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

ARTAX, LLC,

                Plaintiff,

    v.

TOMTOM NORTH AMERICA, INC.,
TOMTOM, INC. and
TOMTOM INTERNATIONAL BV,

                Defendants.

Case No. 4:22-cv-00737

Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Artax, LLC ("Artax") files this Complaint against Defendants TomTom North America, Inc., TomTom, Inc., and TomTom International BV (individually and collectively referred to herein as "TomTom") for patent infringement of United States Patent Nos. 8,019,581; 8,107,608; 8,169,343; 8,428,869; 9,217,644; 9,304,012; 9,423,266; 9,582,814; and 9,625,268 (the "patents-in-suit"), and alleges as follows:

NATURE OF THE ACTION

1.   This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

THE PARTIES

2.   Artax is a limited liability company organized under laws of the State of

Texas with its principal place of business at 17330 Preston Road, Suite 200D, Dallas,

Texas 75252.

3.   On information and belief, TomTom North America, Inc. is a corporation

organized and existing under the laws of New Hampshire, with a principal place of

business at 11 Lafayette Street, Lebanon, New Hampshire 03766. Upon information and

belief, TomTom North America, Inc. sells and offers to sell products and services

throughout the United States, including in this judicial district, and introduces products

and services that perform infringing processes into the stream of commerce knowing

that they would be used, offered for sale, or sold in this judicial district and elsewhere

in the United States.

4.   On information and belief, Defendant TomTom North America, Inc. may

be served with process through its registered agent, National Registered Agents, Inc.

1999 Bryan St., Ste. 900, Dallas, TX 75201-3136 or anywhere it may be found.

5.   Defendant TomTom North America, Inc. has been authorized to do

business in the State of Texas and the Eastern District of Texas since on or about June 20,

2001, under Texas SoS File Number 0013889806.

6.   Upon information and belief, TomTom, Inc. is a corporation organized

and existing under the laws of Massachusetts with a principal place of business at 2400

District Avenue, Suite 410, Burlington, Massachusetts 01803. Upon information and

belief, TomTom, Inc. sells and offers to sell products and services throughout the

United States, including in this judicial district, and introduces products and services

that perform infringing processes into the stream of commerce knowing that they

would be used, offered for sale, or sold in this judicial district and elsewhere in the

United States.

7.   On information and belief, Defendant TomTom Inc. may be served with

process through its registered agent, National Registered Agents, Inc., 155 Federal

Street, Suite 700, Boston, Massachusetts 02110 or anywhere it may be found.

8.   TomTom International BV is a Netherlands corporation with its principal

place of business located at De Ruyterkade 154, 1011 AC Amsterdam, The Netherlands.

9.   TomTom International BV can be served with process at its principal place

of business at De Ruyterkade 154, 1011 AC Amsterdam, The Netherlands or anywhere

it may be found.

10.   Upon information and belief, TomTom North America, Inc. and TomTom

Inc. are wholly-owned subsidiaries of TomTom International BV.

11.   On information and belief, TomTom has made, used, offered to sell

and/or sold products and services, including the following specifically accused

products and services: (1) TomTom Go Navigation app;[1] (2) TomTom Routing API;[2] (3)

current or legacy TomTom products or services, which use, or have used, one or more

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[1] *See* https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

[2] *See* https://developer.tomtom.com/routing-api/documentation/product-information/introduction.

of the foregoing products and services as a component product or component service;

(4) combinations of products and/or services comprising, in whole or in part, two or

more of the foregoing products and services; (5) and all other current or legacy products

and services imported, made, used, sold, or offered for sale by TomTom that operate, or

have operated in a substantially similar manner as the above-listed products and

services. (As used herein, one or more of the forgoing products and services are

individually and collectively referred to as the accused "TomTom Products and

Services").

12.   On information and belief, TomTom, as well as the hardware and

software components comprising the TomTom Products and Services and/or that

enable the TomTom Products and Services to operate infringes (literally and/or under

the doctrine of equivalents) at least one claim of each of the patents-in-suit.

JURISDICTION AND VENUE

13.   This Court has personal jurisdiction over TomTom because they

committed and continues to commit acts of infringement in this judicial district in

violation of 35 U.S.C. §§ 271(a). In particular, on information and belief, TomTom has

made, used, offered to sell access to, and/or sold access to the accused TomTom

Products and Services in the Eastern District of Texas.

14.   On information and belief, TomTom is subject to the Court's jurisdiction

because it regularly conducts and solicits business, or otherwise engages in other

persistent courses of conduct in this judicial district, and/or derives substantial revenue

from the use, sale, and distribution of goods and services, including but not limited to

the accused TomTom Products and Services provided to individuals and businesses in the Eastern District of Texas.

15.   On information and belief, TomTom infringes the patents-in-suit in the Eastern District of Texas, at least, by making, using, offering to sell access to, and/or selling access to the accused TomTom Products and Services in the Eastern District of Texas, and its making, use, offering to sell access to, and/or selling access to the TomTom System.

16.   On information and belief, the accused TomTom Products and Services are made, used, sold and offered for sale throughout the State of Texas and this judicial district directly by TomTom, or through retail agents, including Walmart and BestBuy retail stores located in the Eastern District of Texas among others.

17.   On information and belief, TomTom's customers located in the Eastern District of Texas have obtained access to and used the accused TomTom Products and Services while located in the Eastern District of Texas.

18.   The Court has personal jurisdiction over TomTom at least because it has continuous business contacts in the State of Texas and in the Eastern District of Texas; TomTom has engaged in business activities including transacting business in the Eastern District of Texas and purposefully directing its business activities, including the sale or offer for sale of the TomTom Products and Services to the Eastern District of Texas to aid, abet, or contribute to the infringement of third parties in the Eastern District of Texas.

19.   This Court has personal jurisdiction over TomTom because, *inter alia*, TomTom, on information and belief: (1) has committed acts of patent infringement in this Eastern District of Texas; (2) maintains a regular and established place of business in the Eastern District of Texas; (3) has substantial, continuous, and systematic contacts with this State and the Eastern District of Texas; (4) owns, manages, and operates facilities and mobile mapping vehicles in this State and the Eastern District of Texas; (5) enjoys substantial income from its operations and sales in this State and the Eastern District of Texas; (6) employs Texas residents in this State and the Eastern District of Texas, and (7) solicits business using the TomTom Products and Services in this State and the Eastern District of Texas.

20.   Initially, upon information and belief, TomTom maintains permanent employees within the district, from where they regularly conduct TomTom's regular and established business. Moreover, TomTom owns and deploys a fleet of mobile mapping vehicles, which have, and have had, a regular and established presence in major cities throughout this district since at least 2017. The vehicles are operated by TomTom employees and/or contractors who work entirely at TomTom's direction and under their control. The existence of TomTom's mobile mapping vehicles within this district are steady, uniform, orderly, and methodical such to create, maintain, and sell TomTom's goods and services (e.g., maps, mapping services, and mapping devices).

21.   Both a substantial portion of the value of TomTom's products within the United States and the integrity of its products themselves is dependent upon the regular and established presence of TomTom's mobile mapping vehicles within this District.

Indeed, TomTom's place of business is, in fact, inclusive of the major cities within this District. TomTom's products include a representation of major cities throughout this District. TomTom markets important components of their map products and services as including detailed diagrams of the roadways and structures within major cities such as within this District. Moreover, TomTom's mobile mapping vehicles themselves are highly identifiable with the "TomTom" branding on the sides of the vehicles in large, colorful font. Upon information and belief, this branding is specifically intended to draw attention to TomTom's regular presence in this district, the availability of their infringing products for sale within this district, the quality of their infringing product within this district, and the infringing methods used to create and maintain their infringing products

22.   Thus, every aspect of TomTom's products is tied to the major cities within this district. It creates its product in, and using, this district. It sells and markets its products in this district. It has a regular and established presence of employees within this district, for the purpose of creating and marketing its product. Indeed, the presence of those employees is a necessary aspect of the creation and maintenance of its products.

23.   Venue is proper pursuant to 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b), at least because TomTom, has committed acts of infringement in this judicial district, and has regular and established places of business in this judicial district.

24.   Furthermore, venue is proper as to TomTom International BV under 28

U.S.C. § 1391(c)(3) and *In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018) because it is a

foreign corporation.

United States Patent No. 8,019,581

25.   On September 13, 2011, the USPTO duly and legally issued United States

Patent No. 8,019,581 ("the '581 Patent") entitled "System and Method System for

Providing Routing, Mapping, and Relative Position Information to Users of a

Communication Network" to inventors Michael A. Sheha, Stephen Petilli, and Angie

Sheha.

26.   The '581 Patent is presumed valid under 35 U.S.C. § 282.

27.   Artax owns all rights, title, and interest in the '581 Patent.

28.   Artax has not granted TomTom an approval, an authorization, or a license

to the rights under the '581 Patent.

29.   The '581 Patent relates to, among other things, a method and system for

presenting navigational directions using a combination of a mobile communication

device, such as a cellular phone, and a complementary device, such as a vehicular

navigational device or display device.

30.   The claimed invention(s) of the '581 Patent sought to solve problems with,

and improve upon, existing navigational systems that relied upon stored information

from a local database or navigational information storage system, such as a DVD disc or

CD-ROM discs. For example, the '581 Patent states:

Determining a local position in a navigation system has typically been done by integrating or connecting Global Positioning System (GPS) technology into the local navigational system. New positioning determination systems include network-assisted wireless location systems, such as TOA (Time-of-Arrival), and network assisted GPS systems for determining the local navigation system's position. The unit's location is then displayed on the device and is available for various applications, such as in the case of a commuter seeking the shortest route to a location in a specific area or a user wanting to find the nearest gas station.

Destination locations are typically determined by manually accessing stored information from a local database or navigational information storage system, such as a DVD disc or CD-ROM discs. Location information is found by searching through categories of information until the desired location is found, or alternatively, by cross referencing telephone numbers with addresses by means of the local storage system. Conventionally, numerous discs, or even numerous sets of discs, are required to provide adequate detailed geographic coverage, including address and telephone information about a given metropolitan area. That is, conventional in-vehicle navigation systems require that an extensive collection of storage discs be carried within the vehicle. Additionally, prior art DVD and CD-ROM disc based systems require periodic updating. That is, even after a user has purchased a set of discs, new replacement discs must be acquired, for example, as new roads and points of interest information are updated.

As an additional drawback, some navigation systems that do not have the storage capability, such as wireless PDAs (Personal Digital Assistant) or typical cell phones, are not able to implement cross referencing of telephone numbers to addresses locally due to the large memory and storage size requirements of such an operation and low computational power of the devices. Furthermore, since most businesses and individuals can change their telephone numbers numerous times while at their current address determining destination locations from telephone numbers on a locally-stored database inherently causes the information to be out of date and inaccurate. These and other changes, such as a new telephone line or an area code change, would invalidate the current version of locally-stored DVD or CD-ROM disc information. As a further drawback, mobile navigation devices and stationary landline computing devices are not always associated with telephone numbers, but rather Internet Protocol (IP) addresses or the like.

See '581 Patent at col. 1, l. 26 – col. 2, l. 16.

31. The '581 Patent then states:

Thus, a need exists for a system that determines local and/or remote position information which does not require an extensive collection of DVD or CD-ROM discs, which is able to provide location and destination address or position information given a telephone number, and which is up-to-date and reliable and can be accessed via a networked online server(s). Additionally, the need exists for a system that determines local and/or remote position information of devices that are not always associated by telephone numbers, but IP addresses or the like, and which can obtain such position information instantaneously and share it, by means of authentication and authorization protocols, without requiring any prior configuration.

See '581 Patent at col. 2, ll. 44-56.

32.   The invention(s) claimed in the '581 Patent solves various technological problems inherent in the then-existing existing navigational systems to, among other things, function more efficiently.

United States Patent No. 8,107,608

33.   On January 31, 2012, the USPTO duly and legally issued United States Patent No. 8,107,608 ("the '608 Patent") entitled "System and Method System for Providing Routing, Mapping, and Relative Position Information to Users of a Communication Network" to inventors Michael A. Sheha, Stephen Petilli, and Angie Sheha.

30.   The '608 Patent is presumed valid under 35 U.S.C. § 282.

31.   Artax owns all rights, title, and interest in the '608 Patent.

32.   Artax has not granted TomTom an approval, an authorization, or a license to the rights under the '608 Patent.

33.   The specification of the '608 Patent is the same as the '581 Patent

specification, and solves the problems recited above and described in the '581 Patent

specification.

United States Patent No. 8,169,343

34.   On May 5, 2012, the USPTO duly and legally issued United States Patent

No. 8,169,343 ("the '343 Patent") entitled "Method and System for Saving and

Retrieving Spatial Related Information" to inventors Michael A. Sheha, Angie Sheha,

Stephen Petilli, and Mark Goddard.

35.   The '343 Patent is presumed valid under 35 U.S.C. § 282.

36.   Artax owns all rights, title, and interest in the '343 Patent.

37.   Artax has not granted TomTom an approval, an authorization, or a license

to the rights under the '343 Patent.

38.   The '343 Patent relates to, among other things a method and apparatus for

storing, referencing, retrieving, and graphically displaying spatial and non-spatial

related information of a mobile computing device, such as a laptop computer or a

cellular telephone.

39.   The claimed invention(s) of the '343 Patent sought to solve problems with,

and improve upon navigational methods and systems for:

> 1). storing spatial and non-spatial related information; 2). referencing or linking
> spatial and non-spatial related information (i.e., stop points, images, forms, e-
> mail or instant messages, voice recordings, waypoints, etc.); 3). retrieving both
> spatial and non-spatial related information; 4). graphically displaying spatial and
> non-spatial related information in a temporal or indexed format; 5). utilizing
> spatial and non-spatial related information with a route or trip planner; and 6).

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allowing the capability to share spatial and non-spatial related information amongst multiple users.

See '343 Patent at col. 1, ll. 26-30.

40.   For example, the '343 Patent states:

Thus, a need exits for a method and system that allows the ability to store spatial and non-spatial related Meta data, reference or link spatial and non-spatial related Meta data, while providing a graphical display for viewing spatial and non-spatial related information in a temporal or indexed format, such as a Calendar or Gantt view, and provide a method and system for retrieving both spatial and non-spatial related Meta data. This provides many important benefits for GPS-related devices, such as GPS-enabled wireless cell phones with integrated cameras, that transmit spatial (i.e., location) and non-spatial information (i.e., images, forms, e-mail or instant messages, voice recordings, waypoints, etc.) for the purpose of utilizing Meta information in a powerful graphical application.

See '343 Patent at col. 1, ll. 49-62.

41.   The invention(s) claimed in the '343 Patent solves various technological problems inherent in the then-existing existing navigational systems to, among other things, function more efficiently.

United States Patent No. 8,428,869

42.   On April 23, 2013, the USPTO duly and legally issued United States Patent No. 8,428,869 ("the '869 Patent") entitled "Context Enabled Content System" to inventors Regan Gill, Darrell Sano, Kevin Masao Tsurutome.

43.   The '869 Patent is presumed valid under 35 U.S.C. § 282.

44.   Artax owns all rights, title, and interest in the '869 Patent.

45.   Artax has not granted TomTom an approval, an authorization, or a license to the rights under the '869 Patent.

46.   The '869 Patent relates to, among other things, a system that allows a user

to select an individual address from the multiple addresses for additional information

on that particular address.

47.   The claimed invention(s) of the '869 Patent sought to solve problems with,

and improve upon, existing navigational systems that used text-based systems for

identifying destinations or points of interest. For example, the '869 Patent states:

> The disadvantage of the current technology is that a user searching for an
> address of interest may not have enough information to be able to properly
> choose which address from multiple returned addresses is correct. The multiple
> returned addresses given to a user lack any type of context with which a user can
> make an informed choice.

See '869 Patent at col. 2, ll. 24-69.

48.   The '869 overcomes these problems by providing:

> a method and apparatus for providing context information for a geographic
> location comprises initiating a database query for a supplied search criteria. A
> plurality of geographic locations are found that match the search criteria, or if no
> exact match is found, a plurality that are close matches. Mapping data is
> provided that comprises the plurality of geographic locations. An option to view
> context information is provided for at least one of the plurality of geographic
> locations.

See '869 Patent at col. 2, ll. 36-44.

49.   The invention(s) claimed in the '869 Patent solves various technological

problems inherent in the then-existing navigational systems to, among other things,

function more efficiently.

United States Patent No. 9,217,644

50.   On December 22, 2015, the USPTO duly and legally issued United States

Patent No. 9,217,644 ("the '644 Patent") entitled "Natural Navigational Guidance" to

inventors Brant Miller Clark, Mark Goddard, and Diego Andres Kaplan.

51.   The '644 Patent is presumed valid under 35 U.S.C. § 282.

52.   Artax owns all rights, title, and interest in the '644 Patent.

53.   Artax has not granted TomTom an approval, an authorization, or a license

to the rights under the '644 Patent.

54.   The '644 Patent relates to, among other things, a navigational guidance

system that provides enhanced guidance instructions that take advantage of unique

geographic features along a navigated route to specify maneuver points.

55.   The claimed invention(s) of the '644 Patent sought to solve problems with,

and improve upon, existing natural guidance systems. For example, the '644 Patent

describes:

> a method of providing natural navigational guidance to a user device comprises
> determining a natural guidance point selection area for an upcoming maneuver
> to be navigated. A geographic feature within the determined natural guidance
> point selection area is selected as a natural guidance point to be identified for
> navigation of the upcoming maneuver. A turn-type natural guidance point for an
> upcoming maneuver to be navigated is generated when the user device is within
> the natural guidance point selection area.

See '644 Patent at col. 1, ll. 26-35.

56.   The invention(s) claimed in the '644 Patent solves various technological

problems inherent in the then-existing natural guidance systems to, among other

things, function more efficiently.

United States Patent No. 9,304,012

57.   On March 5, 2016, the USPTO duly and legally issued United States Patent

No. 9,304,012 ("the '012 Patent") entitled "Dynamically Varied Map Labeling" to

inventor Mark Goddard.

58.   The '012 Patent is presumed valid under 35 U.S.C. § 282.

59.   Artax owns all rights, title, and interest in the '012 Patent.

60.   Artax has not granted TomTom an approval, an authorization, or a license

to the rights under the '012 Patent.

61.   The '012 Patent relates to, among other things, novel methods for

dynamically varying label density and label placement on a map display used in

mapping and/or navigation solutions.

62.   The claimed invention(s) of the '012 Patent sought to solve problems with,

and improve upon, the displays of existing navigational systems that used static label

density. For example, the '012 Patent states:

> static label density may cause a map display to look cluttered, or may influence a
> navigation solution to exhibit only minimal information on a map display, in
> attempts to avoid clutter. Due to use of a static label density, conventional
> navigation solutions are forced to present either an uncluttered map display with
> little information (e.g. road names, city names, etc.) or a cluttered map display
> with more information.

See '012 Patent at col. 1, l. 63 – col. 2, l. 3.

63.   The '012 Patent overcomes these problems by providing:

> methods for dynamically varying the label density (i.e. number of labels) and
> placement of labels on a map display used in mapping and/or navigation
> solutions. In accordance with the principles of the present invention, label

density and label placement on a map display is adjusted dynamically based on: a function class of a road being navigated, a function class of a road to be navigated following an upcoming maneuver, a distance to an upcoming maneuver, and/or a speed a device receiving mapping/navigation services is travelling.

See '012 Patent at col. 2, ll. 7-16.

64.   The invention(s) claimed in the '012 Patent solves various technological problems inherent in the displays of then-existing navigational systems to, among other things, function more efficiently.

United States Patent No. 9,423,266

65.   On August 23, 2016, the USPTO duly and legally issued United States Patent No. 9,423,266 ("the '266 Patent") entitled "Navigational Lane Guidance" to inventors Brant Miller Clark, Mark Goddard, and Diego Andres Kaplan.

66.   The '266 Patent is presumed valid under 35 U.S.C. § 282.

67.   Artax owns all rights, title, and interest in the '266 Patent.

68.   Artax has not granted TomTom an approval, an authorization, or a license to the rights under the '266 Patent.

69.   The '266 Patent relates to, among other things, a method of providing navigational lane guidance comprising counting a number of lanes available to a user device, and determining if a navigated lane is on either side or in a middle of other available lanes.

70.   The claimed invention(s) of the '266 Patent sought to solve problems with, and improve upon, existing natural guidance systems. For example, the '266 Patent describes:

Extensive usability testing showed that providing navigation instructions in a more natural and human'-like manner was highly desired by end users. Additionally, user feedback and observed behavior showed that when navigating, most people kept their wireless device (e.g., smartphone) in a place where the screen is not in clear view, so it is important to provide clear and concise voice instructions.

See '266 Patent at col. 2, l. 66 – col. 3, l. 5.

71.   The '266 Patent overcomes these problems by providing:

The Natural and Lane Guidance feature includes enhancements to the way directions are being provided to the user. Natural Guidance improves instructions by using features along the route as reference points instead of just mentioning street names and distances. Lane Guidance improves the user experience when driving on freeways and other wide roads by providing lane information visually and verbally. Guidance is improved to provide better, more concise instructions.

See '266 Patent at col. 2, ll. 43-52.

72.   The '266 Patent goes on to state:

The Natural Guidance feature provides enhanced guidance instructions that take advantage of features along a navigated route to specify maneuver points using easy to understand reference points. The feature makes use of additional rules extracted from the map data (including additional data from NAVTEQ's Stop signs and Traffic lights products).

Ideally the natural guidance feature does not add new types of guidance prompts. Instead, it provides enhancements to existing prompts (Continue/Prepare/Turn) by sometimes replacing terse instructions based on distance with more clear instructions based on features around the maneuver that are clearly visible and easy to find by the driver.

Guidance Points are features in the geography of the maneuver area that can be used to aid the user in discovering the place where the maneuver point is. Since Guidance Points are supposed to aid the user in locating a particular position, they are ideally clearly visible and unambiguous to ensure they will not cause confusion

See '266 Patent at col. 3, ll. 6-25.

73.   The invention(s) claimed in the '266 Patent solves various technological problems inherent in the then-existing natural guidance systems to, among other things, function more efficiently.

United States Patent No. 9,582,814

74.   On February 28, 2017, the USPTO duly and legally issued United States Patent No. 9,582,814 ("the '814 Patent") entitled "Landmark Enhanced Directions" to inventor John Grace.

75.   The '814 Patent is presumed valid under 35 U.S.C. § 282.

76.   Artax owns all rights, title, and interest in the '814 Patent.

77.   Artax has not granted TomTom an approval, an authorization, or a license to the rights under the '814 Patent.

78.   The '814 Patent relates to, among other things, systems and techniques to provide location-based services. The technique includes:

> receiving a request for directions from an initial location to a final location, determining a route from the initial location to the final location, determining one or more landmarks based on the route and providing directions for traveling the route from the initial location to the final location, the directions including a reference to the one or more landmarks.

See '814 Patent Abstract.

79.   The claimed invention(s) of the '814 Patent sought to solve problems with, and improve upon, existing natural guidance systems. For example, the '814 Patent describes:

> Extensive usability testing showed that providing navigation instructions in a more natural and human'-like manner was highly desired by end users. Additionally, user feedback and observed behavior showed that when

navigating, most people kept their wireless device (e.g., smartphone) in a place where the screen is not in clear view, so it is important to provide clear and concise voice instructions.

See '814 Patent at col. 2, l. 66 – col. 3, l. 5.

80. The '814 Patent overcomes these problems by providing:

The Natural and Lane Guidance feature includes enhancements to the way directions are being provided to the user. Natural Guidance improves instructions by using features along the route as reference points instead of just mentioning street names and distances. Lane Guidance improves the user experience when driving on freeways and other wide roads by providing lane information visually and verbally. Guidance is improved to provide better, more concise instructions.

See '814 Patent at col. 2, ll. 43-52.

81. The '814 Patent goes on to state:

The Natural Guidance feature provides enhanced guidance instructions that take advantage of features along a navigated route to specify maneuver points using easy to understand reference points. The feature makes use of additional rules extracted from the map data (including additional data from NAVTEQ's Stop signs and Traffic lights products).

Ideally the natural guidance feature does not add new types of guidance prompts. Instead, it provides enhancements to existing prompts (Continue/Prepare/Turn) by sometimes replacing terse instructions based on distance with more clear instructions based on features around the maneuver that are clearly visible and easy to find by the driver.

Guidance Points are features in the geography of the maneuver area that can be used to aid the user in discovering the place where the maneuver point is. Since Guidance Points are supposed to aid the user in locating a particular position, they are ideally clearly visible and unambiguous to ensure they will not cause confusion

See '814 Patent at col. 3, ll. 6-25.

82.   The invention(s) claimed in the '814 Patent solves various technological problems inherent in the then-existing natural guidance systems to, among other things, function more efficiently.

United States Patent No. 9,625,268

83.   On February 28, 2017, the USPTO duly and legally issued United States Patent No. 9,625,268 ("the '268 Patent") entitled "Navigational Lane Guidance" to inventors Brant Miller Clark, Mark Goddard, and Diego Andres Kaplan.

84.   The '268 Patent is presumed valid under 35 U.S.C. § 282.

85.   Artax owns all rights, title, and interest in the '268 Patent.

86.   Artax has not granted TomTom an approval, an authorization, or a license to the rights under the '268 Patent.

87.   The '268 Patent relates to, among other things, a method of providing navigational lane guidance comprising counting a number of lanes available to a user device, and determining if a navigated lane is on either side or in a middle of other available lanes.

88.   The specification of the '268 Patent is the same as the '266 Patent specification, and solves the problems recited above and described in the '266 Patent.

CLAIMS FOR RELIEF

Count I – Infringement of United States Patent No. 8,019,581

89.   Artax repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

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90.   On information and belief, TomTom (or those acting on its behalf) makes,

uses, sells, imports and/or offers to sell the TomTom Go Navigation App that

infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the
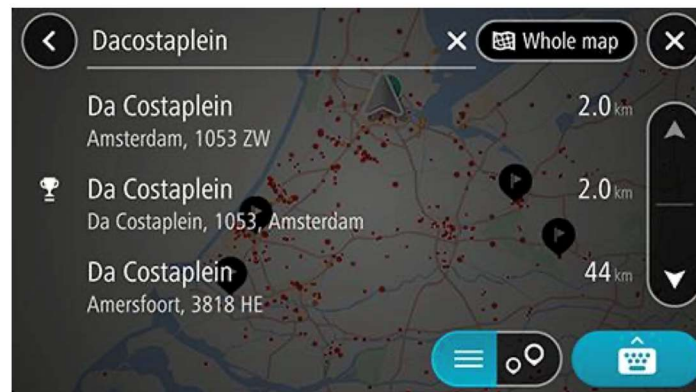
'581 Patent.

91.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for presenting navigational

information using a wireless communication device including a GPS receiver.
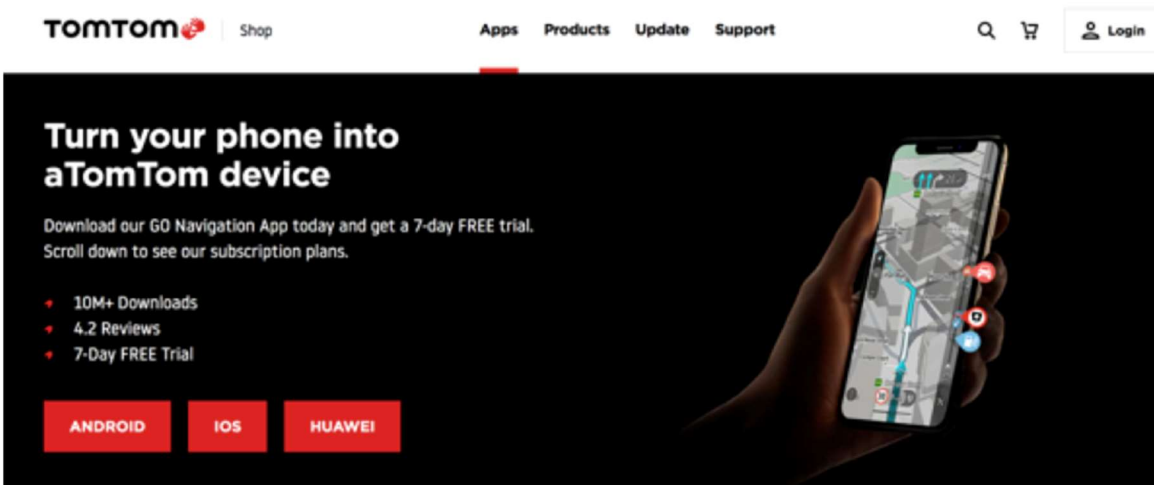
https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/

Id.

About TomTom services

Your TomTom GO Navigation has the following TomTom services:

- **Traffic and Safety Cameras** - See real-time information about traffic and safety cameras or danger zones on your route. To help you avoid traffic delays and get to your destination more quickly, you can use TomTom Traffic even on the routes you drive every day. When your device is connected to the Internet, the TomTom GO Navigation is always connected to **TomTom Traffic** and **Safety Cameras** — you don't have to do anything to activate these services.
- **MyDrive** — Syncing using TomTom MyDrive is the easy way to set a destination, and save your personal navigation information. Log in to MyDrive to sync with your TomTom account.
- **Online Search** - Enhance your search results with online data.
- **Online Routing** — Calculate routes online for faster and more precise results.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf at 8 and

Location services

When you first start the TomTom GO Navigation app, it may need a few minutes to find your GPS position and show your current location on the map. Make sure you have GPS activated on your device.

In areas where location services do not operate normally, such as tunnels, your location may not be accurate.

Important: The navigation app cannot give you route instructions until it has received location data.

Some devices need a data connection to obtain a GPS location.

If your device has no GPS reception, the navigation app uses positioning information from Wi-Fi networks or mobile phone towers. This information is used for route planning and to determine your approximate location, but is not accurate enough to use for route instructions.

Id.

92.   On information and belief, one or more components of the TomTom Go Navigation app employs and provides a method for presenting navigational information using a wireless communication device including a GPS receiver comprising the step of receiving location information of said wireless communication device using said GPS receiver of said wireless communication device, said location information indicating a location of said wireless communication device.

Location services

When you first start the TomTom GO Navigation app, it may need a few minutes to find your GPS position and show your current location on the map. Make sure you have GPS activated on your device.

In areas where location services do not operate normally, such as tunnels, your location may not be accurate.

Important: The navigation app cannot give you route instructions until it has received location data.

Some devices need a data connection to obtain a GPS location.

If your device has no GPS reception, the navigation app uses positioning information from Wi-Fi networks or mobile phone towers. This information is used for route planning and to determine your approximate location, but is not accurate enough to use for route instructions.

Id. and

The map view

The map view is shown when you have no planned route. Your actual location is shown as soon as your device has found your GPS location.
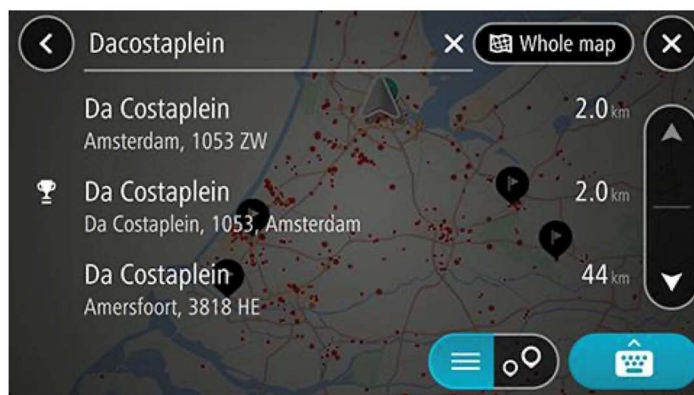
Id. at 9.

93.   On information and belief, one or more components of the TomTom Go Navigation app employs and provides a presenting navigational information using a wireless communication device including a GPS receiver comprising the step of receiving destination information, said destination information indicating a location of a destination.

To plan a route to an address using search, do the following:

1.   Tap the search bar at the top of the map, or select **Search** from the main menu.
2.   Use the keyboard to enter the address that you want to plan a route to.

   Tip: If you press and hold a letter key on the keyboard, you get access to extra characters if they are available. For example, press and hold the letter "e" to access characters 3 e è é ê ë and more.

See id. at 34 and

6.   To plan a route to this destination, select **Drive**.
   A route is planned and then guidance to your destination begins. As soon as you start driving, the guidance view is shown automatically.

id. at 35.

24

94.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a presenting navigational information using a

wireless communication device including a GPS receiver comprising the step of

sending, from said wireless communication device, a request for navigational

information, said navigational information including route information for traveling

between said location of said wireless communication device and said location of said

destination, wherein said request for navigation information is sent to a server over a

telecommunication network.

To plan a route to an address using search, do the following:

1.   Tap the search bar at the top of the map, or select **Search** from the main menu.
2.   Use the keyboard to enter the address that you want to plan a route to.

> **Tip**: If you press and hold a letter key on the keyboard, you get access to extra characters if they are
> available. For example, press and hold the letter "e" to access characters 3 e è é ê ë and more.

See id. at 34 and

6.   To plan a route to this destination, select **Drive**.
     A route is planned and then guidance to your destination begins. As soon as you start driving, the guidance
     view is shown automatically.

25

id. at 35.

95.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a presenting navigational information using a

wireless communication device including a GPS receiver wherein the server queries a

remote party of position request for permission on whether the position request can

be granted based on criteria.

Successful and failed response codes

Code	Meaning & possible causes
200	**OK:** The search successfully returned zero or more results.
400	**Bad Request:** One or more parameters were incorrectly specified.
403	**Forbidden:** Possible causes include: ➚ Service requires SSL ➚ Not authorized ➚ Rate or volume limit exceeded ➚ Unknown referer

See   e.g.,   https://developer.tomtom.com/search-api/documentation/geocoding-

service/geocode.

96.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a presenting navigational information using a

wireless communication device including a GPS receiver comprising the step of

receiving, by said wireless communication device from said server over said

telecommunication network, said navigational information.
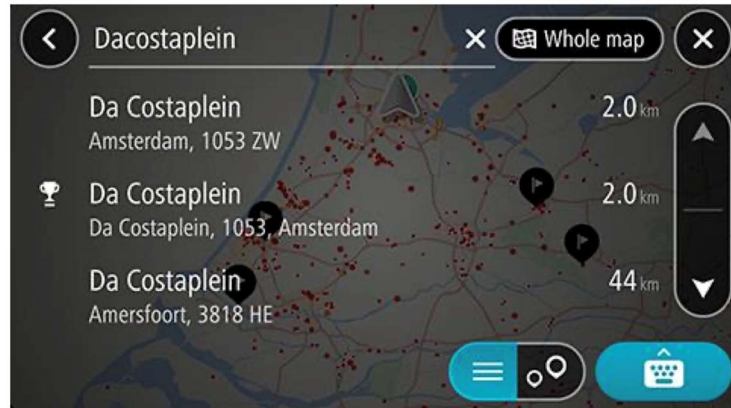
When you select an address from the list of search results, you can choose to show it on the map, add a crossroad or plan a route to that chosen location. To get an exact address you can add the house number.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf at 32 and

6. To plan a route to this destination, select **Drive**.

A route is planned and then guidance to your destination begins. As soon as you start driving, the <u>guidance view</u> is shown automatically.

Id. at 35 and

The guidance view

The guidance view is used to guide you along the route to your destination. The guidance view is shown when you start driving. You see your current location and details along your route, including 3D buildings in some cities.

The guidance view is normally in 3D. To show a 2D map with the map moving in your direction of travel or a 2D map with north always at the top of the map, change the 2D and 3D default settings.

When the navigation app starts after it was closed and you had a route planned, you are shown the map view with your planned route.

You can move two fingers up and down the screen to adjust the 3D viewing angle.

Tip: When you have planned a route and the 3D guidance view is shown, select the switch view button to change to the map view and use the interactive features.

Id. at 15.

97.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a presenting navigational information using a

wireless communication device including a GPS receiver comprising the step of

sending, from said wireless communication device to an in-vehicle navigational

device, said navigational information generated with said wireless communication

device.
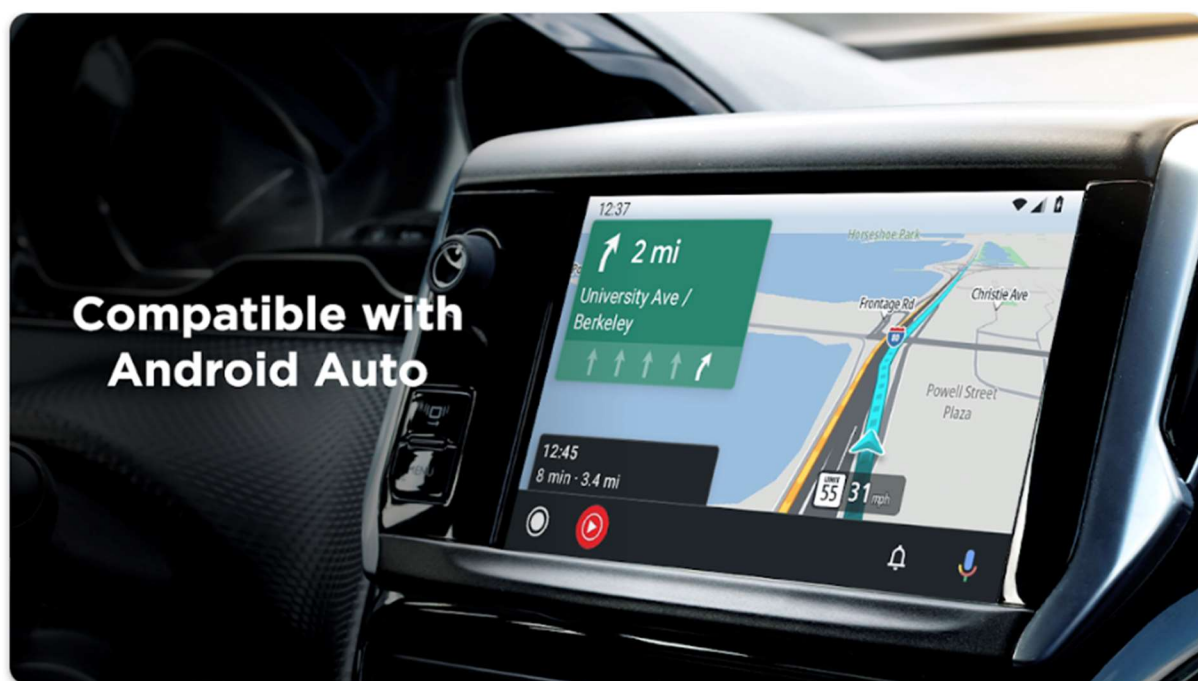
See e.g.,

https://play.google.com/store/apps/details?id=com.tomtom.gplay.navapp&hl=en_U

S&gl=US and

Amsterdam, the Netherlands, May 20, 2021 TomTom (TOM2), the location technology specialist, today announced the availability of its popular navigation app - TomTom GO Navigation - on Android Auto™. This means that drivers with an Android™ device are now able to project and interact with TomTom GO Navigation on their (Android Auto-compatible) vehicle's infotainment screen.

Combining the convenience of a phone app with the advanced functionality of a TomTom satnav, TomTom GO Navigation is the perfect companion on the road. Moving lane guidance helps drivers navigate intersections by indicating which lane is best, and what exit to take. People can easily download detailed 3D maps within the app and use the navigation app abroad where roaming costs may be high. With internet connectivity, trusted TomTom traffic information and speed camera warnings are available. Additionally, the app is advertisement-free, and does not monetize users' personal data in any way. Drivers of an electric vehicle (EV) will also be delighted to know that EV profiles are now available, allowing drivers to easily find available charging points.

"TomTom GO Navigation is the ultimate navigation app with privacy at its heart. The app is full of innovative features that set it apart from the others, and gets drivers to where they want to go, safer and more efficiently," commented Mike Schoofs, Managing Director, TomTom Consumer.

As one of the first navigation apps to be available on Android Auto, TomTom GO Navigation can be downloaded via Google Play. The app is also available through the App Store and Huawei AppGallery. TomTom GO Navigation offers a 30-day free trial, no strings attached, and

https://www.tomtom.com/press-room/general/27101/tomtom-go-navigation-now-available-on-android-auto/.

98.   On information and belief, one or more components of the TomTom Go Navigation app employs and provides a presenting navigational information using a wireless communication device including a GPS receiver comprising the step of displaying, at a display device of said in-vehicle navigational device, driving directions for traveling between said location of said wireless communication device and said location of said destination based on said navigation information received from said wireless communication device.

6. To plan a route to this destination, select **Drive**.
A route is planned and then guidance to your destination begins. As soon as you start driving, the <u>guidance view</u> is shown automatically.

See

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf at 35.

99.   On information and belief, TomTom directly infringes at least claim 1 of

the '581 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

100.   TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

Count II – Infringement of United States Patent No. 8,107,608

101. Artax repeats, realleges, and incorporates by reference, as if fully set forth

here, the allegations of the preceding paragraphs above.

102. On information and belief, TomTom (or those acting on its behalf) makes,

uses, sells, imports and/or offers to sell the TomTom Go Navigation App that

infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the

'608 Patent.

103. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network.

TomTom Support   ❯   Drive Products   ❯   Wi-Fi

Sharing your location and ETA

You can share your location and estimated time of arrival (ETA) with your contact. Before you start driving, you set up a short list of contacts and then when driving you can send an SMS to your chosen contacts about your current location, destination and ETA.

💡This feature is supported by Android phones only (Android 4.1 or later).

See e.g., https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-

location-and-

ETA?_gl=1*1qzlwa1*_ga*NDIyMDk0OTMxLjE2NTI2NjA1NjY.*_ga_TFLCNKEXQ6*M

TY1MjY3MTY4NC4yLjEuMTY1MjY4MDk5My4w.

Sending your location and ETA while driving:

1. In the guidance view, select the current location symbol or speed panel to open the quick menu.
2. Select the people in your shortlist to whom you want to send your location and ETA too.
3. Select **Send** .
   Your location and ETA is sent to your chosen contacts via SMS message.

If you have a route planned, the SMS includes your current location, destination and ETA. If you no route is planned, the SMS sends your current location.

See id.

104. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network comprising the step of

receiving first user device information including at least one of a first user device

identification information and a phone number information of said first user device.

- **Real-time location services and crowdsourced product improvement**
  While using a TomTom-branded product such as our navigation device or app or service subscription for the first time, you will see a notification asking for permission to send your location information to TomTom. If you decide to share your location data with TomTom, we can send you real-time information relevant to where you are in return, such as live traffic data so you can choose an alternative route around a traffic jam further down the road.

See e.g., https://www.tomtom.com/en_us/privacy/drive/ and

1. Say **"Hello TomTom"** to wake up voice control then say <u>**"Activate phone"**</u>, or select the Phone button.
   You will see a message **Speak to your phone after the tone.**
2. Select the <u>**Contacts**</u> button.
3. Search for a contact.
4. Toggle the setting for **Add to short list** to ON.
5. Select the back arrow to add more friends or family to your list.

https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-location-and-

ETA.

     105. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network comprising the step of

receiving second user information including at least one of second user device

identification information and a phone number information of the said second user

device.

1. Say **"Hello TomTom"** to wake up voice control then say **"Activate phone"** , or select the Phone button.
   You will see a message **Speak to your phone after the tone.**
2. Select the **Contacts** button.
3. Search for a contact.
4. Toggle the setting for **Add to short list** to ON.
5. Select the back arrow to add more friends or family to your list.

See e.g., https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-

location-and-ETA.

     106.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of a

first user to a second user of a telecommunication network comprising the step of

receiving first user device position information indicating a real-time location of said

first user device.

- **Real-time location services and crowdsourced product improvement**
  While using a TomTom-branded product such as our navigation device or app or service subscription for the first time, you will see a notification asking for permission to send your location information to TomTom. If you decide to share your location data with TomTom, we can send you real-time information relevant to where you are in return, such as live traffic data so you can choose an alternative route around a traffic jam further down the road.

See e.g., https://www.tomtom.com/en_us/privacy/drive/.

107. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network comprising the step of

accessing first user privacy information indicating a privacy setting, of said first user

device, indicating a duration of time during which permission is given to transmit

said first user device position information.

TomTom Support   >   Drive Products   >   Wi-Fi

Sharing your location and ETA

You can share your location and estimated time of arrival (ETA) with your contact. Before you start driving, you set up a short list of contacts and then when driving you can send an SMS to your chosen contacts about your current location, destination and ETA.

This feature is supported by Android phones only (Android 4.1 or later).

See e.g., https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-

location-and-

ETA?_gl=1*1qzlwa1*_ga*NDIyMDk0OTMxLjE2NTI2NjA1NjY.*_ga_TFLCNKEXQ6*M

TY1MjY3MTY4NC4yLjEuMTY1MjY4MDk5My4w.

108. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network comprising the step of

determining whether a current time is within the duration of time indicated by said

privacy setting of the said first user privacy information.

TomTom Support > Drive Products > Wi-Fi

Sharing your location and ETA

You can share your location and estimated time of arrival (ETA) with your contact. Before you start driving, you set up a short list of contacts and then when driving you can send an SMS to your chosen contacts about your current location, destination and ETA.

This feature is supported by Android phones only (Android 4.1 or later).

See e.g., https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-

location-and-

ETA?_gl=1*1qzlwa1*_ga*NDIyMDk0OTMxLjE2NTI2NjA1NjY.*_ga_TFLCNKEXQ6*M

TY1MjY3MTY4NC4yLjEuMTY1MjY4MDk5My4w.

109. On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method for providing position information of

a first user to a second user of a telecommunication network comprising the step of if

said current time is within said duration of time indicated by the privacy setting,

transmitting said first user device position information to said second user device.

Sending your location and ETA while driving:

1. In the guidance view, select the current location symbol or speed panel to open the quick menu.
2. Select the people in your shortlist to whom you want to send your location and ETA too.
3. Select **Send** .
   Your location and ETA is sent to your chosen contacts via SMS message.

If you have a route planned, the SMS includes your current location, destination and ETA. If you no route is planned, the SMS sends your current location.

See e.g., https://help.tomtom.com/hc/en-us/articles/360013899700-Sharing-your-

location-and-

ETA?_gl=1*1qzlwa1*_ga*NDIyMDk0OTMxLjE2NTI2NjA1NjY.*_ga_TFLCNKEXQ6*M

TY1MjY3MTY4NC4yLjEuMTY1MjY4MDk5My4w.

110. On information and belief, TomTom directly infringes at least claim 1 of

the '608 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

111.   TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

Count III – Infringement of United States Patent No. 8,169,343

112. On information and belief, TomTom (or those acting on its behalf) makes,

uses, sells, imports and/or offers to sell TomTom Routing API that infringes (literally

and/or under the doctrine of equivalents) at least claim 1 of the '581 Patent.

113. On information and belief, one or more components of TomTom Routing

API employs and provides a machine-readable medium storing a set of executable

instructions for causing a processor of a system to perform a method of planning a

route.

Purpose

The Calculate Route service calculates a route between an origin and a destination, passing through waypoints if they are specified.

- The route will take into account factors such as current traffic and the typical road speeds on the requested day of the week and time of day.
- Information returned includes the distance, estimated travel time, and a representation of the route geometry.
- Additional routing information such as optimized waypoint order or turn by turn instructions is also available, depending on the options selected.

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/routing/calculate-route.

Long Distance EV Routing
Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing.

114. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a

route comprising the step of receiving presence information including a start time, an

end time, an origin point, and a destination point.

Purpose

The Calculate Route service calculates a route between an origin and a destination, passing through waypoints if they are specified.

- The route will take into account factors such as current traffic and the typical road speeds on the requested day of the week and time of day.
- Information returned includes the distance, estimated travel time, and a representation of the route geometry.
- Additional routing information such as optimized waypoint order or turn by turn instructions is also available, depending on the options selected.

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/routing/calculate-

route.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-

routing/long-distance-ev-routing.

Purpose

The Calculate Route service calculates a route between an origin and a destination, passing through waypoints if they are specified.

→ The route will take into account factors such as current traffic and the typical road speeds on the requested day of the week and time of day.
→ Information returned includes the distance, estimated travel time, and a representation of the route geometry.
→ Additional routing information such as optimized waypoint order or turn by turn instructions is also available, depending on the options selected.

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/routing/calculate-route.

startPointIndex number	Index of the first point (offset `0`) in the route this section applies to (only included for a `routeRepresentation` `polyline`).
endPointIndex number	Index of the last point (offset `0`) in the route this section applies to (only included for a `routeRepresentation` `polyline`).

Id.

Setting at least one of `minDeviationDistance` or `minDeviationTime` to a value greater than zero has the following consequences:

→ The origin point of the `calculateRoute` request must be on (or very near) the input reference route.
  → If this is not the case, an error is returned.
  → However, the origin point does not need to be at the beginning of the input reference route (it can be thought of as the current vehicle position on the reference route).
→ The reference route, returned as the first route in the `calculateRoute` response, will start at the origin point specified in the `calculateRoute` request. The initial part of the input reference route up until the origin point will be excluded from the response.

Id.

departureTime string	The estimated departure time for the route or leg. Specified as a `dateTime` .
arrivalTime string	The estimated arrival time for the route or leg. Specified as a `dateTime` .

Id.

115. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a route comprising the step of determining at least one stop point associated with the presence information, each of the at least one stop point associated with a duration indicating an expected period of time to be spend at the stop point.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing.

ChargingModes

```
POST      POST ChargingModes format                                                                          Copy
 1  {
 2    [ ... ],
 3    "chargingModes" : [
 4      {
 5        "chargingConnections" : [
 6          {"facilityType" : "Charge_200_to_240V_1_Phase_at_32A", "plugType" : "CHAdeMO"},
 7          {"facilityType" : "Charge_380_to_480V_3_Phase_at_16A", "plugType" : "CHAdeMO"}
 8        ],
 9        "chargingCurve" : [
10          {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 300},
11          {"chargeInkWh" : 2.1, "timeToChargeInSeconds" : 500},
12          {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 3100}
13        ]
14      },
15      {
16        "chargingConnections" : [
17          {"facilityType" : "Charge_200_to_240V_1_Phase_at_10A", "plugType" : "Standard_Household_Country_Specif
18          {"facilityType" : "Charge_100_to_120V_1_Phase_at_16A", "plugType" : "CHAdeMO"}
19        ],
20        "chargingCurve" : [
21          {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 600},
22          {"chargeInkWh" : 3.0, "timeToChargeInSeconds" : 2000},
23          {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 8000}
24        ]
25      },
26      "reassessmentParameterSets" : [
27        {"auxiliaryPowerInkW" : 0.3}
28      ]
29    ]
30  }
```

See https://developer.tomtom.com/routing-api/documentation/extended-

routing/long-distance-ev-routing#request-parameters.

chargingTimeOffsetInSec integer	Optional. If not specified the default value o applies. Must be larger than or equal to zero.

Id.

timeToChargeInSeconds *integer*	A time span in seconds. A non-negative integer.
chargingCurveSupportPoint *object*	A supporting point of a charging curve consisting of `chargeInkWh` and `timeToChargeInSeconds` such that the time it takes to charge the battery from `0` kWh to `chargeInkWh` kWh is given by `timeToChargeInSeconds` .

chargingCurve
 	
array
	A piecewise-linear function which maps a target charge level to the time it takes to charge an empty battery to this level, that is used to compute charging times of the vehicle.
	
	➤ It is given by a sequence of at most 10 non-duplicate `chargingCurveSupportPoints` that are totally, increasingly ordered in `timeToChargeInSeconds` and `chargeInkWh` .
	
	➤ The last `chargeInkWh` is `maxChargeInkWh` .
	
	➤ The curve is given by connecting the given points in order after adding the first point:
	
	Creating a curve
	
	<pre>1 {
	2 "chargeInkWh" : 0.0,
	3 "timeToChargeInSeconds" : 0
	4 }</pre>

Id.

116. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a route comprising the step of adding each of the at least one stop point to the route, each of the at least one stop point between the starting point and the destination point.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing.

117. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a route comprising the step of determining a route between the origin point and the destination point, the route including each of the at least one stop point.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing.

routeRepresentation *string*	Specifies the representation of the set of routes provided as a response. Possible values are: - `polyline` : includes routes in the response. - `summaryOnly` : as per `polyline` , but excluding the `points` elements for the routes in the response. - `none` : only includes the optimized waypoint indices but does not include the routes in the response. This parameter value can only be used in conjunction with `computeBestOrder=true` . Default value: `polyline` Other values: - `summaryOnly` - `none`

See https://developer.tomtom.com/routing-api/documentation/routing/calculate-route.

118. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable

instructions for causing a processor of a system to perform a method of planning a

route comprising the step of providing direction in response to the route.

See https://developer.tomtom.com/routing-api/documentation/extended-

routing/long-distance-ev-routing.

https://developer.tomtom.com/routing-api/documentation/routing/calculate-route.

119. On information and belief, one or more components of TomTom Routing

API employs and provides a machine-readable medium storing a set of executable

instructions for causing a processor of a system to perform a method of planning a

route comprising the step of estimating a travel time for the route in response to the

duration associated with each of the at least one stop.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-

routing/long-distance-ev-routing.

ChargingModes

POST	POST ChargingModes format

```
 1  {
 2      [ ... ],
 3      "chargingModes" : [
 4          {
 5              "chargingConnections" : [
 6                  {"facilityType" : "Charge_200_to_240V_1_Phase_at_32A", "plugType" : "CHAdeMO"},
 7                  {"facilityType" : "Charge_380_to_480V_3_Phase_at_16A", "plugType" : "CHAdeMO"}
 8              ],
 9              "chargingCurve" : [
10                  {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 300},
11                  {"chargeInkWh" : 2.1, "timeToChargeInSeconds" : 500},
12                  {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 3100}
13              ]
14          },
15          {
16              "chargingConnections" : [
17                  {"facilityType" : "Charge_200_to_240V_1_Phase_at_10A", "plugType" : "Standard_Household_Country_Specif
18                  {"facilityType" : "Charge_100_to_120V_1_Phase_at_16A", "plugType" : "CHAdeMO"}
19              ],
20              "chargingCurve" : [
21                  {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 600},
22                  {"chargeInkWh" : 3.0, "timeToChargeInSeconds" : 2000},
23                  {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 8000}
24              ]
25          },
26          "reassessmentParameterSets" : [
27              {"auxiliaryPowerInkW" : 0.3}
28          ]
29      ]
30  }
```

See https://developer.tomtom.com/routing-api/documentation/extended-

routing/long-distance-ev-routing#request-parameters.

chargingTimeOffsetInSec	
integer	Optional. If not specified the default value **o** applies. Must be larger than or equal to zero.

Id.

summary *object*	A summary of a route or a route leg. In addition to the information provided by the Calculate Route service, it contains the following: ➔ `remainingChargeAtArrivalInkWh` ➔ `chargingInformationAtEndOfLeg` , if it is a leg summary and the leg ends at a charging stop ➔ `totalChargingTimeInSeconds` , if it is a route summary
remainingChargeAtArrivalInkWh *float*	The estimated battery charge in kWh upon arrival at the end of the leg or the route.
chargingInformationAtEndOfLeg *object*	The `chargingInformationAtEndOfLeg` object is contained in the leg summary if and only if the leg ends at a charging stop. It contains: ➔ `targetChargeInkWh` ➔ `chargingTimeInSeconds` ➔ `chargingConnections` ➔ `chargingParkUuid` In addition, it may contain any of the following: ➔ `chargingConnectionInfo` ➔ `chargingParkLocation` ➔ `chargingParkName` ➔ `chargingParkPaymentOptions`

Id.

120. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a route comprising the step of comparing the travel time with a duration between the start time and the end time of the presence information.

Purpose

The Calculate Route service calculates a route between an origin and a destination, passing through waypoints if they are specified.

➔ The route will take into account factors such as current traffic and the typical road speeds on the requested day of the week and time of day.
➔ Information returned includes the distance, estimated travel time, and a representation of the route geometry.
➔ Additional routing information such as optimized waypoint order or turn by turn instructions is also available, depending on the options selected.

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

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See https://developer.tomtom.com/routing-api/documentation/routing/calculate-route.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

↱ Each charging stop results in an additional leg in the route response.

↱ Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.

↱ Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.

↱ The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

↱ target battery charge
↱ charging time
↱ details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing#request-parameters.

ChargingModes

| POST | POST ChargingModes format |

```
1  {
2    [ ... ],
3    "chargingModes" : [
4      {
5        "chargingConnections" : [
6          {"facilityType" : "Charge_200_to_240V_1_Phase_at_32A", "plugType" : "CHAdeMO"},
7          {"facilityType" : "Charge_380_to_480V_3_Phase_at_16A", "plugType" : "CHAdeMO"}
8        ],
9        "chargingCurve" : [
10          {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 300},
11          {"chargeInkWh" : 2.1, "timeToChargeInSeconds" : 500},
12          {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 3100}
13        ]
14      },
15      {
16        "chargingConnections" : [
17          {"facilityType" : "Charge_200_to_240V_1_Phase_at_10A", "plugType" : "Standard_Household_Country_Specif
18          {"facilityType" : "Charge_100_to_120V_1_Phase_at_16A", "plugType" : "CHAdeMO"}
19        ],
20        "chargingCurve" : [
21          {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 600},
22          {"chargeInkWh" : 3.0, "timeToChargeInSeconds" : 2000},
23          {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 8000}
24        ]
25      },
26      "reassessmentParameterSets" : [
27        {"auxiliaryPowerInkW" : 0.3}
28      ]
29    ]
30  }
```

Id.

chargingTimeOffsetInSec *integer*	Optional. If not specified the default value o applies. Must be larger than or equal to zero.

Id.

summary *object*	A summary of a route or a route leg. In addition to the information provided by the Calculate Route service, it contains the following: ↗ **remainingChargeAtArrivalInkWh** ↗ **chargingInformationAtEndOfLeg** , if it is a leg summary and the leg ends at a charging stop ↗ **totalChargingTimeInSeconds** , if it is a route summary
remainingChargeAtArrivalInkWh *float*	The estimated battery charge in kWh upon arrival at the end of the leg or the route.
chargingInformationAtEndOfLeg *object*	The **chargingInformationAtEndOfLeg** object is contained in the leg summary if and only if the leg ends at a charging stop. It contains: ↗ **targetChargeInkWh** ↗ **chargingTimeInSeconds** ↗ **chargingConnections** ↗ **chargingParkUuid** In addition, it may contain any of the following: ↗ **chargingConnectionInfo** ↗ **chargingParkLocation** ↗ **chargingParkName** ↗ **chargingParkPaymentOptions**

Id.

121. On information and belief, one or more components of TomTom Routing API employs and provides a machine-readable medium storing a set of executable instructions for causing a processor of a system to perform a method of planning a route comprising the step of updating the presence information in response to the comparison.

Long Distance EV Routing

Service version: 1   Last edit: 2022.02.25

Purpose

The Long Distance EV Routing service calculates a route between a given origin and destination, passing through waypoints if they are specified. The route contains charging stops that have been added automatically based on the vehicle's consumption and charging model.

- Each charging stop results in an additional leg in the route response.
- Each additional leg contains a `chargingInformationAtEndOfLeg` element in its leg summary.
- Both the route summary and the leg summary include a `remainingChargeAtArrivalInkWh` element.
- The route summary includes a `totalChargingTimeInSeconds` element.

The `chargingInformationAtEndOfLeg` field consists of:

- target battery charge
- charging time
- details about the charging stop

Run this endpoint

You can easily run this and other endpoints. Go to the TomTom API Explorer page and follow the directions.

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing.

ChargingModes

```
POST          POST ChargingModes format

                                                                                    Copy
1  {
2     [ ... ],
3     "chargingModes" : [
4        {
5           "chargingConnections" : [
6              {"facilityType" : "Charge_200_to_240V_1_Phase_at_32A", "plugType" : "CHAdeMO"},
7              {"facilityType" : "Charge_380_to_480V_3_Phase_at_16A", "plugType" : "CHAdeMO"}
8           ],
9           "chargingCurve" : [
10             {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 300},
11             {"chargeInkWh" : 2.1, "timeToChargeInSeconds" : 500},
12             {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 3100}
13          ]
14       },
15       {
16          "chargingConnections" : [
17             {"facilityType" : "Charge_200_to_240V_1_Phase_at_10A", "plugType" : "Standard_Household_Country_Specif
18             {"facilityType" : "Charge_100_to_120V_1_Phase_at_16A", "plugType" : "CHAdeMO"}
19          ],
20          "chargingCurve" : [
21             {"chargeInkWh" : 1.0, "timeToChargeInSeconds" : 600},
22             {"chargeInkWh" : 3.0, "timeToChargeInSeconds" : 2000},
23             {"chargeInkWh" : 10.0, "timeToChargeInSeconds" : 8000}
24          ]
25       },
26       "reassessmentParameterSets" : [
27          {"auxiliaryPowerInkW" : 0.3}
28       ]
29    ]
30 }
```

See https://developer.tomtom.com/routing-api/documentation/extended-routing/long-distance-ev-routing#request-parameters.

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chargingTimeOffsetInSec *integer*	Optional. If not specified the default value **o** applies. Must be larger than or equal to zero.

Id.

summary *object*	A summary of a route or a route leg. In addition to the information provided by the Calculate Route service, it contains the following: ↱ **remainingChargeAtArrivalInkWh** ↱ **chargingInformationAtEndOfLeg** , if it is a leg summary and the leg ends at a charging stop ↱ **totalChargingTimeInSeconds** , if it is a route summary
remainingChargeAtArrivalInkWh *float*	The estimated battery charge in kWh upon arrival at the end of the leg or the route.
chargingInformationAtEndOfLeg *object*	The **chargingInformationAtEndOfLeg** object is contained in the leg summary if and only if the leg ends at a charging stop. It contains: ↱ **targetChargeInkWh** ↱ **chargingTimeInSeconds** ↱ **chargingConnections** ↱ **chargingParkUuid** In addition, it may contain any of the following: ↱ **chargingConnectionInfo** ↱ **chargingParkLocation** ↱ **chargingParkName** ↱ **chargingParkPaymentOptions**

Id.

122. On information and belief, TomTom directly infringes at least claim 13 of the '343 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling, importing, and/or offering to sell the TomTom Routing API.
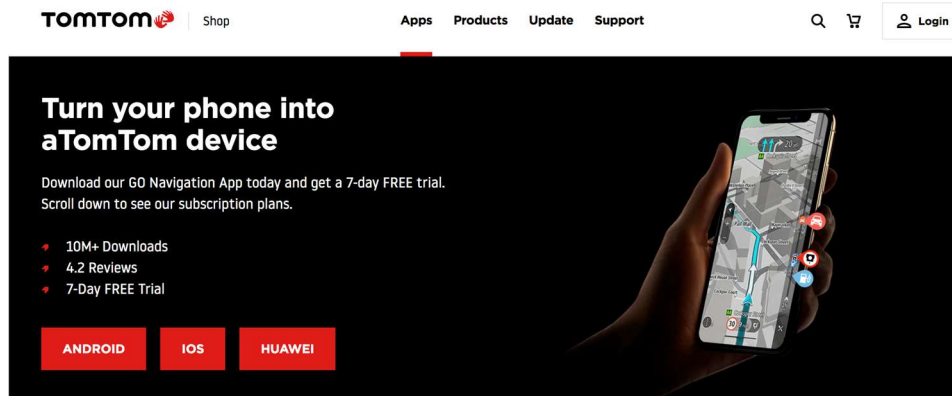
123.   TomTom's direct infringement has damaged Artax and caused it to suffer and continue to suffer irreparable harm and damages.

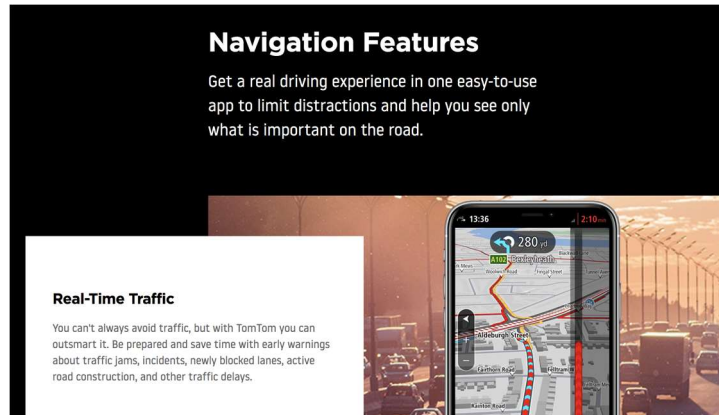### Count IV – Infringement of United States Patent No. 8,428,869

124. Artax repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

125.   On information and belief, TomTom (or those acting on its behalf) makes, uses, sells, imports and/or offers to sell the TomTom Go Navigation App that infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the '869 Patent.

126.   On information and belief, one or more components of the TomTom Go Navigation app employs and provides a method of providing context information for a geographic location.
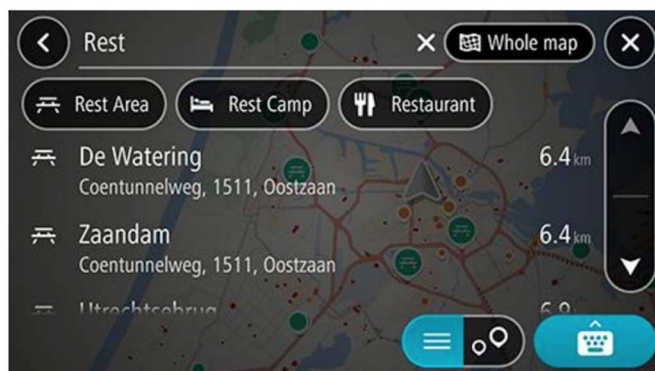
You can search for a POI type, such as a restaurant or tourist attraction. Alternatively, you can search for a specific POI, for example "Rosie's Pizzeria".

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

5. To see more information about the POI, select the POI on the map and then select the pop-up menu button. Select **More Information** on the pop-up menu.

You see more information about the POI such as the phone number, full address, and email.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

127. On information and belief, one or more components of the TomTom Go Navigation app employs and provides a method of providing context information for a geographic location comprising the step of receiving, at a navigation server, a route guidance database query comprising route guidance search criteria including a geographic route beginning location and a geo graphic route destination location.

Planning a route in advance

You can plan a route in advance before you drive it. You can save the route as part of your My Routes list.

To plan a route in advance, do the following:

Tap the search bar at the top of the map, or select **Search** from the main menu.

The search screen opens with the keyboard showing.

Tip: If you don't want to use search to choose your starting point and destination, go to the map view and press and hold to select a location.

1. Use the keyboard to enter the name of the location you want to use as a starting point.
2. Select an address or POI suggestion. The location is shown on the map.
3. Select the pop-up menu button.
   A pop-up menu shows a list of options.

4. Select **Use as Starting Point**.
5. Repeat the steps above to select a destination for your route.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

128.   On information and belief, one or more components of the TomTom Go Navigation app employs and provides a method of providing context information for a geographic location comprising the step of receiving, at said navigation server, a plurality of route guidance destinations that partially match said geographic route destination location.
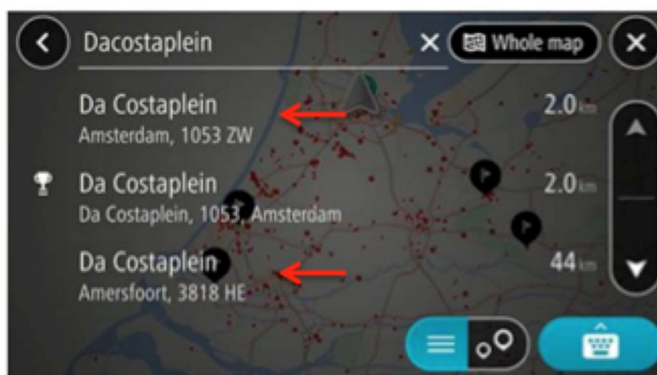
You can search for an address, town, city, or postal code.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

129.   On information and belief, one or more components of the TomTom Go

Navigation app employs and provides a method of providing context information for

a geographic location comprising the step of providing, at said navigation server, said

plurality of route guidance destinations and an option message including an option to

display particular destination context information respectively associated with each of

said plurality of route guidance destinations, augmenting selection of a particular one

of said plurality of route guidance destinations.
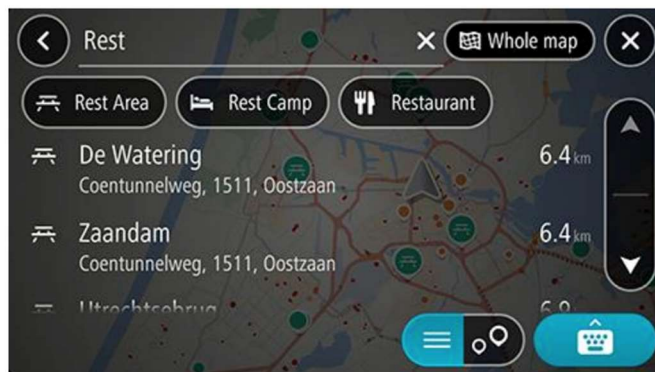
You can search for a POI type, such as a restaurant or tourist attraction. Alternatively, you can search for a specific POI, for example "Rosie's Pizzeria".

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf and

5. To see more information about the POI, select the POI on the map and then select the pop-up menu button. Select **More Information** on the pop-up menu.

You see more information about the POI such as the phone number, full address, and email.   .

Id.

130. On information and belief, TomTom directly infringes at least claim 1 of

the '869 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

131.   TomTom's direct infringement has damaged Artax and caused it to suffer and continue to suffer irreparable harm and damages.

Count V – Infringement of United States Patent No. 9,217,644

132.   Artax repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

133.   On information and belief, TomTom (or those acting on its behalf) makes, uses, sells, imports and/or offers to sell the TomTom Go Navigation App that infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the '644 Patent.

134.   On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

The guidance view

The guidance view is used to guide you along the route to your destination. The guidance view is shown when you start driving. You see your current location and details along your route, including 3D buildings in some cities.

The guidance view is normally in 3D. To show a 2D map with the map moving in your direction of travel or a 2D map with north always at the top of the map, change the 2D and 3D default settings.

When the navigation app starts after it was closed and you had a route planned, you are shown the map view with your planned route.

You can move two fingers up and down the screen to adjust the 3D viewing angle.

Tip: When you have planned a route and the 3D guidance view is shown, select the switch view button to change to the map view and use the interactive features.
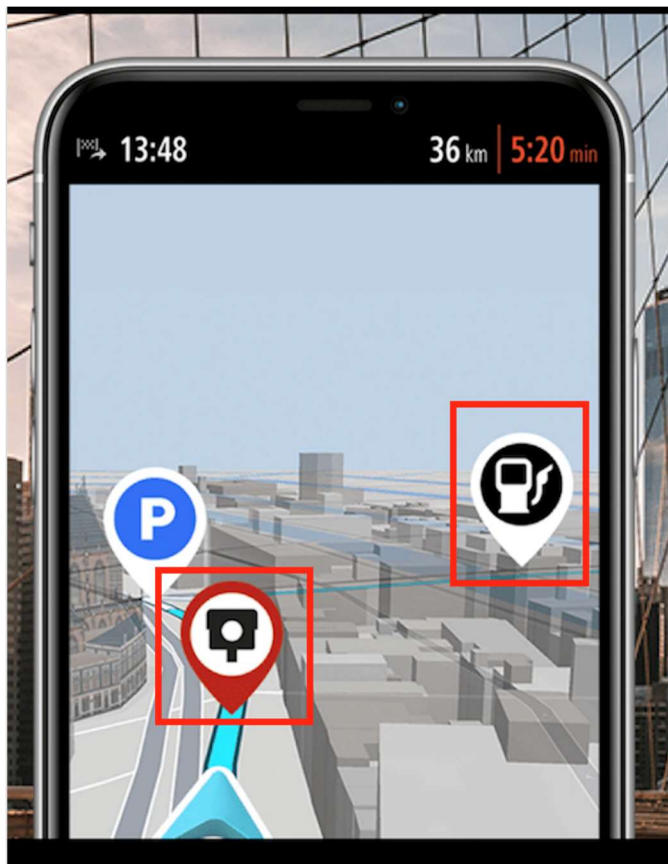

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

135. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device comprising the step of receiving, at a wireless device from a network navigation server, an upcoming maneuver point to be navigated from said wireless device.

The guidance view

The guidance view is used to guide you along the route to your destination. The guidance view is shown when you start driving. You see your current location and details along your route, including 3D buildings in some cities.

The guidance view is normally in 3D. To show a 2D map with the map moving in your direction of travel or a 2D map with north always at the top of the map, change the 2D and 3D default settings.

When the navigation app starts after it was closed and you had a route planned, you are shown the map view with your planned route.

You can move two fingers up and down the screen to adjust the 3D viewing angle.

Tip: When you have planned a route and the 3D guidance view is shown, select the switch view button to change to the map view and use the interactive features.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

> 2. Instruction panel. This panel shows the following information:
>   - The direction of your next turn.
>   - The distance to your next turn.
>   - The name of the next road on your route.
>   - Lane guidance at some intersections.
>   - Basic details of the turn after the next.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

136.   On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device comprising the step of measuring a current location and direction of travel of said wireless device with respect to said upcoming maneuver point.

The guidance view

The guidance view is used to guide you along the route to your destination. The guidance view is shown when you start driving. You see your current location and details along your route, including 3D buildings in some cities.

The guidance view is normally in 3D. To show a 2D map with the map moving in your direction of travel or a 2D map with north always at the top of the map, change the 2D and 3D default settings.

When the navigation app starts after it was closed and you had a route planned, you are shown the map view with your planned route.

You can move two fingers up and down the screen to adjust the 3D viewing angle.

> **Tip**: When you have planned a route and the 3D guidance view is shown, select the switch view button to change to the map view and use the interactive features.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf and

2. Instruction panel. This panel shows the following information:
   - The direction of your next turn.
   - The distance to your next turn.
   - The name of the next road on your route.
   - Lane guidance at some intersections.
   - Basic details of the turn after the next.

3. Switch view button. Select the switch view button to change between the map view and the guidance view.

4. Speed panel. This panel shows the following information:
   - The speed limit at your location.
   - Your current speed. If you drive more than 3 mph (5 km/h) over the speed limit the speed panel turns red. If you drive less than 3 mph (5 km/h) over the speed limit the speed panel turns orange.
   - The name of the street you are driving on (landscape view only).
   - The safety camera or risk zone report button.

5. Main Menu button. Select the button to show the Main Menu.

6. Route bar. The route bar is shown when you have planned a route.

7. Current location. This symbol shows your current location. Select the symbol or the speed panel to open the current location menu.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

137. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device comprising the step of determining a natural guidance point selection area relating to said upcoming maneuver point.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

138. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device comprising the step of varying priorities of a plurality of locally unique geographic features within said determined natural guidance point selection area based on a proximity to said upcoming maneuver point.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

139. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing audible natural navigational guidance output from a wireless device comprising the step of outputting audio from said wireless device, said audio relating an upcoming maneuver to be navigated at said upcoming maneuver point to one of said plurality of locally unique geographic features having a highest varied priority.

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Language

The language used for buttons and menus in the TomTom GO Navigation app is the same as the language you selected in your phone settings. If the selected language isn't supported by the TomTom GO Navigation app, then English is used.

If you change the phone language, the voice used for spoken directions and other route instructions in the TomTom GO Navigation app might not be compatible with the new language. You will be asked to download a compatible voice.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/refman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

140. On information and belief, TomTom directly infringes at least claim 1 of

the '644 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

141.   TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

Count VI – Infringement of United States Patent No. 9,304,012

142. Artax repeats, realleges, and incorporates by reference, as if fully set forth

here, the allegations of the preceding paragraphs above.

143. On information and belief, TomTom (or those acting on its behalf) makes,

uses, sells, imports and/or offers to sell the TomTom Go Navigation App that

infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the

'012 Patent.

144. On information and belief, one or more components of the TomTom Go

Navigation App employs and provides a method for dynamically varying a density of

road labels displayed on a given displayed navigational map having a given density

of displayed features.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

145. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method for dynamically varying a density of road labels displayed on a given displayed navigational map having a given density of displayed features comprising the step of dynamically varying a density of road labels displayed on a user device as a navigational map, said displayed road labels being varied in density for display based on a function class of a first road being navigated by said user device, and a function class of a next road to be navigated along a navigated route following an upcoming maneuver.
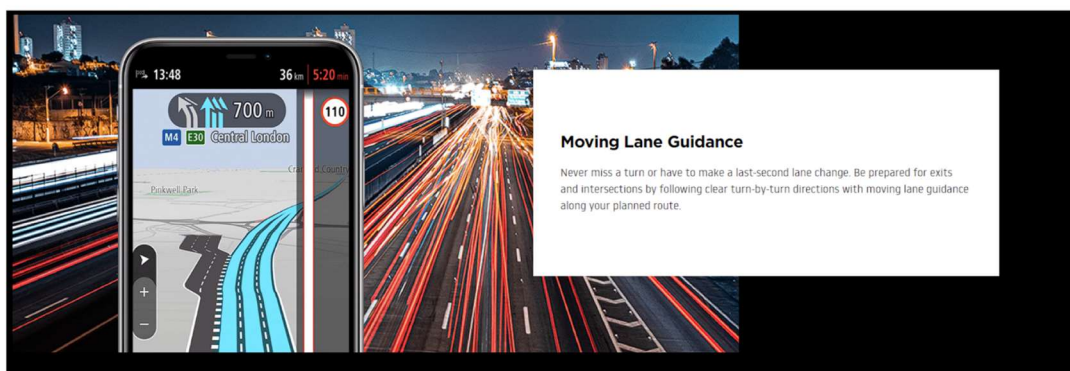
See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.
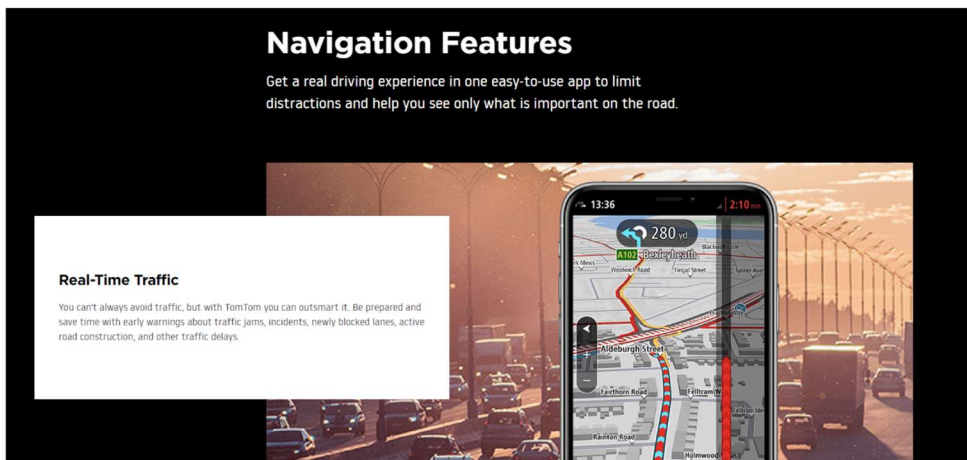
See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.
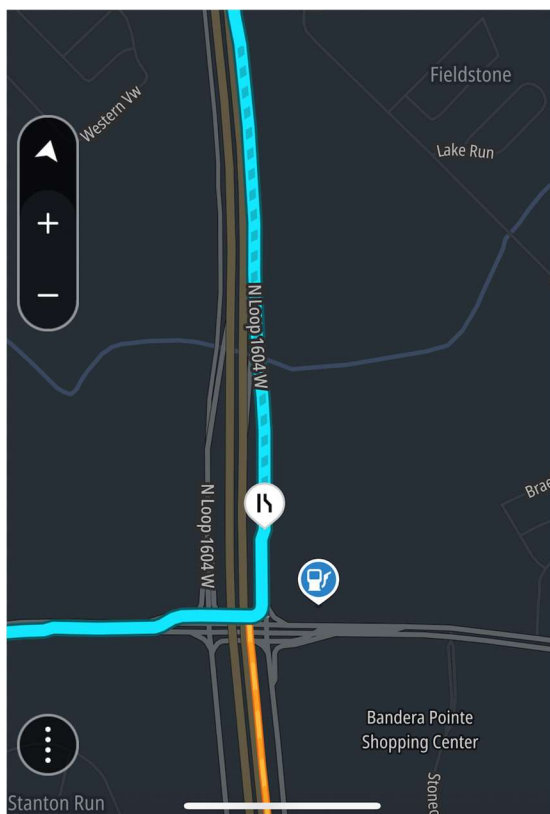
See Screenshot from TomTom Go Navigation Application.
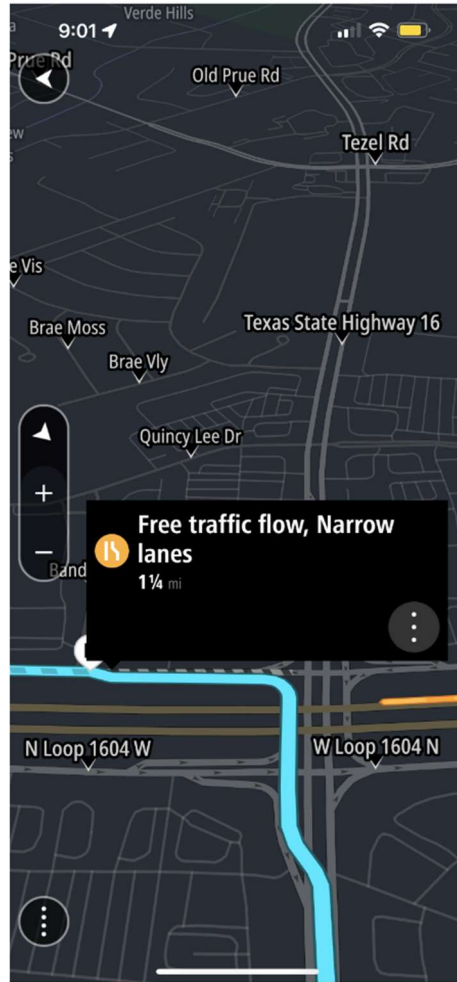
See Screenshot from TomTom Go Navigation Application.

146. On information and belief, TomTom directly infringes at least claim 1 of

the '012 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

147. TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

Count VII – Infringement of United States Patent No. 9,423,266

148. Artax repeats, realleges, and incorporates by reference, as if fully set forth

here, the allegations of the preceding paragraphs above.

72

149. On information and belief, TomTom (or those acting on its behalf) makes, uses, sells, imports and/or offers to sell the TomTom Go Navigation App that infringes (literally and/or under the doctrine of equivalents) at least claim 1 of the '266 Patent.

150. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing navigational lane guidance.

See, e.g.,

https://play.google.com/store/apps/details?id=com.tomtom.gplay.navapp&referrer= adjust_reftag%3Dc9DttVeUGiEOB%26utm_source%3DTomTomLandingPage%26utm_ campaign%3DGoldstreamLandingPage.

Moving Lane Guidance

Note: Lane guidance is not available for all intersections or in all countries.

Moving Lane Guidance helps you prepare for highway exits and junctions by showing the correct driving lane for your planned route.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/refman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

151. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing navigational lane guidance comprising the step of counting a number of lanes available to a user.
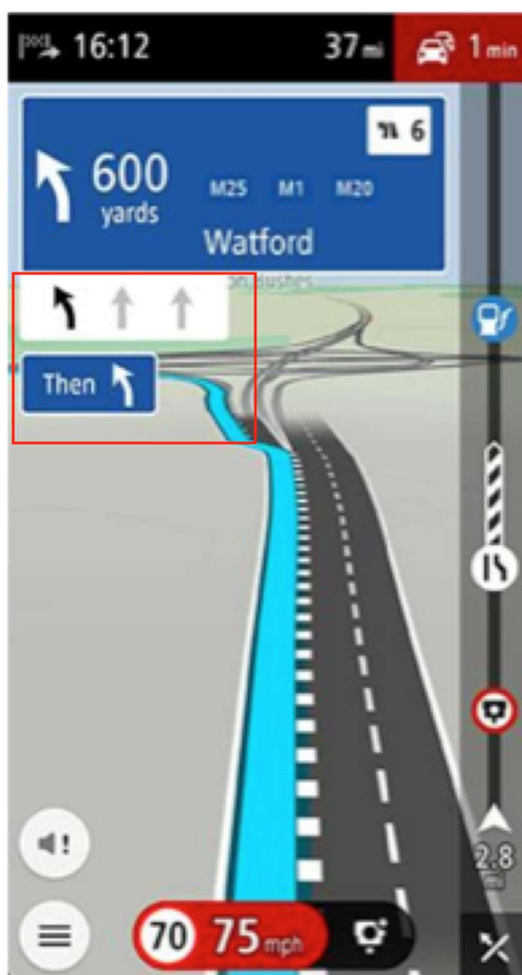
See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

152. On information and belief, one or more components of the TomTom Go Navigation App employs and provides a method of providing navigational lane guidance comprising the step of determining if a navigated lane is on either side or in a middle of other available lanes.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf

153. On information and belief, one or more components of the TomTom Go

Navigation App employs and provides a method of providing navigational lane

guidance comprising the step of building a variable width image with TrueType font,

said variable width image growing in width based on TrueType font lane characters

printed together therein to show all available lanes to provide navigational lane

guidance regarding multiple possible lanes to be taken.

76

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf

154. On information and belief, TomTom directly infringes at least claim 1 of

the '266 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

155. TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

Count VIII – Infringement of United States Patent No. 9,582,814

156. Artax repeats, realleges, and incorporates by reference, as if fully set forth

here, the allegations of the preceding paragraphs above.

157. On information and belief, TomTom (or those acting on its behalf) makes,

uses, sells, imports and/or offers to sell the TomTom Go Navigation App that

infringes (literally and/or under the doctrine of equivalents) at least claim 12 of the

'814 Patent.

158. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides a navigation system.
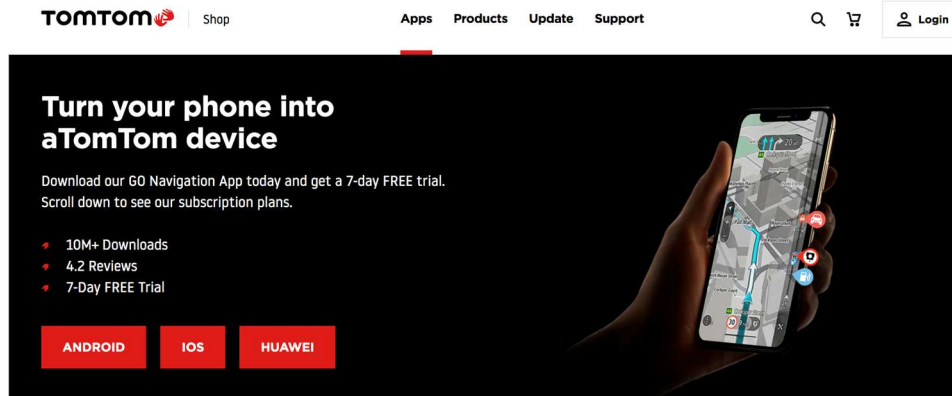
See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.
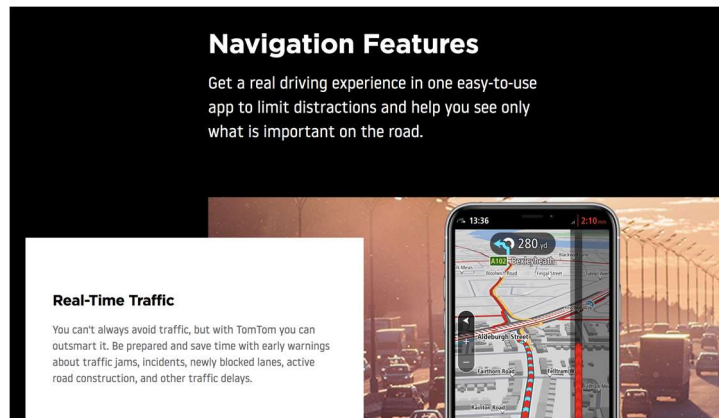
See e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

About TomTom services

Your TomTom GO Navigation has the following TomTom services:

- **Traffic and Safety Cameras** - See real-time information about traffic and safety cameras or danger zones on your route. To help you avoid traffic delays and get to your destination more quickly, you can use TomTom Traffic even on the routes you drive every day. When your device is connected to the Internet, the TomTom GO Navigation is always connected to **TomTom Traffic** and **Safety Cameras** — you don't have to do anything to activate these services.
- **MyDrive** — Syncing using TomTom MyDrive is the easy way to set a destination, and save your personal navigation information. Log in to MyDrive to sync with your TomTom account.
- **Online Search** - Enhance your search results with online data.
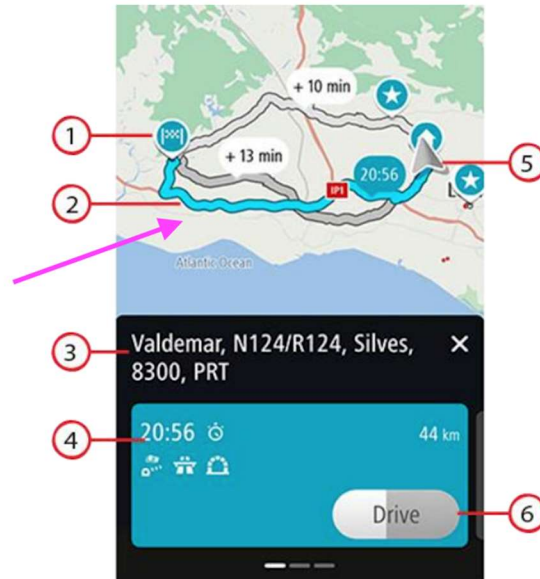- **Online Routing** — Calculate routes online for faster and more precise results.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

Location services

When you first start the TomTom GO Navigation app, it may need a few minutes to find your GPS position and show your current location on the map. Make sure you have GPS activated on your device.

In areas where location services do not operate normally, such as tunnels, your location may not be accurate.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

The guidance view

The guidance view is used to guide you along the route to your destination. The guidance view is shown when you start driving. You see your current location and details along your route, including 3D buildings in some cities.

The guidance view is normally in 3D. To show a 2D map with the map moving in your direction of travel or a 2D map with north always at the top of the map, change the 2D and 3D default settings.

When the navigation app starts after it was closed and you had a route planned, you are shown the map view with your planned route.

You can move two fingers up and down the screen to adjust the 3D viewing angle.

Tip: When you have planned a route and the 3D guidance view is shown, select the switch view button to change to the map view and use the interactive features.

See e.g.,

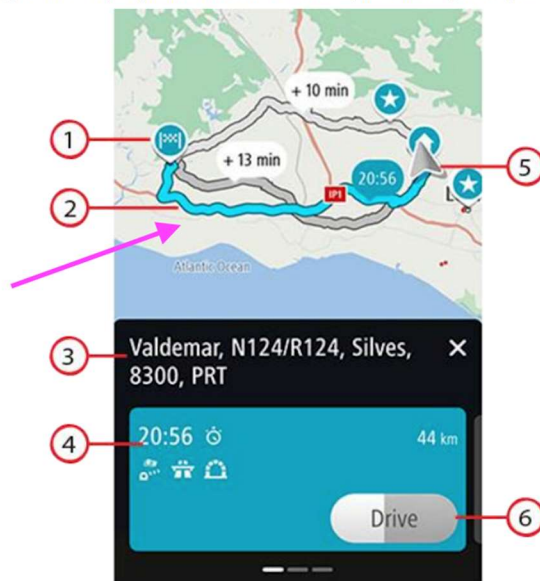https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/refman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

159. On information and belief, one or more components of the TomTom Go Navigation App employs or provides a navigation system comprising a route determination component.

Route selection

When you have chosen a destination, and you select **Drive**, the route selection screen appears.

From here, you can select your preferred route from the three options that are given to you.

1. Destination. This is the location of the destination that you want to drive to.
2. Your route. If available, three routes are shown. The fastest route is highlighted. The other two optional routes are shown with the additional time required.
3. Destination address.
4. Route details panel. This panel gives you, for the chosen route:
   - The arrival time
   - The distance
   - Any delay on the route (such as traffic jams, roadworks) that affect your arrival time
   - Icons that represent specific features of the route, such as tolls, or motorway, or tunnels, that may affect your journey.

   You can swipe left and right to view details of the other routes. As you do this, the route is highlighted on the map.
5. Current location.
6. Drive button. Click on this button to choose your route and go to the guidance view. This button also shows the time left to choose another route. If you get to this screen and do nothing, the fastest route will automatically be chosen.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

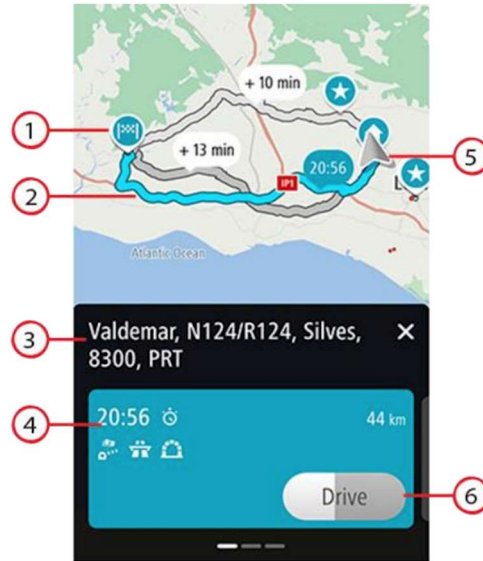efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

160. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides a navigation system comprising a route

determination component configured to generate a plurality of routes between an

initial location and a final location in a response to a request from a given user.

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Route selection

When you have chosen a destination, and you select **Drive**, the route selection screen appears.
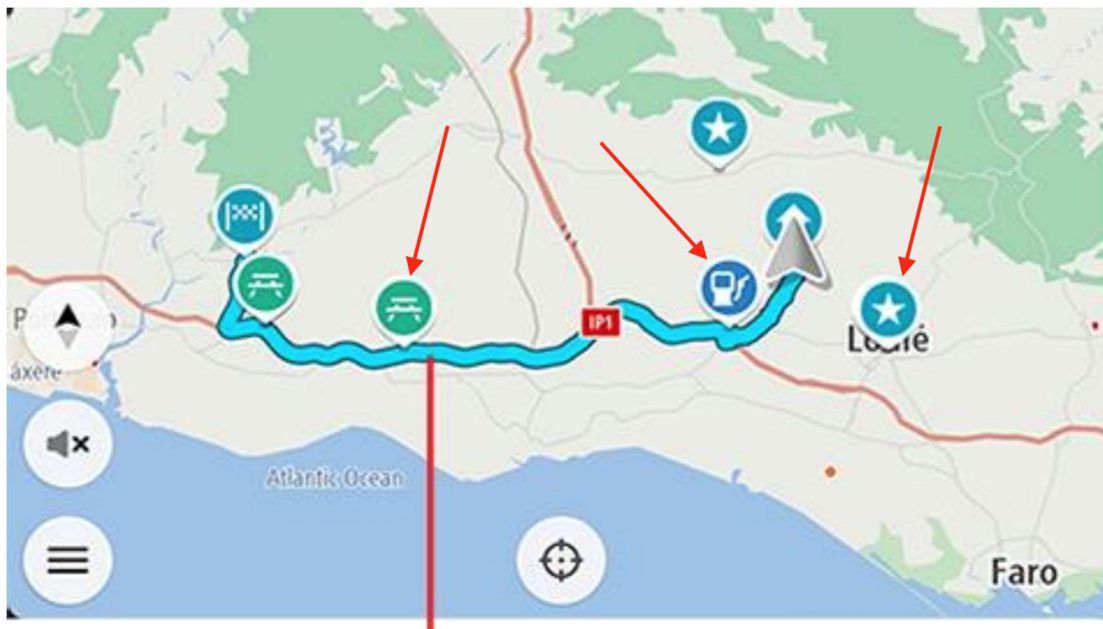
From here, you can select your preferred route from the three options that are given to you.

1. Destination. This is the location of the destination that you want to drive to.
2. Your route. If available, three routes are shown. The fastest route is highlighted. The other two optional routes are shown with the additional time required.
3. Destination address.
4. Route details panel. This panel gives you, for the chosen route:
   - The arrival time
   - The distance
   - Any delay on the route (such as traffic jams, roadworks) that affect your arrival time
   - Icons that represent specific features of the route, such as tolls, or motorway, or tunnels, that may affect your journey.
   You can swipe left and right to view details of the other routes. As you do this, the route is highlighted on the map.
5. Current location.
6. Drive button. Click on this button to choose your route and go to the guidance view. This button also shows the time left to choose another route. If you get to this screen and do nothing, the fastest route will automatically be chosen.
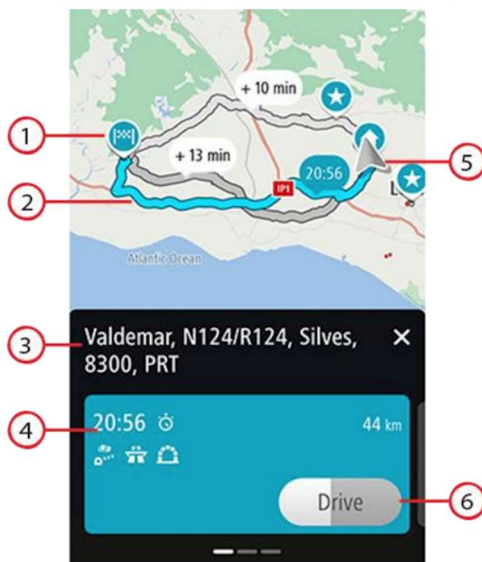
See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

161. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides a navigation system comprising a route

determination component configured to identify landmarks positioned near each of

the plurality of routes based on a user profile that characterizes personal features of the given user.

Route selection

When you have chosen a destination, and you select **Drive**, the route selection screen appears.

From here, you can select your preferred route from the three options that are given to you.
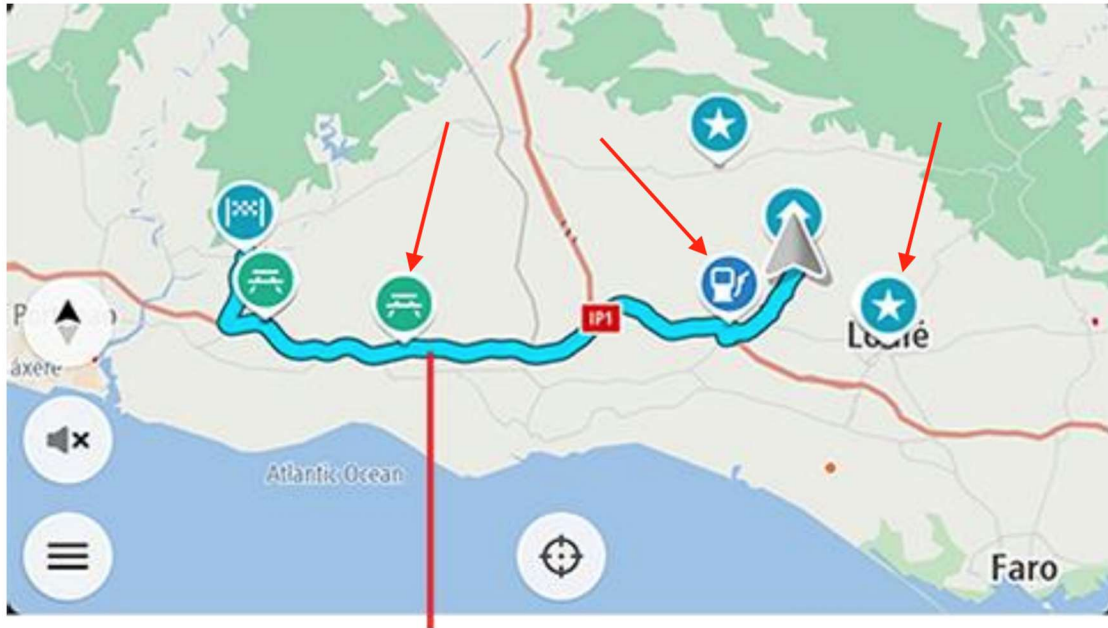
1. Destination. This is the location of the destination that you want to drive to.
2. Your route. If available, three routes are shown. The fastest route is highlighted. The other two optional routes are shown with the additional time required.
3. Destination address.
4. Route details panel. This panel gives you, for the chosen route:
   - The arrival time
   - The distance
   - Any delay on the route (such as traffic jams, roadworks) that affect your arrival time
   - Icons that represent specific features of the route, such as tolls, or motorway, or tunnels, that may affect your journey.
   You can swipe left and right to view details of the other routes. As you do this, the route is highlighted on the map.
5. Current location.
6. Drive button. Click on this button to choose your route and go to the guidance view. This button also shows the time left to choose another route. If you get to this screen and do nothing, the fastest route will automatically be chosen.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

See., e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

162. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides a navigation system comprising a route

determination component configured to select a route from the plurality of routes that

has a greatest number of identified landmarks positioned near the route.

Route selection

When you have chosen a destination, and you select **Drive**, the route selection screen appears.
From here, you can select your preferred route from the three options that are given to you.

1. Destination. This is the location of the destination that you want to drive to.
2. Your route. If available, three routes are shown. The fastest route is highlighted. The other two optional routes are shown with the additional time required.
3. Destination address.
4. Route details panel. This panel gives you, for the chosen route:
   - The arrival time
   - The distance
   - Any delay on the route (such as traffic jams, roadworks) that affect your arrival time
   - Icons that represent specific features of the route, such as tolls, or motorway, or tunnels, that may affect your journey.
   You can swipe left and right to view details of the other routes. As you do this, the route is highlighted on the map.
5. Current location.
6. Drive button. Click on this button to choose your route and go to the guidance view. This button also shows the time left to choose another route. If you get to this screen and do nothing, the fastest route will automatically be chosen.
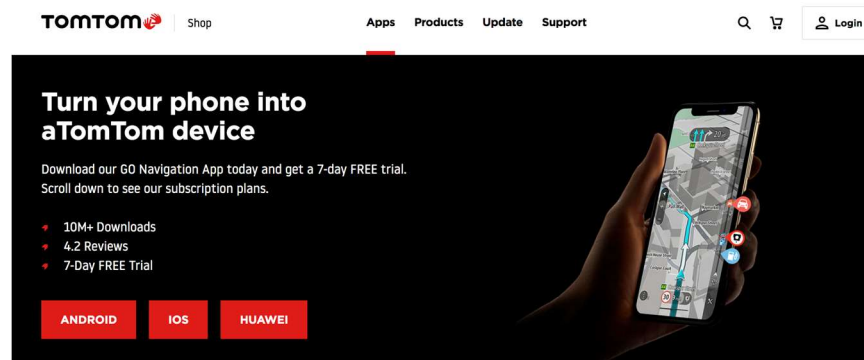
See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/refman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.
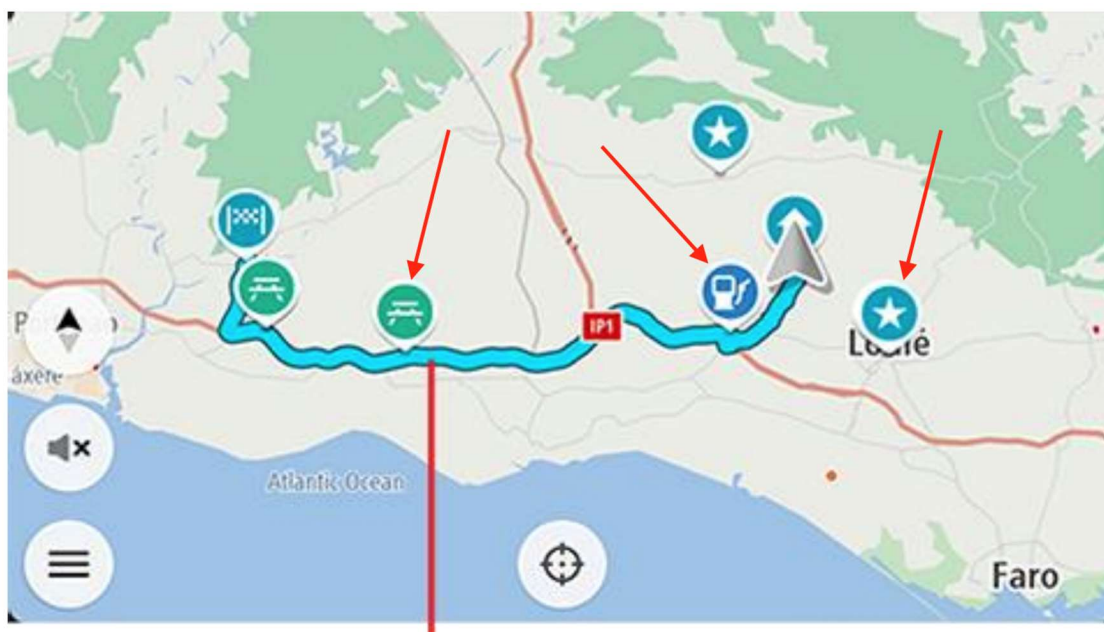
85

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

163.   On information and belief, one or more components of the TomTom Go

Navigation App employs or provides a navigation system comprising a graphical

user interface (GUI).

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-

app/.

164. On information and belief, one or more components of the TomTom Go Navigation App employs or provides a navigation system comprising a graphical user interface (GUI) having a map view configured to output a map depicting a first subset of the route, wherein the map view includes icons on the map representing the identified landmarks positioned near the first subset of the route, wherein the map view includes an outlying landmark on the map that is off the route.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/refman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

165. On information and belief, one or more components of the TomTom Go Navigation App employs or provides a navigation system comprising a graphical user interface (GUI) having a directions view configured to output text characterizing

directions for traveling a second subset of the route, wherein the directions view

includes the icons representing the landmarks, wherein the map view and the

directions view are output concurrently.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

2.   Instruction panel. This panel shows the following information:

- The direction of your next turn.
- The distance to your next turn.
- The name of the next road on your route.
- Lane guidance at some junctions.
- Basic details of the turn after the next.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

The route bar

The route bar is shown when you have planned a route. It has an arrival information panel at the top, and a bar with symbols underneath.

Note: The distance ahead shown by the route bar depends on the overall length of your route.

The arrival information panel shows the following information:

- The estimated time that you will arrive at your destination.
- The length of time to drive to the destination from your current location.
- The total time delay due to traffic jams, weather, and other incidents on your route, including information provided from historical road usage.

Tip: If your destination is in a different time zone, you see a plus (+) or a minus (-) sign and the time difference in hours and half hours in the arrival information panel. The estimated time of arrival is the local time at your destination.

If you have stops on your route, tap and hold this panel to change between information about the next stop and your final destination.

You can choose the information you see on the arrival information panel.

Traffic status - if your TomTom GO Navigation app isn't receiving any traffic information, a symbol showing traffic with a cross appears underneath the arrival information panel.

The bar underneath the arrival information panel uses symbols to show:

- Your final destination.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-gb.pdf.

166. On information and belief, TomTom directly infringes at least claim 12 of the '814 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling, importing, and/or offering to sell the TomTom Go Navigation app.
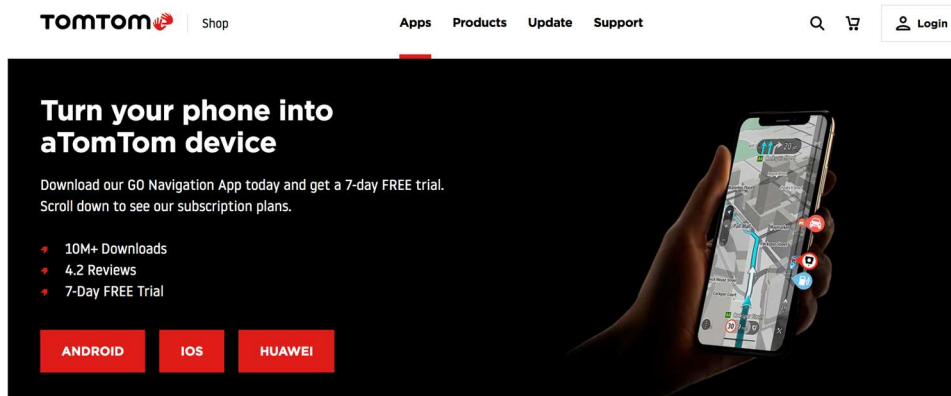
167. TomTom's direct infringement has damaged Artax and caused it to suffer and continue to suffer irreparable harm and damages.

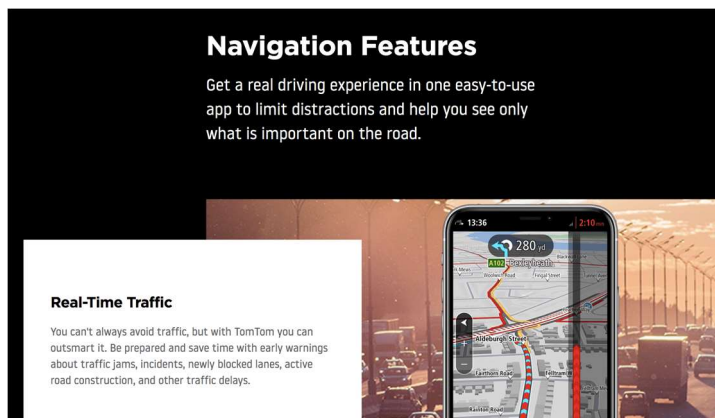### Count IX – Infringement of United States Patent No. 9,625,268

168. Artax repeats, realleges, and incorporates by reference, as if fully set forth here, the allegations of the preceding paragraphs above.

169. On information and belief, TomTom (or those acting on its behalf) makes, uses, sells, imports and/or offers to sell the TomTom Go Navigation App that infringes (literally and/or under the doctrine of equivalents) at least claim 10 of the '268 Patent.

170. On information and belief, one or more components of the TomTom Go Navigation App employs or provides an apparatus for providing navigational lane guidance.

See, e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See e.g., https://www.tomtom.com/en_us/navigation/mobile-apps/go-navigation-app/.

See, e.g.,

https://play.google.com/store/apps/details?id=com.tomtom.gplay.navapp&referrer=

adjust_reftag%3Dc9DttVeUGiEOB%26utm_source%3DTomTomLandingPage%26utm_
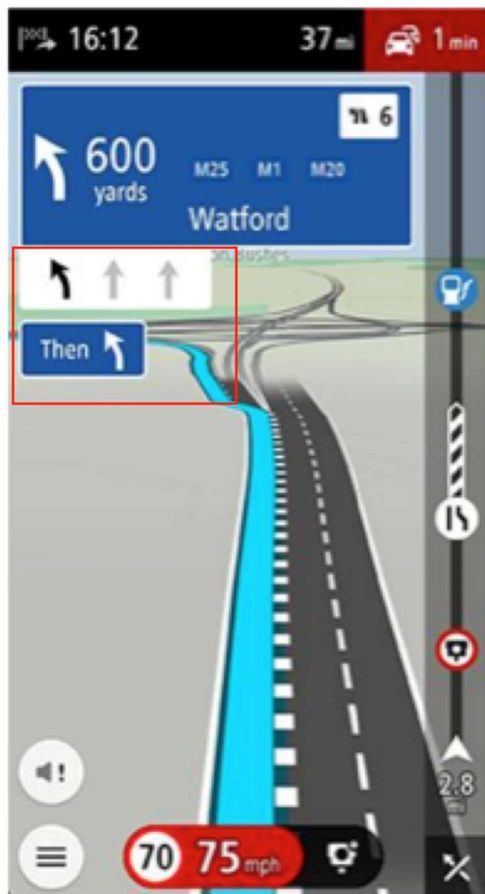
campaign%3DGoldstreamLandingPage.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

171. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides an apparatus for providing navigational lane

guidance comprising means for determining multiple possible lanes available to be

taken by a user device.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

172. On information and belief, one or more components of the TomTom Go
Navigation App employs or provides an apparatus for providing navigational lane
guidance comprising means for generating and using TrueType font printed together
to form a graphical representation of an available lane.

See e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

     173. On information and belief, one or more components of the TomTom Go

Navigation App employs or provides an apparatus for providing navigational lane

guidance wherein the combined printed characters being a composite having a

variable width image growing in width with TrueType font characters.

See, e.g.,

https://download.tomtom.com/open/manuals/TomTom_Navigation_for_Android/r

efman/Tomtom%20GO%20Global%20Android%20v1.0-en-us.pdf.

174. On information and belief, TomTom directly infringes at least claim 10 of

the '268 Patent, and is in violation of 35 U.S.C. § 271(a) by making, using, selling,

importing, and/or offering to sell the TomTom Go Navigation app.

175. TomTom's direct infringement has damaged Artax and caused it to suffer

and continue to suffer irreparable harm and damages.

JURY DEMANDED

176. Pursuant to Federal Rule of Civil Procedure 38(b), Artax hereby requests a trial by jury on all issues so triable.
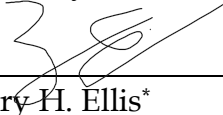
PRAYER FOR RELIEF

Artax respectfully requests this Court to enter judgment in Artax's favor and against TomTom as follows:

a. finding that TomTom has infringed one or more claims of the '581 Patent under 35 U.S.C. §§ 271(a);

b. finding that TomTom has infringed one or more claims of the '266 Patent under 35 U.S.C. §§ 271(a);

c. finding that TomTom has infringed one or more claims of the '343 Patent under 35 U.S.C. §§ 271(a);

d. finding that TomTom has infringed one or more claims of the '869 Patent under 35 U.S.C. §§ 271(a);

e. finding that TomTom has infringed one or more claims of the '644 Patent under 35 U.S.C. §§ 271(a);

f. finding that TomTom has infringed one or more claims of the '012 Patent under 35 U.S.C. §§ 271(a);

g. finding that TomTom has infringed one or more claims of the '266 Patent under 35 U.S.C. §§ 271(a);

h. finding that TomTom has infringed one or more claims of the '814 Patent under 35 U.S.C. §§ 271(a);

i.   finding that TomTom has infringed one or more claims of the '268 Patent under

35 U.S.C. §§ 271(a);

j.   awarding Artax damages under 35 U.S.C. § 284, or otherwise permitted by law,

including supplemental damages for any continued post-verdict infringement;

k.   awarding Artax pre-judgment and post-judgment interest on the damages award

and costs;

l.   awarding cost of this action (including all disbursements) and attorney fees

pursuant to 35 U.S.C. § 285, or as otherwise permitted by the law; and

m. awarding such other costs and further relief that the Court determines to be just

and equitable.

Dated: August 29, 2022   Respectfully submitted,

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