

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HYUNDAI MOTOR COMPANY,

Petitioner,

v.

MEL NAVIP LLC,

Patent Owner

Case No. IPR2024-00172

U.S. Patent No. 8,244,465

DECLARATION OF DR. FANG QIU

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EXHIBIT LIST

Exhibit	Description
2001	Declaration of Dr. Fang Qui (“Qui Decl.”)
2002	Curriculum vitae of Dr. Fang Qui

I, Fang Qui, hereby declare under penalty of perjury:

I. INTRODUCTION

1. 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.

2. I have prepared this Declaration for consideration by the Patent Trial and Appeal Board in the Inter Partes Reviews of U.S. Patent No. 8,244,465 (“the ’465 Patent”).

3. I provide this Declaration at the request of and have been retained by Ni, Wang & Massand, PLLC, which represents Patent Owner Mel NavIP LLC (“Mel NavIP” or “Patent Owner”) in connection with the above-captioned Inter Partes Review.

4. I have been informed and understand that Petitioner Hyundai Motor Company (“Hyundai” or “Petitioner”) contends that claims 1-3, and 5 of the ’465 Patent are invalid based on Grounds 1-2.

5. I am being compensated at an hourly rate of \$300 per hour. My compensation is not dependent on the outcome of or any issue in relation to the above-captioned Inter Partes Review, and I have no interest in either party.

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

A. Expert Qualifications

7. My curriculum vitae (“CV”) is attached hereto as Exhibit 2002 and provides an accurate identification of my background and experience.

8. I am a Professor of GIS and Remote Sensing at the University of Texas at Dallas. I teach classes in Geographic Information Sciences. I received a Bachelor of Science degree in Geography from East China Normal University in Shanghai, China, in 1990. I received a Master of Science degree in Geographic Information Systems from the Chinese Academy of Sciences in Beijing, China, in 1993. I received a Ph.D. in Geography with a concentration in geographic information processing from University of South Carolina in Columbia, South Carolina, in 2000.

9. My research and instructional areas are remote sensing digital image processing, artificial intelligence, spatial analysis and modeling, GIS application software development, and web-based mapping and information processing.

10. My publications have appeared in peer-reviewed journals such as International Journal of Remote Sensing, Photogrammetric Engineering and Remote Sensing, Computers and Geosciences, GIScience and Remote Sensing, ISPRS Journal of Photogrammetry and Remote Sensing, Forest Ecology and Management,

Journal of Geophysical Research, Remote Sensing, International Journal of Applied Earth Observation and Geoinformation and other academic journals.

11. I was the Winner of 2013 ERDAS Award for Best Scientific Paper in Remote Sensing by American Society of Photogrammetry and Remote Sensing, and Winners of Remote Sensing Special Group Award for 2011 and 2013 by American Association of Geographers. My research has been funded by National Sciences Foundation, NASA, and Centers for Disease Control and Prevention (CDC), etc.

B. Basis of My Opinion and Materials Considered

12. I have reviewed the '465 Patent, including the claims of the patent in view of the specification. In addition, I have reviewed the '465 Patent's prosecution history, Mr. William's declaration (Ex. 1003), the prior art discussed herein, and the remaining exhibits listed herein.

C. Summary of Opinions

13. In my opinion, claims 1-3, and 5 of the '465 Patent are not rendered obvious by the prior art combinations cited in Grounds 1-2. In the remainder of this declaration, I demonstrate these in detail and also address the lack of motivation to combine certain references.

II. LEGAL STANDARDS TO BE APPLIED

14. Counsel has advised me of the following legal standards that are relevant to IPR proceedings, which I have applied in forming my opinions.

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

A. Person of Ordinary Skill in the Art

16. I understand that the claims of a patent are reviewed from the point of view of a hypothetical person of ordinary skill in the art (“POSITA”) at the time of the filing of the patent. The “art” is the field of technology to which a patent relates.

B. Claim Construction

17. I understand that, in IPR proceedings, claim terms in a patent are given their ordinary and customary meaning as understood by a POSITA in the context of the entire patent and the prosecution history pertaining to the patent. If the specification provides a special definition for a claim term that differs from the meaning the term would otherwise possess, the specification’s special definition controls. I have applied these standards in preparing the opinions in this declaration.

C. Validity

18. I understand that, in this proceeding, Petitioner has the burden of proving that the challenged claims of the ’465 Patent are unpatentable by a preponderance of the evidence. I understand that “preponderance of the evidence” means that a fact or conclusion is more likely true than not true.

19. I understand that there are two ways in which prior art may render a patent claim unpatentable. First, the prior art can “anticipate” the claim. Second, the prior art can render the claim “obvious” to a POSITA. I understand that for an invention claimed in a patent to be patentable over the prior art, it must not be anticipated and must not be obvious based on what was known before the invention was made.

20. I understand that a patent claim may be invalid as anticipated under 35 U.S.C. § 102 if a prior art reference discloses each element of the claimed subject matter.¹

21. I understand that a patent claim may be invalid as obvious under 35 U.S.C. § 103 if the differences between the subject matter claimed and the prior art are such that the claimed subject matter as a whole would have been obvious to a POSITA at the time the invention was made. I also understand that several factual inquiries underlie a determination of obviousness. These inquiries include (1) the scope and content of the prior art, (2) the level of ordinary skill in the field of the invention, (3) the differences between the claimed invention and the prior art, and (4) any objective evidence of non-obviousness (i.e., “secondary considerations”).

¹ Patent laws discussed herein refer to AIA versions of the relevant laws.

22. I further understand that when a party alleges obviousness, that party may rely on one reference or a combination of multiple references. I also understand that, when a party alleges obviousness based on a combination of references, that party should identify a reason why a POSITA would have been motivated to combine the asserted references in the manner recited in the claims and to explain why a POSITA would have had a reasonable expectation of success in making such combinations.

23. I understand that an obviousness analysis permits the application of “common sense” in examining whether a claimed invention would have been obvious to a POSITA. For example, I understand that combining familiar elements according to known methods and in a predictable way may suggest obviousness when such a combination would yield nothing more than predictable results. And I understand a party asserting obviousness should still provide a specific motivation to combine the references as recited in the claims and explain why one would have reasonably expected to succeed in doing so.

24. I understand that one indicator of nonobviousness is when prior art teaches away from combining certain known elements. For example, a prior art reference teaches away from the patent’s particular combination if it leads in a different direction or discourages that combination, recommends steps that would

not likely lead to the patent's result, or otherwise indicates that a seemingly inoperative device would be produced.

III. TECHNOLOGY OVERVIEW

25. The relevant field for that of the '465 Patent is that of navigation systems, and more particularly to a navigation system and a display method of a road network without losing continuity of display elements. '465 Patent, 1:44-50.

IV. THE '465 PATENT'S OVERVIEW

26. The '465 Patent recognized that in prior art systems, "a large-scale wide-area map displays main roads such as expressways and national highways, and as the map scale reduces, more narrow roads come to be displayed." Ex. 1001 – '465 Patent, 1:15-18. However, "when the map scale is switched, the display elements being displayed can sometimes disappear from the screen suddenly, thereby confusing a user." *Id.* 1:18-21. Alternatively, a technique which does not lose the continuity of roads, in that technique, the map is displayed in such a manner that as the distance from the current position assigned as the origin increases, the scale is increased continuous in circumference directions. *Id.* 1:22-27. However, since the display elements are displayed without losing continuity in the same manner as a fisheye lens, the display elements with different scales are mixedly displayed on a single screen, which distorts the image. *Id.* 1:32-36.

27. The '465 Patent is directed to a navigation system and a display method of a road network on the same system aiming at achieving display without losing continuity of display elements such as roads and facilities without distortion, and at reducing a load of the hardware resources at the time of calculating the display positions. *Id.*, 1:44-50. Specifically, the '465 Patent solves the problem in the prior art by teaching a navigation system which displays roads and facilities based on their attributes for various map scales as show in Fig. 2 below, but also continuously displays each of the roads that is part of the calculated route by not indicated by the attributes as being displayable at the current map scale.

28. As discussed below, neither Yokota, nor the combination of McDonough, Huber and Tanizaki teach this.

A. Person of Ordinary Skill in The Art

29. I understand that the factors considered in determining the ordinary level of skill in a field of art at issue include the level of education and experience of persons working in the field; the types of problems encountered in the field; and the sophistication of the technology at the time of the purported invention, which I understand to be as early as April 9, 2007. I understand that a person of ordinary skill in the art (“POSITA”) is not a specific real individual, but rather is a hypothetical individual having the qualities reflected by the factors above. I

understand that a POSITA would also have knowledge from the teachings of the prior art, including the art cited below.

30. Based on these factors, on or before April 9, 2007, a POSITA relating to the technology of the '465 Patent would have (a) a Bachelor's of Science degree in a technical field and at least four years of experience in the field of geospatial information sciences; (b) a Master's of Science degree in a technical field and at least two years of experience in the field of geospatial information sciences; or (c) a PhD in a technical field relating to the geospatial information sciences. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. A POSITA is presumed to have knowledge of all relevant prior art, and therefore would have been familiar with each of the references cited in this declaration and the full range of teachings they contain.

31. Before April 9, 2007, my level of skill in the art was at least that of a POSITA. I am qualified to provide opinions concerning what a POSITA would have known and understood at that time, and my analysis and conclusions in this declaration are from the perspective of a POSITA prior to April 9, 2007. Furthermore, I have taught, worked with and supervised persons whom I would consider to be persons of ordinary skill in the art according with the description given above.

V. CLAIM CONSTRUCTION

32. For IPR petitions filed after November 13, 2018, I understand the Patent Trial and Appeal Board (“Board”) construes claim terms as having their ordinary and customary meaning to a POSITA at the time of invention (i.e., the same standard used in district court). I have applied this standard in rendering my opinions on claim construction. In addition, I have been asked to assume that the claims are not indefinite.

33. Claim terms are generally given their plain and ordinary meaning, which is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. When the words in the context of the surrounding claim language make the ordinary meaning readily apparent, claim construction involves little more than the application of the widely accepted meaning of commonly understood words.

34. The claims must be read in view of the specification of which they are a part. The specification is the best source for understanding a technical term. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

35. Although terms must be construed in light of the specification, it is improper to import a limitation from the specification into the claims. Courts must capture the scope of the actual invention, rather than strictly limit the scope of claims

to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.

36. The prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be. The prosecution history consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.

37. I understand that in the parallel district court litigation, Hisense has proposed a construction for the terms “waveguide element” and “light entry regions.”

VI. PETITIONER’S PRIOR ART SUMMARY

38. I understand that Petitioner has identified two primary references and two secondary references as prior art to the ’465 Patent in its Grounds 1-2.

A. Yokota

39. U.S. Patent No. 6,587,787 (Ex. 1005 - “Yokota”). issued from Patent Application Number 09/526,023 with a filing date of March 15, 2000.

40. Yokota is directed to a vehicle navigation apparatus displaying enhanced information regarding geographic entities, such as the names, sizes and boundaries of municipalities, counties, and states on scale and in such a manner that

state names can be easily distinguished from municipality and/or county names.

Yokota, 2:18-24. And further to do so in such a manner that the municipalities, counties, and states can be easily distinguished from street names. *Id.*.

41. As shown in FIGs. 4A and 4B below, Yokota provides different sizes for the state “NEVADA” vs the cities “Reno” and “Nevada City.” Table 1 below of Yokota discloses how the different states, counties, should be rendered at different scales.

FIG. 4A

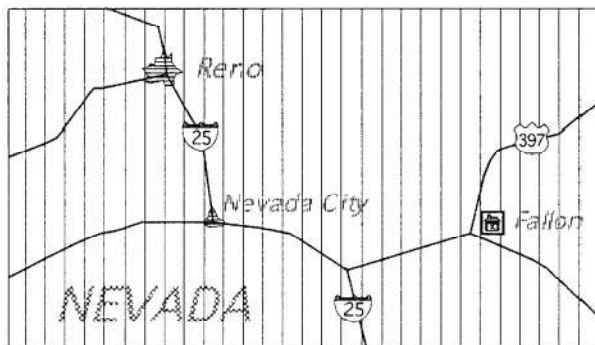


FIG. 4B

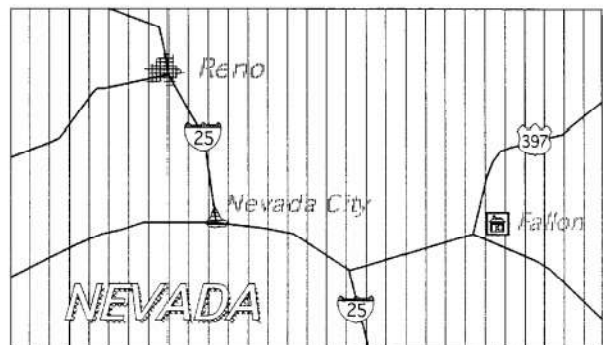


TABLE 1

Level of Detail	Small-Scale Map	Medium-Scale Map	Large-Scale Map
Off	None	None	None
Coarse (polygon)	States	Counties	Cities/rural counties
(label)	—	States	—
Medium (polygon)	States	Counties	Cities/rural counties
(label)	Large counties	Large cities	Large communities
Detailed (polygon)	States	Counties	Cities/rural counties
(label)	Counties	Cities	Communities

42. Yokota also discloses a set of road priority levels in in Table 3 below.

TABLE 3

	Scale				
	Smallest	Small	Medium	Large	Largest
Inter-state	Shown	Shown	Shown	Shown	Shown
Major Hwys	Upgradable	Shown	Shown	Shown	Shown
Minor Hwys	Omitted	Upgradable	Shown	Shown	Shown
Major Roads	Omitted	Omitted	Upgradable	Shown	Shown
Minor Roads	Omitted	Omitted	Omitted	Upgradable	Shown

43. However, Yokota is not focused on whether a type of road is shown or omitted but also includes an “upgradable” which may vary what roads are displayed at certain scales. Compare FIGS. 4C and 4D below to 4A and 4B.

FIG. 4C

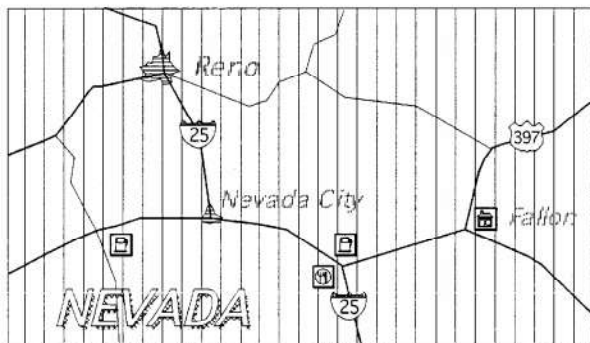
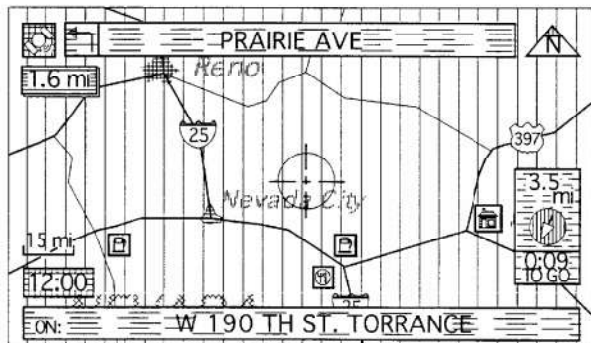


FIG. 4D



i. Petitioner Mischaracterizes the Figures of Yokota

44. Yokota does not teach selecting each of the roads that is part of a calculated or route but not indicated by the attributes as being displayable according to an instructed map scale and displaying the selected roads and the selected display elements on the display section of the map along with the roads indicated by the

attributes as being displayable according to the instructed map scale and by selecting the display elements based on ranks

45. Petitioner attends to mislead using concocted figures. Petition at 32-33. Petitioner attempts to juxtapose FIG. 6D with 7A, and FIG. 6F with 7A. However, Petitioner points to no disclosure in Yokota that suggests FIG. 6F is displaying a road that would was not indicated by attributes as being displayable according to the instructed map scale. In fact, FIG. 6D contradicts that argument as the guidance of FIG. 6F are clearly based on roads that would be shown at the scale of 6D

FIG. 6D

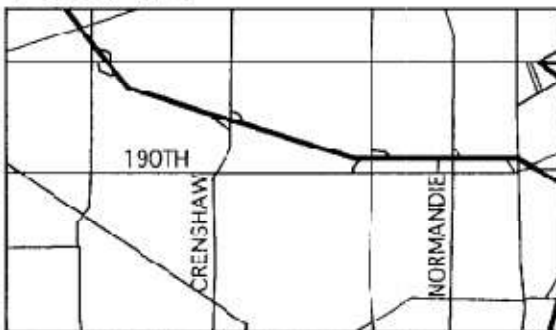
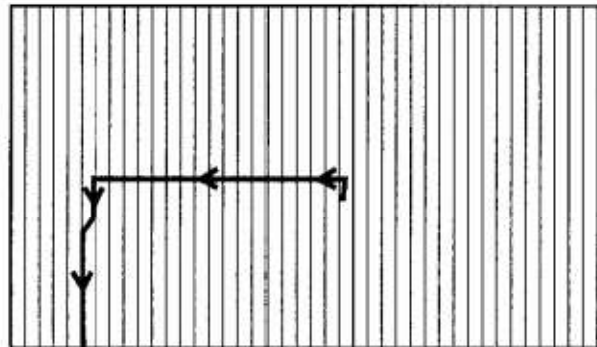


FIG. 6F



B. McDonough

46. Petitioner’s primary reference for Ground 2 is U.S. Patent No. 6,163,749 (ex. 1007 – “McDonough”) filed June 5, 1998, and issued December 19, 2000.

47. McDonough is directed to a smooth scrolling function in a map display tool used with a navigation system. McDonough, Abstract. To accomplish smooth

scrolling, first and second graphics buffers are provided. The first graphics buffer contains map information regarding a first location, and the second graphics buffer holds map information regarding a predicted future location. While a map area is shown and scrolled from map information in the first graphics buffer, a look-ahead process creates an auxiliary map in the second butter. When the map area that is shown on the display reaches or approaches the edge of the map information store in the first buffer, the map information from the second buffer is copied into the first buffer and the process repeats. McDonough, 2:18-31.

C. Huber

48. Petitioner's secondary reference for Ground 2 is U.S. Patent No. 7,023,456 (Ex. 1008 – "Huber"). Huber was filed September 16, 2003, and issued on April 4, 2006.

49. Huber is directed to a way to improve the presentation of map information on a display screen of a computing device when a user zooms in or out. Huber, 1:13-15. Huber teaches a starting image that shows geographic features at a first scale with a first level of detail and then displaying an ending image that shows the same geographic features at a second scale with a second level of detail. Additionally, intermediate images are used that combine component images showing at least some of the safe features. The intermediate image is a temporary

transitional images that illustrates a relationship between the first image and the second image

D. Tanizaki

50. Petitioner's secondary reference for Ground 2 is U.S. Patent Publication No. 82006/0220923. (Ex. 1009 – "Tanizaki") Tanizaki was filed August 18, 2004, and published October 5, 2006.

51. According to Tanizaki, the object of the invention is to provide a map display method whereby the contents of a road map on display can be easily and clearly grasped without regard to the running conditions of the vehicle. Tanizaki [0006].

52. Tanizaki is directed to creating "summarized maps." FIGS. 2A to 2C. In the summarized maps, symbols 15 of roads 14 or facilities and characters indicating the names of places or facilities (names 16) are displayed, together with a mark Δ indicating the present vehicle position 11 (vehicle mark).



A. Yokota Does Not Teach or Disclose to a Primary Novelty of the '465 Patent.

17

displaying the roads of the calculated route including those that would not otherwise be displayed according to the routes respective attributes and respective scales.

Thus, Millington does suggest that a road segment, which is not normally displayable at the highest zoom-out because of its rank, could be displayed if it is either the current road segment, the previous or next cross street, or a panned road segment. However, Millington does not teach calculating a route between the vehicle's current location and a particular city center or facility. As such, Millington does not teach or even suggest choosing to display a road segment which is included in the calculated route, but not indicated as being displayable at the current scale by its rank/attribute, as presently claimed. Thus, Millington does not teach or suggest every feature as recited in independent claim 1.

Ex. 1002 – '465 Patent File History, Mar. 21, 2012, Amendment pg. 7 of 8

55. This was made evident in the file history to overcome the prior art. Yokota fails to teach this novelty as well. Yokota does not teach or even suggest choosing to display a road segment which is included in the calculated route, but not indicated as being displayable at the current scale by its rank/attribute. Nothing in Yokota teaches or suggests that its system intentionally displays a road not indicated as being displayable at the current scale by its rank/attribute.

56. Mr. William's declaration merely parrots portion of the claim language of claim 1 of the '465 Patent without explaining why a POSITA without the benefit of hindsight would've chosen to modify Yokota to obtain this novelty. My opinion is that a POSITA would not have viewed Yokota and added the novelty of the '465

Patent's choosing to display a road segment which is included in the calculated route, but not indicated as being displayable at the current scale by its rank/attribute.

57. Unlike the '465 Patent, all of the Figures of Yokota are shown at the same scales so there was no concern in Yokota that some or all of roads of the calculated route might not be shown due to some or all of the roads of the calculated route being otherwise not displayable at a larger scale. *See* FIGS. 4A-4D

FIG. 4A

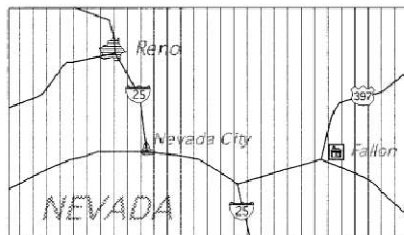


FIG. 4B

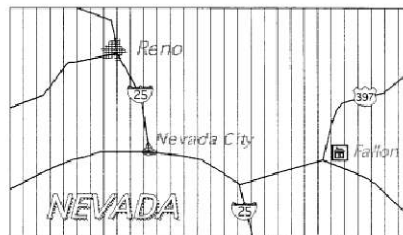


FIG. 4C

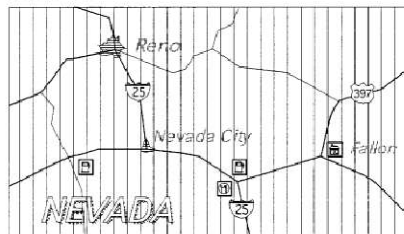
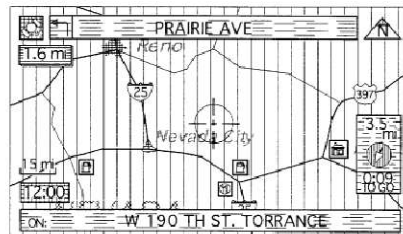


FIG. 4D



B. Yokota Fails to Disclose All of the Limitations of [Claim 1a.]

58. Yokota does not clearly teach “a map data storage section for storing of map data together with attributes and classes of the map data” nor “attributes are indicative of whether or not each of the roads should be displayed for each of a plurality of map scales” as understood by a POSITA with respect to the '465 Patent.

59. While Table 3 of Yokota provides some teaching that “minor roads” are “[o]mitted” at “smallest”, “small”, and “medium” scales and “[s]hown” in the

largest scale, Yokota is ambiguous on the “large” scale as it refers to the minor roads only as “upgradable.” This is not the same as “attributes are indicative of whether or not each of the roads should be displayed for *each* of a plurality of map scales” which is shown in FIG. 2 of the ’465 Patent. The ’465 Patent and the language of claim 1 makes clear that a certain class of road and a certain class of display element are either shown or not shown for “each of a plurality of map scales.”

60. Also, claim 1A recites that the “map data storage section for storing of map data together with attributes and classes” for “display elements including city centers and facilities.” Yokota does not teach attributes for display elements including city centers and facilities.

C. Yokota Fails to Disclose [Claim 1g] “selecting the roads indicated by the attributes as being displayable according to the instructed map scale, and by selecting the display elements based on ranks.”

61. Yokota does not teach or suggest “ranks” used for “display elements” which include city centers and facilities. Petitioner’s claim that that “Yokota further teaches that the display controller 16 selects city center and facility display elements based on their priorities (i.e., ranks) and draws them as layers shown below” is incorrect. Yokota does teach ranks for facility information based on map scale. The image produced by Petition on page 29 of its Petition is completely deceptive as the images are just two layers from Yokota without any regard to ranks.

62. FIGS. 6C and 6E do not show selecting the roads indicated by the attributes as being displayable according to the instructed map scale, and by selecting the display elements based on ranks. The FIGS are merely two separate layers of display elements, one with the city names and “display elements” and another that “include city centers and facilities.”

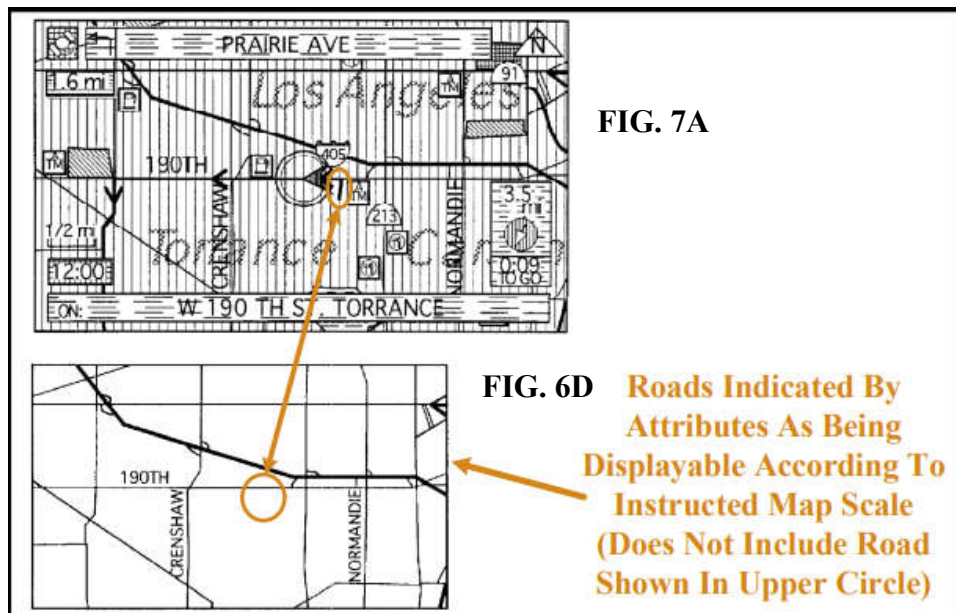
63. A POSITA would not have been motivated to modify Yokota’s map layering as described in the FIGs of 6A-6H to add ranks for display elements (including city centers and facilities) as claimed by the ’465 Patent. Yokota was focused primarily on the generation of and overlaying of layers. *See* Yokota 11:1-16. (“one such set of layers, and an order in which the display controller 16 may synthesize them to create a display, is: base polygons, e.g. city boundaries; then geo-feature polygons, e.g. shopping malls and rivers; then city name labels; then local roads; then highways; then freeways; then street names; then points of interest, such as restaurants; then a guidance route, if present; then route numbers.”).

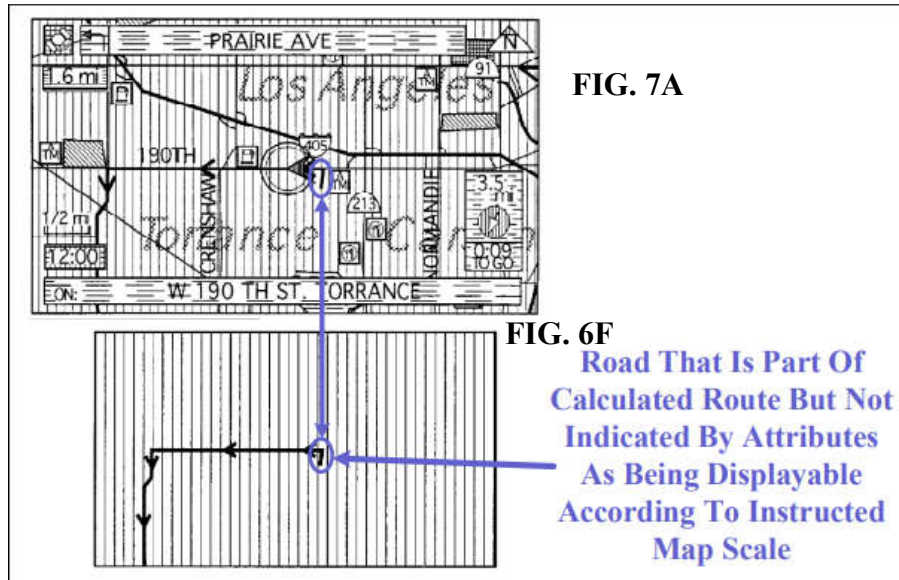
64. A POSITA in view of Yokota would not have been concerned with selecting the display elements based on ranks as the primary focus was to separately generate information from a map database into various layers and allow the layers to be movable relative to each other. *See* Yokota, claims.

65.

- D. Yukata Fails to Disclose [Claim 1h] “further selecting each of the roads that is part of the calculated route but not indicated by the attributes as being displayable according to the instructed map scale” and [Claim 1i] displaying the selected roads and the selected display elements on the display selection as part of the map.**

66. FIG. 6D and FIG. 6F of Yokota cited by Petitioner in its arguments do not disclose “selecting each of the roads that is part of the calculated route but not indicated by the attributes as being displayable according to the instructed map” and then displaying those selected roads and the selected display elements on the display selection as part of the map (which include those roads that are part of the calculated route but not indicated by the attributes as being displayable).





67. The guidance route of FIG. 6F does not show any roads that were not displayed in FIG. 6F and also fails to show the entire calculated route. The vertical hash that hangs at the end of the portion of FIG. 6F is not a road. Any suggestions that it would be is incorrect.

68. As discussed above, Yokata does not teach or even suggest choosing to display a road segment which is included in the calculated route, but not indicated as being displayable at the current scale by its rank/attribute. Nothing in Yokata teaches or suggests that its system intentionally displays a road not indicated as being displayable at the current scale by its rank/attribute. Nor would a POSITA without the benefit of hindsight have modified Yokata to intentionally display roads that were deemed by attributes to be of a class too insignificant at certain scales to be shown at all scales to ensure continuity for the guidance route

E. Yokota Does Not Disclose “wherein the control section displays each selected road not indicated by the attributes as being displayable according to the instructed map scale on the display section in a fashion different from the other selected roads.” of Claim 2.

69. Because Yokota does not teach displaying the selected roads not indicated by the attributes as being displayable according to the instructed map scale on the display section, Yokota cannot then teach that “each selected road not indicated by the attributes as being displayable according to the instructed map scale on the display section in a fashion different from the other selected roads” of claim 2.

70. It would not have been obvious to modify Yokota to intentionally display roads that were deemed by attributes to be of a class too insignificant at certain scales to be shown at all scales to ensure continuity for the guidance route. As I stated above, the primary focus was to separately generate information from a map database into various layers and allow the layers to be movable relative to each other.

VIII. GROUND 2 - PETITIONER’S McDONOUGH IN COMBINATION WITH HUBER AND TANIZAKI FAIL TO RENDER OBVIOUS CLAIMS 1-3 AND 5.

71. Petitioner relies on McDonough as its primary reference for Ground 2. It is my opinion that a POSITA would not find independent claim 1 or its dependent claims obvious in view of McDonough in combination with Huber and Tanizaki. Also, one would not be motivated to combine the “summarized map” and route

guidance of Tanizaki with the first and second buffering system of McDonough as Petitioner.

- A. McDonough does not disclose [Claim 1a] “a map data storage section for storing map data together with attributes and classes of the map data, the map data being composed of roads necessary for a route search and display elements including city centers and facilities...”**

72. Like Yokota, McDonough does not teach “attributes and classes” for “display elements including city centers and facilities. Unlike FIG. 2 of Yokota, which provides exemplary attributes and classes for the city centers and facilities, nothing like this is taught in McDonough.

- B. McDonough does not disclose [Claim 1g] “selecting the roads indicated by the attributes as being displayable according to the instructed map scale, and by *selecting the display elements based on ranks*.”**

73. While McDonough arguable teaches that the map data storage section stores ranks ranging from 0 to 4 for various roads, nothing is taught with respect to display elements (e.g., city centers and facilities). McDonough does not teach any ranks for these display elements, nor does it teach selecting the display elements (e.g., city centers and facilities) based on ranks.

- C. A POSITA Would Not Be Motivated to Combine McDonough and Tanizaki with Respect to [Claim 1h] “further selecting each of the roads that is part of the calculated route but not indicated by the**

attributes as being displayable according to the instructed map scale.”

74. Merely because Tanizaki with McDonough are in the same field is not a proper motivation to combine.

75. POSITA would not have been motivated to combine the “summarized map” and route guidance of Tanizaki with the first and second buffering system of McDonough. McDonough is directed to smooth scrolling by holding present map location in the first buffer and predicted future location in a second buffer, the combined teachings would not have suggested to a POSITA to incorporate the incompatible a route guidance of Tanizaki which displays the entire route guidance on the screen.

76. Because McDonough is intended to scroll from one location to a look-ahead location smoothly, it would not need or want to display the entire route guidance on the display. Because of the differences in systems, one intended to allow for smooth scrolling rather than showing the entire map, Tanizaki’s summarized map route guidance would not have been a “suitable option” for implementation into the first and second buffer system of McDonough.

77. McDonough uses road ranking for determining whether to display certain roads at a specified map scale. Modifying this operation with Tanizaki would obviate the need for the map scale feature in McDonough and would result in an overly complicated system that would not be an improvement over either invention

individually. McDonough describes that the data is organized into layers. When the graphics interface layer displays specific data (i.e., roads) in references to a set map scale, the system is only looking at one specific data layer. In other words when McDonough is set to rank '0,' the navigations system is only looking at data in that particular rank. The zooming and map scale feature described in McDonough requires a road to be stored in the database according to separate layers. In other words, the road data for each rank will be distinct and held separately in the database. Implementing Tanizaki to select (and subsequently display) each of the roads that is part of the calculated route but not indicated by the attributes as being displayable according to the instructed map scale would not be a "routine, straightforward adjustments to the programming logic in McDonough's map display tool" McDonough's map scale and data layer method would be useless if changed to operate this way. To incorporate the teachings of Tanizaki would require eliminating the data layering hierarchy described by McDonough and would be wasteful and overly complicated.

78. If one wanted to select each road not indicated by the attributes, then one would simply use Tanizaki exclusively as Tanizaki discloses a route guidance method, along with a map scaling feature. Based on at least these reasons I discussed, there is no motivation to combine this aspect of Tanizaki with McDonough.

D. McDonough does not disclose [Claim 1i] “displaying the selected roads and the selected display elements on the display selection as part of the map.

79. Likewise, this element requires combining Tanizaki and McDonough which I have previously no motivation exists to combine the route guidance of Tanizaki with McDonough’s teachings. As such, displaying McDonough does not meet this element.

E. McDonough does not disclose [Claim 2] “wherein the control section displays each selected road not indicated by the attributes as being displayable according to the instructed map scale on the display section in a fashion different from the other selected roads.”

80. Because McDonough does not display the “selected roads not indicated by the attributes as being displayable” and a POSITA would not have modified McDonough using Tanizaki to select each of the roads that is part of the calculated route but not indicated by the attributes as being displayable according to the instructed map scale, McDonough cannot then teach that “each selected road not indicated by the attributes as being displayable according to the instructed map scale on the display section in a fashion different from the other selected roads” of claim 2. Likewise, a POSITA would not have been motivated to modify McDonough to arrive at claim 2.

81. I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and

Declaration of Fang Qiu

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that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: February 27, 2024,

By
Fang Qiu



Digitally signed by Fang Qiu
Date: 2024.02.27 21:37:19
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