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SYSTEM AND METHOD FOR ACCESSING LOCAL INFORMATION

Background–Field of Invention

This invention relates to a local information access system and method that storing and retrieves information located at or closed to a location.

Background–Description of Prior Art

Internet is a revolution technology to access the information. Through the Internet, user can access information on the world at the click of a mouse button. They can access information related to a company on the other side of earth at their home. Internet is powerful and convenient media to provide or receive information. Companies are promoting their product information and services or making direct sale on line. To access information, user either need to know the Web site address of the information or use a search engine to search for the information. User needs to provide the search engine some key words that relate to the information. However, the tremendous information on the Internet is explosively growing. User could receive thousand of related information from a search engine. In many cases, user only needs the local information instead of global information.

The prior art used to deal with the explosive global information problem is to categorize the information. Most of the search engine on the Internet categorizes the information by the information characteristics. For example, Yahoo Company. categorizes their database into automobile, travel, computer, political, stock quote, etc. User could choose the category to do the search. This approach might reduce the quantity of information return from a search. However, it is still too much and contains the global information within that category.

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Some of company on the Internet further categorizes their information by the geography areas, for example countries or cities. With the geography area category, user could search the information only in a predefined area, which usually is a government district, for example ZIP code area, city, county, state, and country, etc. One of the example is the Sidewalk WEB site of Microsoft Company. The WEB site provides a utility to locate the stores by given Boolean search criteria and an area, which could be a ZIP code, a city, a county, a state, and a country. After it found the stores, it returns a map and shows the store location by making a mark on the returned map. It has the disadvantage that the searching area is predefined user could not choose as they wish, for example to cross city limit or to narrow down to a shopping mall. Another disadvantage is the information is only limit to store location and without any merchandize information to help shopping. There is no other driving direction to the shopping location except the map. The major problem is the information may not be up to date, for example, the store moved.

Another prior art found in most of Global Position System (GPS) application. The current Global Position System is more popular in Europe and Japan than in Unit States. The Global Position System receiver receives the signals from several satellites and then determines its current position. The Global Position System receiver usually build-in a small computer. The computer has a display that could display a simplified map and show the current position on the map. The map is either pre-stored in the computer or could be down load from a remote site through a wireless connection. The program runs on the computer could use the current position coordination to search a build-in database for closest gas stations, hospitals, or restaurants. The build-in database is a stored in a memory device of the computer, for example, flash memory or CD-ROM. It has the disadvantages that information might be out date and the searching area is not selectable.

A preliminary novelty search of classes 707/1, 701/213, 701/200 in U.S. patents, uncovered U.S. Pat. Nos.US586799, US5839088, US5802492, US5948040. Travel Reservation information and planning system (US5948040) is focus on the travel reservation and planning purpose. The user is planning on a future remote travel activity. It is not for the purpose of real time local information or shopping purpose. And due to the remote planning and reservation process, it is required user to input a ZIP code, a city, a county, a state, or a country as a geographic search area. And the GPS sensor was used in the system for the purpose of route modification instead of the information searching purpose.

None discloses the concept of the said local information accessing system that is using GPS as a shopping assistant to shop the real estate property or using the GPS coordinates to describe the geography search area to search local information through internet. Further more, none of the prior art is focus on the real time searching information or merchandise. Internet search capability and the GPS application was integrated to provide the customer real time to search the information and provide the route to the location of the information. Also, none of the prior art mentioned about finding the merchandise location with a good price. Prior art only mention about the store location instead of the merchandise location. If the store is quite big, such as 3 stories building, the customer still need to find the merchandise even they been able to get into the store.

Therefore, said information position is further used by routing or navigation application to provide information consumer driving guidance.

Pat. Number	Date	Title			File date
5,867,799	February 2, 1999	Information system and method for filtering a massive flow of information entities to meet user information classification needs	707	1	April 4, 1996
5,839,088	November 17,	Geographic location referencing	701	213	August 22, 1996

	1998	system and method			
5,802,492	September 1, 1998	Computer aided routing and positioning system	701	200	June 11, 1996
5,948,040	September 7, 1999	Travel reservation information and planning system	701	201	February 6, 1997

Objects and Advantages

Accordingly, besides the objects and advantages of the system and method for accessing local information describes in my above patent, several objects and advantages of the present invention are:

(a) to provide a efficient system and method for local information provider to distribute their information to local information consumer,

(b) to provide convenient and fast local information searching system and method which could find information in a user specified searching area, and match user specified criteria,

(c) to provide fast and accurate local information search by utilizing the Global Position System coordination,

(d) to provide flexible local information searching system and method with highly adjustable searching area, for example, cross city boundaries or even narrow down to a shopping mall area,

(e) to provide a system and method to couple an information search with Global Position System Navigation to further help information consumer drive to found information position, and

(f) to provide a system and method to couple an information search with an best route to a position of found information, said best route could takes both traffic and distance in to consideration.

Drawing Figures

A system and method for accessing local information is described. In the following description, for purpose of explanation, numerous of specific details are set forth in order to provide a through understanding of the present invention.

FIG.1 shows a server computer system.

FIG.2 shows end-user computers communicate with server computer in variety ways.

FIG.3 shows an end-user computer system.

FIG.4 shows a flow chart of the merchandize inquiry process.

FIG.5 shows a graphical user interface for user to input the query.

FIG.6 shows a graphical user interface to display the search results.

Reference Numerals in Drawings

- 10 is a server computer system
- 11 is a computer processor
- 12 is a program memory
- 13 is a communication device
- 21 is an end-user computer.
- 22 is an server computer system.
- 23 is a modem of end-user computer system.
- 24 is a router or a modem of server computer system
- 25 is a phone connection.
- 26 is an end-user computer.
- 27 is the Internet network.
- 28 is a hand held end-user computer.
- 29 is a wireless connection
- 31 is a computer processor
- 32 is a modem
- 33 is a computer mouse
- 34 is a computer keyboard
- 35 is a computer display
- 36 is a Global Position System receiver
- 37 is an Internet Service Provider.
- 41 is receiving position step.

- 42 is receiving searching area constrain step.
- 43 is receiving search criteria step.
- 44 is receiving price range step.
- 45 is receiving query and query database step.
- 46 is searching database step.
- 47 is returning search result step.
- 48 is display the search result step.
- 51 is a cursor on display.
- 52 is a input box for position.
- 53 is a input box for search area constrain.
- 54 is a input box for search criteria.
- 55 is a input box for price range.
- 61 is table for search results.
- 61a is a field for index
- 61b is a field for store identifier
- 61c is a field for merchandize identifier.
- 61d is a field for merchandize price.
- 62 is a map with merchandize index marked.

Summary of Invention

A convenient and flexible local information searching system is provided which fast builds and retrieves the information corresponding to a location. The preferred embodiment of this invention utilizes the Internet as media to distribute and build up the information and a database with position coordination of Global Position System to search the information.

The users of this system are two folds. One is the information provider. Another is the information consumer. The information provider provides information and stored in the database of this invention. The information consumer retrieves information from the database of this invention and utilizes the information for variety purpose. The typical user of this invention is equipped with a

computer with a modem. The user computer dials up an Internet Service Provider (ISP) through the modem and phone connection to access to the Internet.

The server computer system of this invention is provided to serve two types of users. The preferred server computer system in the embodiment is equipped with a computer, a networking device to an Internet Service Provider with a high-speed data communication link. The Internet Service Provider then connects to user's computer system through another Internet Service Provider that serves the user computer system. The server computer system also couples to a database for storing and querying information in the database.

In the preferred embodiment, the information provider use a computer to data communicate with the server computer via Internet and update their information in the database as frequently as they need. Therefore, the information in the database would to be most up to date because the information is updated on information provider's demand. The provided information is comprised of the identifier of the information provider, the location of the information, and other information descriptions. The location could be an address or the position coordination of Global Position System. If the location is an address, the server computer system converts the address into the related position coordination of Global Position System. The server computer system, then, stores the information and the position coordination into the database.

Information consumer use computer to communicates with the server computer system via Internet and for querying the database. The query is for searching the information that is located in a user-specified area and matches searching criteria. The searching area in the query is derived from a position and searching area constrain input by the user. In the preferred embodiment, Global Position System (GPS) coordination is used to describe the position. User chooses the searching area constrain and a position to decide the area in which he or she would to do information search. If user does not specify searching area constrain, the preferred embodiment of this invention then takes default searching area constrain. The position could be stored in a memory of user's computer and user uses the stored position to query the system of this invention. If a GPS receiver hook-up with user's computer, the computer could periodically update the position by receiving from GPS receiver. The searching area could be close to user's current the position in real time. It is especially convenient if user is driving a vehicle. User could certainly manually enter a GPS position in the query if the user does not has GPS receiver or want to query information outside of user's current position.

The local computer could be a hand held computer or some portable computer. User could install a minimized computer with a GPS receiver on a car and access the Internet through cellular phone or some wireless connection to the system of this invention. The information retrieved by the present invention will be quickly changed corresponding to the new position identified by GPS receiver.

The information in the database of the preferred embodiment of this invention contains the GPS position coordination of information. Since that, the system of this invention could do an accurate search and also return search results with the information position coordination for couple to navigation and routing applications. In the preferred embodiment, the search result includes a map that is marked with the found information according to their position on the map. Such that, the returned information position coordination will be used for determining the best route and real time navigation when incorporate with a GPS receiver.

Description--Figs. 1 to 6

FIG. 1 illustrates an example of a server computer system 10 for storing and retrieving merchandize data in accordance with the invention. Computer system 10 comprises a processor 11, program memory 12, a communication device 13, and a merchandize database 14. The communication device 14 might be a modem or a high-speed leased line router. In the embodiment of FIG. 1, system 10 is an information server, and processor 11 is in data communication with the various end-user computer systems via the Internet. However, in other embodiments, the invention could be implemented with a processor having multiple modems to receive calls directly from end-user computer systems and establish the data communication via the modems and public phone line.

In FIG.2, it shows end-user computers communicate with server computer in variety ways. End-user computer system 21 connects to server computer system 22 via modem 23 and modem 24 through phone line 25. Another example is that end-user computer system 26 also connected to server computer system 22 through Internet 27. End-user computer system 28 connects to server computer system 22 through radio frequency link 29.

An example of a suitable computer system 10 is one operating in accordance with the Sun MicroSystems Solaris operating system. Processor 11 may be any general-purpose processor having a CPU, RAM, ROM, and I/O circuitry.

To explain further, one aspect of the invention is the use of computer system 10 to access merchandize database 14 to provide a user with merchandize information within a given area. In the example of this description, database 14 is a centralized database system and stores the data about merchandize information in the worldwide area. However, in other embodiments, database 14 might be implemented as a distributed database system, which stores the information in several computer systems and might locate in different areas. Each of distributed database might store data about merchandize information in a local area, such as a particular state or country.

Database 14 of the embodiment is implemented in a relational database manner. Each of merchandize information is organized as a record in the database to describe a merchandize, having a filed for each merchandize information record to describe the merchandize, for searching of records of merchandize information describing that merchandize. Another field in each of merchandize information record is a position field. The position field is a position coordination of the merchandize. The position coordination is comprised of latitude and longitude of Global Position System coordination. It could also contain altitude of Global Position System coordination when it is necessary. The database 14 could also be arranged in an object-oriented manner for attribute searching.

FIG. 3 illustrates an example of an end-user computer system 30 for retrieving merchandize information in accordance with the invention. Computer system 30 comprises a processor 31, program memory 32, a mouse 33 and keyboard 34 for user input, a display 35, a modem 36, Global Position System receiver 37, and Internet Service Provider (ISP) 38. In the embodiment of FIG. 2, system 30 is an end-user computer system, and processor 11 is in data communication with an Internet Service Provider 38 first and then the Internet Service Provider transmits the data to the computer system in FIG. 1 via the Internet. However, in other embodiments, the invention could be implemented with a processor having a modem call directly to the computer systems in FIG. 1 and establish the data communication link via the modems. Or, the invention could be implemented such that the end-user computer system in FIG.2 and server computer system in FIG.1 is in a local network (LAN) or a wide area network (WAN).

In the embodiment of FIG.2, Global Position System receiver 37 is a positioning instrument, and is used as current position coordination input device for computer system 30 in FIG2. However, in other embodiment, user of computer system 30 could input the position coordination from other

input device, for example from a keyboard 34, if the user knows his or her current position or like to search merchandize information at other location.

An example of a suitable end-user computer system 30 is one operating in accordance with the Microsoft WINDOWS operating system. Processor 11 may be any general-purpose processor having a CPU, RAM, ROM, and I/O circuitry. Other input devices instead of, or in addition to, mouse 33 and keyboard 34 could be used, such as trackballs, touch pads, graphic tablet, or joysticks. The processor 11 is programmed to execute a process to help the user and take user's input.

FIG.4 illustrates the merchandize information inquiry process in a preferred embodiment. The process with a merchandize information inquiry process executed by processor 31. The process is interactive, with processor 31 responding to input by the user via a trackball device (mouse) 33 or keyboard 34. As is common with today's personal computer systems, mouse 33 is used to point a cursor at an icon, button, or other graphical prompt and to click on that prompt to initiate processor activity.

FIG.5 illustrates the graphical user interface used between step 41 to step 43 to receive input from user. The graphical user interface is a form displayed on display 35. There are several input boxes and buttons on the graphical user interface to accept input from user. On the graphical user interface, a cursor 51 indicates the input focus to where the user input enters. User use mouse 33 to control the movement of the cursor 51 on the graphical user interface.

Box 52 is to accept input for a position. The position is a location in an area where user would like to search for merchandize. The position is the position coordination of the Global Position System coordination. The position coordination includes at least longitude and latitude. Altitude is option for the user. If user don't know the position coordination of the searching area, he or she could type in an address in Box 52. Most of the time, user might be interested in the area that is user's current position of user. User could choose the current position as the focal point by leaving Box 52 empty. The current position is stored in program memory 32. It could be an address or position coordination. By default, the current position is chosen unless user input other address or coordination in the box 52. If end-user computer system 30 contains a Global Positioning System receiver 37, processor 31 could also continuously update the current position coordination with the reading from Global Positioning System receiver 37. In step 41, processor 31 then receives the position from box 52 if the position is given. Or, processor 31 receives the current position from program memory 32.

Box. 53 is to accept input for searching area constrain. Searching area constrain and the position in Box43 together defines a geographic area in where user would like to search for merchandize. There are many ways to specify the searching area constrain. Searching area constrain could be a distance. The distance describes a circle area that is center at the position specified by box 52. Searching area constrain could be a keyword "ZIP", which means a zip code area where the position in box 52 is located. It could be a keyword "CITY", which means a city area where the position in box 52 is located. It could also be "STATE", which means a state area at which the position in box 52 is located. Or, it could be any term to represent a government district. In step 42, processor 31 then receives searching area constrain form Box 53. In FIG.5, a "CITY" searching area constrain is selected.

Box 54 is to accept input for search criteria. The search criteria are a single keyword or a Boolean search expression, which combines several keywords with Boolean operations. For example, user would like to search for a Yamaha piano. User could use "Yamaha AND piano", where AND is the Boolean operation and "Yamaha" and "piano" are keywords. In step 43, user input search criteria in box 54, then, processor 31 receives the search criteria from Box 54.

Box 55 is for to accept input for price range. In the example, a price range between 2000 to 300 dollars is choosing. The price range is to set a range on the price of merchandize for which user is searching. Therefore, all found merchandize are within than the price range. In step 44, processor 31 then receives the price range in box 55.

In step 45, processor 31 organize the received input, position, searching area constrain, search criteria, and price range, as a query and send to a Internet Service Provider 38 via modem 36 and phone line. Then, the Internet Service Provider further transmits the query to computer system 10. After received the query, processor 11 then query database 14.

In step 46, database 14 receives the query and searches the data in the database against the searching area. Received search criteria and received price range further qualify the search results. Only the search result that is located in the searching area, match the search criteria, and within the price range are return to processor 11. Each of search results includes the merchandize description, merchandize price, and merchandize location. Processor 11 further queries a map database, which is not shown on FIG.1, by given the searching area. The map database then returns a map, which covers the searching area. Processor 11 then marks the map with index numbers. Each index number is corresponding to a search result. In step 47, processor 11 transmits received search results to Internet Service Provider 38 via Internet, and the Internet Service Provider 38 transmits the results to computer system 30. In another embodiment, process 11 might only returns the search result and does not include the map.

In step 48, processor 31 receives the search results and displays the results on FIG.6. In FIG.6, table 61 includes a field for merchandize index 61a, a field for identifier of store 61b, a field for an identifier of merchandize 61c, and a field for the price of the merchandize 61d. In another embodiment, Table 61 might also contains a field for a description of merchandize and a field for position of the merchant. In the example of FIG.6, three items are found and the map 62 is marked with three numbers from 1 to 3. Each index number on map 62 is an index to one of the merchandize on Table 61.

Conclusion, Ramifications, and Scope

The system could further help user by providing a routing service because processor 31 knows each of received merchandize position. User requests a routing service by moving the cursor and clicking on an index number on map 67. Processor 31 then transmits the routing request to computer 10 through Internet. The routing request includes current position and a destination position. The destination position is the position of the merchandize with the index that is selected by user on the map. After received routing request, processor 11 find a best route from received current position to destination position. The best route here is in terms of distance. However, the best route might also in terms of time if a real time traffic database is provided in computer system 10. In another embodiment, the step 48 could also execute a routing process on the processor 31 if a route database is provided on computer system 30.

The received merchandize position could further used by a Global Position System receiver. Because the merchandize position is position coordination of Global Position System, the build-in computer on the receiver could continuously navigate the user to a merchandize location chosen by user seamlessly.

Although the description above contains many specific details, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some the presently

preferred embodiments of this invention. Again, the searchable database can also be the event, personnel information database. The personnel information can include a person's hobby, age, occupation, height, weight, or character. The merchandise can also be a real estate property or any location specific merchandise such as the structure or plant above the land.

Thus the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.

Claims: I claim:

1. A local information searching system: comprising:
   - a plurality of information provider computers, which is a computer system used for providing information, wherein
     - said provided information including an identifier of the information provider, a position of the information, and a description of the information itself;
   - a plurality of information consumer computers, which is a computer system used for consuming information, each of said plurality of information consumer computers including:
     - a communication device for communicating with said server computer;
     - a searching geography area input means for receiving a geography area by each of said plurality of information consumer computers and for storing said user input searching geography area;
     - a criteria input means for receiving a selection criteria input by a user of each of said plurality of information consumer computers and for storing said user input criteria;
     - a remote query means for transmitting said stored criteria and said searching geography area from said stored position and said stored searching geography area to said server computer via said communication devices and said communication link, querying a database via said server computer, receiving query result from said server computer via said communication device, and for storing said query results; and
     - a Global Position System(GPS) destination data output means for outputting Global positions System position coordination of said query results retrieved by said remote query means to the consumer computer's local Global Position System application;
   - a server computer that communicates with each of said plurality of information provider computers for receiving said provided information and then storing the information in a said database, communicates with each of said plurality of information consumer computers for receiving database query, query said database, and returning query results; wherein
     - said received database query including receiving a searching geography area and a searching criteria for searching said database.
     - said database containing data of the information including the identifier of information provider, and position of the information, and other information description; said position of the information is geography position coordination;
     - said database query means for querying said information database via said server_ computer with said searching area information and said criteria.
   - a data communication link between said communication device of said server computer and a communication device of each of said plurality of said plurality of information provider computers and said plurality of information consumer computers;

2. The local information searching system of claim 1; wherein
   - Said searching geography area is derived from GPS coordinate.

3. The local information searching system of claim 2; wherein
   - Said identifier of the information provider is the identifier of a merchant
   - Said a position of the information is the position of the merchandise; and merchandise position is derived from position coordinate of Global Position System;
   - Said description of the information consisting of a price of a merchandise;
   - Said searching criteria consisting of said price and identifier of a merchandise;
   - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
4. The local information searching system of claim 2; wherein
   - Said identifier of the information provider is the identifier of an event sponsor;
   - Said a position of the information is the position of an event; and event position is derived from position coordinate of Global Position System;
   - Said description of the information consisting of an identifier of an event and a time of an event;
   - Said searching criteria consisting of said time of an event;
   - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
5. The local information searching system of claim 2; wherein
   - Said identifier of the information provider is a identifier of a person
   - Said a position of the information is a position of a person; and said position is derived from position coordinate of Global Position System;
   - Said description of the information consisting of personnel information of a person;
   - Said searching criteria consisting of said personnel information;
   - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
6. The local information searching system of claim 2, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computers system are industry-standard telecommunications modems
7. The local information searching system of claim 2, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer systems is a high-speed router.
8. The local information searching system of claim 2, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer system are coupled to a telephone line.
9. The local information searching system of claim 2, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer system are coupled to a wireless connection.
10. The local information searching system of claim 2, wherein said query response means searching the database against said criteria and said searching area, wherein said query

results match said criteria and couples to at least one position which is located inside said searching area.

11. The local information searching system of claim 2, wherein said query result is marked on a map that covers the positions of each merchandize.
12. The local information searching system of claim 2, wherein said searching area input are comprising of user GPS coordination position input and a geography searching area constrain input.
13. The local information searching system of claim 12, wherein said searching area constrain is selected from the group consisting of
    - a distance that derived said area which is a circle centered at said position,
    - a ZIP code constrain that derived said area which is a ZIP code area where said position is located,
    - a government district constrain that derived said area which is a district where said position is located,
    - a street name which derived an area between said street and said position, and
    - a plurality of position which derived an area that enclose said first position and the plurality of position.
14. A method of searching local information from a database comprising the steps of:
    - Providing information from a plurality of information provider computers;
    - storing information data in a database, said information data including identifier of information provider, identifier of information, description of information, and position of information;
    - coupling said database to a first computer, wherein said first computer is able to access the database;
    - receiving a searching area by one of a plurality of end-user computers;
    - receiving a criteria specifying one or more of said data selection criteria;
    - transmitting said searching area input and said criteria input from said end-user computer to said first computer;
    - searching said database by said first computer for any of said that matches said criteria and whose position is located in said searching geography area;
    - returning a set of candidate information found in response to said searching step;
    - outputting a GPS coordinate of the said candidate information to local consumer computer's GPS application.
15. The method of claim 14, wherein said a searching geography area is derived from GPS coordinates.
16. The method of claim 15; wherein
    - Said identifier of the information provider is the identifier of a merchant
    - Said a position of the information is the position of the merchandise; and merchandise position is derived from position coordinate of Global Position System;
    - Said description of the information consisting of a price of a merchandise;
    - Said searching criteria consisting of said price and identifier of a merchandise;
    - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.

17. The method of claim 15; wherein
    - Said identifier of the information provider is the identifier of an event sponsor;
    - Said a position of the information is the position of an event; and event position is derived from position coordinate of Global Position System;
    - Said description of the information consisting of a time of an event;
    - Said searching criteria consisting of said time and identifier of an event;
    - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
18. The method of claim 15; wherein
    - Said identifier of the information provider is a identifier of a person
    - Said a position of the information is a position of a person; and said position is derived from position coordinate of Global Position System;
    - Said description of the information consisting of personnel information of a person;
    - Said searching criteria consisting of said personnel information;
    - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
19. The method of claim 15, wherein said step of returning a set of candidate information is marked on a map.
20. The method of claim 15, wherein said step of receiving a geography searching area input is comprised of a user position input and a searching area constrain input.
21. The method of claim 20, wherein said searching area constrain is selected from the group consisting of
    - a distance that derived said area which is a circle centered at said position,
    - a ZIP code constrain that derived said area which is a ZIP code area where said position is located,
    - a government district constrain that derived said area which is a district where said position is located,
    - a street name which derived an area between said street and said position, and
    - a plurality of position which derived an area that enclose said first position and the plurality of position.
22. The local information searching system of claim 1; wherein
    - Said identifier of the information provider is the identifier of a real estate property provider;
    - Said a position of the information is the position of the real estate property; and real estate property position is derived from position coordinate of Global Position System;
    - Said description of the information consisting of an identifier of a real estate property and a price of a real estate property;
    - Said searching criteria consisting of said price.
23. The local information searching system of claim 22; wherein

- Said consumer computer's local GPS application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.

24. The local information searching system of claim 22, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computers system are industry-standard telecommunications modems
25. The local information searching system of claim 22 wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer systems is a high-speed router.
26. The local information searching system of claim 22, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer system are coupled to a telephone line.
27. The local information searching system of claim 22, wherein said communication device in said first computer and said communication device in each of said plurality of end-user computer system are coupled to a wireless connection.
28. The local information searching system of claim 22, wherein said query response means searching the database against said criteria and said searching area, wherein said query results match said criteria and couples to at least one position which is located inside said searching area.
29. The local information searching system of claim 22, wherein said query result is marked on a map that covers the positions of each merchandize.
30. The local information searching system of claim 22, wherein said searching area input are comprising of user GPS coordination position input and a geography searching area constrains input.
31. The local information searching system of claim 30, wherein said searching area constrain is selected from the group consisting of
    - a distance that derived said area which is a circle centered at said position,
    - a ZIP code constrain that derived said area which is a ZIP code area where said position is located,
    - a government district constrain that derived said area which is a district where said position is located,
    - a street name which derived an area between said street and said position, and
    - a plurality of position which derived an area that enclose said first position and the plurality of position.
32. The local information searching system of claim 22, wherein said real estate property position is selected from the group consisting of
    - address and
    - position coordination of Global Position System.
33. The local information searching system of claim 22, wherein said customer computer position is selected from the group consisting of
    - address and
    - position coordination of Global Position System.
34. The method of claim 14; wherein
    - Said identifier of the information provider is the identifier of a real estate property;
    - Said information position is position of a real estate property;

- Said description of the information consisting of a price of a real estate property;
- Said searching criteria consisting of said price;

35. The method of claim 34; wherein
    - Said consumer computer's local application is the consumer computer's navigation apparatus for used by the navigation to retrieve the real time route the desired destination from the GPS position coordination of said consumer computer's navigation apparatus.
36. The method of claim 34, wherein said a searching geography area is derived from GPS coordinates.
37. The method of claim 34, wherein said step of returning a set of candidate information is marked on a map.
38. The method of claim 34, wherein said step of receiving a geography searching area input is comprised of a consumer position input and a searching area constrain input.
39. The method of claim 38, wherein said searching area constrain is selected from the group consisting of
    - a distance that derived said area which is a circle centered at said position,
    - a ZIP code constrain that derived said area which is a ZIP code area where said position is located,
    - a government district constrain that derived said area which is a district where said position is located,
    - a street name which derived an area between said street and said position, and
    - a plurality of position which derived an area that enclose said first position and the plurality of position.
40. The local information searching system of claim 5; wherein
    - Said personnel information consisting of hobby information of a person;
41. The local information searching system of claim 5; wherein
    - Said personnel information consisting of sex information of a person;
42. The local information searching system of claim 5; wherein
    - Said personnel information consisting of age information of a person;
43. The local information searching system of claim 5; wherein
    - Said personnel information consisting of occupation information of a person;
44. The local information searching system of claim 5; wherein
    - Said personnel information consisting of character information of a person;