



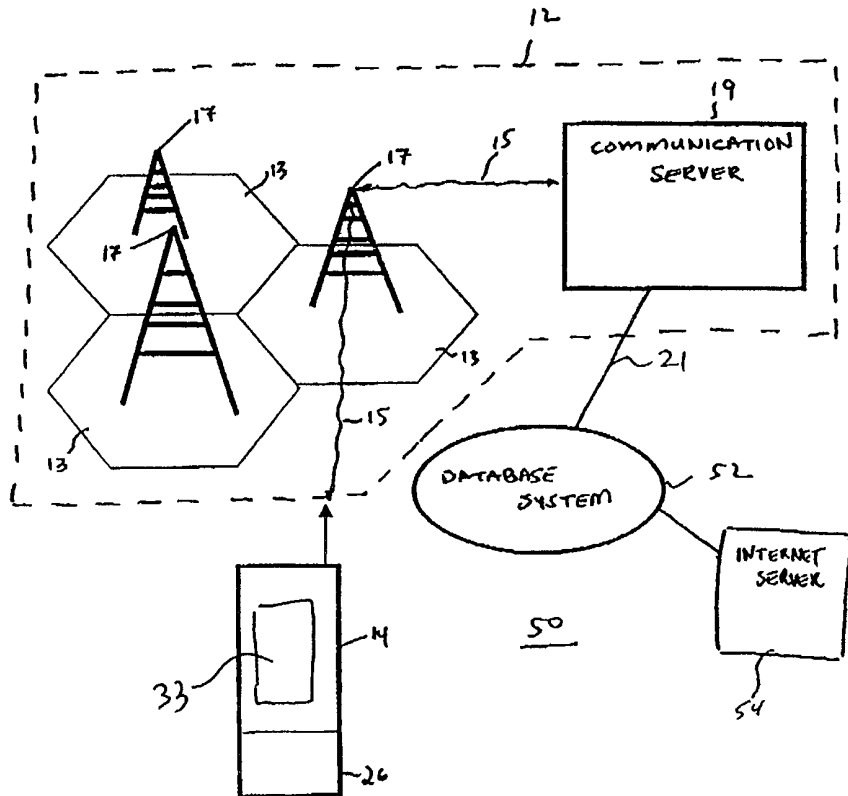
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁷ : H04M 3/42, H04B 7/00</p>	<p>A1</p>	<p>(11) International Publication Number: WO 00/59192 (43) International Publication Date: 5 October 2000 (05.10.00)</p>
<p>(21) International Application Number: PCT/US00/08173 (22) International Filing Date: 28 March 2000 (28.03.00) (30) Priority Data: 60/127,088 30 March 1999 (30.03.99) US 09/328,405 9 June 1999 (09.06.99) US 60/148,687 16 August 1999 (16.08.99) US 60/158,309 8 October 1999 (08.10.99) US 60/180,214 4 February 2000 (04.02.00) US (71) Applicant (for all designated States except US): A.R. WEINER CORPORATE LTD. [CH/CH]; 78, rue du Rhône, CH-1204 Geneva (CH). (71) Applicant (for TJ only): FRIEDMAN, Mark, M. [US/IL]; 1 Alharizi Street, 43406 Raanana (IL). (72) Inventors; and (75) Inventors/Applicants (for US only): WEINER, Avish, Jacob [IL/IL]; 12 Boyer Street, 69127 Tel Aviv (IL). SHPIRO, Zeev [IL/IL]; 8 Beit Zuri Street, 69122 Tel-Aviv (IL). (74) Common Representative: FRIEDMAN, Mark, M.; c/o Castorina, Anthony, 2001 Jefferson Davis Highway, Suite 207, Arlington, VA 22202 (US).</p>	<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.</p>	

(54) Title: SYSTEM AND METHOD FOR PROVIDING REGIOSPECIFIC INFORMATION

(57) Abstract

A system and method for providing regiospecific information to a user. The system includes a cellular communication network (12) having a plurality of regiospecific cells (13), a plurality of mobile cellular communication devices (14) communicating with the cellular communication network, each of the cellular communication devices being operable by a user, and a database system (52) communicating with each of the plurality of mobile cellular communication devices through the cellular communication network, the database system storing regiospecific information which is providable through the cellular communication network to a user using a mobile cellular communication device of the plurality of mobile cellular communication devices.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

SYSTEM AND METHOD FOR PROVIDING REGIOSPECIFIC INFORMATION

FIELD AND BACKGROUND OF THE INVENTION

5 The present invention relates to a system and method for providing a user of a cellular communication device with regiospecific information, which can include, for example, information pertaining to a geographical location and objects located therein and information pertaining to the geographical location of other users of the system. The system further enables a user to establish communication with at least one other user with shared or common interest and/or which is present at the same geographic location.

 Cellular telephones have become a mainstay of modern society. In early years, the services provided by cellular telephone networks were expensive and of limited quality and coverage. As such these systems were typically used to a limited extent by a small sector of society. As more sophisticated cellular networks evolved, covering larger areas, the use of cellular communication has gradually increased. Competition and technical advances have helped to dramatically lower the cost of cellular services, while, at the same time, increase the quality and range of services provided. In addition, the cellular telephone itself has evolved from a bulky device to a user friendly, compact device.

 At present, in some portions of the world, cellular telephony is rapidly becoming a major method of communication; this is especially true especially in countries with poor line-based telephony infrastructure.

 Despite the widespread use of cellular telephones and despite the fact that these devices are carried by a user and therefore provide a direct link thereto, information providing services are practiced to a limited extent by cellular service providers.

30 Currently, such services are used to provide information such as news headlines, financial information, either global or user specific, and the like.

 Although this information is valuable to some users, it can easily be retrieved using conventional line based telephony.

35 Unlike conventional telephony, cellular telephony is not confined to a geographical location but rather to a user. Thus, one type of information which can be of great value to cellular telephone users is regiospecific information. This is especially true for travelers which are

oftentimes in great need of lodging or restaurant information. Although this type of information can theoretically be accessed using conventional telephony, oftentimes this is a time consuming and difficult task.

5 In addition since a cellular telephone network provides service to a plurality of users, it is possible to utilize a cellular network to establish communication between at least two users sharing a common interest or location.

10 There is thus a widely recognized need for, and it would be highly advantageous to have, a system which utilizes a cellular telephone network to provide a cellular telephone user with both regiospecific data and with information regarding other users sharing a common interest

SUMMARY OF THE INVENTION

15 According to one aspect of the present invention there is provided a system for providing regiospecific information to a user, the system comprising (a) a cellular communication network having a plurality of regiospecific communication cells; (b) a plurality of mobile cellular communication devices communicating with the cellular communication network, each of the mobile cellular communication devices being
20 operable by a user; and (c) a database system communicating with each of the plurality of mobile cellular communication devices through the cellular communication network, the database system storing regiospecific information which is providable through the cellular communication network to a user using a mobile cellular communication
25 device of the plurality of mobile cellular communication devices.

According to another aspect of the present invention there is provided a method for providing regiospecific information to a user, the method comprising the steps of (a) providing a plurality of users with a plurality of mobile cellular communication devices, the plurality of
30 mobile cellular communication devices communicating with a cellular communication network having a plurality of regiospecific communication cells; and (b) constructing a database system communicating with each of the plurality of mobile cellular communication devices through the cellular communication network, the database system storing regiospecific information which is providable
35 through the cellular communication network to a user using a mobile cellular communication device of the plurality of mobile cellular communication devices.

According to further features in preferred embodiments of the invention described below, the cellular communication network is selected from the group consisting of an analog cellular communication network and a digital cellular communication network.

5 According to still further features in the described preferred embodiments the mobile cellular communication device is a cellular telephone.

10 According to still further features in the described preferred embodiments the mobile cellular communication device includes a global positioning system (GPS) terminal.

According to still further features in the described preferred embodiments the database system is also in communication with an Internet server and further wherein the regiospecific information includes data from at least one web page accessible by the Internet server.

15 According to still further features in the described preferred embodiments when an updating user updates a personal profile thereof via facsimile, telephony or Internet, the database issues a code communicable to the updating user via the mobile communication device, which code serves for assisted identification of the updating user
20 via the facsimile, telephony or Internet.

According to still further features in the described preferred embodiments the regiospecific information includes information selected from the group consisting of service providers information, geographical information, weather information, traffic information geographical
25 information and historical information.

According to still further features in the described preferred embodiments the regiospecific information is periodically updated.

According to still further features in the described preferred embodiments the service providers information enables the user to
30 establish contact with a specific service provider.

According to still further features in the described preferred embodiments the information is a telephone number of the service provider.

35 According to still further features in the described preferred embodiments the contact between the user and the service provider is established by the database system upon a command from the user.

According to still further features in the described preferred embodiments the cellular communication network maintains the contact following establishment of the contact by the database system.

5 According to still further features in the described preferred embodiments the database system maintains the contact following establishment thereof thereby.

10 According to still further features in the described preferred embodiments the regiospecific information providable to the user includes information on at least one additional user of the system being at a specific geographic location.

According to still further features in the described preferred embodiments the at least one additional user is selected among a list of users stored in a memory of the mobile cellular communication device of the user.

15 According to still further features in the described preferred embodiments the regiospecific information is provided to the user upon a user command communicated from the mobile cellular communication device through the cellular communication network to the database system.

20 According to still further features in the described preferred embodiments the user command defines a specific geographical location.

According to still further features in the described preferred embodiments the regiospecific information is provided to the user according to the geographical location of the user.

25 According to still further features in the described preferred embodiments the geographical location of the user is determined relative to a regiospecific communication cell of the plurality of regiospecific cells of the cellular communication network through which communication between the mobile cellular communication device and the cellular communication network is maintained.

30 According to still further features in the described preferred embodiments the geographical location of the user is determined relative to at least two of the regiospecific communication cells.

35 According to still further features in the described preferred embodiments a geographic location of the user is relayed from the GPS terminal to the database system by the mobile cellular communication device through the cellular communication network such that the user is

provided with regiospecific information according to the geographic location.

According to still further features in the described preferred embodiments the regiospecific information is provided to the user
5 through the voice channel of the mobile cellular communication device.

According to still further features in the described preferred embodiments the regiospecific information is provided to the user through the control channel of the mobile cellular communication device.

According to still further features in the described preferred
10 embodiments the regiospecific information is provided to the user in a format selected from the group consisting of audio format, alphanumeric format and graphical format.

According to still further features in the described preferred
15 embodiments the user command is communicated to the database system through a control channel of the mobile cellular communication device.

According to still further features in the described preferred
embodiments the user command is communicated to the database system through a voice channel of the mobile cellular communication device.

According to still further features in the described preferred
20 embodiments the database system and a user thereof communicate through a control or a voice channel with one another, wherein the communication alternately pertains to menu communication and data transfer communication.

According to still further features in the described preferred
25 embodiments the regiospecific information includes advertising information.

According to still further features in the described preferred
30 embodiments the database system further stores personal preferences of its users, such that at least a portion of the regiospecific information providable to a specific user is provided according to that user's personal preferences.

According to still further features in the described preferred
35 embodiments the database system further stores personal profiles of its users, such that at least a portion of the regiospecific information providable to the user and which pertains to a geographical location of additional users of the system at a given time is providable according to the personal profiles.

According to still further features in the described preferred embodiments the personal profiles are submitted to the database system by a method selected from the group consisting of facsimile, telephony and Internet.

5 According to still further features in the described preferred embodiments a personal profile of a specific user is updated by the database system according to regiospecific information provided to that specific user.

10 According to still further features in the described preferred embodiments each of the plurality of mobile cellular communication devices includes an internal memory, the internal memory serves for storing and later retrieval, on command, at least a portion of the regiospecific information.

15 According to still further features in the described preferred embodiments the database system stores personal profiles of its users and enables communication between users which share a common interest.

20 According to still further features in the described preferred embodiments the database system is further in communication with a communication server so as to allow access to the regiospecific information via a communication device selected from the group consisting of a telephone and a computer.

25 According to still another aspect of the present invention there is provided a method of providing regiospecific information to a user, the method comprising the steps of: (a) associating a plurality of encoded regiospecific objects with a plurality of codes; (b) providing a database system having a memory device, the memory device storing in a retrievable format information pertaining to each of the plurality of encoded regiospecific objects; and (c) using a cellular communication device for communicating one of the plurality of codes to the database system via a compatible cellular communication network having a plurality of regiospecific communication cells, so as to activate the database system to respond to that code, so as to transmit via the compatible cellular communication network information relating to a regiospecific objects associated with that code to the cellular communication device.

35

According to still further features in the described preferred embodiments each of the plurality of codes includes a sequence of alphanumeric characters, such that communicating one of the plurality of

codes to the database system is effected by inputting the sequence of alphanumeric characters via a keyboard of the cellular communication device.

According to still further features in the described preferred
5 embodiments the mobile cellular communication device includes a global positioning system (GPS) terminal, whereas each of the encoded regiospecific objects is encoded by its global position, such that communicating one of the plurality of codes to the database system is effected by positioning the mobile cellular communication device in
10 proximity to an encoded regiospecific object associated with that code and forwarding a global position of the encoded regiospecific object via the mobile cellular communication device to the database system.

According to still further features in the described preferred
15 embodiments each of the encoded regiospecific objects is encoded by its position relative to at least two of the plurality of regiospecific communication cells as determined by positional triangulation of a mobile cellular communication device being in proximity to an encoded regiospecific object.

According to still further features in the described preferred
20 embodiments each of the codes includes a sequence of alphanumeric characters and a regiospecific location pertaining to one of the plurality of regiospecific communication cell.

According to still further features in the described preferred
25 embodiments the information is stored in the memory device in a plurality of user selectable languages, the method further comprising the step of selecting one of the plurality of user selectable languages with which the information is communicated to the user.

According to still further features in the described preferred
30 embodiments the plurality of regiospecific objects are selected from the group consisting of displayed items, landmarks, monuments, structures and sites.

According to still further features in the described preferred
35 embodiments the information pertaining to the plurality of regiospecific objects is selected from the group consisting of description of displayed items, description of landmarks, description of monuments, description of structures and description of sites.

According to still further features in the described preferred embodiments the database system to respond to that code is effected by a control channel of the mobile cellular communication device.

5 According to still further features in the described preferred embodiments activating the database system to respond to that code is effected by a voice channel of the mobile cellular communication device using dual tone multifrequency (DTMF).

10 According to still further features in the described preferred embodiments the mobile cellular communication device includes an internal memory device, the internal memory device serves for storing and retrieval on command at least a portion of the information.

15 According to yet another aspect of the present invention there is provided a system for enabling communication between users sharing a common interest, the system comprising (a) a cellular communication network having a plurality of regiospecific communication cells; (b) a plurality of mobile cellular communication devices communicating with the cellular communication network, each of the mobile cellular communication devices being operable by a user; and (c) a database system communicating with each of the plurality of mobile cellular communication devices through the cellular communication network, the database system storing personal profile information of each of the users, so as to enable a first user to at least establish communication with at least one second user sharing a common interest with the first user, the common interest being determined by the database system according to the personal profile information of the first user and the at least one second user.

20 According to still another aspect of the present invention there is provided a method for enabling communication between users sharing a common interest, the system comprising (b) providing a plurality of users with a plurality of mobile cellular communication devices, the plurality of mobile cellular communication devices communicating with a cellular communication network having a plurality of regiospecific communication cells; and (c) constructing a database system communicating with each of the plurality of mobile cellular communication devices through the cellular communication network, the database system storing personal profile information of each of the plurality of users, so as to enable a first user to at least establish communication with at least one second user sharing a common interest

25
30
35

with the first user, the common interest being determined by the database system according to the personal profile information of the first user and the at least one second user.

5 According to further features in preferred embodiments of the invention described below, the personal profile information of each of the users is submitted to the database by a method selected from the group consisting of facsimile telephony and Internet.

10 According to still further features in the described preferred embodiments the database system further includes stored information which is providable through the cellular communication network to users each using a mobile cellular communication device.

According to still further features in the described preferred embodiments a portion of the stored information is provided to a specific user of the users according to a personal profile information of the user.

15 According to still further features in the described preferred embodiments the portion of the stored information includes information on additional users which share at least one common interest with the specific user.

20 According to still further features in the described preferred embodiments the information on additional users includes the telephone number thereof.

According to still further features in the described preferred embodiments the stored information includes advertisements.

25 According to still further features in the described preferred embodiments the portion of the stored information is provided to the specific user upon a user command.

According to still further features in the described preferred embodiments the portion of the stored information is provided to the specific user automatically.

30 According to still further features in the described preferred embodiments the portion of the stored information is regiospecific information provided to the specific user according to a geographical location thereof.

35 According to still further features in the described preferred embodiments the communication between the first user and the at least one second user which is established by the database system is initiated by the first user.

According to still further features in the described preferred embodiments the communication is initiated by the first user via a command.

5 According to still further features in the described preferred embodiments the cellular communication network maintains the communication following establishment thereof by the database system.

According to still further features in the described preferred embodiments the database system maintains the communication following establishment of the communication thereby.

10 According to another aspect the present invention provides a system for providing information to a user of a plurality of companies presenting in an exhibition, the system comprising (a) a cellular communication network having a plurality of regiospecific communication cells; (b) a plurality of mobile cellular communication devices communicating with the cellular communication network, each
15 of the mobile cellular communication devices being operable by a user and including keys for keying in digits 0 through 9, at least some of the keys being associated with one or more letters of an alphabet; and (c) a database system communicating with each of the plurality of mobile
20 cellular communication devices through the cellular communication network, the database system storing information pertaining to each of the companies which is providable through the cellular communication network to a user using a mobile cellular communication device of the plurality of mobile cellular communication devices by keying a company
25 code, the company code including, in a sequence, a set of number digits representing the company's name.

According to another aspect the present invention provides a method for providing information to a user of a plurality of companies presenting in an exhibition, the method comprising the steps of (a)
30 providing a plurality of users with a plurality of mobile cellular communication devices, the plurality of mobile cellular communication devices communicating with a cellular communication network having a plurality of regiospecific communication cells, each of the mobile cellular communication devices being operable by a user and including
35 keys for keying in digits 0 through 9, at least some of the keys being associated with one or more letters of an alphabet; and (b) constructing a database system communicating with each of the plurality of mobile cellular communication devices through the cellular communication

network, the database system storing information pertaining to each of the companies providable through the cellular communication network to a user using a mobile cellular communication device of the plurality of mobile cellular communication devices by keying a company code, the
5 company code including, in a sequence, a set of number digits representing the company's name.

The present invention successfully addresses the shortcomings of the presently known configurations by providing a system and method for providing a user of a cellular communication device with regiospecific
10 information, which can include, for example, information pertaining to a geographical location and information pertaining to the geographical location of other users of the system.

BRIEF DESCRIPTION OF THE DRAWINGS

15 The invention is herein described, by way of example only, with reference to the accompanying drawings. With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the
20 cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings
25 making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

FIG. 1 is a black box diagram of a system for providing regiospecific information according to the present invention; and

30 FIG. 2 is a black box diagram of a system for enabling communication between users sharing a common interest according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

35 The present invention is of a system and method which can be used to provide a user of a mobile cellular communication device with regiospecific information. Specifically, the present invention can be used to provide a user of a mobile cellular communication device, such as a cellular telephone, with regiospecific information, such as information on

regiospecific objects which can be retrieved, on command, by the user, or directly and automatically provided to the user according to the geographical location thereof. The geographical location of the user can be determined from the command provided therefrom or automatically
5 via, triangulation or GPS provided data. In addition, the present invention can be used to provide a user of a mobile cellular communication device with information pertaining to other users which are of interest to said user such as, for example, users sharing at least one common interest with said user.

10 The principles and operation of a system and method according to the present invention may be better understood with reference to the drawings and accompanying descriptions.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its
15 application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of
20 description and should not be regarded as limiting.

As used herein in the specification and in the claims section that follows, the phrase "regiospecific information" refers to information pertaining to a geographical location which falls within a coverage area of a cellular communication network, at any given time. The
25 geographical location can be of any size either smaller or larger than the area of a single communication cell 13. For example, a geographical location may be as large as a city or a state or as small as a city block or smaller, such as the location of a user of system 10. A geographical location may be defined by several methods, including, but not limited to,
30 telephone area codes, postal zip codes, map coordinates and the like. In addition to pertaining to specific geographical locations, it will be appreciated that some of the regiospecific information provided to a user can also provide information which content changes according to the time of day, day, week or month requested. This is the case for
35 regiospecific information which changes in content through the day or week, such as, for example, a museum which is closed to the public on a particular day would provide a user with such an announcement on that particular day.

Regiospecific information also refers to information pertaining to objects having a geographical location at a given time which falls within a coverage area of a cellular communication network.

As used herein in the specification and in the claims section that follows, the term "object" or "objects" includes displayed items, typically of a transportable nature, such as, but not limited to, exhibits, e.g., paintings, sculptures, arts, crafts, antiquities, etc., in museums, galleries and the like, and landmarks which are stationary in nature, such as, but not limited to, prominent or conspicuous objects on land that serve as guides, distinguishing landscape feature marking a site or location and buildings, monuments, structures or other places or sites of outstanding historical, aesthetic, or cultural importance. The regiospecific information can be of any type including, but not limited to, descriptive information, such as historical, cultural, geographical, navigational and/or trivial information, etc., pertaining to an object and information related to other objects of its kind, related to, or in its vicinity.

Referring now to the drawings, Figure 1 illustrates a system for providing regiospecific information to a user according to the present invention, which is referred to hereinbelow as system **10**.

System **10** includes a cellular communication network **12**. Cellular communication network **12** uses a network of relatively low powered radio transmitters and receivers that cover a geographical region. This network is made up of a plurality of regiospecific communication cells **13**, each with a combined receiver and transmitter, which are collectively known as a transceiver. Each transceiver includes an antenna and is typically positioned on a mast **17** so as to enable efficient communication to and from the transceiver, although, other installations are also feasible, especially in urbanized areas. Each regiospecific communication cell **13** is typically provided with a single transceiver which is located within the area covered by the cell. Network **12** further includes at least one communication server **19** communicating with each transceiver. Server **19** is a mobile telephone switching operator (MTSO) which serves for processing and maintaining communication through cellular communication network **12**. As used herein, cellular communication network **12** can include a plurality of individual cellular communication networks operated by different cellular telephone service providers. As such, system **10** according to the

present invention can include a plurality of cellular communication networks **12** each communicating with database server system **22**.

Further detail relating to cellular communication networks can be found in a plurality of text books, an example of which is "Cellular
5 Telephones and Pagers, An overview" Stephen W. Gibson, 1997, Butterworth-Heinemann, USA, and in, for example, U.S. Pat. Nos. 5,812,950; 5,758,293; 5,490,285; 5,822,324; 5,131,020; 5,133,081; 5,481,546; 5,642,303; 5,850,610 and 5,841,971, which are incorporated by reference as if fully set forth herein.

10 As will be appreciated by one ordinarily skilled in the art, the area coverage of cellular communication network **12** is limited only by the number of regiospecific communication cells **13** employed thereby. In other words, the area coverage of cellular communication network **12** is not limited by transmission intensity.

15 System **10** according to the present invention further includes a plurality of mobile cellular communication devices **14** (one is shown). Each of devices **14** communicates with server **19** via bi-directional radio communication (indicated by **15**) provided through the transceivers of individual cells **13**, and thereby communication between subscribers of
20 network **12** and between subscribers and other communication networks is enabled.

As used herein in the specification and in the claims section that follows, the phrase "mobile cellular communication device" includes any type of portable device including a radio transceiver and which is capable
25 of bi-directional communication with a cellular communication network. Examples, include, but are not limited to, mobile cellular telephone devices and mobile cellular communicator devices having, in addition to telephone properties, capabilities similar to those of a personal computer (PC) or a personal digital assistant (PDA).

30 In all cases, as is well known in the art, a cellular communication device includes keypad keys which are used for keying in the digits 0-9. Typically, some of the keys are associated with one or more letters of an alphabet, say the English alphabet. For example, in cellular telephones presently manufactured by NOKIA, key 2 also stands for a, b, and c; key
35 3 also stands for d, e, and f; key 4 also stands for g, h, and i, key 5 also stands for j, k, and l, key 6 also stands for m, n, and o, key 7 also stands for p, q, r and s; key 8 also stands for t, u, and v; key 9 also stands for w, x, y and z. Typically, once in the "Text" (or "Edit") mode, and in order to

select a specific character (either letter, digit or other symbol) a user is requested to key the key associated with that character a number of times which typically equals its order of appearance. Thus, in the above example the letter v is selected by pressing three times on the 8 key.

5 Thus, system **10** according to the present invention takes advantage over the availability and abundance of cellular telephone systems. In Israel, for example, which is populated by about 6 million people, there are close to 2.5 million cellular telephone users distributed among three cellular telephone service providers using analog and digital
10 systems, including GSM and CDMA systems, each of which has set up a cell communication network substantially covering the entire state.

System **10** according to the present invention further includes a database server system **22** communicating with mobile cellular communication device **14**, as indicated at **21**, through cellular
15 communication network **12**. Database system **22** serves for storing regiospecific information which is providable through cellular communication network **12** to a user using a mobile cellular communication device **14**. Thus, database system **22** includes a memory device including but not limited to RAM, ROM, CD-ROM, magnetic
20 medium memory, DVD and the like for storing the regiospecific information in a retrievable manner.

Database system **22** can store and provide a user with regiospecific information according to personal preferences of that user which can be presented to system **10** in advance, as further detailed
25 hereinunder, or learned and memorized by system **10** during use, such that at least a portion of the regiospecific information providable to a specific user is provided according to that user's personal preferences.

In addition, database server system **22** can further store and provide a user with regiospecific information according to a personal
30 profile thereof and that of other users which can be presented to system **10** by users thereof in advance, as further detailed hereinunder, or learned and memorized by system **10** during use, such that at least a portion of the regiospecific information providable to a specific user is provided according to that user's personal profile as matched to profiles of other
35 users. Alternatively, the personal profile of a user can be stored in a memory of device **14**. In this case when a user communicates with database server system **22** the personal profile of the user is

communicated to database server system **22** according to which regiospecific information is relayed to the user.

Such personal preferences and/or profiles can be submitted to database server system **22** through, for example, facsimile, telephony and/or the Internet. As further detailed hereinbelow, the personal preferences/profile of the user can be constantly updated according to regiospecific information retrieved by the user. It will be appreciated that the personal profile of a user can also include confidential information. Such information can include, for example, medical information which can be accessed when necessary by a medical professional. For example, a doctor treating a patient which is a user of system **10**, can receive information which is pertinent to the patients treatment. It will be appreciated that any individual wishing to receive confidential information on a user of system **10** must first be identified by the system as an individual with access privileges to such information.

The regiospecific information can be provided in a vocal, alphanumeric and/or graphical (including still images and video images) format which can include, for example, a map image and the like. In the former two cases, the information can be provided in any user defined preferred language, including, but not limited to, English, German, French, Hebrew, Arabic, Chinese, Japanese, Korean, Spanish and/or Portuguese, and in a variety of user defined level, ranging from a brief review to a thorough documentary level. The regiospecific information can be received in any format and language which is preferred by the user, provided that the mobile cellular communication device of the user supports such format as determined by either the user or by database server system **22**.

It will be appreciated that the regiospecific information stored within database server system **22** is periodically updated, which period is dependent on the type of regiospecific information. For example, if the regiospecific information is a historical description of a monument or a land mark within a specific geographical location the information is seldom updated. On the other hand, if the information is a movie listing of a specific movie theater located within a geographical location, than the information is updated daily or weekly, etc. It will be appreciated that updating of the regiospecific information can be performed by either an operator of system **10** and/or by the service providers which provide the regiospecific information. When updating is performed by the

service providers such update can be performed via facsimile, telephony or Internet. It will be appreciated that some of the regiospecific information can include advertisement information which can be provided according to the personal profile/preference of the user or according to a regiospecific information provided to the user.

According to one aspect of the present invention the regiospecific information includes information pertaining to a plurality of encoded regiospecific objects **27** (one shown in Figure 1).

As used herein in the specification and in the claims section below, the term "encoded" refers to unique codes **29** each is associated with, and identifies, one regiospecific object.

Code **29** can be, for example, visibly presented in positional context with the regiospecific objects, over tags or road signs, etc. In this case, each code **29** preferably includes a sequence of alphanumeric characters, such as letters (e.g., A to Z), digits (0 to 9) and symbols commonly employed in keypads of communication systems, such as, but not limited to, a star sign (*) and/or a pound sign (#).

According to this embodiment of the present invention when a user **31** views an encoded regiospecific object **27** and wishes to retrieve information pertaining thereto, user **31** uses a mobile cellular communication device **14** to communicate with database server system **22** via network **12** and by inputting the code via a keyboard or keypad **33** of cellular communication device **14**, the user activates database server system **22** to communicate information pertaining to the encoded regiospecific object.

This aspect of the present invention is applicable both in confined areas, such as a museum, in which each exhibit is associated with, and identified by, unique code **29**, and in wide geographical areas covered by network **12** in which landmarks are associated with and identified by, codes **29**.

The cellular structure of network **12** provides a unique advantage in this respect. It is understood that the number of different regiospecific objects attended by system **10** of the present invention can be exceedingly high. In this case, the number of alphanumeric characters employed in each code **29** can be reduced because each code **29** can include also the inherent data of a regiospecific communication cell pertaining to a regiospecific location or zone. The user is of course unaware of this extra coded data. Thus, identical alphanumeric character

sequences can be employed to identify different regiospecific objects provided that such objects are positioned within different regiospecific communication cells of cellular communication network **12**. The regiospecific communication cells according to this aspect of the present invention act similar to area codes in conventional telephone systems. This feature of the present invention is unique to cellular applications and is not at all applicable to cordless applications, such as described in U.S. Pat. No. 5,850,610.

According to another aspect of the present invention, the regiospecific information includes information which pertains to a specific geographical location. Such information can be of any type including, but not limited to, service providers information, such as, but not limited to, hotels, restaurants, movie theaters, airlines, emergency services and the like, and descriptive information pertaining to a location, such as historical, cultural, geographical, navigational and/or trivial information, etc.

In one particular, the regiospecific information pertains to participants in a show or an exhibition, such as, but not limited to, computers exhibition, software exhibition, furniture exhibition, jewelry exhibition, books exhibition, clothing exhibition, tools exhibition, car exhibition, food exhibition, etc.

In addition, and according to a preferred embodiment of the present invention, regiospecific information can also include information on at least one additional user of system **10** which is located, at a give time period, at a specific geographic location covered by network **12**. Thus, a user of system **10** can receive information on the geographical location of an individual which is also a user of system **10**. Such an individual can be, for example, a friend or a family member or a person selected among a list of users stored in a memory of mobile cellular communication device **14** of the user. Additional examples are provided in the following sections.

According to another preferred embodiment of the present invention, the regiospecific information includes data from at least one web page accessible by database server system **22**. As such database server system **22** is also in communication with an Internet server **24** such that regiospecific information from at least one web page accessible by the Internet server can be provided to a user of system **10**.

According to the present invention a user of system **10** can be provided with regiospecific information via one of several methods.

According to one preferred embodiment of the present invention the geographical location of a user is determined by system **10** according to a menu selection made by the user, which menu is provided to the user from database server system **22** upon demand or automatically upon first establishing communication between device **14** and database server system **22**. For example, database server system **22** can communicate to device **14** of a user, a selectable multilayer menu which lists items associated with specific geographic locations. Thus, a user menu selection of a specific item which is associated with a specific geographic location can be indicative of the geographic location of the user. Alternatively, information provided by a menu can be represented graphically in the form of a coded map of a city or country displaying sites of interest, such that a specific geographic location can be recognized by the user as a part of menu selection and communicated to database server system **22**. For example, a touch screen or cursor operated screen (e.g., via a mouse, guiding stick or touch pad) can be provided in device **14**, such that a site of interest can be directly indicated on a map displayed on the screen. Hand held devices with touch or cursor operated screens which include cellular communication capabilities are well known in the art, examples include, but are not limited to, PDAs and the like. It will be appreciated that such a map can be multilayered and sizable, so as to provide a user with the ability to view any portion of the information provided by the map or to edit the map for a particular type of information such as for example, display all the restaurants in a particular location .

According to another preferred embodiment of the present invention the regiospecific information is provided to a user upon a user command communicated from mobile cellular communication device **14** to database server system **22** through cellular communication network **12**.

Such a user command can be an alphanumeric code which defines a specific geographical location, such as, but is not limited to, a postal zip code, a telephone area code, a city code. Alternatively the alphanumeric code can be a code associated with a geographical location displayed on a dedicated map which is provided to the user, any other map utilized by the user or presented in physical context of the geographical location or an encoded object present at a geographical location as described above.

Such an alphanumeric code can, for example, be keyed in by the user, by using the keypad of device **14**. The command can be relayed using either the control or the voice channels (DTMF) of device **14**.

In one particular, the code includes, in a sequence, a set of number
5 digits representing a name of a company which exhibits in an exhibition, an object or service present in a specific geographical location or a company listed in a list, say in the Yellow pages list. For instance, in the above example of association between digits and alphabet letters, the codes of the companies IBM and MICROSOFT would include, in
10 sequence, the following digits 426, and 742767638, respectively. In case of identical codes, say for a company called GAN and therefore having the code 426 which is identical to the IBM code, a menu is constructed so as to enable a user to select the retrieval of information pertaining to the company of choice. It will however be appreciated that the chances of
15 such code identity to be shared among a large number of companies presenting in a single exhibition or even listed in a single country are rather low.

Alternatively the user command can also be relayed to database server **22** as an uttered command or response, in which case database **22**
20 includes voice recognition software such that the uttered command or response can be interpreted and if so applicable executed. It will be appreciated in this case that an uttered command can also be used for menu selection as detailed above.

It will be appreciated that in this case regiospecific information
25 retrieved via a user command can be of any geographical location regardless of the actual physical location of the user which geographical location is determined by the user.

In addition, and according to preferred embodiments of the present invention, the regiospecific information is provided to the user
30 according to the geographical location of the user which can be determined via one of several alternative methods. It will be appreciated that in this case a user can also access regiospecific information pertaining to other geographical locations if needed by providing a user command as described hereinabove.

Thus, according to one preferred embodiment of the present
35 invention the geographical location of the user is determined relative to at least one regiospecific communication cell **13** of communication network **12**. When the user is communicating with communication network **12**,

the position of the user can be determined according to a specific communication cell 13 from which the communication is maintained. Since network 12 can inherently determine the geographical location of this specific communication cell 13, the geographical location of the user
5 can be determined. In this case, the area of a geographical location is typically determined by the coverage area of communication cell 13.

According to another preferred embodiment of the present invention the geographical location of the user is determined relative to at least two of regiospecific communication cells 13. This can be achieved
10 by measuring intensity and/or direction of a transmission of a user operated device 14 received at cells 13.

It will be appreciated that the transceivers of network 12 which are positioned within individual regiospecific communication cells 13 can be used to triangulate a mobile cellular communication device 14
15 because when device 14 transmits a signal, it is typically received by more than a single cell 13. For example, two transceivers can triangulate a mobile cellular communication device 14 if intensity and/or direction of transmission therefrom is provided. Such intensity provision is applicable for modern mobile cellular telephones. Additional
20 transceivers can be used for more accurate triangulation. This triangulation is employed to define the geographical location of the user and as such to place the user within a location which can be predefined by system 10.

According to another preferred embodiment of the present invention the geographic location of the user is relayed from a global
25 positioning system (GPS) terminal 26 to database server system 22 via device 14 through cellular communication network 12. As such device 14 is provided with a GPS terminal communicating with device 14. GPS terminal 26 can be integrally formed with or attached to device 14.

30 Once a geographical location of a user is established according to any of the above described methods, regiospecific information which pertains to that geographical location can be provided to the user. The regiospecific information is provided to the user through either the voice or control channels of mobile cellular communication device 14.

35 Preferably the regiospecific information is selectively retrieved by the user once the geographical location thereof is established. It will be appreciated that since information relating to a specific geographical location can include a large amount of data covering many different

subjects, the user is preferably provided with a selectable menu representing the content of the regiospecific information. Thus, the user can use, for example, either alphanumeric or voice commands as described above to select for items of interest from within the menu. In this case, database server system **22** and the user communicate through a control or a voice channel with one another, wherein communication alternately pertains to menu communication and data transfer communication.

Thus, information pertaining to menu and menu selection and information pertaining to data are communicable between device **14** and system **10** through either the voice or control channels. The user is unaware of changes in transmission/reception modes. For analog cellular networks, this means that modems in device **14** and system **10** are automatically switched on and off according to present needs. It will be appreciated that the control channel of analog cellular networks are digital. For digital cellular networks, both the voice (data transfer) and the control channels are digital, therefore such systems do not include a modem. In both cases, data can be communicated as audio, alphanumeric or graphical data. Alphanumeric data can be and is preferably communicable through the control channel. Audio and graphical data can only be communicated through the voice (for analog for digital cellular networks) or data transfer (for digital cellular networks) channels. In a digital cellular network different data transfer channels can be employed to communicate audible and textual data. Alternatively, the data carries a tag associating it with audio or graphical data, so as to appropriately process such data and audially or graphically present such data to the user via the speakers or screen. For analog cellular networks, audio data is communicated analogically, whereas, graphical data must be communicated through the modems.

Device **14** can include a memory in which case the data encompassing the regiospecific information can be communicated to device **14** and stored in the memory and browsed by the user without the need to further maintain communication with database server system **22**.

As already mentioned hereinabove the regiospecific information can include information on a plurality of subjects.

For example the regiospecific information can include information on a service provider, which can be for example restaurants. As already mentioned hereinabove the content of at least a portion of the

regiospecific information can be edited to specifically suit a profile/preference of a user. As such, in this case when a user requests information on restaurants located within a specific geographical location, database server system **22** can edit the list in accordance to the
5 gastronomomic preferences of the user. It will be appreciated that the personal profile of a user can be continuously updated according to the regiospecific information retrieved by the user.

The information retrieved by the user on a particular restaurant can include, but is not limited to, a menu of entree's, business hours,
10 location, telephone number and the like, which can be provided in a textual, graphical or audio format and arranged in a convenient to use selectable menu. If the user decides to reserve a table at the restaurant the user can either dial the provided phone number or alternatively and preferably the communication between the user and the restaurant can be
15 initiated and established by database server **22** upon a user's command.

Regiospecific information pertaining to emergency services providers such as hospital and ambulatory medical services, police and fire services and the like can also be provided by system **10** of the present invention. This is of particular importance in cases were an individual
20 witnesses or experiences an emergency situation and is in need of immediate assistance. It will be appreciate in this case, that since the general geographical location of a user can be determined by system **10**, a specific location of this user can be rapidly and easily identified from the user's instructions. In more advanced modes of system **10**, such as, for
25 example, in the case where a GPS is employed with device **14** thereof, as is further detailed herein, a precise location of the user in need of assistance is determinable.

Similarly, a user of system **10** of the present invention which is in need of immediate assistance can also establish contact with a family
30 relative or friend co-present in the same defined geographical location. To enable this feature of system **10**, information on close relatives or friends is stored in the personal profile of the user such that when needed, contact with a relative which is in the nearest vicinity can be established by a user provided command.

35 In any case, dialing and establishing communication between the user and the service providers or relative is handled by database **22** which frees the user from the hassles of both dialing and redialing if necessary. In addition, once communication is maintained, database **22**

can monitor the communication between the user and the service provider such that when communication terminates database **22** can again present the user with menu information.

It will be appreciated that once communication between a user and a service provider is initiated and established by database **22**, such communication can be maintained either by communication server **19** of network **12** or by database server **22** in which case database server **22** must be provided with the suitable hardware and software.

Another example to a service provider can be a bank and/or an ATM (automated teller machine). A user of system **10** of the present invention wishing to perform a monetary transaction, for example, withdrawal of money, can be provided, on command, with a list of available ATM machines in a geographical location of interest. Further information relating to a particular ATM, such as, specific location, ATM cards accepted and services provided thereby, can also be provided to the user. Preferably, information on ATM machines is provided to the user according to personal profile information which can include in this case, the type of ATM card utilized by the user.

It will be appreciated that regiospecific information pertaining to service providers, such as, but not limited to, gas stations and auto repair shops, pharmacies, parking structures and the like can also be provided by system **10** of the present invention. It will further be appreciated in this case that the information providable to the user is preferably limited according to the user's personal profile. For example, when a user requests a list of auto repair shops, this information is provided in accordance with the users personal profile information which includes the make of the user's car. Thus, auto repair shops information retrieved by the user would list only the shops which service the user's car make.

Regiospecific information according to the present invention can also include information on movie listing in theaters located in a specific geographical location. For example, a user for which a geographical location has been determined by system **10** of the present invention, as further described hereinabove, can receive information regarding the availability of movies of interest in this geographical location, which information can include, for example, playing times ticket availability and the like. System **10** of the present invention can also be used by the user to directly reserve or purchase tickets for a particular movie or show. It will be appreciated that since movie listing for a particular

geographical location can include a large amount of information, the user is preferably presented with an option of directly selecting a movie of interest or a theater of interest by using the keypad of device **14**.

Similarly, regiospecific information can include television show listings. For example, a user of system **10** can include within the personal profile information a list of preferred television shows or preferred show topics. In this case, system **10** can provide the user with information relating to particular television shows which match the user's profile information ahead of time.

In addition, regiospecific information can also include information on public transport services such as taxi cabs, buses, trains and the subway. Information providable to the user can include, for example, schedules, nearest station to the users location, fares and the like. In addition, if a user specifies a target destination, system **10** can also provide information on best mode of transport including detailed information on the most convenient or shortest possible route to the target destination, preferably taking into account updated traffic reports.

Furthermore, regiospecific information can also include classified information pertaining to a specific geographical location. For example, a user can be provided with car classified ads which pertain to a geographical location determined for the user by system **10** as described hereinabove. The user can further select which portion of the classified information is retrieved. For example, a user can select to retrieve only the classified ads relating to a single automobile type etc.

In addition, a user can specify in the personal profile a particular car make of interest, such that when an advertisement for this particular car make is placed the user of system **10** is notified. According to another preferred embodiment of the present invention user access to regiospecific information stored within database **22** can also be effected through conventional telephony or the Internet. This is advantageous in cases where, for example, travelers or businessman want to plan their itinerary ahead of time, in which cases access to database **22** through the Internet may be more convenient. Accessing database **22** via an Internet connection is particularly advantageous since the regiospecific information retrieved by a user's computer can be downloaded to a device **14** which includes a memory by connecting device **14** to the computer. When access is gained through conventional telephony, the user can command database **22** to establish communication with device **14** and

communicate the regiospecific information or a menu representing the content of the information to device **14**.

It will be appreciated that when a user accesses database **22** from a device other than device **14** for whatever reason, especially when updating the personal profile/preferences thereof, verification of the user identification must be employed, so as to prevent unauthorized access to privileged sections of database **22**. This verification can be achieved by either a password which can be provided to the user upon initial use of system **10**, or alternatively and preferably, a dedicated password can be communicated from database **22** to a device **14** which is identified with a specific user as the user identifies him/herself to database **22** upon access to database **22** from a conventional telephone or a computer.

According to a preferred embodiment of the present invention and as already mentioned hereinabove, the regiospecific information can include information on the geographical location of additional users of system **10**. It will be appreciated that the location of the additional user(s) can be determined by system **10** according to any of the methods described hereinabove.

This information can be retrieved via a user command or alternatively database **22** can automatically provide device **14** of any interested user with the location of all of the users stored in device **14** thereof or stored thereby within database **22**, or which match the user's personal profile, and which are located in a certain geographical location. For example, a user of system **10** located at a geographical location experiencing or witnessing an emergency situation, such as an accident or a stranded vehicle, can establish communication with, and possibly be provided with assistance from, a doctor or a mechanic which is a user of system **10**, which is co-present in the same geographical location and which profession is defined within the personal profile thereof. This is especially applicable in remote areas where suitable service providers are not listed or included within the regiospecific information. It will be appreciated, that in this case, the profession of a user becomes a permanent part of the user's personal profile. It will also be appreciated that in the case were system **10** locates a plurality of doctors or mechanics co-present with the user at the geographic location, the doctor or mechanic which is nearest by to the user can be located and communication with the user can be established by system **10** as described hereinabove.

In another example, system **10** can serve a traveling user to contact other users which are in the same geographical location. Thus, when a user of system **10** which is a resident of a given country/city is traveling to another country/city, system **10** can be used to establish communication between that user and another user of system **10** which is also resident of the given country/city and which happens to be in the other country/city at the same time. It will be appreciated, that in this case, the whereabouts of a user become a transient part of the user's personal profile.

10 It will be appreciated that this feature of the present invention can also be utilized to locate acquaintances in small geographical regions. For example, it is often difficult to locate acquaintances in meeting places such as cemeteries which are inherently difficult to navigate through. System **10** of the present invention can inform the user of acquaintances present in such small geographical regions and in addition provide directions to a common meeting place (burial plot in cases of cemeteries).

20 As further detailed hereinabove, since database server system **22** preferably stores information of its users which is location independent, system **10** can additionally or independently be used to enable communication between users sharing a common interest regardless of their permanent or transient location.

25 Thus according to another aspect of the present invention, and as specifically shown in Figure 2, there is provided a system for enabling communication between users sharing a common interest which is referred to hereinbelow as system **50**.

30 System **50** is similar to system **10** described hereinabove with the exception that system **50** includes a database server system **52** instead of database server system **22**. Database system **52** stores personal profile information of each of its users. Database system **52** communicates with each of a plurality of mobile cellular communication devices **14** (one is shown) through cellular communication network **12** as described hereinabove for database server system **22**. Database system **52** serves to, at least, establish communication between a user and at least one additional user of system **50** which share a mutual or common interest. In addition, since database server system **52** can co-communicate with a plurality of cellular communication networks each being operated by a different service provider, a user of one cellular communication network

can establish communication with a user of a different cellular communication network via system 50. Communication can also be established between a user of system 50 and a user or users of other communication systems such as Internet users. This can be achieved by any number of ways.

For example, a user can connect to database 52 and request to be connected to another user of system 50 which shares a common interest therewith.

Additionally, the user can request to be connected to another user according to subject or topic selected by the user. For example, the user can select a specific topic from a menu providable by database 52 upon which selection database 52 scans the stored personal profile information for suitable matching users.

Once a matching user, or a user sharing a common interest, is located, a direct connection therebetween can be established by database 52, which connection can be maintained by either database 52 or communication server 19 of network 12 as described hereinabove. Alternatively, a telephone number of a matching user or a user sharing a common interest can be provided to the requesting user. In addition, information pertaining to the geographical location and other non-confidential information of the matching user or a user sharing a common interest can be provided to the requesting user. It will be appreciated that once a connection is established and maintained between users, information pertaining to the personal profiles of the users is bi-directionally communicated.

A personal profile of a user is submittable to database 52 by any of the methods, preferably accompanied by the access security means, described hereinabove. In addition, the user can determine what portion of the personal information is confidential and thus cannot be communicated to other users of system 50.

It will be appreciated that any number of users can co-communicate using system 50 of the present invention thus creating discussion groups. It will also be appreciated that users can join any discussion groups which are already in progress by requesting to be matched and communicated with active sessions. These sessions can be maintained by either database server system 52, or communication server 19 of network 12. It will be appreciated that system 50 of the present invention provides co-communication between a plurality of users similar

to that provided by chat channels, Internet based discussion groups, or dedicated connectivity clients, such as for example, the ICQ (I seek you) client (<http://www.icq.com>). Furthermore, co-communication between one or a plurality of users of system 50 to Internet based chat channels, discussion groups and the like can be established by providing communication between database server system 52 and an Internet server which is indicated in Figure 2 at 54. In this case, database server system 52 is provided with the necessary software and hardware such that the communication between a user of system 50 and a user using an Internet based client or service can be provided.

In another example, a user can store information on groups of interest which groups can be contacted with a single user command. This is similar to electronic-mail mailing lists, with which a user can efficiently send a single message to a plurality of users. Thus, a user of system 50 can send, for example, a voice message to a plurality of users, simultaneously. It will be appreciated that although using device 14 is of distinct inherent advantages in this case, a user can also use standard line telephony to both send and receive such messages.

Since system 50 can identify when a particular user of a group has retrieved a distributed message, confirmation of message retrieval can be provided to the user which sent the message. It will further be appreciated in this case that a user to which a message was sent when wishing to retrieve the message from a device other than device 14, such as, for example, a standard line telephone, must provide system 50 with a user identification code. Message retrieval confirmation according to this aspect of the present invention is of particular advantage since a user sending a message to a group can determine in a short amount of time the status of each user. That is to say the user can determine if a user of a group has received, read or heard, and responded to the message content.

For example a user can schedule a business meeting with a plurality of co-workers by simply sending a single message to database server system 52 with instructions to distribute the message to a particular group. Using system 50 of the present invention to perform the above mentioned tasks is particularly advantageous over, for example, electronic mail. Unlike a personal computer, device 14 is mobile and is typically carried by the user at all times. Thus, a message received by a user belonging to a group via device 14 will typically be retrieved and confirmed more rapidly than a message sent via electronic mail.

Conformation of a message received ,according to this aspect of the present invention, can be effected by one of several ways. When messages are relayed as text to a user by using, for example, the control channel, immediate confirmation and/or response can be effected by the user through the control channel. In this case, no voice communication
5 between device **14** and system **50** is necessary.

Two options exist in cases of voice messages. If system **50** upon contacting a device **14** of a user detects the presence of a user, by, for example, having the user key in a response, the incoming message is relayed and system **50** immediately confirms reception. If system **50**
10 cannot detect the presence of a user, for example, no response is registered to a request from system **50**, then a message is not relayed but instead it is stored and the user is alerted of a pending message. In this case, the user is instructed to confirm reception of a message upon
15 retrieving the stored message by relaying a code which identifies both the message and the user to system **50**.

Once a message has been distributed and confirmed response information collected by system **50** it is displayed to the sender in an easy to comprehend format. It will be appreciated that each message sent
20 by a user is given a specific code such that the user can retrieve response information which is specific to the message sent by specifying the message code in addition to being identified to system **50**.

According to another aspect of the present invention system **50** can be used to provide a user with music. Music can be provided to the user, on demand, according to a user selection from a menu provided by
25 system **50**, or alternatively according to a personal music preference list included within the personal profile information of that user.

In a preferred embodiment of the present invention systems **10** and **50** are integrated into a single system which provides all or some of the
30 services described herein for either system **10** and/or system **50**.

Thus the present invention provides means with which users can access regiospecific information and/or establish communication with other users with which they share a common interest. In its presently
35 most preferred embodiments, the present invention takes advantage of the inherent capability of communication cellular networks to regiospecifically associate users thereof with geographical locations.

Although the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications
5 and variations that fall within the spirit and broad scope of the appended claims.

WHAT IS CLAIMED IS:

1. A system for providing regiospecific information to a user, the system comprising:
 - (a) a cellular communication network having a plurality of regiospecific communication cells;
 - (b) a plurality of mobile cellular communication devices communicating with said cellular communication network, each of said mobile cellular communication devices being operable by a user; and
 - (c) a database system communicating with each of said plurality of mobile cellular communication devices through said cellular communication network, said database system storing regiospecific information which is providable through said cellular communication network to a user using a mobile cellular communication device of said plurality of mobile cellular communication devices.
2. The system of claim 1, wherein said regiospecific information is provided to the user upon a user command communicated from said mobile cellular communication device through said cellular communication network to said database system.
3. The system of claim 2, wherein said user command defines a specific geographical location.
4. The system of claim 2, wherein said user command includes a sequence of alphanumeric characters being identifiable in context of one or several of said plurality of regiospecific communication cells, so as to permit usage of identical sequences of alphanumeric characters in said plurality of said regiospecific communication cells.
5. The system of claim 1, wherein said regiospecific information is provided to the user according to a geographical location of the user.

6. The system of claim 5, wherein said geographical location of the user is determined relative to a regiospecific communication cell of said plurality of regiospecific cells of said cellular communication network through which communication between said mobile cellular communication device and said cellular communication network is maintained.

7. The system of claim 5, wherein said geographical location of the user is determined relative to at least two of said plurality of regiospecific communication cells.

8. The system of claim 1, wherein said regiospecific information includes information on a plurality of regiospecific objects.

9. The system of claim 8, wherein each of said plurality of regiospecific objects is encoded by a sequence of alphanumeric characters.

10. The system of claim 1, wherein said plurality of regiospecific objects are selected from the group consisting of displayed items, landmarks, monuments, structures and sites.

11. The system of claim 1, wherein said information pertaining to said plurality of regiospecific objects is selected from the group consisting of description of displayed items, description of landmarks, description of monuments, description of structures and description of sites.

12. The system of claim 1, wherein said mobile cellular communication device includes a global positioning system (GPS) terminal.

13. The system of claim 12, wherein a geographic location of the user is relayed from said GPS terminal to said database system by said mobile cellular communication device through said cellular communication network such that the user is provided with regiospecific information according to said geographic location.

14. The system of claim 1, wherein said database system is also in communication with an Internet server and further wherein said regiospecific information includes data from at least one web page accessible by said Internet server.

15. The system of claim 1, wherein said regiospecific information includes information selected from the group consisting of service providers information, geographical information, weather information, traffic information geographical information and historical information.

16. The system of claim 15, wherein said service providers information enables the user to establish contact with a specific service provider.

17. The system of claim 16, wherein said information is a telephone number of said service provider.

18. The system of claim 16, wherein said contact between the user and said service provider is established by said database system upon a command from said user.

19. The system of claim 1, wherein said regiospecific information providable to the user includes information on at least one additional user of the system being at a specific geographic location.

20. The system of claim 19, wherein said at least one additional user is selected among a list of users stored in a memory of said mobile cellular communication device of the user.

21. The system of claim 1, wherein said regiospecific information is provided to the user through a channel of said mobile cellular communication device selected from the group consisting of a voice channel and a control channel.

22. The system of claim 1, wherein said regiospecific information is provided to the user in a format selected from the group consisting of audio format, alphanumeric format and graphical format.

23. The system of claim 2, wherein said user command is communicated to said database system through a channel of said mobile cellular communication device selected from the group consisting of a control channel or a voice channel.

24. The system of claim 1, wherein said database system and a user thereof communicate through a control or a voice channel with one another, wherein said communication alternately pertains to menu communication and data transfer communication.

25. The system of claim 1, wherein said database system further stores personal preferences of its users, such that at least a portion of said regiospecific information providable to a specific user is provided according to that user's personal preferences.

26. The system of claim 1, wherein said database system further stores personal profiles of its users, such that at least a portion of said regiospecific information providable to the user and which pertains to a geographical location of additional users of the system at a given time is providable according to said personal profiles.

27. The system of claim 26, wherein a personal profile of a specific user is updated by said database system according to regiospecific information provided to that specific user.

28. The system of claim 1, wherein each of said plurality of mobile cellular communication devices includes an internal memory, said internal memory serves for storing and later retrieval, on command, at least a portion of said regiospecific information.

29. The system of claim 1, wherein said database system stores personal profiles of its users and enables communication between users which share a common interest.

30. A method of providing regiospecific information to a user, the method comprising the steps of:

- (a) associating a plurality of encoded regiospecific objects with a plurality of codes;

- (b) providing a database system having a memory device, said memory device storing in a retrievable format information pertaining to each of said plurality of encoded regiospecific objects; and
- (c) using a cellular communication device for communicating one of said plurality of codes to said database system via a compatible cellular communication network having a plurality of regiospecific communication cells, so as to activate said database system to respond to that code, so as to transmit via said compatible cellular communication network information relating to a regiospecific objects associated with that code to said cellular communication device.

31. The method of claim 30, wherein each of said plurality of codes includes a sequence of alphanumeric characters, such that communicating one of said plurality of codes to said database system is effected by inputting said sequence of alphanumeric characters via a keyboard of said cellular communication device.

32. The method of claim 30, wherein said mobile cellular communication device includes a global positioning system (GPS) terminal, whereas each of said encoded regiospecific objects is encoded by its global position, such that communicating one of said plurality of codes to said database system is effected by positioning said mobile cellular communication device in proximity to an encoded regiospecific object associated with that code and forwarding a global position of said encoded regiospecific object via said mobile cellular communication device to said database system.

33. The method of claim 30, wherein each of said encoded regiospecific objects is encoded by its position relative to at least two of said plurality of regiospecific communication cells as determined by positional triangulation of a mobile cellular communication device being in proximity to an encoded regiospecific object.

34. The method of claim 30, wherein each of said codes includes a sequence of alphanumeric characters and a regiospecific

location pertaining to one of said plurality of regiospecific communication cell.

35. The method of claim 30, wherein said information is stored in said memory device in a plurality of user selectable languages, the method further comprising the step of selecting one of said plurality of user selectable languages with which said information is communicated to the user.

36. The method of claim 30, wherein said plurality of regiospecific objects are selected from the group consisting of displayed items, landmarks, monuments, structures and sites.

37. The method of claim 30, wherein said information pertaining to said plurality of regiospecific objects is selected from the group consisting of description of displayed items, description of landmarks, description of monuments, description of structures and description of sites.

38. The method of claim 30, wherein activating said database system to respond to that code is effected by a control channel of said mobile cellular communication device.

39. The method of claim 30, wherein activating said database system to respond to that code is effected by a voice channel of said mobile cellular communication device using dual tone multifrequency (DTMF).

40. The method of claim 30, wherein said mobile cellular communication device includes an internal memory device, said internal memory device serves for storing and retrieval on command at least a portion of said information.

41. A system for enabling communication between users sharing a common interest, the system comprising:

- (a) a cellular communication network having a plurality of regiospecific communication cells;

- (b) a plurality of mobile cellular communication devices communicating with said cellular communication network, each of said mobile cellular communication devices being operable by a user; and
- (c) a database system communicating with each of said plurality of mobile cellular communication devices through said cellular communication network, said database system storing personal profile information of each of the users, so as to enable a first user to at least establish communication with at least one second user sharing a common interest with said first user, said common interest being determined by said database system according to said personal profile information of said first user and said at least one second user.

42. The system of claim 41, wherein said personal profile information of each of the users is submitted to said database by a method selected from the group consisting of facsimile telephony and Internet.

43. The system of claim 41, wherein said database system further includes stored information which is providable through said cellular communication network to users each using a mobile cellular communication device.

44. The system of claim 43, wherein a portion of said stored information is provided to a specific user of said users according to a personal profile information of said user.

45. The system of claim 44, wherein said portion of said stored information includes information on additional users which share at least one common interest with said specific user.

46. The system of claim 45, wherein said information on additional users includes the telephone number thereof.

47. The system of claim 43, wherein said stored information includes advertisements.

48. The system of claim 44, wherein said portion of said stored information is provided to said specific user upon a user command.

49. The system of claim 44, wherein said portion of said stored information is provided to said specific user automatically.

50. The system of claim 44, wherein said portion of said stored information is regiospecific information provided to said specific user according to a geographical location thereof.

51. The system of claim 41, wherein said communication between said first user and said at least one second user which is established by said database system is initiated by said first user.

52. The system of claim 51, wherein said communication is initiated by said first user via a user command.

53. The system of claim 41, wherein said cellular communication network maintains said communication following establishment thereof by said database system.

54. The system of claim 41, wherein said database system maintains said communication following establishment of said communication thereby.

55. A system for providing information to a user of a plurality of companies presenting in an exhibition, the system comprising:

- (a) a cellular communication network having a plurality of regiospecific communication cells;
- (b) a plurality of mobile cellular communication devices communicating with said cellular communication network, each of said mobile cellular communication devices being operable by a user and including keys for keying in digits 0 through 9, at least some of said keys being associated with one or more letters of an alphabet; and
- (c) a database system communicating with each of said plurality of mobile cellular communication devices through

said cellular communication network, said database system storing information pertaining to each of the companies which is providable through said cellular communication network to a user using a mobile cellular communication device of said plurality of mobile cellular communication devices by keying a company code, said company code including, in a sequence, a set of number digits representing said company's name.

Fig 1

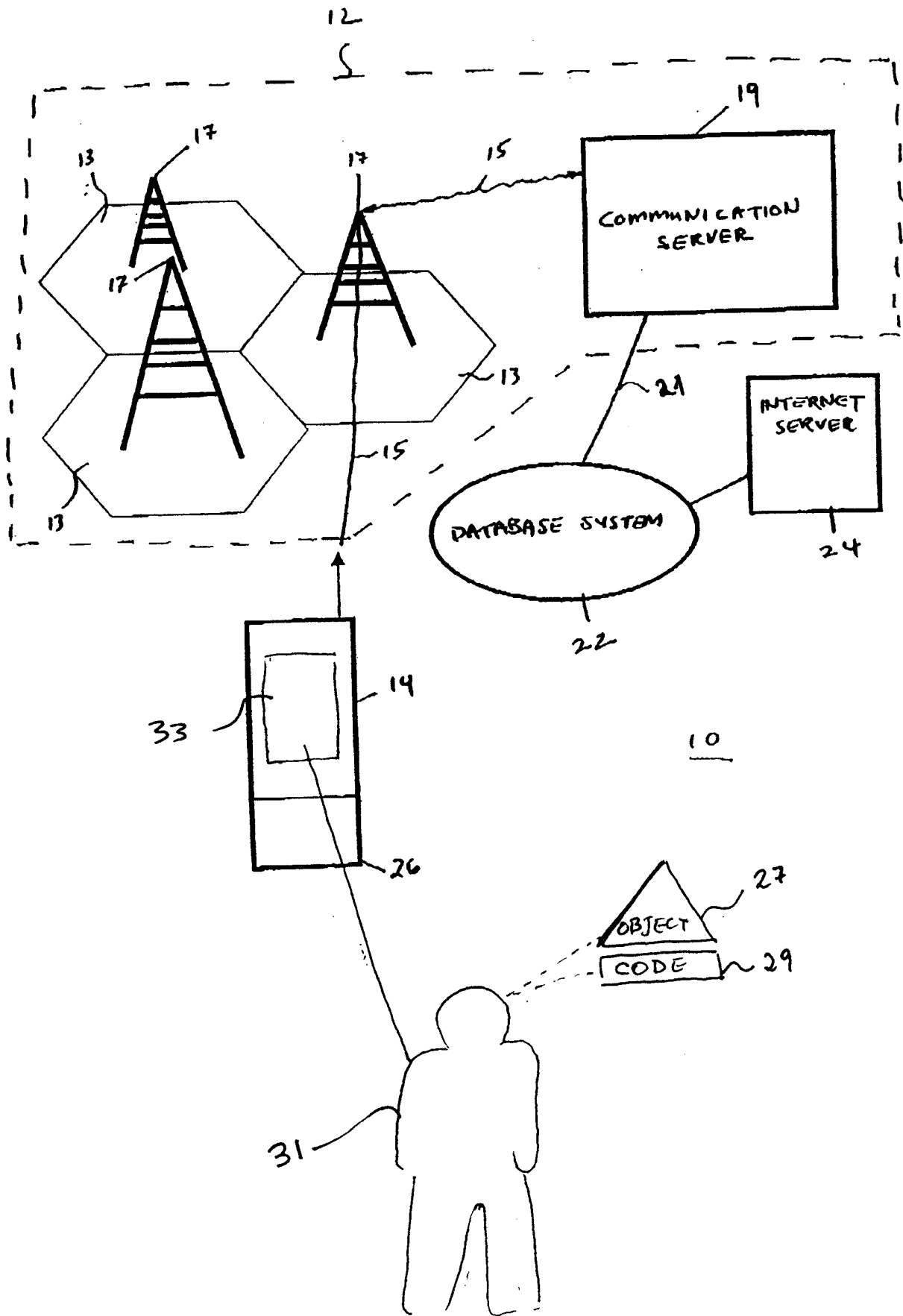
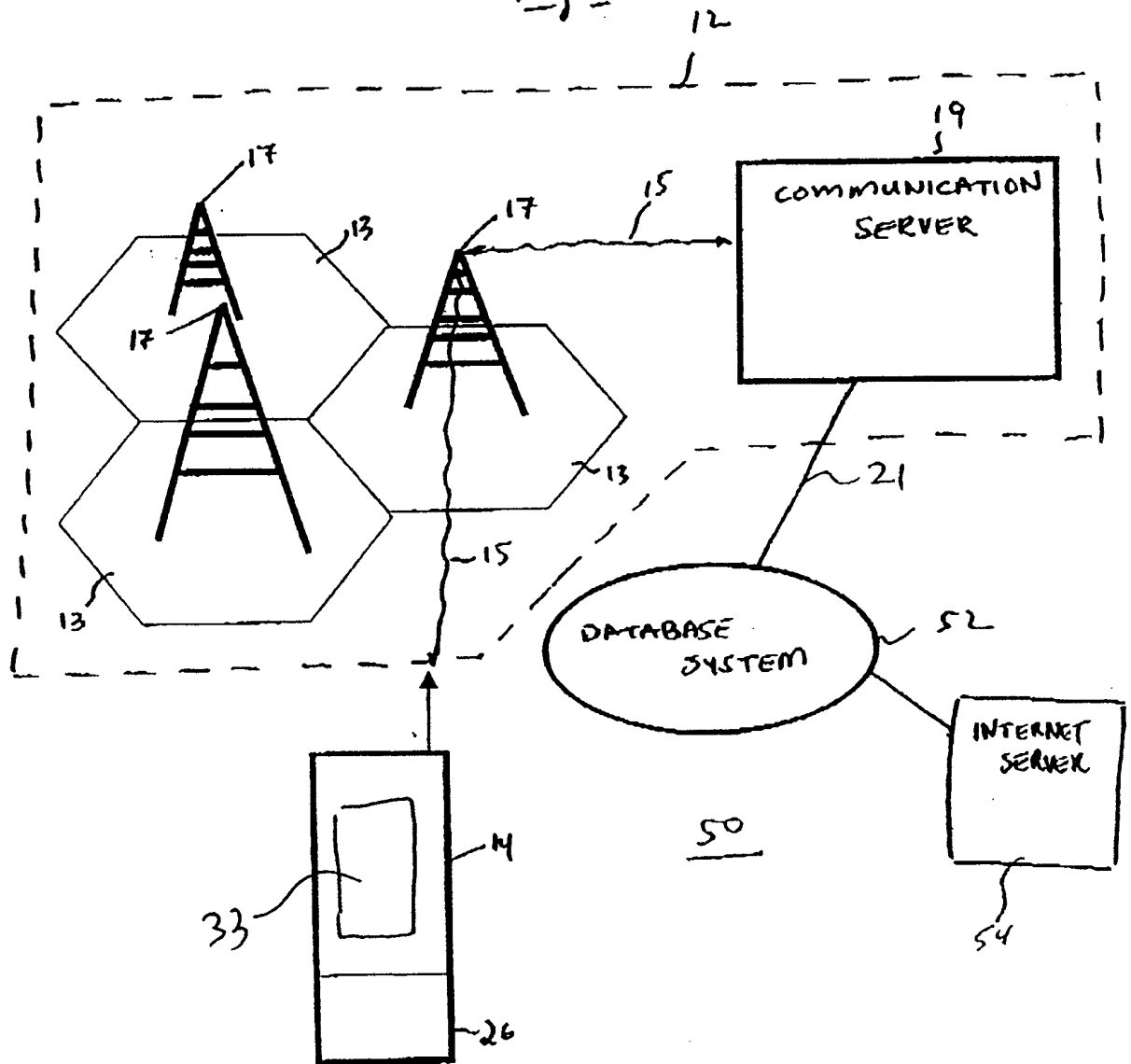


Fig 2



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/08173

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :HO4M 3/42; HO4B 7/00

US CL :455/414, 517

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 455/414, 517, 412, 456, 457; 340/905; 707/10; 379/67.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,579,535 A (ORLEN et al) 26 NOVEMBER 1996, figures 1, 6 and 7, col. 3, line 47 to col. 11, line 51	1-2, 4-5, 7-8, 11-13,, 15- 16, 18-19, 22-24, 26-29
Y	US 5,187,810 A (YONEYAMA et al) 16 FEBRUARY 1993, figure 2	1, 30, 41, 55
Y	US 4,812,843 A (CHAMPION, III et al) 14 MARCH 1989, figure 3	1-55
Y	US 5,321,737 A (PATSIOKAS) 14 JUNE 1994, figure 1.	1-55
Y	US 5,594,779 A (GOODMAN) 14 JANUARY 1997, figure 1	1-55

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	* & * document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

03 JUNE 2000

Date of mailing of the international search report

07 JUL 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

CHARLES APPIA

Telephone No. (703) 305-4772

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/08173

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,049,711 A (BEN-YEHEZKEL et al) 11 APRIL 2000, figure 1	1-55
Y,P	US 6,014,090 A (ROSEN et al) 11 JANUARY 2000, figure 1.	12, 13, 32, 39

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/08173

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

WEST AND EAST

search terms: (data or information) and (retrieval or request), location or position dependent, display, database and mobile or cellular