IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

AUTONAVIGARE LLC, Plaintiff, v. TOYOTA MOTOR NORTH AMERICA, INC. and TOYOTA MOTOR SALES, U.S.A., INC., Defendants.	CIVIL ACTION NO. 2:24-cv-439-JRG **JURY TRIAL DEMANDED**

PLAINTIFF'S FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff AutoNavigare LLC files this First Amended Complaint against Defendants Toyota Motor North America, Inc. and Toyota Motor Sales, U.S.A., Inc. (collectively, "Toyota") for infringement of U.S. Patent No. 7,512,489 ("the '489 Patent"), U.S. Patent No. 7,584,049 ("the '049 Patent"), U.S. Patent No. 7,725,254 ("the '254 Patent), U.S. Patent No. 9,288,665 ("the '665 Patent"), and U.S. Patent No. 9,766,801 ("the '801 Patent") (collectively, the "Asserted Patents").

THE PARTIES

1. Plaintiff AutoNavigare LLC ("AutoNavigare") is a Texas limited liability company located in Plano, Texas.

2. On information and belief, Defendant Toyota Motor North America, Inc. ("TMNA") is a corporation organized and existing under the laws of California, with its principal place of business in this District at 6565 Headquarters Drive, Plano, Texas 75024. TMNA has been served with process and has appeared through counsel. On information and belief, TMNA is responsible for research and development, manufacturing, sales, offers for sale, marketing,

importation, and distribution of automotive vehicles from Toyota-managed brands (e.g., Toyota and Lexus) in the United States, including this District.

3. On information and belief, Defendant Toyota Motor Sales, U.S.A., Inc. ("TMS") is corporation organized and existing under the laws of California, with its principal place of business in this District at 6565 Headquarters Dr., Plano, Texas 75024. TMS has been served with process and has appeared through counsel. On information and belief, TMS is responsible for sales, marketing, and distribution of automotive vehicles from Toyota-managed brands (e.g., Toyota and Lexus) in the United States, including this District.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1, *et seq*., including, without limitation, 35 U.S.C. §§ 271, 281, 284, and 285. This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has specific and general personal jurisdiction over TMNA and TMS consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute because, among other things, each (i) has engaged in continuous, systematic, and substantial business in Texas, (ii) maintains a principal place of business in Texas and in this District, (iii) is registered to do business in Texas, and (iv) has committed and continues to commit, directly or through intermediaries (including subsidiaries, agents, distributors, affiliates, retailers, suppliers, integrators, customers, and others), acts of patent infringement in this State and this District. Such acts of infringement include making, using, testing, offering for sale, selling, and/or importing Accused Products (as more particularly identified and described throughout this Complaint) in this State and this District and/or inducing others to commit acts of patent infringement in this State and District. Indeed, TMNA and TMS have purposefully and

voluntarily placed, and are continuing to place, one or more Accused Products into the stream of commerce through established distribution channels (including the Internet) with the expectation and intent that such products will be sold to and purchased by consumers in the United States, this State, and this District; and with the knowledge and expectation that such products (whether in standalone form or as integrated in downstream products) will be imported into the United States, this State, and this District.

6. In addition, TMNA and TMS have derived substantial revenues from their infringing acts occurring within this State and this District. TMNA and TMS have substantial business in this State and this District, including (i) at least part of its infringing activities alleged herein and (ii) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported, and services provided to Texas residents vicariously through and/or in concert with its agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers.

7. In addition, TMNA and TMS have knowingly induced, and continue to knowingly induce, infringements within this State and this District by advertising, marketing, offering for sale and/or selling Accused Products (as more particularly identified and described throughout this Complaint) that incorporate the fundamental technologies covered by the Asserted Patents. Such advertising, marketing, offering for sale and/or selling of Accused Products is directed to consumers, customers, manufacturers, integrators, suppliers, distributors, resellers, partners, and/or end users, and this includes providing instructions, user manuals, advertising, and/or marketing materials that facilitate, direct and encourage use of infringing functionality with TMNA's and TMS's knowledge thereof.

8. TMNA and TMS have, in the multitude of ways described above, availed themselves of the benefits and privileges of conducting business in this State and willingly subjected themselves to the exercise of this Court's personal jurisdiction over them. TMNA and TMS also have sufficient minimum contacts with this forum through their transaction of substantial business in this State and this District and their commission of acts of patent infringement as alleged in this Complaint that are purposefully directed towards this State and District.

9. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b) because, among other things, (i) TMNA and TMS are subject to personal jurisdiction in this District, (ii) TMNA and TMS have committed acts of patent infringement in this District, and (iii) TMNA and TMS have regular and established places of business in this District, including at 6565 Headquarters Dr., Plano, Texas 75024.

DEFENDANTS' PRE-SUIT KNOWLEDGE OF ITS INFRINGEMENTS

10. Prior to filing this Complaint, AutoNavigare sent a letter to Toyota, addressed to Mr. Tetsuo Ogawa (TMNA's President and CEO), Mr. Jack Hollis (TMS's EVP and CEO), and Ms. Sandra Rogers (TMNA's General Counsel), identifying the Asserted Patents as being infringed by Toyota products, and further including claim charts demonstrating those infringement.

11. The Accused Products addressed in the Counts below include, but are not limited to, products identified in AutoNavigare's letter to Toyota. Toyota's past and continuing sales of the Accused Products (i) willfully infringe the Asserted Patents and (ii) impermissibly usurp the significant benefits of AutoNavigare's patented technologies without fair compensation.

THE ASSERTED PATENTS AND TECHNOLOGY

12. AutoNavigare is the sole and exclusive owner of all right, title, and interest in the Asserted Patents and holds the exclusive right to take all actions necessary to enforce its rights in, and to, the Asserted Patents, including the filing of this patent infringement lawsuit. Indeed, AutoNavigare owns all substantial rights in the Asserted Patents, including the right to exclude others and to recover damages for all past, present, and future infringements.

U.S. Patent 7,512,489

13. The '489 Patent is entitled, "Route Search Method and Traffic Information Display Method for a Navigation Device." The '489 Patent lawfully issued on March 31, 2009 and stems from U.S. Patent Application No. 10/771,743, which was filed on February 5, 2004 and claims priority to a Japanese Patent Application (JP2003-028847), filed on February 5, 2003, and a Japanese Patent Application (JP2003-078461) filed on March 20, 2003. A copy of the '489 Patent is attached hereto as Exhibit A.

14. The invention disclosed and claimed by the '489 Patent relates to "a navigation device, and, more particularly, to a route search technique and a traffic information display technique for an in-vehicle type navigation device." Ex. A, 1:7-10. As used in the '489 Patent, route searching refers to the implementation of route searching by one or more computer processors using data representing links (segments of road) and associated data that can be used to calculate a cost of traversing a particular link (e.g., distance, speed limit, traffic conditions) to identify one or more preferred routes. At the time of the invention, the data sets used in route searching for road navigation and guidance were complex and contained large quantities of information that could not be meaningfully organized and maintained by pencil and paper, much less a human brain. Likewise, at the time of the invention, the processing required to perform route

searching for road navigation and guidance was complex and required substantial computing power, particularly given the size and complexity of real-world data sets. A human could not perform route searching as contemplated by the '489 Patent and its claims with pencil and paper in any useful way on any useful data set, much less mentally.

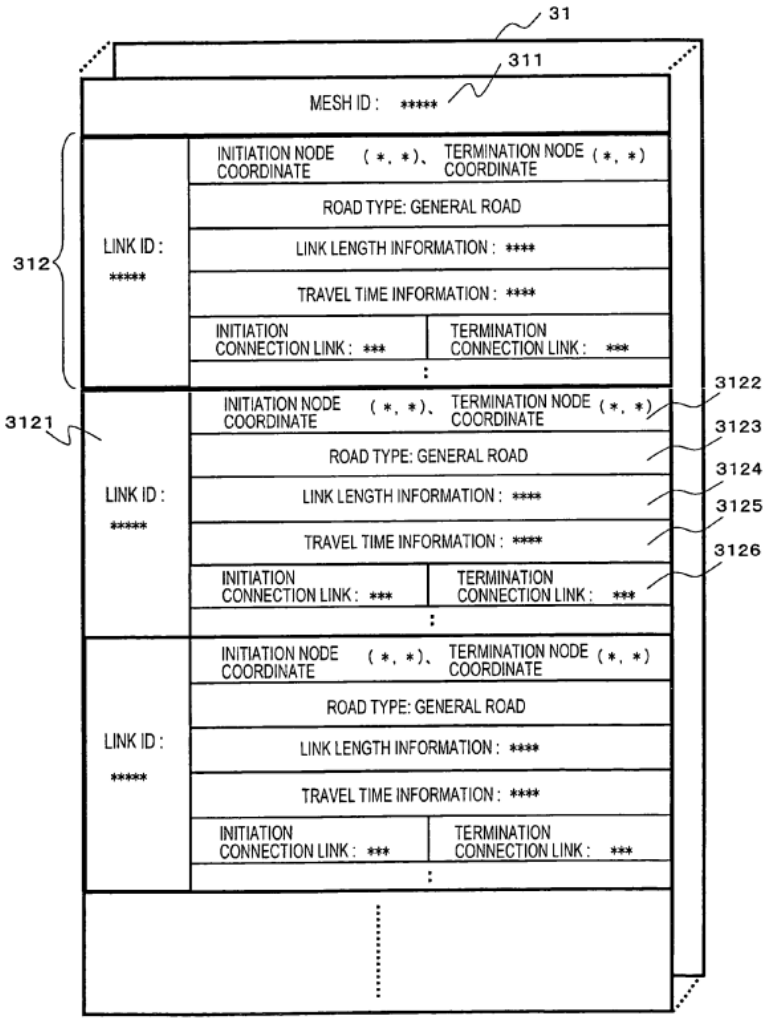
15. The inventors of the '489 Patent discerned that prior art navigation devices and techniques could be improved by using, among other things, statistical data based on traffic information (e.g., speed on link, degree of jam on link, time to traverse link) collected in the past and classified according to collection conditions (e.g., date, weather, time). *See, e.g.,* Ex. A, 1:1-2:14. To that end, the '489 Patent describes and claims specific technological improvements to navigation devices to improve route searching and guidance by such devices through use of, among other things, statistical traffic data that corresponds to environmental conditions on links in a route search. *See id.*, 1:30-2:14, 9:1-11, 10:58-14:24; Ex. B, p. 18 (explaining how the invention "realizes a more advantageous and highly accurate route search system" compared to prior art). The claims of the patent are not directed to an abstract idea or other ineligible subject matter, but instead to key technical improvements to navigation devices.

16. The technical improvements to navigation devices and route searching are evident in the specification and claims of the '489 Patent. The '489 Patent describes a navigation device that includes computing units (i.e., processors) configured to provide, among other things, route searching. For example, the patent describes an embodiment wherein "route search unit 42 searches a route (route of the minimum cost (travel time)), through which the vehicle can reach a destination in the shortest time, out of routes connecting two specified points (the departure position and the destination) by using the Dijkstra method (or the like) from map data, and stores the searched route as a recommended route in the route storage unit 43." Ex. A, 9:1-7; *see also id.*,

10:58-13:24. Notably, the specification explains how statistical traffic data corresponding to collection (or environmental) conditions is used to provide improved route searching and guidance. *See, e.g., id.* 9:7-13 ("In the embodiment, in order to calculate the cost for a route connecting two points, there are used statistical traffic data stored in the map/statistical traffic data storage device 3, that is, traffic information statistical values classified every condition such as the day type, the weather type, etc., and every time zone of respective links (see FIG. 3)."); *id.*, 11:63-12:18; *see also* Ex. B, p. 18.

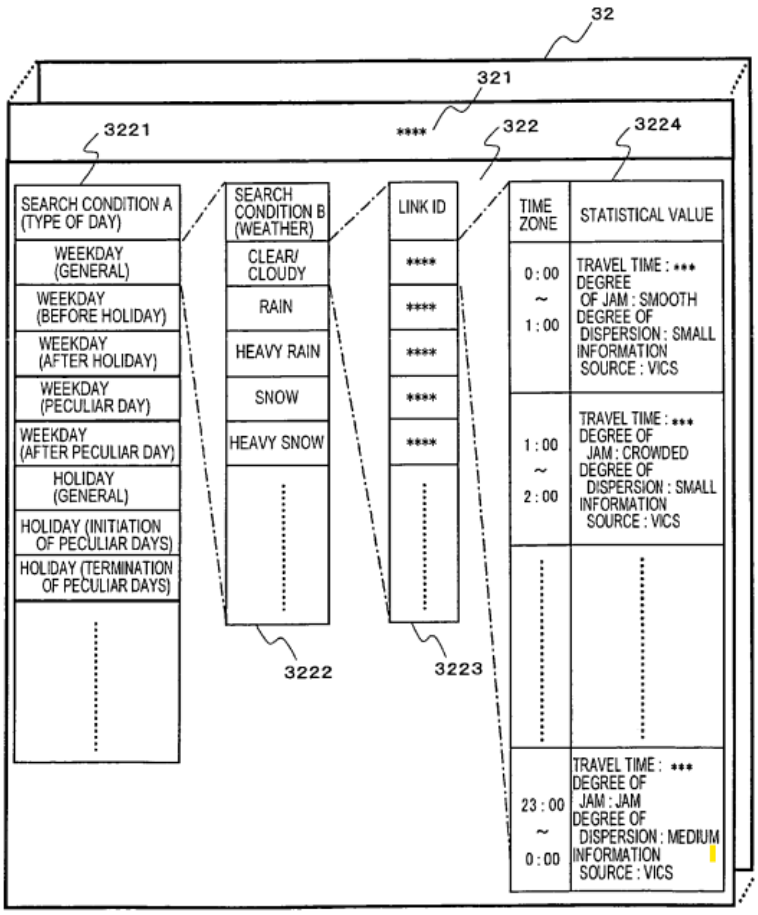
17. To implement the disclosed invention, the '489 Patent describes new structures for storing map-related data, including statistical data (e.g., travel time, moving speeds) for a link (a representation of a road segment) corresponding to traffic data collected in the past and organized by environmental conditions when the traffic data was collected. As illustrated by Figures 2-3 (and related disclosure), for example, the patent describes a navigation device with a memory that stores map data organized by links and statistical data for links corresponding to traffic data for environmental conditions when the traffic data was collected. *See, e.g., id.*, 5:3-6:52:

FIG.2



Ex. A, Fig. 2.

FIG.3



Ex. A, Fig. 3.

18. The claims of the ’489 Patent reflect the novel data structures and route search technology of the disclosed invention. For example, the “navigation device” of claims 1-7 and 21 includes “a storage device which stores map data including link data of respective links constituting roads on a map, and statistical data including travel time or moving speeds of the respective links determined by statistical values of traffic information collected in the past, said statistical data being classified according to differing predetermined environmental conditions existing during collection of the traffic information.” Ex. A, 36:43-51, 42:33-40. These aspects of

the claimed invention were not well-understood, routine or conventional at the time of the invention.

19. The improved route searching technology implemented by the disclosed navigation device is also reflected in the claims of the '489 Patent. For example, claim 21 recites:

> a route searching unit adapted to search a recommended route from the departure position to the destination, by using the map data stored in the storage device and statistical data corresponding to the environmental conditions set in the setting device out of the statistical data stored in the storage device;
>
> wherein, in the route searching unit, the statistical data corresponding to the environmental condition of respective candidate links constituting a recommended route, is used.

Ex. A, 42:44-53. Similarly, claim 1 recites:

> recommended route searching step which searches a recommended route from the departure position to the destination, by using the map data stored in the storage device and statistical data corresponding to the environmental conditions set in the setting step out of the statistical data stored in the storage device;
>
> wherein, in the route searching step, the statistical data corresponding to the environmental condition of respective candidate links constituting a recommended route, is used.

Ex. A, 36:54-63; *see also, e.g., id.*, 37:1-14. The "statistical data corresponding to the environmental conditions" refers to information stored according to the novel data structures disclosed by the '489 Patent and claimed in the "storage device" limitations of claims 1 and 21; thus, the claim language ties how the claimed navigation device searches for a route using the

unique data structure of the navigation device disclosed and claimed by the '489 Patent. The route searching limitations set forth by claims 1 and 21 goes beyond what was well-understood, routine, or conventional at the time of the invention.

20. As discussed above, the '489 Patent describes and claims specific technological improvements to navigation devices to improve route searching and guidance by such devices through use of, among other things, statistical traffic data that corresponds to environmental conditions on links in a route search. As of the priority date of the '489 Patent, navigation devices and technology were in their relative infancy and did not account for statistical data (e.g., average speed on a link, time to traverse a link, degree of traffic on link) corresponding to the environmental condition of respective candidate links (e.g., date, time, weather) when performing route searching. The technology disclosed and claimed by the '489 Patent enabled navigation devices to provide route searching and guidance in a way that, at the time of the invention, was an unconventional use of navigation and other computing technology. In other words, taking into account statistical data for a link corresponding to environmental conditions to perform route searching in a navigation device, as set forth by the claims of the '489 Patent, was not well-understood, routine, or conventional activity at the time of the invention.

21. The prosecution history for the '489 Patent further evidences that using statistical data corresponding to environmental conditions to perform route searching, as claimed by the '489 Patent, was not well-understood, routine, or conventional activity. During prosecution of the application that issued as the '489 Patent (U.S. Patent Application No. 10/771,743), the USPTO rejected the original claims as un-patentable in view of prior art. In response, in an Amendment dated October 17, 2008, the applicant amended claim 1 to recite "wherein, in the route searching step, the statistical data corresponding to the environmental condition of respective candidate links

constituting a recommended route, is used." Ex. B, p. 2. The applicant explained that, in contrast with the prior art, "Applicant's present invention discloses specifying the **statistical data**, wherein the value of the statistical data is likely to be fluctuated depending on environmental conditions such as weather or date/time, in accordance with the conditions at the time of the search and executing a route search based on the specified statistical data." *Id.*, p. 18 (emphasis in original). Thus, the "present invention realizes a more advantageous and highly accurate route search system." *Id.* The USPTO allowed the claims in response to the applicant's amendment and arguments, evidencing that the route searching technology claimed by the '489 Patent was not well-understood, routine, or conventional at the time of the invention. *See* Ex. C.

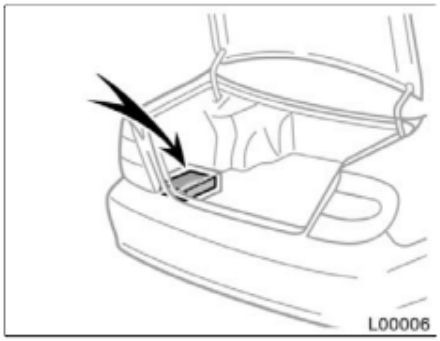
22. The '489 Patent describes and claims, among other things, specific technological improvements to navigation devices to improve route searching by such devices through the use of statistical data that corresponds to environmental conditions for links considered during route searching. The claims are not directed to an abstract idea. Rather, as discussed above and evidenced by the patent's specification, claims, and file history, the claims are drawn to a specific navigation device that improves upon prior art navigation devices and route searching through the use of, among other things, novel data structures storing statistical data reflecting changes in environmental conditions and route searching technology that accounts for such statistical data, each of which and together, were not well-understood, routine, or conventional at the time of the invention.

U.S. Patent 7,584,049

23. The '049 Patent is entitled, "Navigation Method, Processing Method for Navigation System, Map Data Management Device, Map Data Management Program, and Computer Program." The '049 Patent lawfully issued on September 1, 2009 and stems from U.S. Patent

Application No. 10/521,327, which was filed on October 20, 2005 and claims priority to a Japanese Patent Application (JP2002-208763) filed on July 17, 2002. A copy of the '049 Patent is attached hereto as Exhibit D.

24. The invention disclosed and claimed by the '049 Patent relates to navigation systems. At the time of the invention, navigation systems generally relied on map data stored in fixed media, such as a DVD, that could only be updated periodically and in its entirety (e.g., by replacing a DVD). *See* Ex. D, 9:39-49, 30:46-53. The user guide for the navigation system in the 2002 Toyota Camry is instructive:



The map database is normally updated once a year. Contact your dealer for updating a map database.

INFORMATION
For the up-dated map DVD-ROM, contact your Toyota dealer.

DVD: To determine which version of the database is currently in your vehicle, touch the **"DVD"** switch on the "Menu" screen. The "DVD information" screen appears and the map database version date is displayed. Contact your dealer to find out if a more recent update has been released.

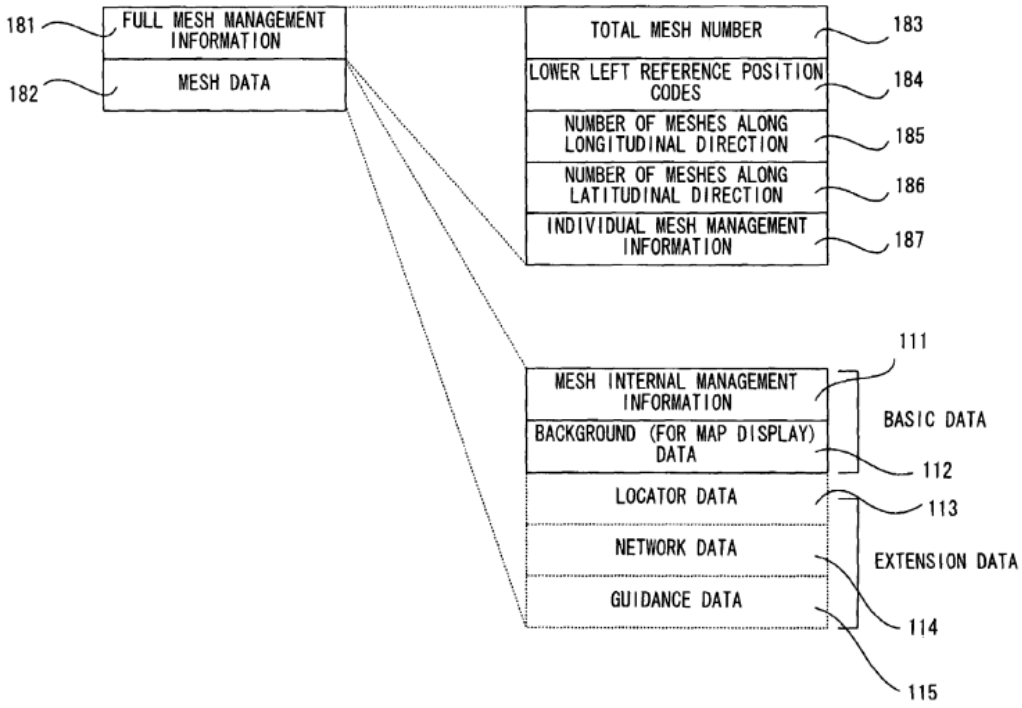
Toyota 2002 Camry Navigation Onwer's Manual (OM33559U), p. 63, *available at* https://www.toyota.com/owners/warranty-owners-manuals/.

25. The inventor of the '049 Patent sought to improve upon prior art navigation devices through new techniques for updating the data used to provide mapping and navigation that did not require updating a map database in its entirety or replacing a storage medium (e.g., a DVD). To that end, the '049 Patent describes and claims specific technological improvements to navigation devices to improve how map-related data is organized, updated, and used by such devices through

the use of, among other things, "meshes," that enable a navigation device to use both map data previously stored at the device and specific updated map data of interest to a user (e.g., map data in a particular area of interest, map data along a route) downloaded from a remote source. The claims of the patent are not directed to an abstract idea or other ineligible subject matter, but instead to technical improvements to navigation systems and devices.

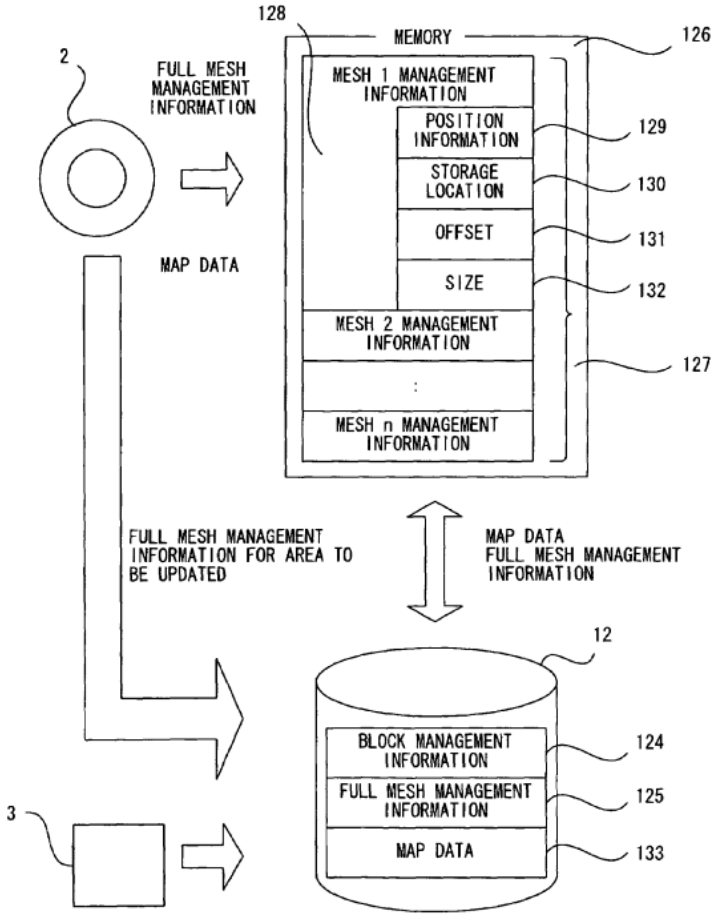
26. The specification and claims of the '049 Patent evidence the invention's technical improvement to navigation devices. The patent describes unique data structures that subdivide and organize map-related data in units referred to as "meshes." Figures 4-6 of the '049 Patent (and related disclosure) describe the mesh-based data structures disclosed by the patent:

FIG. 4



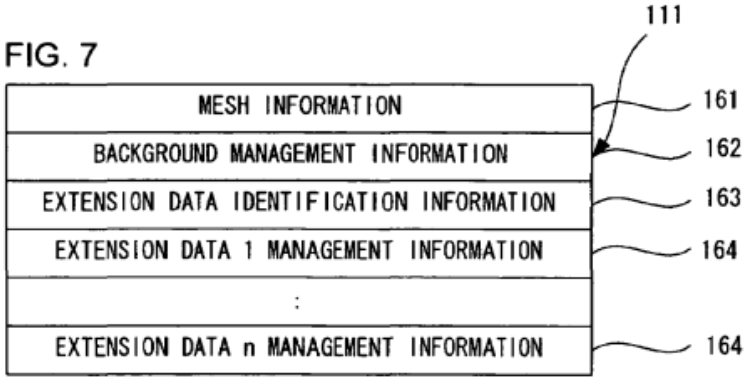
Ex. D, Fig. 4.

FIG. 5



Ex. D, Fig. 5.

FIG. 7

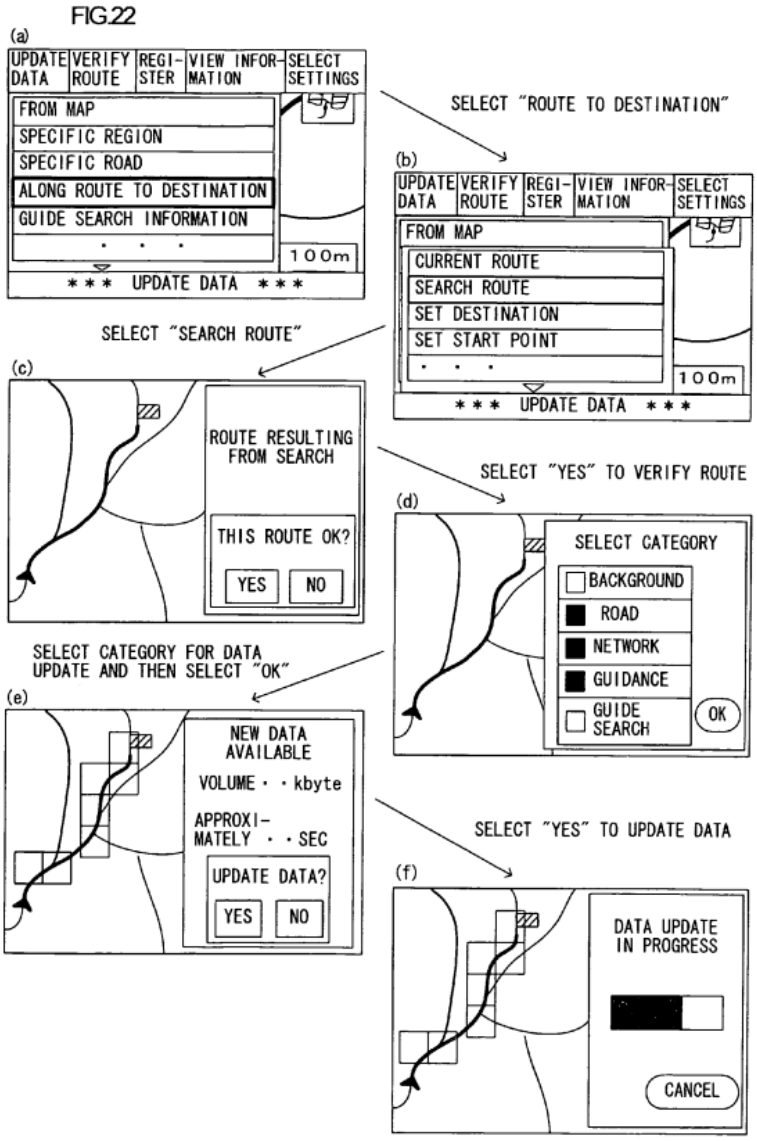


Ex. D, Fig. 7. The '049 Patent explains that the information represented by a mesh can be linked to geographic locations; thus, a mesh can be a geographic-based division of data. *See, e.g., id.*, 7:32-33.

27. The mesh-based data structures of the disclosed invention enable a flexible system in which a navigation device can rely on existing map data stored on the device in combination with updated map data for a particular "mesh" or "meshes" of interest (e.g., where updated map data is available for a particular area of interest or along a route). The mesh-based data structures used in the disclosed invention facilitate partial updates to map-related data that are less memory intensive and, thus, can be implemented more flexibly than prior art updates, including by update through remote means (e.g., wireless updates downloaded via the Internet). The patent identifies these and other benefits of the disclosed invention. *See* Ex. D, 30:46-33:10:

> (1) Since map data can be updated in units of individual meshes, the entire recording medium, such as a DVD ROM, in which the map data are stored, does not need to be replaced with a new recording medium when the map data are partially updated. Since the minimum data update units are individual meshes, i.e., since data can be updated in units of individual sets of basic data and extension data, data that do not need to be updated are not updated and thus, the volume of data that need to be communicated (the communication cost) can be minimized. In addition, individual sets of basic data and extension data can be updated over varying cycles.
>
> (2) Since update data can also be provided through communication via the Internet, the latest version of the update data can be made available quickly at low cost.

28. The '049 Patent also discloses novel processes and user interfaces for implementing a navigation system that uses meshes for updating map-related information. Examples of user interfaces are disclosed by Figures 18-24 of the '049 Patent (and related disclosure).



Ex. D, Fig. 22. Figure 22 illustrates a user interface for facilitating user selection of data categories and meshes for map updates along a route. In the embodiment of Figure 22, a navigation device displays "data along the specified route available for [] update" (Figure 22(d)) and permits a user to select "a single category or a combination of categories of data to be updated." *Id.*, 28:42-56. After categories of updates are selected, the navigation device displays "the update target meshes related to the selected categories." *Id.*, 28:66-29:3. As illustrated by Figure 22 (for example), the disclosed user interfaces, in combination with the disclosed mesh-based organization and use of

map-related data, allows a user to specify map updates of interest (e.g., particular categories of updated information along a route). As explained by the '049 Patent, this minimizes the amount of information for update (because only relevant data, not all data, can be updated), which in turn reduces the time and data needed for such updates. *See, e.g., id.*, 31:53-59, 32:9-15, 33:4-10. In other words, the disclosed user interfaces facilitate streamlined and reduced-cost data updates.

29. The claims of the '049 Patent reflect the specific technical improvements disclosed by the '049 Patent. For example, independent claim 9 recites a "navigation device" that includes "a control unit that is configured to use map data stored in a fixed recording medium and update map data downloaded from a map data management apparatus ***in combination***" Ex. D, 36:8-12 (emphasis added). Similarly, independent claim 5 recites a method for use in a "navigation system that uses map data stored in a fixed recording medium and update map data downloaded from a map data management apparatus ***in combination***" *Id.*, 34:59-62 (emphasis added). These aspects of the invention were not well-understood, routine or conventional activity at the time of the invention.

30. The specification explains that prior art navigation systems did not use updated map data downloaded from a remote source.

> A navigation system in the related art reads data from a recording medium such as a CD ROM or a DVD-ROM alone. The navigation system achieved in the embodiment, on the other hand, uses the map data in the recording medium 2 and updated map data in combination.

Ex. D, 9:39-49; *see also id.*, 30:46-59. In other words, a "navigation device" with "a control unit that is configured to use map data stored in a fixed recording medium and update map data downloaded from a map data management apparatus in combination" (claim 9) and a "navigation

system that uses map data stored in a fixed recording medium and update map data downloaded from a map data management apparatus in combination" (claim 5) were not well-understood, routine, or conventional activity at the time of the invention.

31. Claims of the '049 Patent also incorporate the use of a "mesh" to manage map data and updates thereto. Claim 7, for example, recites "A navigation device" comprising "a control unit … wherein the control unit is configured to display a menu with which a user specifies an area of a map over which map data are to be updated … ***the map data being managed in units of a mesh***." Ex. D, 35:13-22 (emphasis added). Similarly, claim 1 recites "displaying a menu with which a user specifies an area of a map over which map data are to be updated … ***the map data being managed in units of a mesh***." *Id.*, 34:31-38 (emphasis added). These aspects of the claimed invention were not well-understood, routine, or conventional activity at the time of the invention.

32. The prosecution history for the application that issued as the '049 Patent evidences that navigation devices and systems that managed map data in units of a mesh were not well-understood, routine, or conventional at the time of the invention. In response to a rejection over certain prior art, the applicant argued that the prior art did not teach or suggest "the map data being managed in units of a mesh." Ex. E, p. 14. Responsive to the reply, the USPTO allowed the claims, evidencing that the elements of the issued claims were not well-understood, routine, or conventional activity at the time of the invention. *See* Ex. F.

33. The claims of the '049 Patent also incorporate user interfaces for implementing the technological improvements to navigation devices disclosed by the patent. For instance, claim 1 recites "displaying a route and a map including the route, and displaying along the route one or more meshes including map data judged to be updated based upon the route, when the route-based option is selected from the options in the menu on display." Ex. D, 34:39-42. Similarly, claim 7

recites a control unit configured "to display a route and a map including the route, and displaying along the route one or more meshes including map data judged to be updated based upon the route, when the route-based option is selected from the options in the menu on display." *Id.*, 35:22-27. These limitations were not well-understood, routine, or conventional activity at the time of the invention.

34. As discussed above, navigation devices that used map data stored in a fixed recording medium in combination with updated map data downloaded from a map management apparatus were not well-understood, routine, or conventional at the time of the invention. Consequently, "displaying a route and a map including the route, and displaying along the route one or more meshes including map data judged to be updated based upon the route, when the route-based option is selected from the options in the menu on display" as claimed by claim 1 (and similar limitations in claim 7) would not have been well-understood, routine, or conventional at the time of the invention. Indeed, the specification explains that these aspects of the claimed invention are advantages of the invention. *See* Ex. D, 32:43-62. And, as discussed above and evidenced by the prosecution history for the '049 Patent, the use of meshes to manage and update map-related data was not well-understood, routine, or conventional activity at the time of the invention, much less the claimed user interfaces designed to implement the updating of maps using meshes. *See* Ex. E, pp. 14-15 (arguing in Reply that "displaying a route and a map including the route, and displaying along the route one or more meshes including more data judged to be updated based upon the route, when the route-based option is selected from the options in the menu on display" as claimed in claim 1 was not disclosed in prior art); Ex. F (notice of allowance in response to Reply).

35. Claims 5 and 9 also incorporate novel user interfaces for implementing the technological improvements to navigation devices disclosed by the '049 Patent. For example, claim 5 recites "a step of prompting an input of at least one selected option in an update category menu prepared in advance and displaying the specific area distinguishable when the specific area is judged to have update map data based upon the input of the selected option." Ex. D, 34:66-35:3. Similarly, claim 9 recites a navigation device comprising a control unit configured "to prompt an input of at least one selected option in an update category menu prepared in advance and display the specific area distinguishably when the specific area is judged to have update map data based upon the input of the selected option." *Id.*, 36:18-22. These limitations were not well-understood, routine, or conventional activity at the time of the invention.

36. As discussed above, navigation devices that used map data stored in a fixed recording medium in combination with updated map data downloaded from a map management apparatus were not well-understood, routine, or conventional at the time of the invention. Consequently, "prompting an input of at least one selected option in an update category menu prepared in advance and displaying the specific area distinguishable when the specific area is judged to have update map data based upon the input of the selected option" as claimed by claim 9 (and similar limitations in claim 5) would not have been well-understood, routine, or conventional at the time of the invention. Indeed, the specification explains that these aspects of the claimed invention are advantages of the invention. *See* Ex. D, 33:4-10. The prosecution history for application that issued as the '049 Patent also evidences that the claimed user interface features were not well-understood, routine, or conventional activities at the time of the invention. *See* Ex. E, p. 16 (arguing in Reply that "a step of prompting an input of at least one selected option in an update category menu prepared in advance and displaying the specific area distinguishably when

the specific area is judged to have update map data based upon the input of the selected option" was not disclosed in prior art); Ex. F (notice of allowance in response to Reply).

37. As discussed above, the '049 Patent describes and claims specific technological improvements to navigation devices to improve how such devices obtain and use updated map data, including (for example) through the use of meshes and unique user interfaces to facilitate download of updated map data of interest to a user for use with existing map data stored at the device. As of the priority date of the '049 Patent, navigation devices and technology did not use meshes to manage map data or use a combination of map data stored in a fixed recording medium (e.g., a DVD) and updated map data downloaded from a remote location to provide mapping and navigation. The technology disclosed and claimed by the '049 Patent enabled navigation devices to access and use updated map data in a way that, at the time of the invention, was an unconventional use of navigation and other computer technology. In other words, the improvements to managing and using updated map data by navigation devices and systems, as set forth by the claims of the '049 Patent, were not well-understood, routine, or conventional activity at the time of the invention.

38. The '049 Patent describes and claims, among other things, specific technological improvements to navigation devices to improve how such devices obtain and use updated map-related data. The claims are not directed to an abstract idea. Rather, as discussed above and evidenced by the patent's specification, claims, and file history, the claims are drawn to specific navigation devices and systems that improve upon prior art navigation devices and systems through the use of, among other things, updated map-related data provided in a way that it can be obtained from a remote source and used in combination with existing map data and unique user

interfaces to facilitate obtaining such updated map-related data, each of which and together, were not well-understood, routine, or conventional at the time of the invention.

U.S. Patent 7,725,254

39. The ’254 Patent is entitled, “Navigation Device Used for a Route Search.” The ’254 Patent lawfully issued on May 25, 2010 and stems from U.S. Patent Application No. 11/514,931, which was filed on September 5, 2006 and claims priority to a Japanese Patent Application (JP2005-256485) filed on September 5, 2005. A copy of the ’254 Patent is attached hereto as Exhibit G.

40. The invention disclosed and claimed by the ’254 Patent “relates to a navigation device, and particularly to a route search technique for a car-mounted navigation device.” Ex. G, 1:7-9. Route searching, as used in the ’254 Patent, refers to the implementation of route searching by one or more computer processors using data representing links (segments of road) and associated data that can be used to calculate a cost of traversing a particular link (e.g., distance, speed limit, traffic conditions) to identify one or more preferred routes. At the time of the invention, the data sets used in route searching for road navigation and guidance were complex and contained large quantities of information that could not be meaningfully organized and maintained by pencil and paper, much less a human brain. Likewise, at the time of the invention, the processing required to perform route searching for road navigation and guidance was complex and required substantial computing power, particularly given the size and complexity of real-world data sets. A human could not perform route searching as contemplated by the ’254 Patent and its claims with pencil and paper in any useful way on any useful data set, much less mentally.

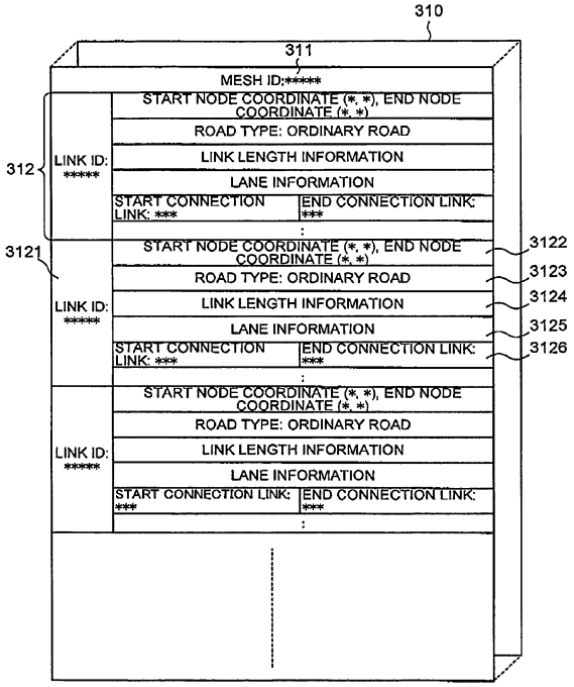
41. The inventors of the ’254 Patent discerned that prior art navigation devices and techniques could be improved by using lane-specific link costs. *See* Ex. G, 1:5-27. To that end, the

'254 Patent describes and claims specific technological improvements to navigation devices to improve route searching by such devices through use of lane-specific costs. The claims of the patent are not directed to an abstract idea or other ineligible subject matter, but instead to technical improvements to navigation devices.

42. The specification and claims of the '254 Patent evidence the invention's technical improvements to navigation devices and route searching. The '254 Patent describes a navigation device that includes a processor configured to provide, among other things, route searching. "[F]or example, Dijkstra's algorithm for searching for a route connecting the two designated points (i.e. the present location and the destination) so that the cost (such as travel time) of the route becomes smallest." Ex. G, 5:52-56; *see also id.,* 2:55-61, 6:42-8:60. Notably, the specification explains how lane-specific cost data is used to provide improved route searching and guidance. *See, e.g., id.*, 7:5-8:60.

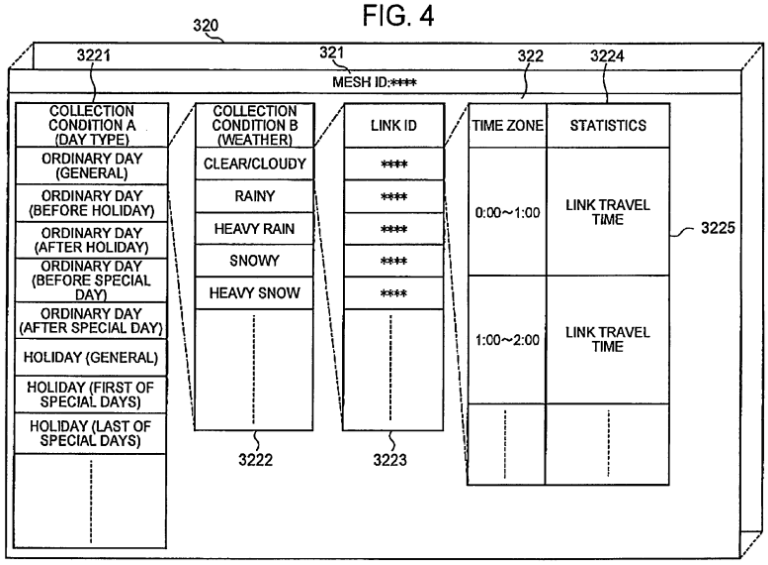
43. To implement the disclosed invention, the '254 Patent describes new structures for storing map-related data, including costs associated with lanes of a link (a representation of a road segment), in a memory of a navigation device. As illustrated by the Figures 2-6 (and related disclosure), for example, the patent describes a navigation device with a memory that stores map data organized by links, where each link is associated with respective data, including lane information, and also statistic and cost information for the link, including lane-specific cost information. *See, e.g., id.*, 3:1-4:31. Specifically, Figures 2, 4 and 5 appears as follows:

FIG. 2



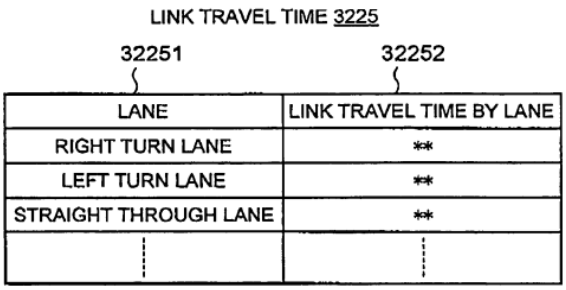
Ex. G, Fig. 2.

FIG. 4



Ex. G, Fig. 4

FIG. 5



Ex. G, Fig. 5. The disclosed data structures, which (among other things) associate lane-related data with a link as opposed to treating a lane as a separate link, make better use of memory and reduce the complexity of route searching.

44. The claims of the '254 Patent reflect the novel data structures and route search technology of the disclosed invention. For example, the "navigation device" of claims 1-6 includes "a storage unit configured to store link data for links constituting routes on a map, where at least one link has plural lanes including ones of a left-turn lane, a straight-through lane and a right-turn lane, and where the link data: identifies each link using an identifier, associates each respective lane with the identifier of the at least one link to which it belongs, and stores respective costs of the respective lanes." Ex. G, 9:64-10:4. These aspects of the claimed invention were not well-understood, routine or conventional at the time of the invention.

45. The prosecution history for the application that issued as the '254 Patent evidences that a "navigation device" comprising "a storage unit configured to store link data for links constituting routes on a map, where at least one link has plural lanes including ones of a left-turn lane, a straight-through lane and a right-turn lane, and where the link data: identifies each link using an identifier, associates each respective lane with the identifier of the at least one link to which it belongs, and stores respective costs of the respective lanes" was beyond well-understood, routine, or conventional activity at the time of the invention. During prosecution of the application

that issued as the '254 Patent (U.S. Patent Application No. 11/514,931), the USPTO rejected the claims as un-patentable in view of prior art. In response, in an Amendment dated October 6, 2009, the applicant amended claim 1 as shown below:

> 1. (Currently Amended) A navigation device, comprising:
>
> ~~a storage means for storing~~ a storage unit configured to store link data for links constituting routes on a map, where at least one link has plural lanes including ones of a left-turn lane, a straight-through lane and a right-turn lane, and where the link data: identifies each link using an identifier, associates each respective lane with the identifier of the at least one link to which it belongs, and stores respective costs of the respective lanes; and ~~including cost of respective lanes of links constituting a road on a map; and~~
>
> ~~a route search means for searching~~ a route search unit adapted to search for a route having a lowest total cost to a destination, using said link data, including using the respective costs of the respective lanes.

Ex. H, p. 3. The applicant argued that the prior art did not disclose or suggest "storing costs with respect to lanes." *See id*, pp. 10, 12. Responsive to the October 6, 2009 Amendment, the USPTO allowed the amended claims, evidencing that the elements of the issued claims were not well-understood, routine, or conventional activity at the time of the invention. *See* Ex. I.

46. The improved route searching technology implemented by the disclosed navigation device is also reflected in the claims of the '254 Patent. For example, claim 1 recites "a route search unit adapted to search for a route having a lowest total cost to a destination, using laid link data, ***including using the respective costs of the respective lanes***." Ex. G, 10:5-8 (emphasis added); *see also id.*, 10:9-12 ("said route search unit uses, as a cost of a link on a route, a cost of a lane on which a vehicle runs to move to a next link, such being the cost of one of lanes of the link

in question"); *id.*, 10:28-32 ("the route search unit uses, the route search unit uses, as a cost of a link on a route, a cost of a lane on which a vehicle runs to move to a next link this cost having been classified according to a collection condition corresponding to the situation at the time of arrival at the link in question"). "Said link data" and "the respective costs of the respective lanes" refers to information stored according to the novel data structures disclosed by the '254 Patent and claimed in the "storage unit" limitations of claim 1; thus, the claim language ties how the claimed route search unit searches for a route using the unique data structure of the navigation device disclosed and claimed by the '254 Patent.

47. As explained by the '254 Patent, prior art navigation devices did not account for differences between costs of traveling on different lanes of a link when performing route searching. *See* Ex. G, 1:6-34. In other words, using lane costs to implement route searching in a navigation device, as set forth by the claims of the '254 Patent, was not well-understood, routine, or conventional activity at the time of the invention.

48. The prosecution history for the '254 Patent further evidences that using lane-specific costs to perform route searching was not well-understood, routine, or conventional activity. As discussed above, the claims of the application that issued as the '254 Patent (U.S. Application No. 11/514,931) were amended to recite, in part, "a route search unit adapted to search for a route having a lowest total cost to a destination, using said link data, ***including using the respective costs of the respective lanes***" to overcome prior art rejections. *See* Ex. H, p. 3 (emphasis added to amended language). The USPTO allowed the claims in response to the applicant's amendments, evidencing that the route searching technology claimed by the patent was not well-understood, routine, or conventional at the time of the invention. *See* Ex. I.

49. The ’254 Patent describes and claims specific technological improvements to navigation devices to improve route searching and guidance by such devices through use of, among other things, lane specific costs for route searching. As of the priority date of the ’254 Patent, navigation devices and technology did not account for lane specific costs for lanes of a link when performing route searching. The technology disclosed and claimed by the ’254 Patent enabled navigation devices to provide route searching and guidance in a way that, at the time of the invention, was an unconventional use of navigation and other computing technology. In other words, taking into account lane-specific costs to perform route searching in a navigation device, as set forth by the claims of the ’254 Patent, was not well-understood, routine, or conventional activity at the time of the invention.

50. The ’254 Patent describes and claims, among other things, specific technological improvements to navigation devices to improve route searching by such devices through use of lane-specific costs. The claims are not directed to an abstract idea. Rather, as discussed above and evidenced by the patent’s specification, claims, and file history, the claims are drawn to a specific navigation device that improves upon prior art navigation devices and route searching technology through the use of, among other things, novel data structures and route searching technology, each of which and together, were not well-understood, routine, or conventional at the time of the invention.

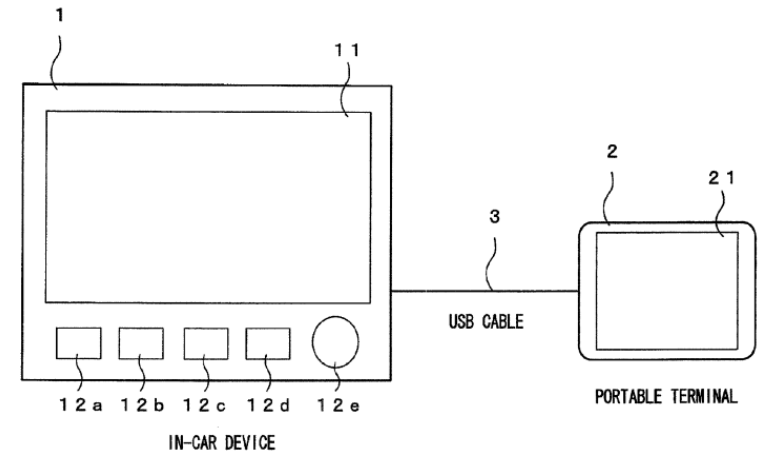
U.S. Patent 9,288,665

51. The ’665 Patent is entitled, “In-Car Information System, In-Car Device, and Information Terminal.” The ’665 Patent lawfully issued on March 15, 2016 and stems from U.S. Patent Application No. 14/508,420, which was filed on October 7, 2014 and is a continuation of U.S. Patent Application No. 13/824,150 filed on September 16, 2011. The ’665 Patent claims

priority to three Japanese Patent Applications: JP2010-20933 (filed September 17, 2010), JP2010-251664 (filed November 10, 2010), and JP2011-090411 (filed April 14, 2011). A copy of the '665 Patent is attached hereto as Exhibit J.

52. The invention disclosed and claimed by the '665 Patent relates to interfaces that facilitate control of an information terminal (e.g., smartphone) through an in-car device (e.g., an infotainment system in a vehicle):

FIG.1

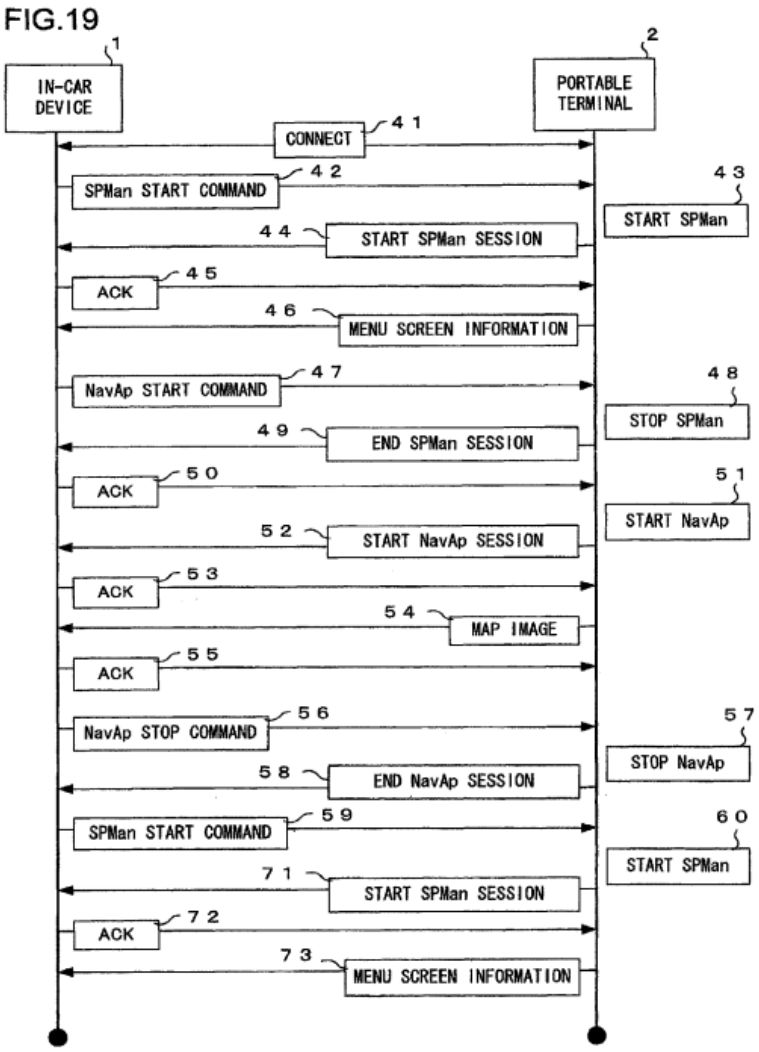


Ex. J, Fig. 1. The '665 Patent explains that, at the time of the invention, an in-car device and information terminal had to be individually and specifically configured to operate with one another for the in-car device to provide menu and control features for applications run on the information terminal. *See* Ex. J, 1:25-2:45. According to the inventors, this was problematic because different types of in-car devices (e.g., infotainment systems) were configured with different input/output features (e.g., different numbers of switches, dials buttons) and different types of information terminals (e.g., smartphones) included different features and functionality. Thus, a first type of in-car device that could be used to control one type of information terminal would not work with another type of information terminal, and an information terminal configured to work with a first type of in-car device could not be used with a second type of in-car device. The inventors of the

'665 sought to improve upon prior art techniques for how an information terminal and an in-car device interfaced to provide control of the information terminal through the use of the in-car device.

53. In particular, the inventors sought to improve upon the prior art through new techniques that allowed an information terminal (e.g., smartphone) to interface with any type of in-car device (e.g., infotainment system). To that end, the '665 describes and claims a novel interface that allows an information terminal and in-car device to establish communications, exchange functionality and configuration parameters, and generate information used to produce a menu that is displayed by the in-car device and used to control the execution and use of applications on the information terminal. The claims of the patent are not directed to an abstract idea or other ineligible subject matter, but instead to a technical solution to problems arising in systems wherein an in-car device (e.g., infotainment system) is used to control the execution or use of applications on an information terminal (e.g., a smartphone).

54. Figure 19 of the '665 Patent (and related disclosure) describe aspects of an embodiment according the disclosed and claimed invention:



Ex. J, Fig. 19. As explained by the patent, the information terminal (e.g., smartphone) includes a novel interface, referred to as a smartphone application manager ("SPMan") in the specification, that manages communications between the in-car device (e.g., infotainment system) and information terminal (e.g., smartphone). *See, e.g., id.*, 34:55-35:13, 37:13-38:19. The patent discloses that, after determining what type of in-car device the information terminal is communicating with, SPMan identifies the type of in-car device and its capabilities and then generates menu screen information, which information can be used to produce and display a menu by the in-car device. Notably, with respect to the claims of the '665 Patent, SPMan identifies (based on the type of in-car device) what applications on the information terminal (e.g.,

smartphone) can be controlled through the in-car device (e.g., infotainment system) and generates menu screen information based on this identification. *See, e.g.,* Ex. J, 37:63-38:19.

55. The claims of the '665 Patent reflect the novel technological improvements of the disclosed invention. For example, claim 3 recites "A menu screen generation method for an in-car information system comprising an information terminal and an in-car device that is connected to the information terminal so as to be capable of communicating with the information terminal." Ex. J, 70:13-17. The method performed by the system comprising an "information terminal" (e.g., smartphone) and "in-car device" (e.g., infotainment system) ties back to the inventive interface disclosed by the '665 Patent.

56. Claim 3 first recites that the claimed system performs "a step of determining a first application that is capable of starting ***corresponding to a type of the in-car device*** via an actuation unit provided to the in-car device from among a plurality of applications stored in the information terminal" and next performs "a step of generating menu screen information for displaying an icon corresponding to the first application upon a display unit provided to the in-car device in a state that information for displaying an icon corresponding to a second application that is incapable of starting via the actuation unit is not included in the menu screen information." Ex. J, 70:18-30 (emphasis added). These steps were not well-understood, routine, or conventional activity at the time of the invention, particularly in systems comprising "an information terminal and an in-car device" as claimed.

57. As discussed above, prior art systems were specifically configured in advance by to ensure that a particular in-car device (e.g., infotainment system) could be used to display a menu for controlling specific applications on a specific information terminal (e.g., smartphone) in a specific way. The approach disclosed and claimed by the '665 Patent is more flexible and allows

different information terminals (with different applications and functionality) to interface with and be controlled via various in-car devices through the use of a novel interface, which is reflected in the requirements of claim 3. The steps recited by claim 3 were not performed in prior art systems comprising an in-car device in communication with an information terminal; indeed, they were unnecessary because the applications that could be started and their use on an information terminal via an in-car device were preset. For example, there was no need in prior art systems for an in-car device or information terminal to determine what applications stored in the information terminal could be started based on the type of in-car device because applications that could be operated through the in-car device were fixed in advance. Similarly, there was no need for an in-car device or information terminal in the claimed system to perform the step of "generating menu screen information for displaying an icon corresponding to the first application upon a display unit provided to the in-car device," much less "in a state that information for displaying an icon corresponding to a second application that is incapable of starting via the actuation unit is not included in the menu screen information" because the menu screen information for displaying an icon was fixed in prior art systems.

58. The '665 Patent describes and claims specific technological improvements to systems in which an in-car device (e.g., infotainment system) is used to interface with and control the operation of an information terminal (e.g., smartphone), including through the use of, among other things, a novel interface that facilitates interoperability between the in-car device and information terminal and generates information that can be used to by the in-car device to produce and display a menu customized for controlling the execution of applications by an information terminal based on its specific capabilities. The claims are not directed to an abstract idea. As of the priority date of the '665 Patent, and as discussed above, prior art in-car devices (e.g.,

infotainment systems) could not be used to control the execution and use of applications stored on an information terminal unless the in-car device and information terminal were specifically configured to work together in advance. The technology disclosed and claimed by the '665 Patent addressed this shortcoming and enabled in-car devices to generate and display control information for an information terminal in a way that, at the time of the invention, was an unconventional use of in-car devices and information terminals. In other words, the functionality for generating menu screen information by a system comprising an in-car device in communication with an information terminal, including "determining a first application that is capable of starting corresponding to a type of in car device … and … generating menus screen information for displaying an icon corresponding to the first application … in a state that information for displaying an icon corresponding to a second application that is incapable of starting via the actuation unit is not included in the menu screen information," was not well-understood, routine, or conventional activity at the time of the invention.

U.S. Patent 9,766,801

59. The '801 Patent is entitled, "In-Car Information System, In-Car Device, and Information Terminal." The '801 Patent lawfully issued on September 19, 2017 and stems from U.S. Patent Application No. 15/018,060, which was filed on February 8, 2016, and is a continuation of U.S. Patent Application No. 14/508,420, which was filed on October 7, 2014, itself a continuation of U.S. Patent Application No. 13/824,150 filed on September 16, 2011. The '665 Patent claims priority to three Japanese Patent Applications: JP2010-20933 (filed September 17, 2010), JP2010-251664 (filed November 10, 2010), and JP2011-090411 (filed April 14, 2011). A copy of the '801 Patent is attached hereto as Exhibit K.

60. The ’801 Patent, which is a continuation of the ’665 Patent, shares a specification with the ’665 Patent and addresses the same shortcomings in the prior art as the ’665 Patent. The ’801 Patent, like the ’665 Patent, describes and claims a novel interface that allows an information terminal and in-car device to establish communications, exchange functionality and configuration parameters, and generate information used to produce a menu that is displayed by the in-car device and used to control the execution and use of applications on the information terminal. The claims of the patent are not directed to an abstract idea or other ineligible subject matter, but instead to specific systems and devices that incorporate a technical solution to problems arising in systems wherein an in-car device (e.g., infotainment system) is used to control the execution or use of applications on an information terminal (e.g., a smartphone).

61. The claims of the ’801 Patent reflect the novel technological improvements of the disclosed invention. Claim 1 recites a specific technological system – “An in-car information system comprising an in-car device and an information terminal” – not an abstract idea or any other ineligible subject matter. The claim recites limitations that narrowly tailor the claimed “in-car device” and “information terminal” to specific hardware configured to operate together in a particular way. *See* Ex. K, 71:36-72:11. Notably, the claimed “information terminal” includes, among other things, “an application manager,” which corresponds to the novel “SPMan” disclosed by the ’665 and ’801 Patents. Claim 1 recites “the information terminal starts the application manager to transmit, from the video signal output unit to the in-car device, the video signal for displaying a menu screen on the in-car device display monitor when the information terminal receives the start command from the in-car device” and “the in-car device receives the video signal by the video signal input unit to display the menu screen on the in-car device display monitor on the basis of the received video signal.” *Id.*, 72:1-11. Thus, the claim recites an in-car system in

which a specifically claimed information terminal (e.g., smartphone) executes an application manager to transmit a video signal for displaying a menu screen on a specifically claimed in-car device (e.g., infotainment system). This was not well-understood, routine, or conventional activity at the time of the invention, as evidenced (for example) by the prosecution history of the application that issued as the '801 Patent. *See* Ex. L, p. 2.

62. Claims 2 through 5 also recite a specific technological device – "An in-car device that is capable to be connected to an information terminal" – not an abstract idea or other ineligible subject matter. Like the system of claim 1, the "in-car device" of claims 2-5 includes specific hardware and is configured to operate in ways that were not well-understood, routine, or conventional activity at the time of the invention. The claimed in-car device includes "a display monitor of a touch panel type," "an interface unit that transmits actuation information on the basis of actuation on the display monitor," and "a video signal input unit that receives a video signal transmitted from the information terminal." Ex. K, 72:12-32. As evidenced by the prosecution history (for example), the "in-car device" of claims 2 through 5 is configured to operate in ways that were not well-understood, routine, or conventional at the time of the invention. For example, claim 2 recites that the in-car device is configured to "become ready to transmit a start command for an application stored in the information terminal to the information terminal when the interface unit and the video signal input unit are connected to the information terminal." *See, e.g.,* 72:19-23. Other claims require that the in-car device interacts with an "application manager" on an information terminal, activity that was not well-understood, routine, or conventional at the time of the invention. *See, e.g., id.*, 72:24-39.

63. Claims 6 and 7 of the '801 Patent are directed to a method for use in a specific technological system – "an in-car information system comprising an information terminal and an

in-car device" – that addresses technical shortcomings in the prior art. The claimed "in-car device" is limited to specific configurations (i.e., "the in-car device includes: a display monitor of a touch type; an interface unit that transmits actuation information on the basis of actuation on the display monitor; and a video signal input unit that receives a video signal transmitted from the information terminal"). Ex. K, 72:50-55. The claim also recites that the claimed "in-car information system" performs the steps of, among others, "receiving the video signal for displaying a menus screen by the video signal input unit from the information terminal" and "displaying the menu screen on the display monitor on the basis of the received video signal." *Id.*, 72:56-67. Thus, the claims recite an in-car system in which a specifically-claimed in-car device (e.g., infotainment system) receives a video signal for displaying a menu screen from an information terminal (e.g., smartphone). This was not well-understood, routine, or conventional activity at the time of the invention, as evidenced (for example) by the prosecution history of the application that issued as the '801 Patent. *See* Ex. L.

64. The '801 Patent describes and claims specific technological improvements to systems in which an in-car device (e.g., infotainment system) is used to interface with and control the operation of an information terminal (e.g., smartphone), including through the use of, among other things, a novel interface that facilitates interoperability between the in-car device and information terminal and generates information that can be used to by the in-car device to produce and display a menu for controlling the execution of applications by an information terminal. The claims are not directed to an abstract idea, but instead to specific technical systems and devices configured to operate in ways that were not well-understood, routine, or conventional at the time of the invention to address shortcomings in the prior art.

Summary

65. The claims of the Asserted Patents are directed to patent-eligible subject matter under 35 U.S.C. § 101. They are not directed to an abstract idea, and the technologies covered by the claims comprise systems and/or ordered combinations of features and functions that, at the time of invention, were not, alone or in combination, well-understood, routine, or conventional.

66. AutoNavigare's claims do not have damages limited by 35 U.S.C. § 287. AutoNavigare seeks damages only for infringement of: (i) method claims of the '665 Patent; and (ii) claims of the '489, '049, '254, and '801 Patents accruing upon, and after, notice of infringement to Toyota.

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 7,512,489)

67. AutoNavigare incorporates the preceding paragraphs herein by reference.

68. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq*.

69. AutoNavigare is the owner of all substantial rights, title, and interest in and to the '489 Patent, including the right to exclude others and to enforce, sue, and recover damages for past, present, and future infringements.

70. The '489 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on March 31, 2009, after full and fair examination.

71. Attached hereto as Exhibit M, and incorporated herein by reference, is an exemplary claim mapping that details how Toyota infringes claim 21 of the '489 Patent.[1]

Direct Infringement (35 U.S.C. § 271(a))

72. Toyota directly infringes one or more claims of the '489 Patent in this District and elsewhere in Texas and the United States.

73. To this end, Toyota directly infringes, either by itself or via its agent(s), at least claim 21 of the '489 Patent as set forth under 35 U.S.C. § 271(a) by making, using (including through testing or demonstration), selling, offering to sell, and/or importing Toyota and Lexus-branded vehicles equipped with built-in navigation systems that incorporate the fundamental technologies covered by the '489 Patent, including, but not limited to, Toyota and Lexus-branded vehicles (e.g., the 2024 Toyota Camry Hybrid) equipped with Toyota's Audio Multimedia System, Toyota's Entune 3.0 system, the Lexus Gen 11 Multimedia System, or Lexus' Interface Multimedia System, with built-in navigation capabilities (collectively, "the '489 Accused Products") (*see, e.g.*, Exhibit M).

Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

74. In addition and/or in the alternative to the direct infringements, Toyota indirectly infringes one or more claims of the '489 Patent by knowingly and intentionally inducing others, including its customers and/or other end users, to directly infringe the '489 Patent.

[1] The claim chart attached hereto as Exhibit M is exemplary. AutoNavigare served Toyota with its infringement contentions pursuant to Local P.R. 3-1 on September 4, 2024, which identify the claims infringed by Toyota (claims 1-3, 6-7 and 21 in this case) and include claim charts demonstrating how each element of claims 1-3, 6-7, and 21 of the '489 Patent is satisfied by Toyota and its vehicles. Exhibit M should not be interpreted as limiting AutoNavigare's infringement theories, which are set forth in AutoNavigare's infringement contentions, or be considered to be an admission that any claim is representative, whether for purposes of determining subject matter eligibility or any other issue.

75. At a minimum, Toyota has had knowledge of the '489 Patent at least since service of the original Complaint in the action. Toyota also has knowledge of the '489 Patent since receiving detailed correspondence from AutoNavigare prior to the filing of the original Complaint, alerting Toyota to its infringements. Since receiving notice of its infringements, Toyota has actively induced, and continues to actively induce, the direct infringements of its customers and/or other end users (e.g., as illustrated by Exhibit M) as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that the acts induced constitute infringement of the '489 Patent. Indeed, Toyota has intended to cause, continues to intend to cause, and has taken, and continues to take, affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the Accused Products, including marketing materials, user manuals (e.g., those available via https://www.toyota.com/owners/warranty-owners-manuals/), and online instructional materials (e.g., those available via https://www.youtube.com/toyotausa) that specifically teach and encourage customers and other end users to use the '489 Accused Products in an infringing manner. By providing such instructions and support, Toyota knows (and has known), or should know (and should have known), that its actions have actively induced, and continue to actively induce, infringement of the '489 Patent.

Damages

76. AutoNavigare has been damaged as a result of Toyota's infringing conduct described in this Count. Toyota is, thus, liable to AutoNavigare in an amount that adequately compensates it for Toyota's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

77. On information and belief, despite having knowledge of the '489 Patent and knowledge that it directly and/or indirectly infringes one or more claims of the '489 Patent, Toyota has nevertheless continued its infringing conduct and has disregarded an objectively high likelihood of infringement. Toyota's infringing activities relative to the '489 Patent have, thus, been, and continue to be, willful, wanton, and deliberate in disregard of AutoNavigare's rights with respect to the '489 Patent, justifying enhanced damages under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 7,584,049)

78. AutoNavigare incorporates the preceding paragraphs herein by reference.

79. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq*.

80. AutoNavigare is the owner of all substantial rights, title, and interest in and to the '049 Patent, including the right to exclude others and to enforce, sue, and recover damages for past infringements.

81. The '049 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on September 1, 2009, after full and fair examination.

82. Attached hereto as Exhibit N, and incorporated herein by reference, is an exemplary claim mapping that details how Toyota infringes claim 9 of the '049 Patent.[2]

[2] The claim chart attached hereto as Exhibit N is exemplary. AutoNavigare served Toyota with its infringement contentions pursuant to Local P.R. 3-1 on September 4, 2024, which identify the claims infringed by Toyota (claims 1, 4-7 and 9 in this case) and include claim charts demonstrating how each element of claims 1, 4-7, and 9 of the '049 Patent is satisfied by Toyota and its vehicles. Exhibit N should not be interpreted as limiting AutoNavigare's infringement theories, which are set forth in AutoNavigare's infringement contentions, or be considered to be an admission that any claim is representative, whether for purposes of determining subject matter eligibility or any other issue.

Direct Infringement (35 U.S.C. § 271(a))

83. Toyota directly infringes one or more claims of the '049 Patent in this District and elsewhere in Texas and the United States.

84. Toyota directly infringes, either by itself or via its agent(s), at least claim 9 of the '049 Patent as set forth under 35 U.S.C. § 271(a) by making, using (including through testing or demonstration), selling, offering to sell, and/or importing Toyota and Lexus-branded vehicles equipped with dynamic and/or cloud-based navigation systems that incorporate the fundamental technologies covered by the '049 Patent, including, but not limited to, Toyota and Lexus-branded vehicles (e.g., the 2024 Toyota Camry Hybrid) equipped with Toyota's Audio Multimedia System, Toyota's Entune 3.0 system, the Lexus Gen 11 Multimedia System, or Lexus' Interface Multimedia System with built-in navigation capabilities (collectively, the "'049 Accused Products") (*see, e.g.*, Exhibit N).

Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

85. In addition and/or in the alternative to its direct infringements, Toyota indirectly infringes one or more claims of the '049 Patent by knowingly and intentionally inducing others, including its customers and/or other end users, to directly infringe the '049 Patent.

86. At a minimum, Toyota has had knowledge of the '049 Patent at least since service of the original Complaint in this action. Toyota also has knowledge of the '049 Patent since receiving detailed correspondence from AutoNavigare prior to the filing of the original Complaint, alerting Toyota to its infringements. Since receiving notice of its infringements, Toyota has actively induced, and continues to actively induce, the direct infringements of its customers and/or other end users (e.g., as illustrated by Exhibit N) as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that

the acts induced constitute infringement of the ’049 Patent. Indeed, Toyota has intended to cause, continues to intend to cause, and has taken, and continues to take, affirmative steps to induce infringements by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the Accused Products, including marketing materials, user manuals (e.g., those available via https://www.toyota.com/owners/warranty-owners-manuals/), and online instructional materials (e.g., those available via https://www.youtube.com/toyotausa) that specifically teach and encourage customers and other end users to use the ’049 Accused Products in an infringing manner. By providing such instructions and support, Toyota knows (and has known), or should know (and should have known), that its actions have actively induced, and continue to actively induce, infringement of the ’049 Patent.

Damages

87. AutoNavigare has been damaged as a result of Toyota’s infringing conduct described in this Count. Toyota is, thus, liable to AutoNavigare in an amount that adequately compensates it for Toyota’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

88. On information and belief, despite having knowledge of the ’049 Patent and knowledge that it directly and/or indirectly infringes one or more claims of the ’049 Patent, Toyota has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Toyota’s infringing activities relative to the ’049 Patent have, thus, been, and continue to be, willful, wanton, and deliberate in disregard of AutoNavigare’s rights with respect to the ’049 Patent, justifying enhanced damages under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 7,725,254)

89. AutoNavigare incorporates the preceding paragraphs herein by reference.

90. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq*.

91. AutoNavigare is the owner of all substantial rights, title, and interest in and to the '254 Patent, including the right to exclude others and to enforce, sue, and recover damages for past infringements.

92. The '254 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on May 25, 2010, after full and fair examination.

93. Attached hereto as Exhibit O, and incorporated herein by reference, is an exemplary claim mapping that details how Toyota infringes claim 1 of the '254 Patent.[3]

Direct Infringement (35 U.S.C. § 271(a))

94. Toyota has directly infringed and continues to directly infringe one or more claims of the '254 Patent in this District and elsewhere in Texas and the United States.

95. Toyota directly infringes, either by itself or via its agent(s), at least claim 1 of the '254 Patent as set forth under 35 U.S.C. § 271(a) by making, using (including through testing or demonstration), selling, offering to sell, and/or importing Toyota and Lexus-branded vehicles equipped with built-in navigation systems that incorporate the fundamental technologies covered

[3] The claim chart attached hereto as Exhibit O is exemplary. AutoNavigare served Toyota with its infringement contentions pursuant to Local P.R. 3-1 on September 4, 2024, which identify the claims infringed by Toyota (claims 1-6 in this case) and include claim charts demonstrating how each element of claims 1-6 of the '254 Patent is satisfied by Toyota and its vehicles. Exhibit O should not be interpreted as limiting AutoNavigare's infringement theories, which are set forth in AutoNavigare's infringement contentions, or be considered to be an admission that any claim is representative, whether for purposes of determining subject matter eligibility or any other issue.

by the ’254 Patent, including, but not limited to, Toyota and Lexus-branded vehicles (e.g., the 2024 Toyota Camry Hybrid) equipped with Toyota’s Audio Multimedia System, Toyota’s Entune 3.0 system, the Lexus Gen 11 Multimedia System, or Lexus’ Interface Multimedia System with built-in navigation capabilities (collectively, the “’254 Accused Products”) (*see, e.g.*, Exhibit O).

Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

96. In addition and/or in the alternative to its direct infringements, Toyota has indirectly infringed and continues to indirectly infringe one or more claims of the ’254 Patent by knowingly and intentionally inducing others, including its customers and/or other end users, to directly infringe the ’254 Patent.

97. At a minimum, Toyota has had knowledge of the ’254 Patent at least since service of the original Complaint in this action. Toyota also has knowledge of the ’254 Patent since receiving detailed correspondence from AutoNavigare prior to the filing of the original Complaint, alerting Toyota to its infringements. Since receiving notice of its infringements, Toyota has actively induced, and continues to actively induce, the direct infringements of its customers and/or other end users (e.g., as illustrated by Exhibit O) as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that the acts induced constitute infringement of the ’254 Patent. Indeed, Toyota has intended to cause, continues to intend to cause, and has taken, and continues to take, affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the ’254 Accused Products, including marketing materials, user manuals (e.g., those available via https://www.toyota.com/owners/warranty-owners-manuals/), and online instructional materials (e.g., those available via https://www.youtube.com/toyotausa) that specifically teach and encourage customers and other

end users to use the ’254 Accused Products in an infringing manner. By providing such instructions and support, Toyota knows (and has known), or should know (and should have known), that its actions have actively induced, and continue to actively induce, infringement of the ’254 Patent.

Damages

98. AutoNavigare has been damaged as a result of Toyota’s infringing conduct described in this Count. Toyota is, thus, liable to AutoNavigare in an amount that adequately compensates it for Toyota’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

99. On information and belief, despite having knowledge of the ’254 Patent and knowledge that it directly and/or indirectly infringes one or more claims of the ’254 Patent, Toyota has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Toyota’s infringing activities relative to the ’254 Patent have, thus, been, and continue to be, willful, wanton, and deliberate in disregard of AutoNavigare’s rights with respect to the ’254 Patent, justifying enhanced damages under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 9,288,665)

100. AutoNavigare incorporates the preceding paragraphs herein by reference.

101. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq*.

102. AutoNavigare is the owner of all substantial rights, title, and interest in and to the ’665 Patent, including the right to exclude others and to enforce, sue, and recover damages for past infringements.

103. The ’665 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on March 15, 2016, after full and fair examination.

104. Attached hereto as Exhibit P, and incorporated herein by reference, is an exemplary claim mapping that details how Toyota infringes claim 3 of the '665 Patent.[4]

Direct Infringement (35 U.S.C. § 271(a))

105. Toyota has directly infringed and continues to directly infringe one or more claims of the '665 Patent in this District and elsewhere in Texas and the United States.

106. To this end, Toyota has infringed, either by itself or via its agent(s), at least claim 3 of the '665 Patent by, among other things, testing and using Toyota and Lexus-branded vehicles equipped with touchscreen infotainment systems that incorporate the technologies covered by the '665 Patent, including, but not limited to, Toyota and Lexus-branded vehicles (e.g., the 2023 Toyota Corolla Hybrid) equipped with touchscreen infotainment systems that support the integration of multimedia devices (e.g., smartphones) with the infotainment systems through a wired connection (e.g., via a USB data interface) and/or wirelessly (e.g., via Bluetooth) (collectively, the "'665 Accused Products") (e.g., as illustrated by Exhibit P). In addition, on information and belief, Toyota retains title to, and ownership and control over, '665 Accused Products that Toyota leases to customers and other end users and is, thus, liable for infringements performed by the vehicles.

107. In addition and/or in the alternative, Toyota directly infringes, either by itself or via its agent(s), at least claim 3 of the '665 Patent by directing, controlling, and setting into operation the performance of the claimed methods of the '665 Patent (e.g., as illustrated by Exhibit P).

[4] The claim chart attached hereto as Exhibit P is exemplary. AutoNavigare served Toyota with its infringement contentions pursuant to Local P.R. 3-1 on September 4, 2024, which identify the claims infringed by Toyota (claims 3-6 in this case) and include claim charts demonstrating how each element of claims 3-6 of the '665 Patent is satisfied by Toyota and its vehicles. Exhibit P should not be interpreted as limiting AutoNavigare's infringement theories, which are set forth in AutoNavigare's infringement contentions, or be considered to be an admission that any claim is representative, whether for purposes of determining subject matter eligibility or any other issue.

Toyota directs and controls the '665 Accused Products' performance of the steps of the claimed method(s), as Toyota provides software that is not accessible to end users and automatically performs the steps of the claimed methods through normal operation of the infotainment system without user action. Further, Toyota conditions receipt of various benefits upon performance of the patented methods (e.g., by providing end users seamless integration of key infotainment system functionality consistent with their expectations, as well as by providing manufacturer warranties conditioned upon operation of the vehicle without alteration). In addition, Toyota conditions use of its infotainment services and software on acceptance of a Toyota Vehicle Software End User License Agreement that prohibits end users from modifying the services and software. Thus, Toyota conditions use of its infotainment system on allowing Toyota to implement functionality that performs methods claimed by the '665 Patent. As discussed above, Toyota does more than merely sell a product with software that performs the claimed methods; rather, Toyota exercises control over the equipment and software that performs the method claimed in at least claim 3 of the '665 Patent.

Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

108. In addition and/or in the alternative to its direct infringements, Toyota has indirectly infringed and continues to indirectly infringe one or more claims of the '665 Patent by knowingly and intentionally inducing others, including its customers and/or other end users, to directly infringe the '665 Patent.

109. At a minimum, Toyota has had knowledge of the '665 Patent at least since service of the original Complaint in this action. Toyota also has knowledge of the '665 Patent since receiving detailed correspondence from AutoNavigare prior to the filing of the original Complaint, alerting Toyota to its infringements. Since receiving notice of its infringements, Toyota has

actively induced, and continues to actively induce, the direct infringements of its customers and/or other end users (e.g., as illustrated by Exhibit P) as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that the acts induced constitute infringement of the '665 Patent. Indeed, Toyota has intended to cause, continues to intend to cause, and has taken, and continues to take, affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the '665 Accused Products, including marketing materials, user manuals (e.g., those available via https://www.toyota.com/owners/warranty-owners-manuals/), and online instructional materials (e.g., those available via https://www.youtube.com/toyotausa) that specifically teach and encourage customers and other end users to use the '665 Accused Products in an infringing manner. By providing such instructions and support, Toyota knows (and has known), or should know (and should have known), that its actions have actively induced, and continue to actively induce, infringement of the '665 Patent.

Damages

110. AutoNavigare has been damaged as a result of Toyota's infringing conduct described in this Count. Toyota is, thus, liable to AutoNavigare in an amount that adequately compensates it for Toyota's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

111. On information and belief, despite having knowledge of the '665 Patent and knowledge that it directly and/or indirectly infringes one or more claims of the '665 Patent, Toyota has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Toyota's infringing activities relative to the '665 Patent have, thus, been, and

continue to be, willful, wanton, and deliberate in disregard of AutoNavigare's rights with respect to the '665 Patent, justifying enhanced damages under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 9,766,801)

112. AutoNavigare incorporates the preceding paragraphs herein by reference.

113. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq*.

114. AutoNavigare is the owner of all substantial rights, title, and interest in and to the '801 Patent, including the right to exclude others and to enforce, sue, and recover damages for past infringements.

115. The '801 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on September 19, 2017, after full and fair examination.

116. Attached hereto as Exhibit Q, and incorporated herein by reference, is an exemplary claim mapping that details how Toyota infringes claim 2 of the '801 Patent.[5]

Direct Infringement (35 U.S.C. § 271(a))

117. Toyota directly infringes one or more claims of the '801 Patent in this District and elsewhere in Texas and the United States.

118. Toyota directly infringes, either by itself or via its agent(s), at least claim 2 of the '801 Patent as set forth under 35 U.S.C. § 271(a) by making, using (including through testing or

[5] The claim chart attached hereto as Exhibit Q is exemplary. AutoNavigare served Toyota with its infringement contentions pursuant to Local P.R. 3-1 on September 4, 2024, which identify the claims infringed by Toyota (claims 1-7 in this case) and include claim charts demonstrating how each element of claims 1-7 of the '801 Patent is satisfied by Toyota and its vehicles. Exhibit Q should not be interpreted as limiting AutoNavigare's infringement theories, which are set forth in AutoNavigare's infringement contentions, or be considered to be an admission that any claim is representative, whether for purposes of determining subject matter eligibility or any other issue.

demonstration), selling, offering to sell, and/or importing Toyota and Lexus-branded vehicles equipped with infotainment systems that incorporate the fundamental technologies covered by the '801 Patent, including, but not limited to, Toyota and Lexus-branded vehicles (e.g., the 2023 Toyota Corolla Hybrid) equipped with touchscreen infotainment systems that support the integration of multimedia devices (e.g., smartphones) with the infotainment systems through a wired connection (e.g., via a USB data interface) and/or wirelessly (e.g., via Bluetooth) (collectively, the "'801 Accused Products") (*see, e.g.*, Exhibit Q).

Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

119. In addition and/or in the alternative to its direct infringements, Toyota indirectly infringes one or more claims of the '801 Patent by knowingly and intentionally inducing others, including its customers and/or other end users, to directly infringe the '801 Patent.

120. At a minimum, Toyota has had knowledge of the '801 Patent at least since being served with the original Complaint in this action. Toyota also has knowledge of the '801 Patent since receiving detailed correspondence from AutoNavigare prior to the filing of the original Complaint, alerting Toyota to its infringements. Since receiving notice of its infringements, Toyota has actively induced, and continues to actively induce, the direct infringements of its customers and/or other end users (e.g., as illustrated by Exhibit Q) as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that the acts induced constitute infringement of the '801 Patent. Indeed, Toyota has intended to cause, continues to intend to cause, and has taken, and continues to take, affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the Accused Products, including marketing materials, user manuals (e.g., those available via https://www.toyota.com/owners/warranty-owners-

manuals/), and online instructional materials (e.g., those available via https://www.youtube.com/toyotausa) that specifically teach and encourage customers and other end users to use the '801 Accused Products in an infringing manner. By providing such instructions and support, Toyota knows (and has known), or should know (and should have known), that its actions have actively induced, and continue to actively induce, infringement of the '801 Patent.

Damages

121. AutoNavigare has been damaged as a result of Toyota's infringing conduct described in this Count. Toyota is, thus, liable to AutoNavigare in an amount that adequately compensates it for Toyota's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

122. On information and belief, despite having knowledge of the '801 Patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '801 Patent, Toyota has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Toyota's infringing activities relative to the '801 Patent have, thus, been, and continue to be, willful, wanton, and deliberate in disregard of AutoNavigare's rights with respect to the '801 Patent, justifying enhanced damages under 35 U.S.C. § 284.

CONCLUSION

123. AutoNavigare is entitled to recover from Toyota the damages sustained by AutoNavigare as a result of Toyota's wrongful acts and willful infringements in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

124. AutoNavigare has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional

case within the meaning of 35 U.S.C. § 285, and, in such case, AutoNavigare is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

125. AutoNavigare hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

126. AutoNavigare respectfully requests that the Court find in its favor and against Toyota, and that the Court grant AutoNavigare the following relief:

(i) Judgment that one or more claims of the Asserted Patents have been infringed, either literally and/or under the doctrine of equivalents, by Toyota;

(ii) Judgment that one or more claims of the Asserted Patents have been willfully infringed, either literally and/or under the doctrine of equivalents, by Toyota;

(iii) Judgment that Toyota account for and pay to AutoNavigare all damages and costs incurred by AutoNavigare because of Toyota's infringements and other conduct complained of herein, including an accounting for any sales or damages not presented at trial;

(iv) Judgment that Toyota account for and pay to AutoNavigare a reasonable, ongoing, post-judgment royalty because of Toyota's infringements, including continuing infringing activities, and other conduct complained of herein;

(v) Judgment that AutoNavigare be granted pre-judgment and post-judgment interest on the damages caused by Toyota's infringements and other conduct complained of herein;

(vi) Judgment that this case is exceptional under the provisions of 35 U.S.C. § 285 and award enhanced damages; and

(vii) Such other and further relief as the Court deems just and equitable.

Dated: October 9, 2024

Respectfully submitted,

/s/ Edward R. Nelson III
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Attorneys for Plaintiff AutoNavigare LLC

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on October 9, 2024, the foregoing was filed with the Court via its CM/ECF system, which will send notice to counsel for Defendant.

/s/ Edward R. Nelson III