of said first wireless device, and another one of said plurality of levels of access rights comprise an approximate location of said first wireless device, this would have been obvious based on Obradovich and McDonnell. Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to data by assigning "security level indexes for each item of information to information" and "which

security level index each such other individual should be provided." Ex. 1055, 26:29-36. Obradovich teaches each item of geographic location information can be made available only to specific levels of access rights. Ex. 1055, 26:28-35. Obradovich also identifies examples of geographic information such as latitude, longitude, street address, or site names. *Id.*, 26:24-27. McDonnell describes a system that allows a mobile device user to obscure its location information to a specified accuracy level before sending it to a requesting service provider. Ex. 1053, Abstract, 6:44-52, 8:30-45 ("...because of privacy concerns, the user of the mobile entity does not want the Service System to know his/her location with a high degree of accuracy and accordingly specifies an accuracy limit as a quality of Service parameter in data package Q1..."). In McDonnell's system, "upon request...from mobile entity 20 [a mobile device], location server 79 returns...the location L of the mobile entity in an encrypted package P," where the encrypted package "contains an identifier for the mobile entity...and an indicator of the accuracy of the location data provided." Ex. 1053, 8:8-15. Thus, when the mobile entity sends the encrypted location data to the service system, the service system has decryption entity decrypt the data based on the information in the package P so it "can reliably limit the accuracy of the location data it returns to the level specified by the mobile entity." *Id.*, 8:46-53.

508. Given Enzmann's system can limit location sharing to other devices,

it would have been obvious to a POSITA to limit the type of location information shared using access rights, per Obradovich and McDonnell. A POSITA aware of Obradovich's security level index and the accuracy limiting capabilities of McDonnell would be motivated to incorporate such functionality into Enzmann's system to allow a user to have more complete control over their location information. For example, a user may allow precise location for some people, such as family or friends, to enable a requesting device to navigate to their location; however, for other types of requesters, such as shopping or advertising services (such as the Yellow Pages, described in McDonnell), they may wish to provide less accurate location information as McDonnell describes. Ex. 1055, 26:29-36; Ex. 1053, 3:1-16, 8:30-45, 9:45-55. Thus, a POSITA would be motivated to modify Enzmann to incorporate Obradovich's and McDonnell's functionalities to restrict different requesters to different levels of location accuracy.

509. Thus, Enzmann in view of Obradovich and McDonnell renders this element obvious, and claim 51 is obvious based on Enzmann in combination with Obradovich and McDonnell.

52. Claim 52 – "The system of claim 45, 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 first wireless device, and said approximate location comprises a city or state."

510. Enzmann in view of Obradovich and McDonnell renders this

limitation obvious. As set forth for claim 51, Enzmann in view of Obradovich and McDonnell discloses a plurality of levels of access rights related to providing approximate and specific location information to tailor the degree of specificity to the closeness of the relationship. In addition, Enzmann's system is able to obtain and transmit city and state location information to a requesting device. Ex 1040, 3:9-12, 4:50-56 ("For example, the database of mapping converter 126 could include an entry associating coordinates 'R-S' (raw information) with the description '101 Park Place' (displayable information)."). It would have been obvious to provide a city or state as approximate location information to specified users having that access level.

511. Thus, for the reasons set forth in claim 51, it is my opinion that Enzmann in view of Obradovich and McDonnell renders this limitation and claim 52 obvious.

53. Claim 53 – "The system of claim 45, wherein said remote system is further capable of receiving a login and password from said second wireless device to identify a user of said second wireless device."

512. Enzmann discloses this limitation. Enzmann discloses that a request for a location includes an identification of the requestor and can include a password. Ex. 1040, 6:41-48 ("As shown in step 200, a requestor submits a location query to location server 100. The query includes at least an identification

of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service."). Enzmann further states "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device." *Id.*, 6:51-62. The user is using the wireless device to enter a login and password and the system is receiving that information from the device.

513. Thus, it is my opinion that Enzmann discloses this limitation, and claim 53 is obvious based on Enzmann.

54. Claim 54 – "The system of claim 45, wherein said remote system is further capable of: receiving a request from said first wireless device to modify said location access rights for said second wireless device; and modifying said location access rights for said second wireless device based on said request."

514. Enzmann discloses this limitation. Enzmann discloses a user may provide and modify lists of authorized requestors to its system to identify the users who may request their locations. Ex. 1040, 2:35-41, 5:28-34. Enzmann discloses "a preferred embodiment of the present invention gives the network user control of who can receive his location information" and "[t]he network user provides the service with a list of authorized requestors who may receive the user's location

information." Ex. 1040, 2:35-41. Enzmann also discloses a user may permit access to an unauthorized user upon receiving a request from the system via the mobile device: "To facilitate the alternate preferred embodiment in which a network user responds to off-list requests, wireless handheld devices 104 include messaging capabilities that can communicate a request for access, the identification of the unauthorized requestor, and a response by the network user. For example, such messaging capabilities can be audio-based, text-based, or graphical." Ex. 1040, 5:50-56; *see also id.*, 2:42-51, 7:39-43, 7:51-58. Such temporary authorization would be a modification of a user's access rights via the user's device.

515. Thus, it is my opinion that Enzmann discloses this limitation, and claim 54 is obvious based on Enzmann.

55. Claim 55 – "The system of claim 45, wherein said remote system is further capable of: receiving a request from said first wireless device to delete said location access rights for said second wireless device; and deleting said location access rights for said second wireless device based on said request."

516. Enzmann renders obvious this limitation. As described for claim 54, Enzmann's system can change, at the direction of the wireless telephone, a list of users allowed to access the telephone's location. This change can include deleting location access rights for the device. Ex. 1040, 2:35-41, 5:28-34. Enzmann's system "gives the network user control of who can receive his location

information" and "[t]he network user provides the service with a list of authorized requestors who may receive the user's location information." *Id.*, 2:35-41. Enzmann also discloses a user may permit access to an unauthorized user upon receiving a request from the system via his/her mobile device. *Id.*, 5:50-56. A POSITA would recognize the user could likewise delete access rights via his/her mobile device. It is my opinion that although Enzmann does not explicitly disclose deleting location access rights, the ability to delete access rights is obvious because it is an integral aspect of Enzmann's system which allows the user of the target device to control his/her information. A user who was unable to delete location access rights for a given requestor would not actually have "control of who can receive his location information" as Enzmann intends. Ex. 1040, 2:34-36.

517. Thus, it is my opinion that Enzmann renders this limitation obvious, and claim 55 is obvious based on Enzmann.

56. Claim 56 – "The system of claim 45, wherein said remote system is further capable of filtering information about said location such that only a portion of location information associated with said location is transmitted to said second wireless device."

518. Enzmann alone or in combination with Obradovich renders this limitation obvious. Enzmann's system confirms access levels of requestors and returns location information based on the user's preferences. For example, Enzmann states "Location server 100 executes the service logic of the present

invention, including receiving location queries from requesters 106, confirming the access levels of requestors 106, obtaining the location information of wireless network devices 104, and returning the location information to requesters 106." Ex. 1040, 5:3-9. Because Enzmann's system determines authorization and sends only authorized information, a POSITA would understand the claimed filtering is within Enzmann's capabilities and implicitly performed by Enzmann's system.

519. Further, to the extent Enzmann does not expressly disclose filtering information about a device's location such that only a portion of location information is transmitted to another device, this would have been obvious based on Obradovich. As I explained for claims 51 and 52, Obradovich describes a system whereby a user of a mobile device may provide varying levels of access to data by assigning "security level indexes for each item of information to information" and "which security level index each such other individual should be provided." Ex. 1055, 26:29-36. A POSITA would understand that this necessarily means the system in Obradovich filters information based on security level indexes and transmit only a portion of the available information.

520. A POSITA would have been motivated to include filtering location information and transmitting only a portion of location information in Enzmann's system based on Obradovich to enhance the privacy settings available to a user as set forth for claims 51 and 52. Further, because Enzmann's system already

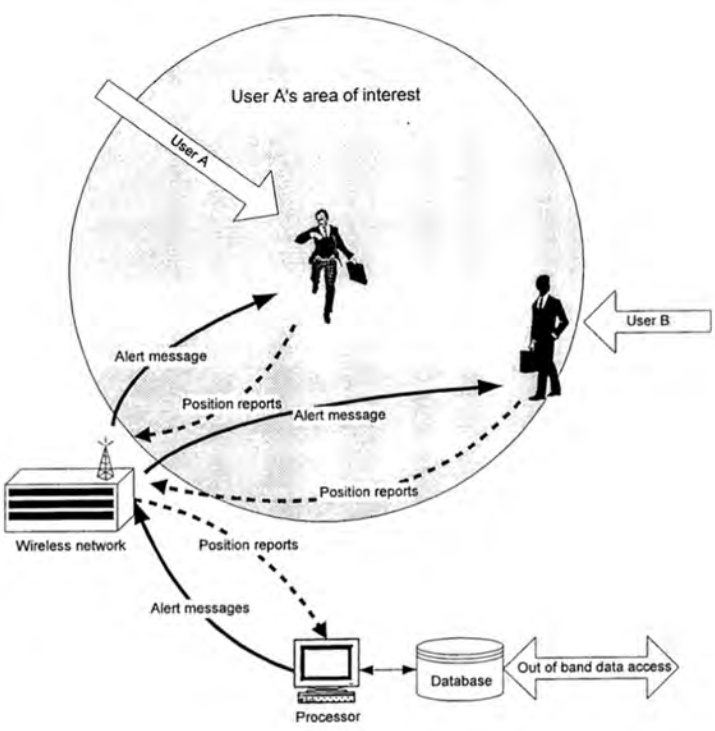
implicitly filters location information based on privacy settings, a POSITA would have had a reasonable expectation of success in adding the filtering functionality described in Obradovich to Enzmann's system.

521. Thus, it is my opinion that Enzmann alone or in combination with Obradovich renders this limitation and claim 56 obvious.

57. Claim 57 – "The system of claim 45, wherein said remote system is further capable of alerting said second wireless device when said first wireless device is within a distance of second wireless device."

522. Enzmann in view of Degnbol renders this limitation obvious. In Enzmann's system, the mobile devices can continually update their position to the server. Ex. 1040, 2:3-7. To the extent Enzmann does not expressly disclose that its system transmits an alert message based on a location of a requesting device, it would have been obvious that Enzmann's system had this capability as it is capable of monitoring locations of devices and transmitting location information among devices.

523. Further, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



524. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

525. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Enzmann's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile

device who may also be moving. In addition, the alert can also allow the user of the requesting device to visually search for the user of the target device, if they move into close range. Indeed, because Enzmann talks about showing a user which of his or her contacts is nearby, extending that functionality to provide alerts, as disclosed in Degnbol, would be an obvious addition. Ex. 1040, 9:15-30.

526. As stated above, a POSITA would have known that Enzmann's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Enzmann's system already determines the positions of users' devices and distance between them. Further, a POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

527. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 57 is obvious based on Enzmann in view of Degnbol.

58. Claim 58 – "The system of claim 45, wherein said remote system is further capable of: receiving a request for a second location of said first wireless device from a non-wireless device, wherein said non-wireless device does not comprise a positioning system; and providing said second location of said first wireless device to said non-wireless device in response to said request."

528. Enzmann discloses this limitation. Enzmann discloses receiving a request for a location of a wireless device from a non-wireless device that does not have a positioning system. Ex. 1040, 3:66-4:4. For example, Enzmann discloses a system in which a personal computer or wireline device can request the position of a wireless device and the system provides location information to the PC or wireline requestor. Ex. 1040, 3:66-4:4, 5:3-9, Fig. 4.

529. Thus, it is my opinion that Enzmann discloses this claim limitation, and claim 58 is obvious based on Enzmann.

59. Claim 59 – "The system of claim 45, wherein said remote system is further capable of receiving said location of said first wireless device from a positioning system of said first wireless device."

530. Enzmann discloses this limitation. Enzmann discloses that its system may be utilized by wireless devices and its wireless devices may be equipped with a GPS receiver to determine positions of the wireless devices. Ex. 1040, 4:37-38, 5:13-20; 8:20-36. Enzmann states "[l]ocation system 120 includes one or both of handheld location systems 122 and a network-based location system 124.

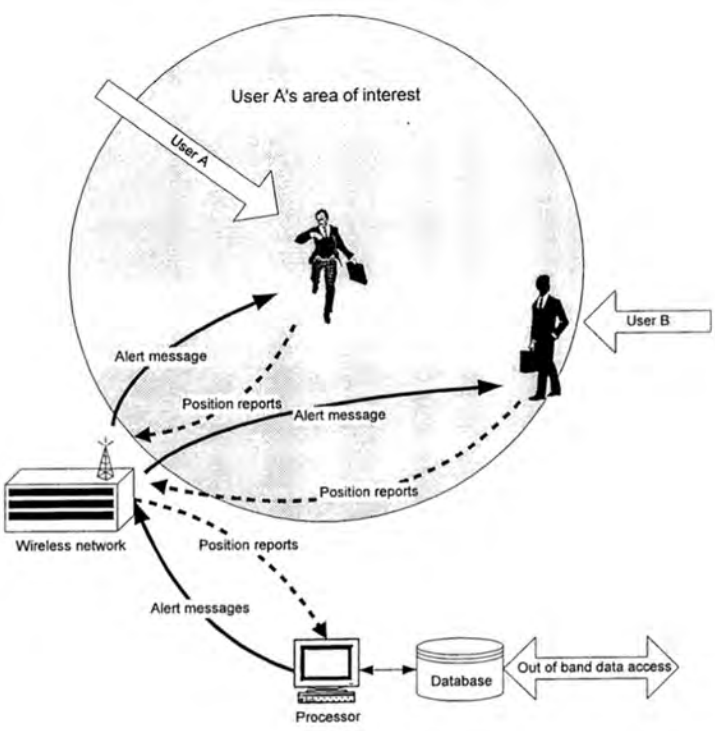
Handheld location systems 122 are provisioned in wireless handheld devices 104." *Id.*, 4:19-23.

531. Thus, it is my opinion that Enzmann discloses this limitation, and claim 59 is obvious based on Enzmann.

60. Claim 60 – "The system of claim 45, wherein said remote system is further capable of setting at least one location alert associated with said first wireless device for a user associated with said second wireless device in response to a request from said second wireless device."

532. Enzmann in view of Degnbol renders this limitation obvious. In Enzmann's system, the mobile devices can continually update their position to the server. Ex. 1040, 2:3-7. To the extent Enzmann does not expressly disclose that its system sets an alert message based on a location of a requesting device, it would have been obvious that Enzmann's system had this capability as it is capable of monitoring locations of devices and transmitting location information among devices.

533. Further, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



534. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.* Further, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

535. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Enzmann's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. For example, it would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert can also allow the user of the requesting device to visually search for the user of the target device, if they move into close range.

536. Further, a POSITA would have known that Enzmann's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, because Enzmann talks about showing a user which of his or her contacts is nearby, so extending that functionality to provide alerts, as disclosed in Degnbol, would be an obvious addition. Ex. 1040, 9:15-30.

537. Further, a POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

538. Thus, it is my opinion that Enzmann in view of Degnbol renders this

limitation obvious, and claim 60 is obvious based on Enzmann in view of Degnbol.

61. Claim 61 – "The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for an indefinite period of time."

539. Enzmann discloses this limitation. Enzmann's system stores a user's list of authorized users in memory storage 128, which is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. As shown below, the location server 100 is remote from the wireless devices 104 and is in communication with the wireless devices 104 via the user wireless network 102. Ex. 1040, Fig. 1.

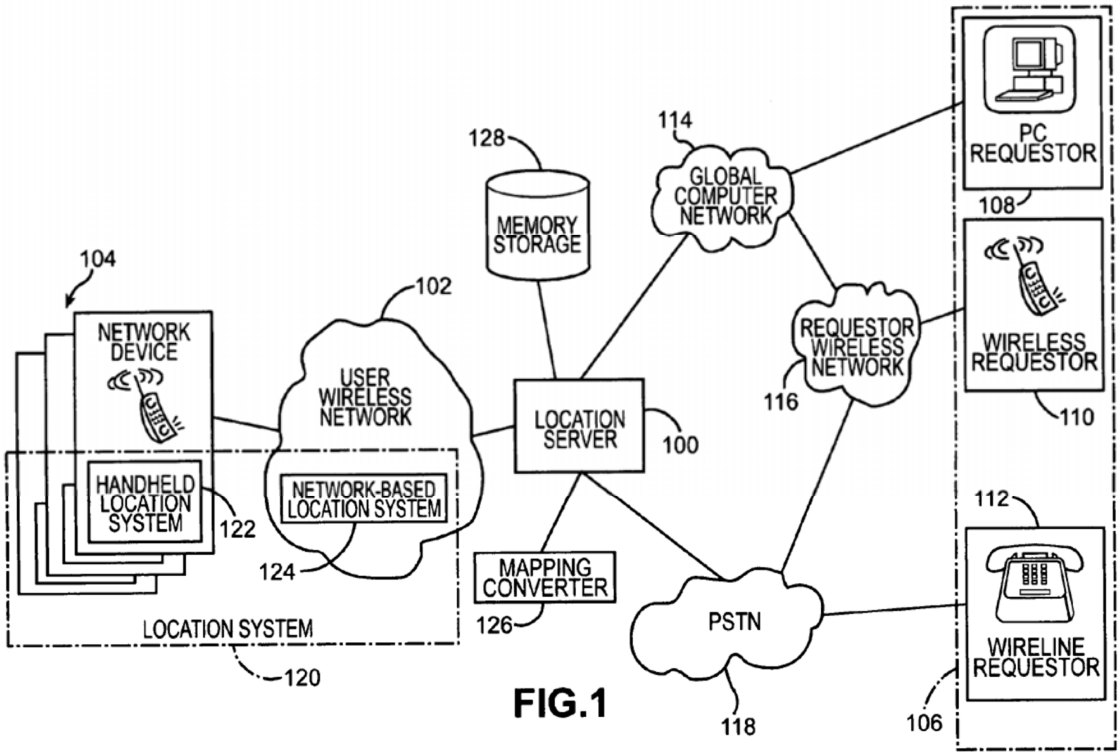


FIG.1

540. While a user is included within list, they are permitted to obtain the

user's wireless device's position indefinitely. Thus, the list provides permission for an indefinite period of time.

541. Thus, it is my opinion that Enzmann discloses this limitation, and claim 61 is obvious based on Enzmann.

62. Claim 62 – "The system of claim 45, wherein said storing said location access rights comprises storing location access rights that allow a user of said second wireless device to access said location of said first wireless device for only a specific period of time."

542. Enzmann renders obvious this limitation. As discussed for claim 61, Enzmann's system stores the lists of authorized users in memory storage 128, which is a remote system that is accessible by the system's location server 100. Ex. 1040, 5:28-38, Fig. 1. While a user is included within list, they are permitted to obtain the user's wireless device's position.

543. To the extent Enzmann does not expressly disclose access rights that allow a user to access location information for a specific period of time, it would have been obvious to a POSITA that Enzmann had this capability. For example, Enzmann describes an embodiment where the system can query the targeted wireless device to request permission for an unauthorized requestor. Ex. 1040, 7:26-58. If the targeted wireless device approves the request, the Enzmann system receives the approval and, inherently or obviously for the period of time required to obtain and provide the position, permits it to obtain the targeted wireless

device's position. Ex. 1040, 7:51-62. Thus, Enzmann discloses that each request for each unauthorized requestor that is approved only lasts for the specific period of time needed for the single position request. Such authorization would be stored at the server for at least the specific period of time. Further, a POSITA would have been motivated to modify Enzmann's system to include this capability so a user can have more granular control over who can receive their location information and when. A POSITA would have had a reasonable expectation of success as this would simply be an additional permission to store on the server.

544. Thus, it is my opinion that Enzmann renders this limitation obvious, and claim 62 is obvious based on Enzmann.

63. Claim 63 – "The system of claim 62, wherein said remote system is further capable of receiving an indication of said specific period of time from said first wireless device."

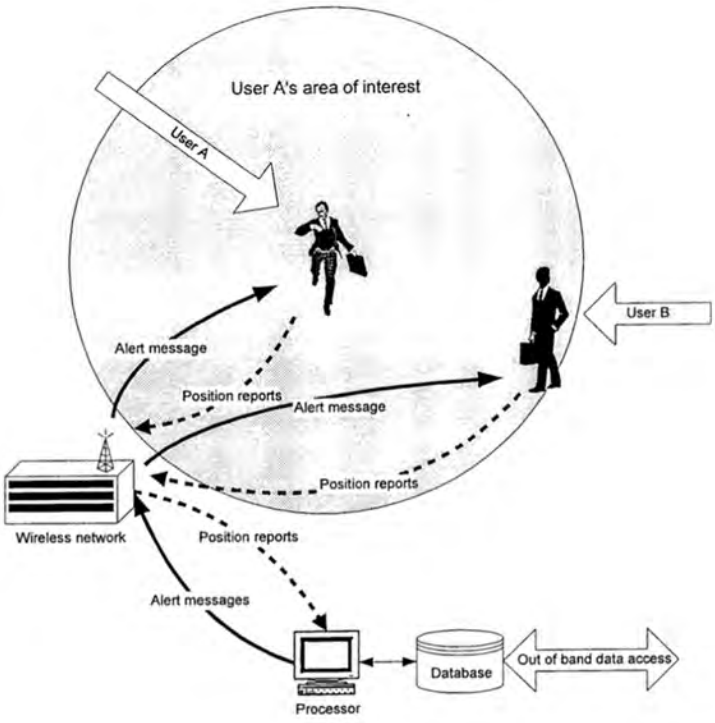
545. Enzmann discloses this limitation. As discussed for claims 61 and 62, Enzmann discloses a system capable of authorizing access to location information for a specific period of time, which is provided as an indication to the remote server. Enzmann discloses the wireless telephone provides, and thus the system receives, such authorization which indicates the requestor has access for the specific period of time needed for the single position request. Ex. 1040, 5:28-38, Fig. 1. In other words, the system receives, from the wireless telephone, an indication of a user's permission settings.

546. Thus, it is my opinion that Enzmann discloses this limitation, and claim 63 is obvious based on Enzmann.

64. Claim 64 – "The system of claim 45, wherein said remote system is further capable of transmitting an alert to said second wireless device based on said location of said first wireless device."

547. Enzmann in view of Degnbol renders this limitation obvious. In Enzmann's system, the mobile devices can continually update their position to the server. Ex. 1040, 2:3-7. To the extent Enzmann does not expressly disclose that its system transmits an alert message based on a location of a requesting device, it would have been obvious that Enzmann's system had this capability as it is capable of monitoring locations of devices and transmitting location information among devices.

548. Further, it would have been obvious to include such a capability based on Degnbol. Degnbol discloses a system that provides location-based alert messages associated with a location when a said user is within a certain distance of that location, as shown in Figure 1 below:



549. Degnbol's system provides an alert message to a user when another user is in a certain pre-determined location or within a certain pre-determined distance of the user. Ex. 1047, Abstract, 3:23-24, 4:1-11; 9:19-2317:12-18, 20:24-28. Degnbol monitors the positions of locations and then, based on settings of a user, sends alerts to the user accordingly. *Id.*

550. A POSITA would have been motivated to incorporate the location-based alerts taught by Degnbol to expand Enzmann's functionality, recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. Indeed, because Enzmann talks about showing a user which of his or her contacts

is nearby, extending that functionality to provide alerts, as disclosed in Degnbol, would be an obvious addition. Ex. 1040, 9:15-30.

551. The alert disclosed in Degnbol would be useful when attempting to navigate to a user of a mobile device who may also be moving. In addition, the alert would aid the user of the requesting device in visually searching for the nearby target device, if they move into close range.

552. As stated above, a POSITA would have known that Enzmann's system would have been capable of transmitting an alert to said one of said plurality of wireless telephones based on said location of said first wireless telephone, as disclosed in Degnbol, as Enzmann's system already determines the positions of users' devices and distance between them. Further, a POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

553. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 64 is obvious based on Enzmann in combination with Degnbol.

65. Claim 65 – "The system of claim 64, wherein said remote system is further capable of receiving a request for said alert from said second wireless device."

554. Enzmann in view of Degnbol renders this limitation obvious. Enzmann discloses that its system provides a location query service for users of wireless handheld devices. Ex. 1040, 3:53-61. Enzmann's system allows a user of a wireless device, e.g., wireless requestor 110, to request the location of another wireless device. Ex. 1040, 6:8-11, Fig. 1. In doing so, the wireless telephone submits a request to the remote server and thus, the remote server receives this request.

555. While Enzmann does not describe receiving a request for an alert from a wireless device, this is taught by Degnbol, and a POSITA would have known the devices and system in Enzmann had such capabilities. For example, Degnbol explains a user can set preferences to receive a notification when a pre-selected user is in a certain location. Ex. 1047, 9:19-21. Further, Degnbol states "[p]references can be configured in several ways; e.g. directly from the handset of the users cellular phone, using a web-based interface, or by calling an operator at a callcenter." Ex. 1047, 11:1-3.

556. A POSITA looking to expand Enzmann's functionality would have been motivated to incorporate the location-based alerts taught by Degnbol, which permit a device to submit and the remote system to receive a request for alerts,

recognizing that such functionality would be useful to provide notice to another user that they have reached or nearly reached the destination device that they are navigating to. A POSITA would have been motivated to modify Enzmann based on Degnbol to include this functionality with a reasonable expectation of success, as discussed above for claim 9.

557. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 65 is obvious based on Enzmann in combination with Degnbol.

66. Claim 66 – "The system of claim 65, wherein said alert is geographic area-based and said remote system is further capable of alerting said second wireless device when said location of said first wireless device is within a geographic area specified by said second wireless device."

558. Enzmann in view of Degnbol renders this limitation obvious. As set forth for claims 64 and 65, it is my opinion that Enzmann in view of Degnbol renders obvious a system capable of transmitting an alert to a wireless telephone based on the location of another wireless telephone based on a request for such alert from the wireless telephone.

559. Degnbol further discloses that the alert may be geographic area-based and the system may alert the wireless telephone when the other wireless telephone is within the specified geographic area. Ex. 1047 3:23-24 ("It is an advantage of the present invention that user "A" can be alerted when user "B" arrives or leaves

the defined location(s) or area(s).”), 13:19-21, claims 29-30. A POSITA would have been motivated to combine Enzmann and Degnbol with a reasonable expectation of success, as set forth in claims 64 and 65, to provide geographic-based alerts in Enzmann’s system as this could alert a user when a friend is in the area.

560. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 66 is obvious based on Enzmann in combination with Degnbol.

67. Claim 67 – “The system of claim 45, wherein said remote system is further capable of transmitting an alert to said first wireless device when said second wireless device locates said first wireless device.”

561. Enzmann in view of Degnbol renders this limitation obvious. As I explain above, Enzmann’s system transmits location information among devices. Ex. 1040, 5:3-9; 7:54-58; Fig. 2. To the extent Enzmann does not expressly disclose transmitting an alert to a wireless telephone when another wireless phone locates it, a POSITA would have known Enzmann’s system had this capability.

562. In addition, it would have been obvious to include such a capability in Enzmann’s system based on Degnbol. For example, Degnbol discloses “[w]hen a match is found between the Personal Profiles of user "A" and "B" an alert is transmitted to user "A", user "B", or both, depending on their respective

preferences." Ex. 1047, 18:29-31; *see also id.* at 21:4-6 ("At the same time, a message is sent to User "B", informing him that he has been the subject of an alert to another user."). As set forth for claims 9-11, a POSITA would have been motivated to incorporate this functionality in Enzmann's system because such functionality would be useful to provide notice to a user that his or her location is being shared with another user so that the user can decide whether to update privacy settings with respect to the other user. A POSITA would have had a reasonable expectation of success in combining Enzmann with Degnbol because both references utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing, authentication and authorization, navigation, location monitoring, and alerting functionality.

563. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 67 is obvious based on Enzmann in combination with Degnbol.

68. Claim 68 – "The system of claim 45, wherein said remote system is further capable of storing a history of locations of said first wireless device."

564. Enzmann alone or in view of Ganesh renders this limitation obvious. Enzmann discloses storing locations obtained from a wireless telephone on the memory storage 128, which may be in a remote system. Ex. 1040, 5:28-34 ("In a

preferred embodiment of the present invention, location server 100 is in communication with a memory storage 128. Memory storage 128 is a database or other memory storage device that can record relationships between device identifications (e.g., MINs) and network user identifications. In addition, memory storage contains authorized requestor lists for each device identification.”). Enzmann states “[a]s another way to avoid a prolonged wait for the transmission providing the location information, in an alternate preferred embodiment, as shown in FIG. 3, the present invention periodically records a device's location in a location database 300. Therefore, instead of activating location system 120 only in response to a request from location server 100, location system 120 of user wireless network 102 periodically updates location database 300 and always has location information available when location server 100 makes a request. In such a case, as shown in step 206b, location server 100 checks location database 300 for the location information of the network user.” Ex. 1040, 8:20-32.

565. To the extent Enzmann does not expressly disclose storing a history of locations, including this capability in Enzmann’s system would have been obvious based on Ganesh. Ganesh discloses obtaining and storing cell site identifiers and the sector (i.e. directional antenna) communicating with a wireless device during calls in a comprehensive call history database. Ex. 1049, 4:8-28. For example, Ganesh explains “[t]he one of cell sites 22 and the particular sector identifies the

particular one of coverage areas 26" so "the potential location area is predicted to be the one of coverage areas 26 (FIG. 1) in which device 24 was last used as found in call records 32." Ex. 1049, 7:13-17. A POSITA would have been motivated to modify Enzmann's system to include this capability with a reasonable expectation of success to permit the system to obtain location information when the device is off or unavailable, as described in Ganesh. Further, a POSITA would recognize that there is significant functionality enabled by the storing of historical locations, for example generating "breadcrumbs" reports that plot the past locations of a given person/device in a given time period.

566. Thus, it is my opinion that Enzmann alone or in view of Ganesh renders this limitation obvious, and claim 68 is obvious based on Enzmann alone or in combination with Ganesh.

69. Claim 69 – "The system of claim 68, wherein said providing said location to said second wireless device comprises providing to said second wireless device a location from said history of locations when said first wireless device is turned off."

567. Enzmann in view of Ganesh renders this limitation obvious. As explained for claim 68, Enzmann, alone or in combination with Ganesh, describes storing a history of locations in a remote system. To the extent Enzmann does not disclose transmitting a location from a history of locations when a wireless device is off, Enzmann's system could transmit this stored location even when the phone

is turned off.

568. Moreover, this functionality would have been obvious based on Ganesh. Ganesh describes providing a location from call records when a phone is off. Ex. 1049, 7:3-20. For example, Ganesh states "[i]f, however, wireless communication device 24 is not on, or not located, first coverage area 26′ (FIG. 1) determined by accessing a latest one of call records 32 in database 34 may be utilized to provide approximate location information." Ex. 1049, 7:62-65. A POSITA would have recognized that the remote system in Enzmann could transmit location information even when a device is off, as described in Ganesh, because Enzmann's system has stored location information and would have been capable of sending that information when the phone is off.

569. Thus, it is my opinion that Enzmann in view of Ganesh renders this limitation obvious, and claim 69 is obvious based on Enzmann in combination with Ganesh.

70. Claim 70 – "The system of claim 45, wherein said remote system is further capable of providing said location to another device utilized by a user of said second wireless device after said user utilizes said another device to input a login and password for said user into a website."

570. Enzmann discloses this limitation. Enzmann discloses its system is capable of providing a target user's location to a requesting user's device after the requesting user inputs a login and password. Ex. 1040, 6:41-48("As shown in step

200, a requestor submits a location query to location server 100. The query includes at least an identification of the requestor and an identification of the network user about whom the requestor desires location information. Optionally, the query also includes a password, which enables a location query service provider to allow access to the service only by requesters who pay for the service.").

571. Enzmann discloses entering the username and password may be done on a mobile device through a website: "[t]he requestor submits the query using any number of communications media supported by location server 100 and the requestors individual communication device. For example, if the requestor uses a personal computer 108 linked to location server 100 through global computer network 114, the requestor could initiate the query using a graphical user interface. As another example, if the requestor uses a text messaging wireless device 110 linked to location server 100 through requestor wireless network 116 and global computer network 114, the requestor could initiate the query using a menu driven interface or a series of key sequence inputs." Ex. 1040, 6:51-62. A POSITA would understand a requestor using Enzmann's system inputs their login and password into a website.

572. Thus, it is my opinion that this limitation is disclosed by Enzmann, and claim 70 is obvious based on Enzmann.

71. Claim 71 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a watch."

573. Enzmann in view of Degnbol renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. While Enzmann describes its system in the context of mobile phones, a POSITA would understand Enzmann's system may be used with a variety of position-enabled devices and both wired and wireless devices connected to a network. Ex. 1040, 3:64-66, 5:39-50,. 6:20-27.

574. Further, using Enzmann's system to store and transmit a location of a watch would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a watch. Ex. 1047, 4:29-31, 7:16-18, claim 10. Both Enzmann and Degnbol utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. A POSITA would have known that Enzmann's system could likewise transmit a location of a watch to the first wireless telephone device, with a reasonable expectation of success.

575. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 71 is obvious based on Enzmann in combination with Degnbol.

72. Claim 72 – "The system of claim 71, wherein said remote system is capable of communicating with said watch over said communications network to obtain said location of said watch from a positioning system of said watch."

576. Enzmann in view of Degnbol renders this limitation obvious. As explained above in claim 16, Degnbol discloses a system that can determine and store a location of a watch. Further, Degnbol and Enzmann explain that their remote systems are capable of communicating with devices over a communications network. Ex. 1047, 5:7-11; Ex. 1040, 2:52-55, 5:41-50. The devices in both Degnbol and Enzmann communicate with devices over a communications network to obtain position information and that such position information may be provided by a device's positioning system. Ex. 1040, 2:52-55, 5:41-50; Ex. 1047, 5:7-11. A POSITA would have understood Enzmann's system was capable of doing so with a watch per Degnbol.

577. Thus, it is my opinion that Enzmann in view of Degnbol renders this limitation obvious, and claim 72 is obvious based on Enzmann in combination with Degnbol.

73. Claim 73 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a personal computer."

578. Enzmann alone or in view of Degnbol renders this limitation obvious. Enzmann's remote system is capable of storing and transmitting location of one

device to another device. Ex. 1040, 7:51-58, 8:65-67. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. A POSITA would understand that Enzmann's system could store and transmit the location of a personal computer. It would have been obvious that Enzmann's system could transmit the location of a personal computer to a wireless device at least because it discloses the requesting device may be a personal computer. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

579. Further, using Enzmann's system to store and transmit a location of a PC would have been obvious at least based on Degnbol. Degnbol discloses determining and storing a location of a PC. Ex. 1047, 4:27-28, 7:14-15, claim 9. A POSITA would have known Enzmann's system could likewise transmit a location of a PC to the first wireless telephone as Enzmann's system works with personal computers because it discloses the requesting device may be a personal computer. Ex. 1040, 3:64-66, 5:39-50, 6:20-27.

580. Thus, it is my opinion that Enzmann alone or in view of Degnbol renders this limitation obvious, and claim 73 is obvious based on Enzmann alone or in view of Degnbol.

74. Claim 74 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a radio."

581. Enzmann in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Enzmann explains various devices can be used in its system, including wireless and wired phones, pagers, and personal computers, so long as they can connect to the network. Ex. 1040, 3:64-66, 5:39-50, 6:20-27. While Enzmann describes its system in the context of mobile phones and landline phones, using Enzmann's system to store and transmit a location of a radio to the first wireless telephone device would have been obvious and within the capabilities of Enzmann's system.

582. Further, storing and transmitting the location of a radio to the first wireless telephone would have been obvious based on Obradovich. Obradovich describes a system that obtains, stores, and transmits the location of a radio to a mobile device. Ex. 1055, 17:28-32, 18:6-8. For example, Obradovich describes condition reporting devices ("CRD"), which include a radio transceiver unit, and that a central computer system that tracks the locations of CRDs and maintains a database of their locations. *Id.*, 17:36-40, 19:25-28. Further, Obradovich explains that the CRD location data may be transmitted to mobile devices (or other PCDs), such as to be displayed on a map along a route. *Id.*, 19:38-14:25. 1055

583. Both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality. Thus, a POSITA would have known that Enzmann's system could likewise transmit a location of a radio to the first wireless telephone device, as disclosed in Obradovich. Further, a POSITA would have had a reasonable expectation of success in modifying Enzmann's system to do so as this would have been within the capabilities of the devices and system disclosed in Enzmann and a routine implementation.

584. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation obvious, and claim 74 is obvious based on Enzmann in combination with Obradovich.

75. Claim 75 – "The system of claim 45, wherein said remote system is further capable of storing and transmitting to said second wireless device a location of a car."

585. Enzmann in view of Obradovich renders this limitation obvious. As explained for claims 1d and 13, Enzmann's system is capable of storing and transmitting location information of one device to another device. Further, Enzmann describes prior art vehicle tracking systems that communicate with GPS receivers in vehicles to obtain and monitor vehicle locations. Ex. 1040, 1:55-67. It would have been obvious to a POSITA that the system in Enzmann, which utilizes a network and network based location systems to obtain position information of

and communicate with wireless devices, was capable of obtaining, storing, and transmitting a vehicle's location from a GPS-enabled device in the vehicle to a requesting wireless device. Ex. 1040, 4:15-38.

586. Further, including this capability in Enzmann's system would have been obvious based on Obradovich. Obradovich describes transmitting and receiving maps and other location information between devices, including location information of a car. Ex. 1055, 4:59-65 ("By way of example, the invention can provide a requester with dynamic location information, or other data to a location anywhere in the U.S. This location information may be used to locate individuals in determining whether to authorize credit requests, whether PCD or item containing a PCD, such as an automobile, is moved, or in routing electronic communications."). In another example, Obradovich describes obtaining information of a wireless device within an automobile to monitor the location of the automobile: "PCDs can be used to monitor automobile locations and thereby discourage automobile theft or aid in the recovery of the automobile. For example, for an active PCD left in the INTERROG mode, upon discovery of the theft of the PCD or item in which the PCD is located, the user merely need to interrogate the PCD as to its location and thereafter be immediately informed as to the device location, thus allowing for ease in locating and returning the device to the proper user." Ex. 1055, 25:31-39.

587. A POSITA would have known that Enzmann's system could likewise transmit a location of a car to the first wireless telephone device, and would have been motivated to include this capability to prevent theft of the car as well as to track the location of another user if the user is driving and the user's phone dies or is not with the user. Further, a POSITA would have had a reasonable expectation of success because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

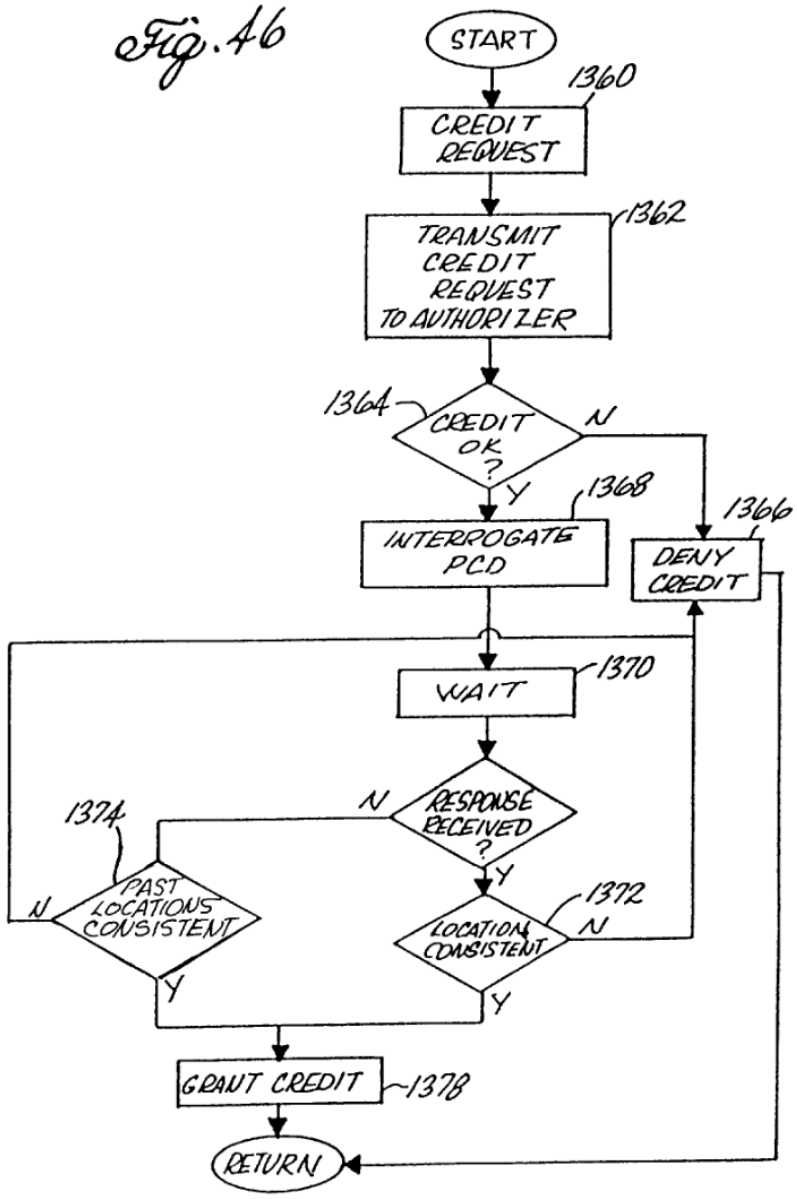
588. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation and claim 75 obvious.

76. Claim 76 – "The system of claim 45, wherein said remote system is further capable of providing said location of said first wireless device to a credit card authorization system."

589. Enzmann in view of Obradovich renders this limitation obvious. Enzmann discloses obtaining and transmitting location information to an authorized requesting device. To the extent Enzmann does not expressly disclose providing the location of a wireless telephone to a credit card authorization system, a POSITA would have known that Enzmann's system had such capability because it obtains and transmits location information of a device to another device, which could include a credit card authorization system.

590. Further, including this capability in Enzmann's system would have

been obvious based on Obradovich, which describes transmitting a location of a wireless device to a credit card authorization system. Ex. 1055, 4:62-63, 24:51-25:30. Obradovich describes providing locations of wireless devices to credit card authorization systems as a security measure: "credit authorization agencies may make use of the location monitoring capability provided by the PCD in determining the validity of credit requests." Ex. 1055, 24:51-54. This embodiment is shown in Figure 46 and described in the accompanying description:



Ex. 1055, Fig. 46, 24:54-25:30.

591. A POSITA would have been motivated to use Enzmann's system to obtain and transmit the location of the wireless phone to a credit card authorization system, as described in Obradovich, for added security and protection against unauthorized credit card uses. A POSITA would have had a reasonable expectation

of success in including this capability in Enzmann's system because both Enzmann and Obradovich utilize generic wireless network server-side functionality to assist software on a mobile wireless network to provide the respective location sharing functionality.

592. Thus, it is my opinion that Enzmann in view of Obradovich renders this limitation and claim 76 obvious.

77. Claim 77 – "The system of claim 45, wherein said remote system is further capable of providing to said second wireless device information indicating time to reach said location of said first wireless device from a second location of said second wireless device according to at least two types of travel selected from the types of travel consisting of subway, walking, running, and driving."

593. Enzmann in view of Bectolsheim renders this limitation obvious. As discussed above, Enzmann discloses that a mobile device can request and receive a position of another mobile device. In addition, Enzmann discloses that a wireless device's position information may be periodically updated at the location server. Ex. 1040, 8:20-30. Thus, Enzmann discloses that multiple position measurements for the same device may be provided to the location server. Because the location server is capable of obtaining two (or more) positions for a mobile device, it could determine its speed and distance to the target device based on the received positions, and compute the travel time from the requestor's location to the target device. While Enzmann does not disclose that its system actually computes a travel

time, this element only requires such calculation "is operable to be made." A POSITA would have known Enzmann's system has this capability.

594. Further, it was known at the time of the Enzmann that systems that could calculate distance and travel time could do so according to multiple types of travel, as shown, for example, in Bectolsheim. Bectolsheim describes calculating and providing routes for driving, public transportation, and walking. See, e.g., Ex. 1043, Abstract, 1:7-9, 21:53-59 ("When public transportation is available for some or all of a route to a final destination, the travel time using public transportation may be compared to the travel time using a private vehicle."). A POSITA would have been motivated to expand the functionality in Enzmann's system to provide estimated travel times for multiple methods of transportation so that a user could determine the optimal route for reaching the target destination. Both Enzmann and Bectolsheim describe utilizing geographic data, such as position information, stored in a database to calculate routes and directions for a user. Ex. 1043, 2:59-65 ("The positioning system 124 may include sensors 125 or other components that sense the speed, orientation, direction, and so on, of the vehicle 111. The positioning system 124 may also include a GPS System."); Ex. 1040, 8:20-30. Accordingly, a POSITA would have a reasonable expectation of success in combining the systems of Enzmann and Bectolsheim.

595. Thus, it is my opinion that Enzmann in view of Bectolsheim renders

this limitation obvious, and claim 77 is obvious based on Enzmann in combination with Bectolsheim.

78. Claim 78 – "The system of claim 45, wherein said remote system is further capable of: storing a phone book corresponding to a user of said second wireless telephone; and downloading said phone book to a new wireless telephone of said user."

596. Enzmann alone or in combination with Obradovich and/or Degnbol renders this limitation obvious. Enzmann's system stores information correlating position information to a telephone number in a group database, and establishes which users may access such information. Ex. 1040, 5:28-38. While Enzmann does not expressly describe storing a phone book and downloading the stored phone book onto a new device, a POSITA would have known that Enzmann's system was capable of including this capability given Enzmann describes storing privacy settings for different users on a remote system, which implicitly means the system is storing a phone book of such users. The claim simply requires that the system be "capable of" storing a user's phone book and downloading the phone book to a new device. A POSITA would have known that Enzmann's system has this capability given it is able to store location access rights for specific users. A POSITA would have been motivated to modify Enzmann's system to include such functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and

including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

597. In addition, including this functionality would have been obvious based on Obradovich and/or Degnbol. Obradovich explains that wireless devices are capable of downloading directory information that is stored remotely to a wireless device. Ex. 1055, 3:1-16. Degnbol describes storing profile information in a database and the ability to transfer buddy lists. Ex. 1047, 10:13-15, 20:24-28. A POSITA would have been motivated to modify Enzmann's system to include such functionality with a reasonable expectation of success given Enzmann's system includes a group database correlating privacy settings and to identified users, and including telephone numbers in the group database would enhance this stored information and permit users to login on different devices and have access to their phonebooks.

598. Thus, it is my opinion that Enzmann alone or in combination with Obradovich and/or Degnbol renders this limitation obvious, and claim 78 is obvious based on Enzmann alone or in combination with Obradovich and/or Degnbol.