

COMPUTERIZED NAVIGATION, ROUTING & LOCATION DATA

Ian Cummings

Initial Bidding Guidance: Mid-six Figures

With a 2006 priority date, the disclosed portfolio describes systems and methods related to routing, data transmission reduction, advertising, and user interfaces. Some of the IP has wider application. The patents pertain to “server-client” navigators, where some of functions of the navigator are performed external to the navigation device. Extant technology in this class includes smartphone navigators, connected car and telematics systems, personal navigation devices, autonomous vehicles, and mapping web sites. This portfolio includes the following:

Abstract (US 7,831,386)

A navigation system and method uses loops as opposed to existing search techniques using line segments to more expeditiously find routes on a map from a starting point to a destination. Roads on a map are traced to form one or more continuous loops. Information regarding the loops is stored for future reference. A starting point and at least one destination are specified, and loops that connect the loops containing the starting point and destination are determined. A route is then formulated from the starting point to the destination using road segments or intersections where the identified loops are mutually contiguous. A list is generated including the loops and the road segments associated therewith. The road segments of an initial loop are examined and, if a road segment or intersection common to a next loop is identified, the road segments of that loop are examined, and so on, until a route from the starting point to the destination is found. Alternatively the route may be formulated by searching for routes along the roads that form one or more continuous loops connecting the starting point and the destination. Various speed-up algorithms and/or heuristics may be applied to the route formulation. The method finds application in many fields of endeavor, including wireless client-server navigation; embedded/dedicated automotive navigation, and logistics control, to name a few.

Abstract (US 8,116,974 & US 9,037,409)

A system and method are disclosed for conducting searches and generating routes to selected points of interest using a wireless client-server (WCS) navigator. A method includes the step of requesting, at a mobile unit, information about one or more locations meeting certain criteria. Locations meeting the criteria are displayed on the display screen at the location of the user and, if a location is selected, a route to include the selected location is automatically generated. Guidance regarding how to travel to the selected location may also be provided. If the user is already en route to a destination when a route to a selected location is requested, the navigator may generate a route that includes both the original destination and the selected new location. If the user is already en route to a destination when locations matching criteria are requested, along with the locations displayed the navigator may provide information to the user as to the total travel time or distance of a route passing through the original destination and a new location or the additional travel time or distance in comparison to the original route. The method may further include the step of requesting information about a class of locations such as restaurants.

Abstract (US 9,423,996)

Apparatus and methods are directed to the use and customization of user interfaces associated with vehicle navigation systems, including “skins,” selection of context for clarification, and autocompletion functions. The navigator may be a wireless client server navigation system comprising mobile clients used for requesting and receiving guidance from a central server that houses databases of geographical information. Customization may include images, icons, controls, menus, colors, symbols, or shapes that are added, removed, or moved on the display. Options may be selected using equipment external to the navigation system. If a word, or phrase is not

TECHNOLOGY

GPS/AUTOMOTIVE NAVIGATION

NOVELTY

VARIETY OF METHODS FOR USE WITH CLIENT-SERVER NAVIGATORS, ROUTE GENERATION METHOD, USER INTERFACE FEATURES, REDUCING THE AMOUNT OF DATA TRANSMITTED BY THE SYSTEM, AND A NOVEL METHOD OF ADVERTISING ON NAVIGATION SYSTEMS

IMPORTANCE

IMPORTANT PORTFOLIO FOR COMPANIES INVOLVED IN TELEMATICS, SMARTPHONE NAVIGATORS, PERSONAL NAVIGATION DEVICES, INDASH GPS, AS WELL AS MIDDLEWARE AND OTHER DATA PROVIDERS

NUMBER OF ASSETS

21

PATENTS (4)

US 7,831,386
US 8,116,974
US 9,423,996
US 9,037,409

APPLICATIONS (17)

US 11/561,050
US 11/697,977
US 12/113,989
US 12/114,195
US 12/115,262
US 12/116,714
US 12/116,760
US 60/915,515
US 60/915,530
US 60/915,774
US 60/915,776
US 60/916,130
US 60/916,142
US 60/916,399
US 60/916,681
US 60/916,682
US 60/917,773

understood, the method proceeds with the steps of: searching a database for potential matching letters, words, or phrases; querying the user with the potential matching words, or phrases; and, if the user selects one of the potential matching words, or phrases: performing an operating associated with the potential matching words, or phrases.

Earliest Priority Date: 11-17-2006

Representative Claims: US 7,831,386 – Claim #1

1. A navigation method, comprising the steps of: providing a map having a network of roads and intersections; tracing the roads to form one or more continuous loops; specifying a starting point and a destination on the map; graphing the map such that the loops are represented as nodes and common roads or intersections between the loops are represented as edges; and using a greedy, A*, SMA*, IDA*, or annealing search method on the graph to identify a set of one or more loops linked by mutually contiguous roads and/or intersections such that a route can be traced from the starting point to the destination along the roads and/or intersections comprising the identified loops.

Contact:

For more information on the assets available for sale in this portfolio, contact Paul Greco.

Paul Greco

Sr. Vice President

paul@icapip.com

(646)453-7931