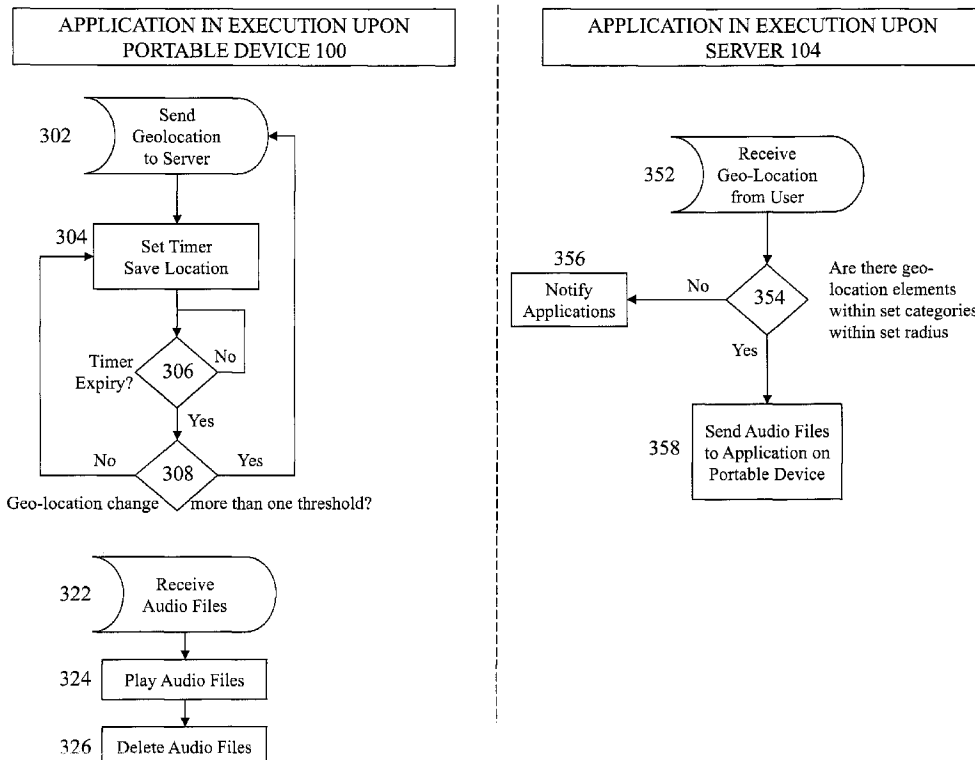




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 (72) **Inventeur/Inventor:**
LABRIE, MARTIN, CA
 (73) **Propriétaire/Owner:**
LABRIE, MARTIN, CA
 (74) **Agent:** STRATFORD MANAGERS CORPORATION

(54) **Titre : APPLICATION DE SERVICE D'INFORMATION FONDEE SUR L'EMPLACEMENT**
 (54) **Titre : LOCATION BASED INFORMATION SERVICE APPLICATION**



(57) **Abrégé/Abstract:**

A method and system for providing audio information to a mobile device relating to geographical elements at the geo-location coordinates of a location on a map on a screen on the device. The method and system provide for selecting and sending electronic files to the device relating to different geographical elements at the geo-location coordinates.

ABSTRACT

A method and system for providing audio information to a mobile device relating to geographical elements at the geo-location coordinates of a location on a map on a screen on the device. The method and system provide for selecting and sending electronic files to the device relating to different geographical elements at the geo-location coordinates.

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LOCATION BASED INFORMATION SERVICE APPLICATION

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This patent application is a divisional application of the parent application CA 2,928,191 filed April 28, 2016 (allowed on January 16, 2018).

5 **FIELD OF THE INVENTION**

[002] This invention relates to information services applications and more particularly to location based information services applications.

BACKGROUND OF THE INVENTION

10 [003] Users today can easily access a variety of mobile devices, such as smart phones, tablets or any handheld device which provides for network connectivity (e.g., Internet connectivity), as well as for means of determining their location. Whilst some applications such as navigation, mapping, etc. allow the location of the mobile device, and hence the user, to be explicitly defined the majority of software applications and providers of information and electronic content to users do not provide the user with information based on their location.

15 [004] Accordingly, it would be beneficial to provide users with electronic content, e.g. audio, etc., which is defined by and based upon their location.

[005] Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

20 **SUMMARY OF THE INVENTION**

[006] It is an object of the present invention to mitigate limitations within the prior art relating to information services applications and more particularly to location-based information services applications.

[007] In accordance with an aspect of the present invention there is provided a method comprising: method comprising: receiving, at a server, geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map; selecting a radius surrounding the geo-location coordinates of the location; identifying a
5 geographic element within the radius surrounding the geo-location coordinates meeting a predetermined criterion with respect to the geo-location coordinates in dependence upon information stored upon the server relating to a plurality of geographical elements, each geographical element being associated with a physical location defined by fixed geo-location coordinates; selecting an electronic file comprising information on the identified geographical
10 element, the electronic file being one of a plurality of electronic files stored upon the server, each electronic file being associated with a predetermined geographical element of the plurality of geographical elements; and transmitting the selected electronic file to the mobile device.

[008] In accordance with yet another aspect of the present invention, there is provided a method comprising: transmitting via a communications network geo-location coordinates of a location
15 on a selected map on a screen of a mobile device to a remote server upon the generation of a stimulus associated with the map; receiving from the remote server an electronic file associated with a geographic element, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates of the location and identified within a selected radius surrounding the geo-location coordinates, in dependence upon information stored upon the server
20 relating to a plurality of geographical elements, each geographical element being associated with a physical location defined by fixed geo-location coordinates and an electronic file of a plurality of electronic files stored upon the server; and at least one of: storing the electronic file within a memory of the mobile device; and executing the electronic file on the mobile device.

[009] In accordance with yet another aspect of the present invention, there is provided a system
25 comprising: a server coupled to a communications network and comprising at least a microprocessor and a non-transitory computer readable medium; wherein when the microprocessor executes computer-executable instructions stored upon the non-transitory computer-readable medium, said instructions cause the system to: receive geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a
30 stimulus associated with the map; selecting a radius surrounding the geographic coordinates of the location; identify a geographic element within the radius surrounding the geo-location

coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates in dependence upon information stored upon the server relating to a plurality of geographical elements, each geographical element being associated with a physical location defined by fixed geo-location coordinates; select an electronic file comprising
5 information on the geographical element, the electronic file being one of a plurality of electronic files stored upon the server, each electronic file being associated with a predetermined geographical element of the plurality of geographical elements; and transmit the selected electronic file to the mobile device.

[0010] In accordance with yet another aspect of the present invention, there are provided a
10 device comprising: an interface for communicating to a remote server via a communications network; a microprocessor; and a non-transitory computer readable medium; wherein when the microprocessor executes computer-executable instructions stored upon the non-transitory computer-readable medium they cause the device to: transmit via the communications network geo-location coordinates of a location on a selected map on a screen of a mobile device to a
15 remote server upon generation of a stimulus associated with the map; receive from the remote server an electronic file associated with a geographic element, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates and identified within a selected radius surrounding the geo-location coordinates in dependence upon information stored upon the server relating to a plurality of geographical elements, each geographical element being
20 associated with a physical location defined by fixed geo-location coordinates and an electronic file of a plurality of electronic files stored upon the server; and at least one of: store the electronic file within a memory of the mobile device; and play the electronic file on the mobile device.

[0011] In accordance with yet another aspect of the present invention, there are provided
25 computer-executable instructions Computer-executable instructions stored upon a non-transitory computer- readable medium for execution by a microprocessor, when executed the instructions cause a system to: receive geo-location coordinates of a location on a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map; selecting a radius surrounding the geo-location coordinates of the location; identify a geographic element
30 within the radius surrounding the geo-location coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo- location coordinates in

dependence upon information stored upon the server relating to a plurality of geographical elements, each geographical element being associated with a physical location defined by fixed geo-location coordinates; select an electronic file comprising information on the identified geographical element, the electronic file being one of a plurality of electronic files stored upon the server, each electronic file being associated
5 with a predetermined geographical element of the plurality of geographical elements; and transmit the selected electronic file to the mobile device.

[0012] In yet another aspect of the present invention, there is provided computer-executable instructions stored upon a non-transitory computer-readable medium for execution by a microprocessor, when executed the instructions cause a device to: transmit via a communications network geo-location
10 coordinates of a location on a selected map on a screen of a mobile device to a remote server upon generation of a stimulus associated with the map; receive from the remote server an electronic file associated with a geographic element, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates and identified within a selected radius surrounding the geo-
15 location coordinates in dependence upon information stored upon the server relating to a plurality of geographical elements, each geographical element being associated with a physical location defined by fixed geo-location coordinates and an electronic file of a plurality of electronic files stored upon the server; and at least one of: store the electronic file within a memory of the mobile device; and play the electronic file on the mobile device.

[0012.1] In yet another aspect of the present invention, there is provided a method comprising: receiving,
20 at a server, geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map; selecting a radius surrounding the geo-location coordinates of the location; identifying a geographic element within the radius surrounding the geo-
location coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates; selecting an electronic file comprising information on the
25 identified geographical element, transmitting the selected electronic file to the mobile device; wherein: the stimulus is provided for obtaining information on the location on the selected map and the geo-
location coordinates of the location on the map are independent of the geo-location coordinates of the mobile device.

[0012.2] In yet another aspect of the present invention, there is provided a method comprising:
30 transmitting via a communications network geo-location coordinates of a location on a selected map on a screen of a mobile device to a remote server upon generation of a stimulus associated with the map; receiving from the remote server an electronic file associated with a geographic element, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates of the location and

identified within a selected radius surrounding the geo-location coordinates of the location; and at least one of: storing the electronic file within a memory of the mobile device; and executing the electronic file on the mobile device; wherein: the stimulus is provided for obtaining information on the location on the selected map and the geo-location coordinates of the location on the map are independent of the geo-
5 location coordinates of the mobile device.

[0012.3] In yet another aspect of the present invention, there is provided a system comprising: a server coupled to a communications network and comprising at least a microprocessor and a non-transitory computer readable medium; wherein when the microprocessor executes computer-executable instructions stored upon the non-transitory computer-readable medium, said instructions cause the system to: receive
10 geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map; select a radius surrounding the geo-location coordinates of the location; identify a geographic element within the radius surrounding the geo-location coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates; select an electronic file comprising information on the geographical element; and transmit
15 the selected electronic file to the mobile device; wherein the stimulus is provided for obtaining information on the location on the selected map and the geo-location coordinates of the location on the map are independent of the geo-location coordinates of the mobile device.

[0013] Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in
20 conjunction with the accompanying figures.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] Embodiments of the present invention will now be described, by way of example only, with reference to the attached Figures, wherein:

25 **[0015]** Figure 1 depicts a network diagram of a location-based information service application according to an embodiment of the invention;

[0016] Figure 2 depicts an example architecture of a location-based information service application according to an embodiment of the invention;

30 **[0017]** Figure 3 depicts a flow chart of an example embodiment for the location based information service application that pushes geo-location to a server according to an embodiment of the invention;

[0018] Figure 4 depicts a flow chart of an example embodiment for the location based information service application that is polled by a server for its geo-location according to an embodiment of the invention; and

5 [0019] Figure 5 depicts a flow chart of an example embodiment for the location based information service application that sends its geo-location to a server based on a stimulus provided by the user according to an embodiment of the invention.

[0020] Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

10 **DETAILED DESCRIPTION**

[0021] The present invention is directed to information services applications and more particularly to location based information services applications.

15 [0022] The ensuing description provides representative embodiment(s) only, and is not intended to limit the scope, applicability or configuration of the disclosure. Rather, the ensuing description of the embodiment(s) will provide those skilled in the art with an enabling description for implementing an embodiment or embodiments of the invention. It being understood that various changes can be made in the function and arrangement of elements without departing from the scope as set forth in the appended claims. Accordingly, an embodiment is an example or implementation of the inventions and not the sole implementation. Various appearances of "one embodiment," "an embodiment" or "some embodiments"

20 do not necessarily all refer to the same embodiments. Although various features of the invention may be described in the context of a single embodiment, the features may also be provided separately or in any suitable combination. Conversely, although the invention may be described herein in the context of separate embodiments for clarity, the invention can also be implemented in a single embodiment or any combination of embodiments.

[0023] Reference in the specification to “an example”, “one example”, “examples”, “one embodiment”, “an embodiment”, “some embodiments” or “other embodiments” means that a particular feature, structure, or characteristic described in connection with the embodiments is included in at least one embodiment, but not necessarily all embodiments, of the inventions. The phraseology and terminology employed herein is not to be construed as limiting but is for descriptive purpose only. It is to be understood that where the claims or specification refer to “a” or “an” element, such reference is not to be construed as there being only one of that element. It is to be understood that where the specification states that a component feature, structure, or characteristic “may”, “might”, “can” or “could” be included, that particular component, feature, structure, or characteristic is not required to be included.

[0024] Reference to terms such as “left”, “right”, “top”, “bottom”, “front” and “back” are intended for use in respect to the orientation of the particular feature, structure, or element within the figures depicting embodiments of the invention. It would be evident that such directional terminology with respect to the actual use of a device has no specific meaning as the device can be employed in a multiplicity of orientations by the user or users. Reference to terms “including”, “comprising”, “consisting” and grammatical variants thereof do not preclude the addition of one or more components, features, steps, integers or groups thereof and that the terms are not to be construed as specifying components, features, steps or integers. Likewise the phrase “consisting essentially of”, and grammatical variants thereof, when used herein is not to be construed as excluding additional components, steps, features integers or groups thereof but rather that the additional features, integers, steps, components or groups thereof do not materially alter the basic and novel characteristics of the claimed composition, device or method. If the specification or claims refer to “an additional” element, that does not preclude there being more than one of the additional element.

[0025] A “mobile device” as used herein and throughout this disclosure, refers to a wireless device used for communications and other applications that requires a battery or other independent form of energy for power. This includes devices, but is not limited to, such as a cellular telephone, smartphone, personal digital assistant (PDA), portable computer, pager, portable multimedia player, portable gaming console, laptop computer, tablet computer, a wearable device and an electronic reader.

5 [0026] A “server” as used herein, and throughout this disclosure, refers to one or more physical computers co-located and / or geographically distributed running one or more services as a host to users of other computers, mobile devices, etc. to serve the client needs of these other users. This includes, but is not limited to, a database server, a file server, a mail server, a print server, a web server, a gaming server, a “cloud” server, or a virtual environment server. Such servers are accessed by mobile devices via one or more communications networks including, but not limited to, wireless networks, wired networks, optical networks, and a global communications networks such as the Internet.

10 [0027] An “application” (commonly referred to as an “app”) as used herein may refer to, but is not limited to, a “software application”, an element of a “software suite”, a computer program designed to allow an individual to perform an activity, a computer program designed to allow an electronic device to perform an activity, and a computer program designed to communicate with local and / or remote electronic devices. An application thus differs from an operating system (which runs a computer), a utility (which performs maintenance or general-purpose chores), and
15 a programming tools (with which computer programs are created). Generally, within the following description with respect to embodiments of the invention an application is generally presented in respect of software permanently and / or temporarily installed upon a mobile device.

[0028] A “user” as used herein may refer to, but is not limited to, an individual or group of individuals. This includes, but is not limited to, private individuals, employees of organizations
20 and / or enterprises, members of community organizations, members of charity organizations, men and women. In its broadest sense the user may further include, but not be limited to, software systems, mechanical systems, robotic systems, android systems, etc. that may be characterised by an ability to exploit one or more embodiments of the invention.

[0029] “Electronic content” (also referred to as “content” or “digital content”) as used herein
25 may refer to, but is not limited to, any type of content that exists in the form of digital data as stored, transmitted, received and / or converted wherein one or more of these steps may be analog although generally these steps will be digital. Forms of digital content include, but are not limited to, information that is digitally broadcast, streamed or contained in discrete files. Viewed
30 narrowly, types of digital content include popular media types such as MP3, JPG, AVI, TIFF, AAC, TXT, RTF, HTML, XHTML, PDF, XLS, SVG, WMA, MP4, FLV, and PPT, for example,

as well as others, see for example http://en.wikipedia.org/wiki/List_of_file_formats. Within a broader approach digital content may include any type of digital information, e.g. digitally updated weather forecast, a GPS map, an eBook, a photograph, a video, a Vine™, a blog posting, a Facebook™ posting, a Twitter™ tweet, online TV, etc. The digital content may be any digital data that is at least one of generated, selected, created, modified, and transmitted in response to a user request, said request may be a query, a search, a trigger, an alarm, and a message for example.

[0030] Within the following descriptions in respect of Figures 1 to 5 the embodiments of the invention are described and depicted with respect to providing audio files to the user based upon their location. However, it would be evident to one of skill in the art that any item of electronic content may be provided to the user via the systems and methods described with respect to embodiments of the invention.

[0031] Within the following descriptions in respect of Figures 1 to 5 the embodiments of the invention are described and depicted with respect to determining the user's location using a Global Position System (GPS) feature implemented within the hardware, firmware and software of the mobile device associated with the user. Reference to GPS generally refers to the Global Positioning Systems as operated by the U.S. Department of Defense. However, it would be evident that other location based systems employing satellite based navigation systems may be employed including, for example, the Russian Global Navigation Satellite System (GLONASS), European Union Galileo, Chinese Compass, and the Indian Regional Navigational Satellite System. However, it would be evident to one of skill in the art that in addition to GPS for location determination that a mobile device may also support within its hardware, firmware and software other location determination methods including, but not limited to, triangulation, base station association, beacon identification, etc. which may be employed without departing from the scope of the invention. Further, a mobile device may itself not explicitly be able to establish location but it may communicate with another fixed and / or mobile devices in order to establish its location.

[0032] Referring to Figure 1, one or more users 100 uses a mobile device 102 to communicate with one or more servers 104 over a network 106 (e.g., the Internet). A satellite 110 signal 112 provides geo-location coordinates to the mobile device. The user may be moving at various speeds depending if the user is walking, driving, riding a bus etc.

5 [0033] The server(s) maintain information pertaining to geographical elements with fixed GPS coordinates. The information can include explanations for the origin of the geographical elements such as, for example, street names, park names, historical building, surrounding communities and related cultural information. The information can be designed for educational, informational, touristic or advertising purpose.

10 [0034] The information is grouped into categories. The grouping can be hierarchical. Generically, any geographical element with fixed GPS coordinate can be categories and an explanation can be coupled with it. The information related to a geographical element is typically stored in one or more audio file, recorded in one or more language. For one geographical element, the system may store audio file of different size (e.g. comprising more or less details). The user can change the settings of the application to select the categories of interest, the language, the size of the audio information to play.

15 [0035] The user can also select the dimension of the radius within which it would like to receive information. For example, the user can set to receive audio information for all geographical elements within 100 meters of the user location.

[0036] The radius can optionally be set based on the speed of motion, such that if the user is moving in a car, the radius is larger than if the user is walking.

20 [0037] The application on the device may optionally display a map of the surroundings as well known in the art. The map may identify (using for example a red dot icon), geographical elements for which the system can provide information. Optionally, the icon displayed on the map may be modified with the information is played on the device (e.g., the red dot turns into a green dot).

25 [0038] For example, a user may select to hear “short” explanations about “street names” within 200 meters radius, in French. As the user changes location the application plays back information on the surrounding street names that are programmed in the server.

30 [0039] with reference to Figure 2, the mobile device 100 generally comprises one or more processor 202 that executes software such as a location-based information application. The processor is coupled with a GPS module 206 to receive the satellite 110 signal 112, a stimulus module 208 to detect a stimulus provided by the user (e.g., click, touch, shake, sound), a speaker 212 to output audio, a memory 204 to store data and temporarily store audio files and a

communication module 214 used to interface with a network 106 such as the Internet. The communication module may use WIFI or any known wireless communication technologies.

5 [0040] The application server 104 comprises one or more processors 250 coupled with one or more memories to store the user settings 252 for the application (e.g., radius, language etc.) and a database 254 maintaining one or more audio files for geographical elements along with their geo-location. An Application Programming Interface (API) and/or a management module 256 can be used to configure the database 254.

[0041] Referring to Figure 3, in one embodiment, the mobile device executes an application, which periodically sends its geo-location coordinates 302 to a server 104.

10 [0042] The server receives the geo-location coordinates 352 and searches the database for geographical elements in the set categories that are within the set radius 354. If nothing is found, the server notifies the application 354. The application sets a timer 304 and saves the location into a previous location variable. When the timer expires 306, the current geographical location is compared with the previous location. If the difference is greater than a pre-determined
15 threshold (e.g., the user location is substantially different than the previous location), the application sends the coordinates to the server 302. Otherwise the timer is set again 304 and the current location is set to previous location.

[0043] If there are geographical elements in the set categories that are within the set radius, one or more audio files corresponding to the elements are downloaded to the mobile device 358.

20 [0044] The audio files are of the size set by the user. When the audio files are received by the application 322, they are saved on the device and played back to the user via the mobile device speaker 324. After a predetermined time, the audio files are removed from the mobile device 326.

25 [0045] The timer may be set by the user in the user settings and may optionally vary based on the speed of motion, such that if the user is moving in a car, the radius is larger than if the user is walking. The predetermined time until which the audio files are removed from the mobile device may also be a user setting.

[0046] Referring to Figure 4, in another embodiment, the mobile device executes an application 100, which is enabled to receive requests 412 by a server 104 to send its geo-location coordinates 404.

5 [0047] The server 104 periodically polls each mobile device running the application for the geo-location coordinates 412. Upon receiving the current location for one user 452, the server compares the current location of the user with the previous location received for that user 454. If the difference is lower than a pre-determined threshold (e. g., the user location is not substantially different than the previous location), then the application is notified that nothing needs to be played 456 and a timer is set 414. If the location has changed substantially 454, the server searches the database for geographical elements in the set categories that are within the set
10 radius 354. If nothing is found, the server notifies the application 354 and a timer is set 414.

[0048] If there are geographical elements in the set categories that are within the set radius, one or more audio files corresponding to the elements are downloaded to the mobile device 358. The audio files are of the size set by the user. When the audio files are received by the application
15 322, they are saved on the device and played back to the user via the mobile device speaker 324. After a predetermined time, the audio files are removed from the mobile device 326. The poll timer is set at the server 414 before polling the device again for the current geo-location.

[0049] When the poll timer expires 416, the server polls for the current geo-location of the mobile device 412.

20 [0050] In this embodiment, the poll timer may be set by the user in the user settings and may optionally vary based on the speed of motion, such that if the user is moving in a car, the radius is larger than if the user is walking. The predetermined time until which the audio files are removed from the mobile device may also be a user setting.

[0051] Referring to Figure 5, in another embodiment, the mobile device executes an application
25 100, which send its geo-location coordinates 504 to the application server 104 upon a stimulus 502 generated by the user on the device. The stimulus can be, for example, a click of a button, a touch on the screen, a gesture with the device, a voice command.

[0052] The server 104 receives the geo-location coordinates 352 and searches the database for geographical elements in the set categories that are within the set radius 354. If nothing is found, the server notifies the application 354.

5 [0053] If there are geographical elements in the set categories that are within the set radius, one or more audio files corresponding to the elements are downloaded to the mobile device 358. The audio files are of the size set by the user. When the audio files are received by the application 322, they are saved on the device and played back to the user via the mobile device microphone 324. After a predetermined time, the audio files are removed from the mobile device 326.

10 [0054] As another embodiment, the server can correlate the sequence of GPS-locations sent by one application to determine in which direction the user is moving. In this case, the audio can be augmented by adding information that the geographical element being explained is located to the right or left of the user.

15 [0055] In another embodiment, the poll timer may be replaced or combined with a measure of change in geo-location. For example, in the embodiment shown in Figure 4, the application monitors its change in geo-location and sends new geo-location data to the server only when the change is greater than a pre-determined threshold. As another embodiment, the pre-determined threshold may vary depending on the speed of change in the geo-location.

20 [0056] In another embodiment, the geographical elements maintained by the server may not have fixed GPS coordinates. The coordinates of the geographical elements may be updated periodically.

[0057] The database of the geographical elements can be maintained via an application programming interface or programmed directly via a management interface. For example the cultural department of a city may maintain a server with explanations of different geographical elements. Alternatively, the city may subscribe to a service and provide update information which is then input by the service into the server.

[0058] In another embodiment, the explanations of the geographical elements are crowd-sourced (e.g., filled by the users - like Wikipedia). The crowd-sourced information is approved by a server manager.

[0059] Optionally, the geographical elements are prioritized such that if there is too much audio information to play at one location or the user is moving too fast, only the high priority geographical elements are played back. As another embodiment, the explanations are played randomly. As another embodiment, the application maintains a circular list of which graphical elements have been played back previously in that location and plays back the oldest explanation next.

[0060] As another embodiment, the application may be executed in an offline mode, wherein the user is looking at a selected map on the screen and providing stimulus to get information on a location that is not the geo-location or near the geo-location of the device. In this case, the GPS coordinate corresponding to the stimulus provided on the selected map are sent to the server 104. If there are geographical elements with information in the selected category, then the audio file(s) are sent to the device.

[0061] Optionally, a user can play back at a later time the information that was previously played, because it was missed or forgotten. A list of previously played locations is provided to the user to select the information that the user wants to play back.

[0062] Specific details are given in the above description to provide a thorough understanding of the embodiments. However, it is understood that the embodiments may be practiced without these specific details. For example, circuits may be shown in block diagrams in order not to obscure the embodiments in unnecessary detail. In other instances, well-known circuits, processes, algorithms, structures, and techniques may be shown without unnecessary detail in order to avoid obscuring the embodiments.

[0063] Implementation of the techniques, blocks, steps and means described above may be done in various ways. For example, these techniques, blocks, steps and means may be implemented in hardware, software, or a combination thereof. For a hardware implementation, the processing units may be implemented within one or more application specific integrated circuits (ASICs), digital signal processors (DSPs), digital signal processing devices (DSPDs), programmable logic devices (PLDs), field programmable gate arrays (FPGAs), processors, controllers, micro-controllers, microprocessors, other electronic units designed to perform the functions described above and/or a combination thereof.

[0064] Also, it is noted that the embodiments may be described as a process which is depicted as a flowchart, a flow diagram, a data flow diagram, a structure diagram, or a block diagram. Although a flowchart may describe the operations as a sequential process, many of the operations can be performed in parallel or concurrently. In addition, the order of the operations may be rearranged. A process is terminated when its operations are completed, but could have additional steps not included in the figure. A process may correspond to a method, a function, a procedure, a subroutine, a subprogram, etc. When a process corresponds to a function, its termination corresponds to a return of the function to the calling function or the main function.

[0065] Furthermore, embodiments may be implemented by hardware, software, scripting languages, firmware, middleware, microcode, hardware description languages and/or any combination thereof. When implemented in software, firmware, middleware, scripting language and/or microcode, the program code or code segments to perform the necessary tasks may be stored in a machine readable medium, such as a storage medium. A code segment or machine-executable instruction may represent a procedure, a function, a subprogram, a program, a routine, a subroutine, a module, a software package, a script, a class, or any combination of instructions, data structures and/or program statements. A code segment may be coupled to another code segment or a hardware circuit by passing and/or receiving information, data, arguments, parameters and/or memory content. Information, arguments, parameters, data, etc. may be passed, forwarded, or transmitted via any suitable means including memory sharing, message passing, token passing, network transmission, etc.

[0066] For a firmware and/or software implementation, the methodologies may be implemented with modules (e.g., procedures, functions, and so on) that perform the functions described herein. Any machine-readable medium tangibly embodying instructions may be used in implementing the methodologies described herein. For example, software codes may be stored in a memory. Memory may be implemented within the processor or external to the processor and may vary in implementation where the memory is employed in storing software codes for subsequent execution to that when the memory is employed in executing the software codes. As used herein the term “memory” refers to any type of long term, short term, volatile, nonvolatile, or other storage medium and is not to be limited to any particular type of memory or number of memories, or type of media upon which memory is stored.

[0067] Moreover, as disclosed herein, the term “storage medium” may represent one or more devices for storing data, including read only memory (ROM), random access memory (RAM), magnetic RAM, core memory, magnetic disk storage mediums, optical storage mediums, flash memory devices and/or other machine readable mediums for storing information. The term
5 “machine-readable medium” includes, but is not limited to portable or fixed storage devices, optical storage devices, wireless channels and/or various other mediums capable of storing, containing or carrying instruction(s) and/or data.

[0068] The methodologies described herein are, in one or more embodiments, performable by a machine which includes one or more processors that accept code segments containing
10 instructions. For any of the methods described herein, when the instructions are executed by the machine, the machine performs the method. Any machine capable of executing a set of instructions (sequential or otherwise) that specify actions to be taken by that machine are included. Thus, a typical machine may be exemplified by a typical processing system that includes one or more processors. Each processor may include one or more of a CPU, a graphics-
15 processing unit, and a programmable DSP unit. The processing system further may include a memory subsystem including main RAM and/or a static RAM, and/or ROM. A bus subsystem may be included for communicating between the components. If the processing system requires a display, such a display may be included, e.g., a liquid crystal display (LCD). If manual data entry is required, the processing system also includes an input device such as one or more of an
20 alphanumeric input unit such as a keyboard, a pointing control device such as a mouse, and so forth.

[0069] The memory includes machine-readable code segments (e.g. software or software code) including instructions for performing, when executed by the processing system, one of more of the methods described herein. The software may reside entirely in the memory, or may also
25 reside, completely or at least partially, within the RAM and/or within the processor during execution thereof by the computer system. Thus, the memory and the processor also constitute a system comprising machine-readable code.

[0070] In alternative embodiments, the machine operates as a standalone device or may be connected, e.g., networked to other machines, in a networked deployment, the machine may
30 operate in the capacity of a server or a client machine in server-client network environment, or as a peer machine in a peer-to-peer or distributed network environment. The machine may be, for

example, a computer, a server, a cluster of servers, a cluster of computers, a web appliance, a distributed computing environment, a cloud computing environment, or any machine capable of executing a set of instructions (sequential or otherwise) that specify actions to be taken by that machine. The term machine" may also be taken to include any collection of machines that individually or jointly execute a set (or
5 multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

[0071] The foregoing disclosure of the exemplary embodiments of the present invention has been presented for purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many variations and modifications of the embodiments described herein will be apparent to one of ordinary skill in the art in light of the above disclosure. The
10 scope of the invention is to be defined only by the claims appended hereto, and by their equivalents.

[0072] Further, in describing representative embodiments of the present invention, the specification may have presented the method and/or process of the present invention as a particular sequence of steps. However, to the extent that the method or process does not rely on the particular order of steps set forth herein, the method or process should not be limited to the particular sequence of steps described. As one
15 of ordinary skill in the art would appreciate, other sequences of steps may be possible. Therefore, the particular order of the steps set forth in the specification should not be construed as limitations on the claims. In addition, the claims directed to the method and/or process of the present invention should not be limited to the performance of their steps in the order written, and one skilled in the art can readily appreciate that the sequences may be varied and still remain within the scope of the present
20 invention.

CLAIMS

What is claimed is:

1. A method comprising:

receiving, at a server, geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map;

selecting a radius surrounding the geo-location coordinates of the location;

identifying a geographic element within the radius surrounding the geo-location coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates;

selecting an electronic file comprising information on the identified geographical element, transmitting the selected electronic file to the mobile device;

wherein:

the stimulus is provided for obtaining information on the location on the selected map and the geo-location coordinates of the location on the map are independent of the geo-location coordinates of the mobile device.

2. The method according to claim 1, further comprising receiving the predetermined criterion from the mobile device, the predetermined criterion established by a user of the mobile device.

3. The method according to claim 1 or 2, further comprising receiving from the mobile device, data relating to the selection of the electronic files, wherein the data relates to at least one of a size, content, and language of the electronic files.

4. The method according to any one of claims 1 to 3, wherein the electronic files are provided by at least one of a city council, a tourism department, an educational department, an advertising group, a retailer, and crowd sourcing.
5. The method according to any one of claims 1 to 4, wherein the electronic file is one of an audio file, an image file, a video file and any combination thereof.
6. The method according to any one of claims 1 to 5, wherein the stimulus comprises a click of a button on a keypad of the mobile device, a touch on a touchscreen of the mobile device, a gesture on the touchscreen of the mobile device, a gesture captured with a camera forming part of the mobile device, or a vocal input provided to the mobile device by a user of the mobile device.
7. A method comprising:
 - transmitting via a communications network geo-location coordinates of a location on a selected map on a screen of a mobile device to a remote server upon generation of a stimulus associated with the map;
 - receiving from the remote server an electronic file associated with a geographic element, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates of the location and identified within a selected radius surrounding the geo-location coordinates of the location; and
 - at least one of: storing the electronic file within a memory of the mobile device; and executing the electronic file on the mobile device;

wherein:

the stimulus is provided for obtaining information on the location on the selected map and the geo-location coordinates of the location on the map are independent of the geo-location coordinates of the mobile device.

8. The method according to claim 7, further comprising removing the electronic files from the memory of the mobile device.
9. The method according to claim 8, wherein the removal is determined by a timer.
10. The method according to claim 7 or 8, further comprising establishing the predetermined criterion on the mobile device; and transmitting the predetermined criterion from the mobile device to the remote server.
11. The method according to any one of claims 7 to 10, wherein the electronic file is one of an audio file, an image file, a video file and any combination thereof.
12. The method according to any one of claims 7 to 11, wherein the stimulus comprises a click of a button on a keypad of the mobile device, a touch on a touchscreen of the mobile device, a gesture on the touchscreen of the mobile device, a gesture captured with a camera forming part of the mobile device, or a vocal input provided to the mobile device by a user of the mobile device.
13. A system comprising:

a server coupled to a communications network and comprising at least a microprocessor and a non-transitory computer readable medium;

wherein when the microprocessor executes computer-executable instructions stored upon the non-transitory computer-readable medium, said instructions cause the system to:

receive geo-location coordinates of a location on a selected map on a screen of a mobile device upon generation of a stimulus associated with the map;

select a radius surrounding the geo-location coordinates of the location;

identify a geographic element within the radius surrounding the geo-location coordinates of the location, the geographic element meeting a predetermined criterion with respect to the geo-location coordinates;

select an electronic file comprising information on the geographical element; and

transmit the selected electronic file to the mobile device;

wherein the stimulus is provided for obtaining information on the location on the selected map and the geo-location coordinates of the location on the map are independent of the geo-location coordinates of the mobile device.

14. The system according to claim 13, further comprising additional computer-executable instructions which when executed cause the system to: receive the predetermined criterion from the mobile device, the predetermined criterion established by a user of the mobile device, or receive from the mobile device data relating to the selection of the electronic files, wherein the data relates to at least one of a size, content, and language of the electronic files.

15. The system according to claim 13 or 14, wherein the geo-location coordinates identify the geographic element as being oriented to the left or right with respect to the location on the map.

16. The system according to claim 13, wherein the electronic files are provided by at least one of a city council, a tourism department, an educational department, an advertising group, a retailer, and crowd-sourcing.

17. The system according to any one of claims 13 to 15, wherein the electronic file is one of an audio file, an image file, a video file and any combination thereof.

18. The system according to any one of claims 13 to 15, wherein the stimulus comprises a click of a button on a keypad of the mobile device, a touch on a touchscreen of the mobile device, a gesture on the touchscreen of the mobile device, a gesture captured with a camera forming part of the mobile device, or a vocal input provided to the mobile device by a user of the mobile device.

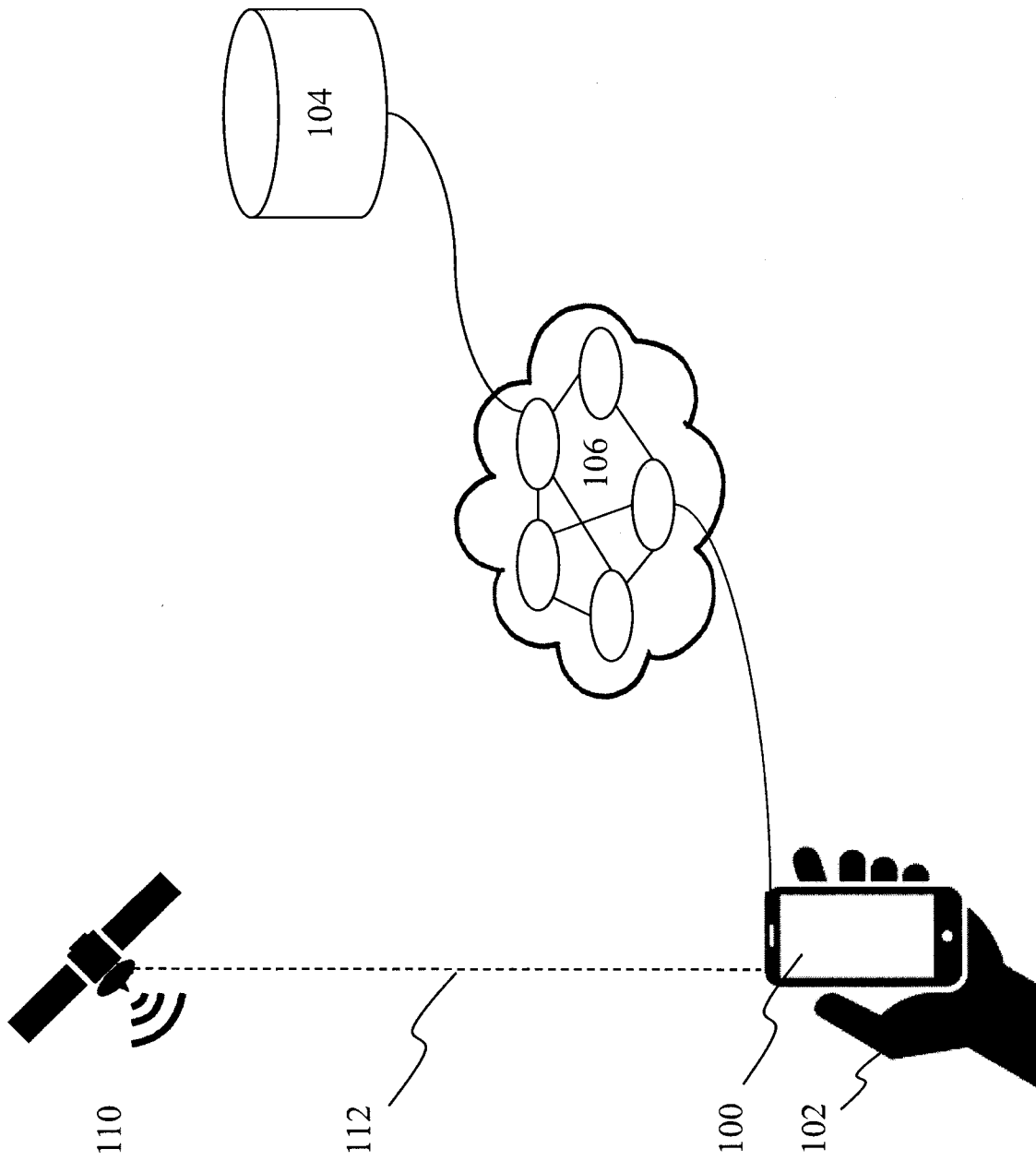


Figure 1

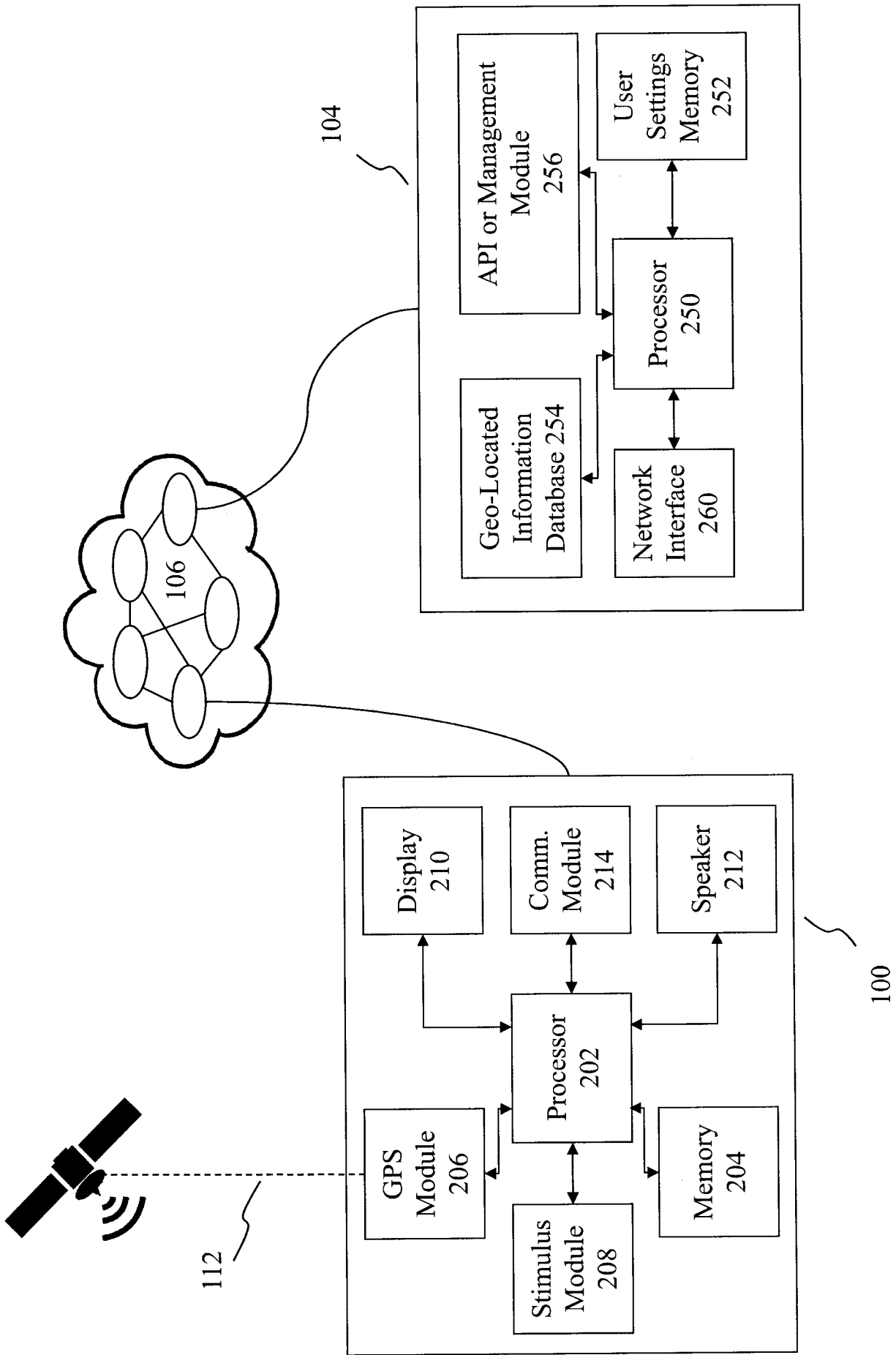
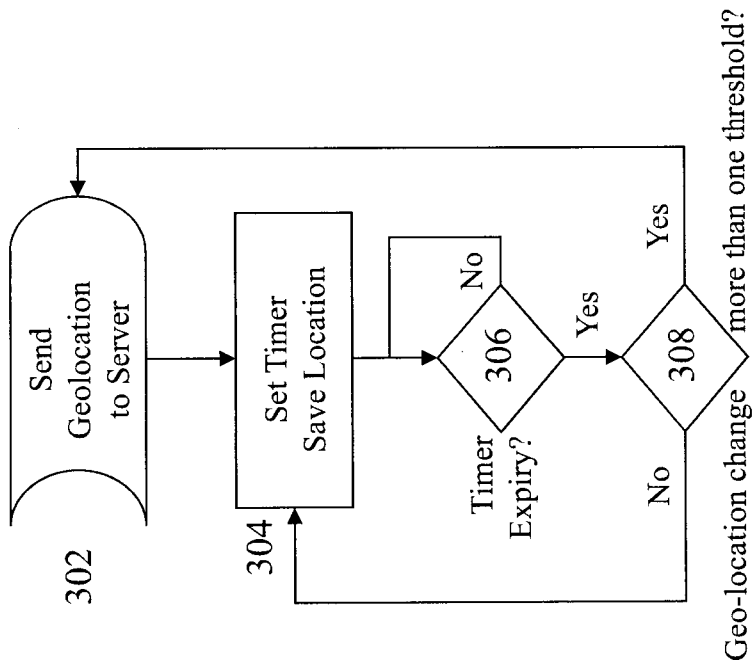


Figure 2

APPLICATION IN EXECUTION UPON PORTABLE DEVICE 100



APPLICATION IN EXECUTION UPON SERVER 104

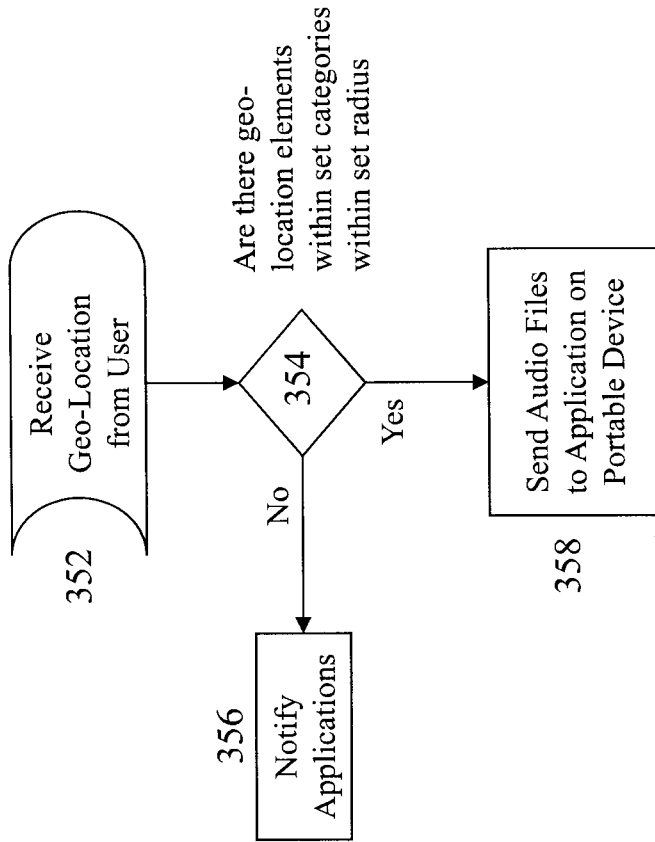


Figure 3

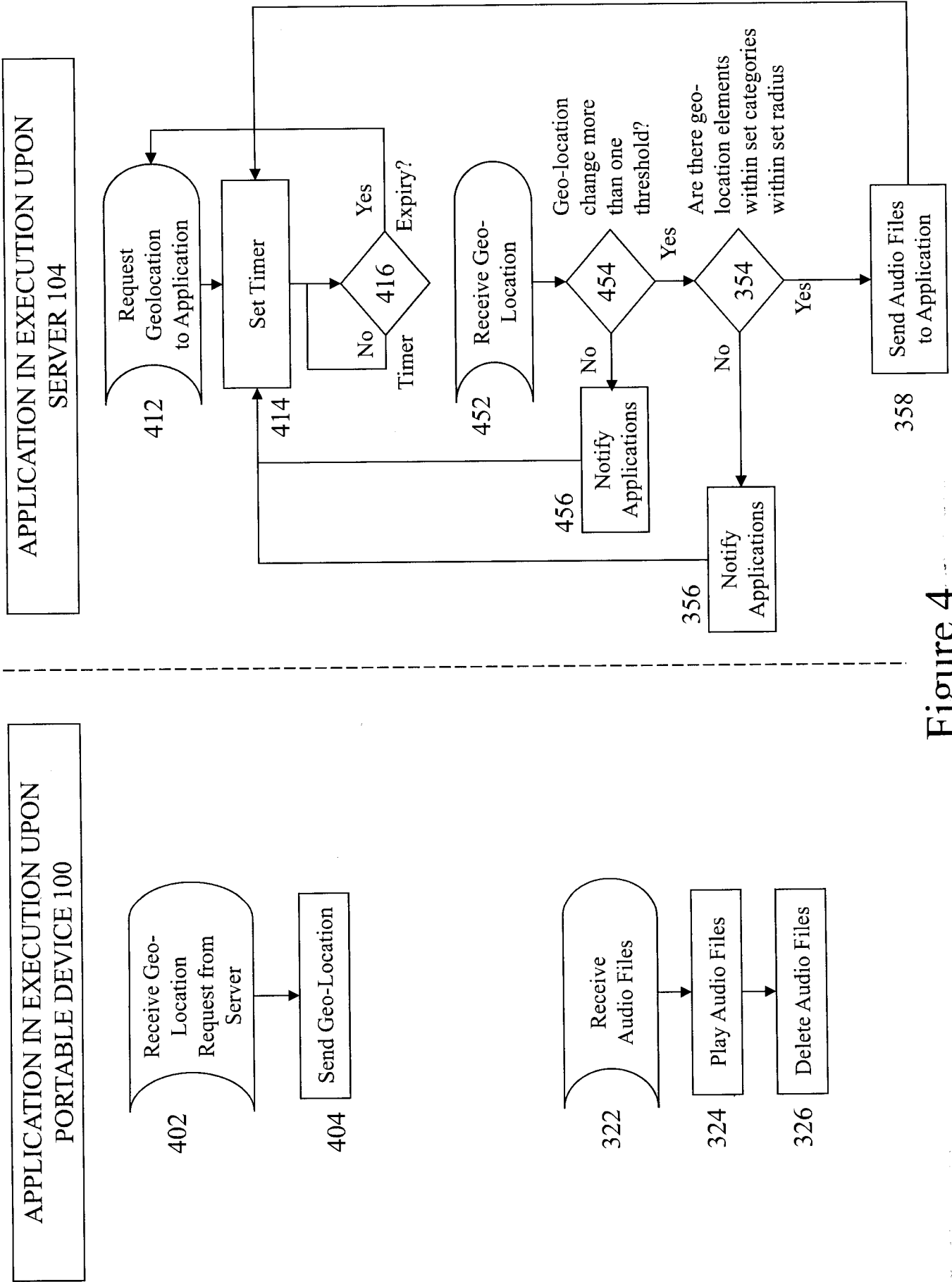


Figure 4

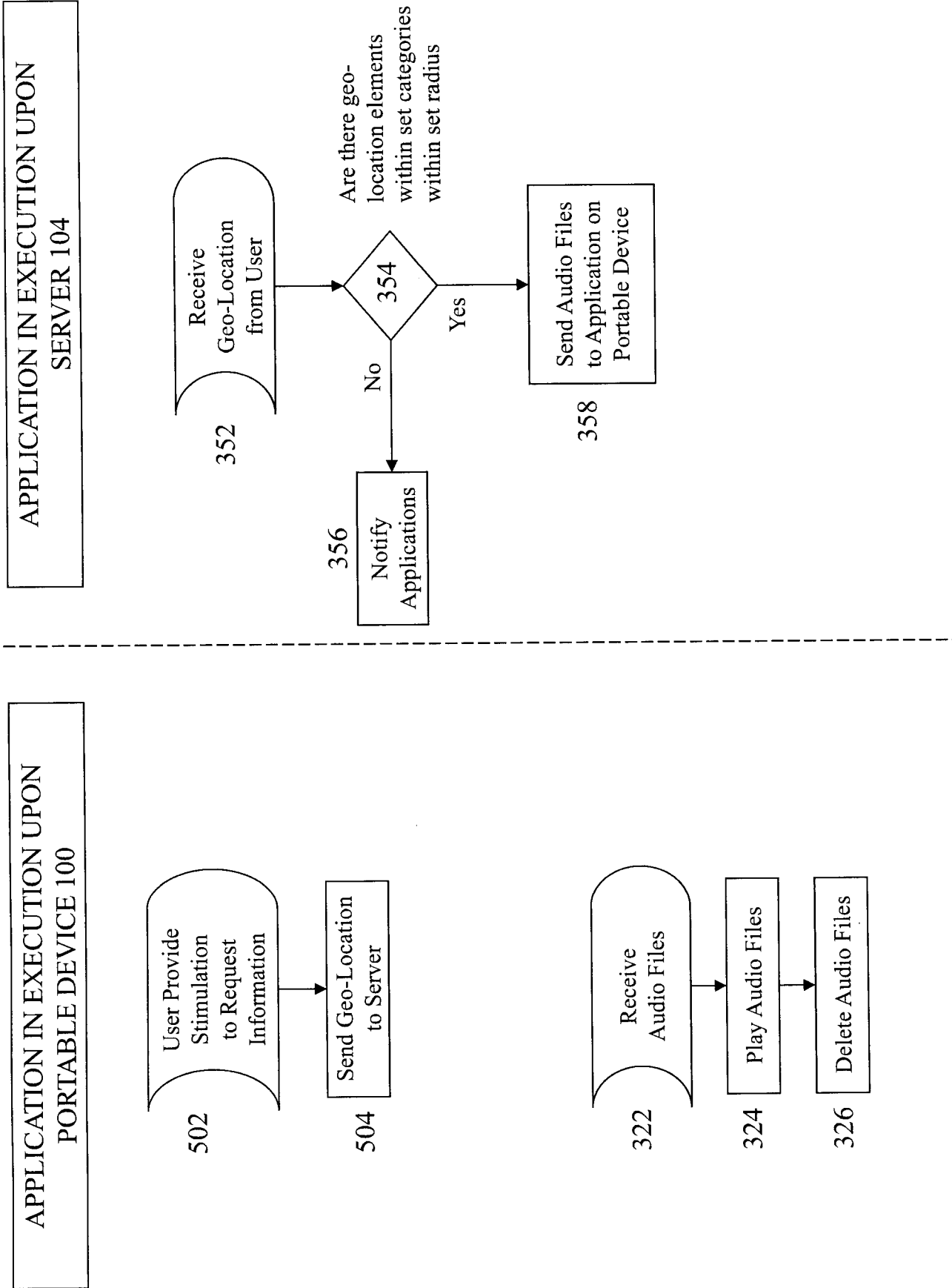
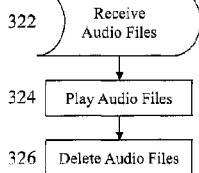
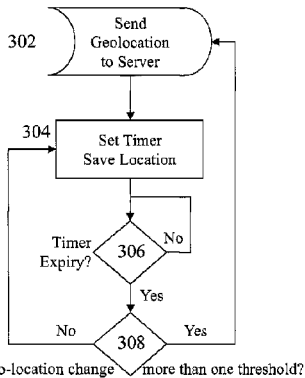


Figure 5

APPLICATION IN EXECUTION UPON
PORTABLE DEVICE 100



APPLICATION IN EXECUTION UPON
SERVER 104

