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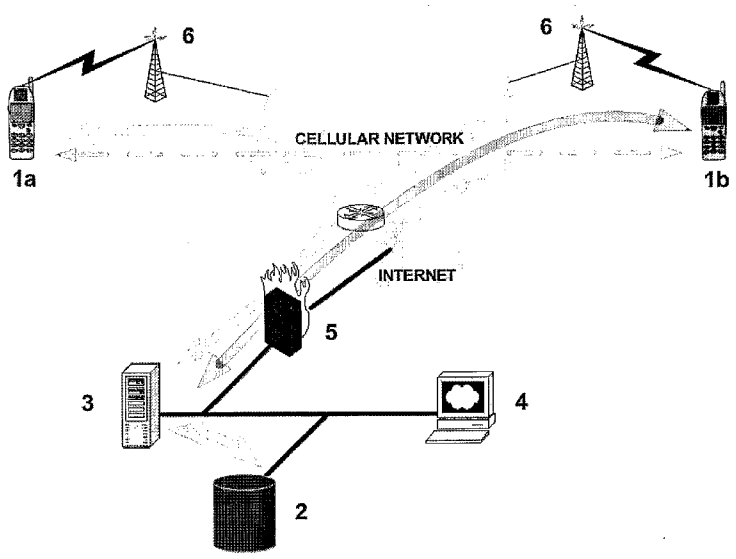
(54) Title: SYSTEM AND METHOD BASED ON MOBILE OR PORTABLE DEVICES FOR SEARCHING AND FINDING PEOPLE WITH COMMON OR MUTUAL INTERESTS



(57) Abstract: It comprises a computerized system prepared to allow matching people with similar interests or having any reasons to get in contact with using prefereably two-way telecommunication mobile or portable devices (1a, 1b) operating through a wireless communication network. (6) and including an application server (3) and an associated database (2), providing implementation of several quick search and classification strategies of users included in said database (2) got into touch along time or in a near future, and duly located at any time, using an anonymous and safe channel of communication.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

System and method based on mobile or portable devices for searching and finding people with common or mutual interests

Field of the invention

The present invention refers to a computerized system and to a method of matching people with similar interests or who have other reasons to get in contact with each other using preferebly two-way telecommunication mobile or portable devices (mobile phone, handset, or another kind of portable device with communication capability) through a wireless communication network.

Description of related art

US-A-5963951 discloses an on-line dating service wherein a database of subscriber information is searched to find at least one subscriber matching user search criteria. The users access the database by a telephone or a computer. The subscriber information includes a date of last updating of a personal profile by each subscriber and preferences of subscribers to the service. Personal preferences for a user are obtained as search criteria, including said personal preferences a gender preference; a geographic location preference; an age preference; appearance preferences; religious belief preferences; educational level preferences; and a goal preference. The database is repeatedly searched and the percentage match parameter reduced until at least a required number of matching records are found.

US-A-6542748 discloses a method and system for connecting closely located telecommunications units. The method and system may be used in a location aware telecommunications system that can determine the location of a telecommunications unit (TU) being used within the system. A user of a mobile telecommunications unit (MU) is connected to a TU when the MU is within a predetermined distance of a predetermined geographic location meeting predefined criteria. The TU to which the MU is connected may be automated or manually operated. In some embodiments, multiple MUs are connected when they are within a predetermined proximity to each other and a predefined criterion is met, being said criteria for some embodiments screening criteria responsive to user's profile information.

EP-A-1212910 discloses a mobile communications subscriber profile matching system including a wireless communications network and a method of initiating contact between two persons having a mobile unit operable on such a wireless communications network with a location capability, the method comprising the steps of storing a profile in the network for each

one of the two persons; tracking the location of the mobile unit of each one of the two persons using said location capability; comparing the profile of the two persons for similarities if the two persons are in the same location; and in the event of a similarity, sending a signal message to each one of the two persons, for example through a phone call or other communications method.

DE-A-10040948 describes a distributed system for matchmaking or dating service which provides information via personal mobile devices and allows direct or indirect communication. The system comprises respective personal mobile communication and computing devices (PMCCD), each one carried by a user, that can communicate wirelessly. Two users of a service who are located in a common environment are introduced to each other after a partner search and suitability test. Checks are made using a remote computer system (RPMMSU). The users are informed of 'hits' via their respective PMCCDs. The users are thus enabled to communicate directly or indirectly with each other.

WO-A-02/01405 relates to a people networking and locating system. The system allows users to locate people in transit with the same interests as them, or to find people who would satisfy a current need (e.g. a job vacancy). The system can make use of different services (such as those used through Internet, WAP, GPS, etc) and of devices (such as card readers) to respectively provide and update location information. Each user of the system provides a personal profile of their interests. The users may login to the system via an Internet access device or a mobile phone and search the database for compatible matches may be obtained from either the system database or other participating networking services (e.g. a dating agency). Any matches may be sent a text message in which the sender's anonymity is preserved.

BE-A-1014586 discloses a people matching system for e.g. dating or people with similar hobbies, based on mobile communication devices programmed with parameters of user and people user would like to meet. Subscribers to the system are provided with a special mobile communication device, into which they input parameters relating to themselves and to people they would like to meet. The parameters are supplied to the device via the internet or the subscriber can program in the parameters himself or herself. If two subscribers with matching parameters come into close proximity with each other when carrying the devices, they will receive a message to alert them to this fact. The subscribers can then contact each other by e.g. looking around, telephoning or sending a text message (SMS).

GB-A-2388493 relates to a location-based computerised dating or matchmaking service, based on location-specific information from mobile access devices (such as mobile phones and PDAs), which may be cross-referenced against pre-registered subscriber demographics and preferences stored in a central repository, and implemented via messaging and related services though the medium of mobile access devices. This may include the use of GPS location-specific

information, but may also be implemented though the use of location-specific installed sensors utilising Bluetooth, Infrared or similar short-range communications to identify potential partners within a specified arena.

US-A-2004/0122810 describes a system and method for searching, finding and contacting dates on the Internet in instant messaging networks and/or in other methods that enable immediate finding and creating immediate contact. This system and method enables the user to search and find instantly compatible dates in instant messaging networks on the basis of attribute search or 1-way compatibility search or 2-way compatibility search, and to search either for potential dates that are currently Online or Offline. Users can be connected to the system through cellular devices and the search can be done to find someone who is fitting a certain criterion and is close to other users below a certain distance, which can be known from different ways.

None of the previous related art refers to the alternative solution proposed by the inventors, enabling improved dynamic management of all the interactions that can happen. The invention proposes an application module such as a server acting as a central unit, controlling a database with data about people to be matched, and allowing, along with the architecture of the system, that any user information data can at any given moment be updated with his/her last used profile or information, in spite of the access to said application module being done by several different means (a handheld wireless device, a mobile or cellular phone, a smartphone, a PDA with wireless communication capabilities, a computer or similar device connected to Internet, a digital television set, etc.)

Brief summary of the invention

The system according to this invention as a means for searching and finding people comprises a plurality of user-associated telecommunication mobile or portable devices (preferably two-way), in the following UATWT mobile or portable devices, providing and having communication capabilities, including:

one or more programs or part of a program or programs, allowing composing and sending search requests or messages;

storage means including at least said one program, and data used by said one program;

output means to inform user (a display, an acoustical device, or an output signal to an external display, acoustical device or printer)

input means (keyboard, touch screen or voice-recognition device);

The system also comprises, in combination with said set of UATWT mobile or portable devices:

- a database (even more than one database or parts of a database can be used) containing a set of user-associated registers, each user having at least one user-associated register providing a user data information; said user data information containing at least the following information elements: user ID, user phone number or unique device identification number, and user location information at a given moment; said information elements being made up of one or more fields; and
- one application module (even more that one application module or parts of a application module can be used) having communication capabilities and accessible to the users through a telecommunication network comprising at least a mobile phone network, the Internet or any other network of computers, said application module having access to said database and managing it including at least:

  - updating and storing in said database at least one field of said information elements of said user data information each time a user interacts with said application module sending a search request and/or sending a request through said UATWT mobile or portable device, or by other means having communication capabilities.

By other means it is intended to cover the access to referred application module being done by several different means (a handheld wireless device, a mobile or cellular phone, a smartphone, a PDA with wireless communication capabilities, a computer or similar device connected to Internet, a digital television set, etc).

As per one aspect of the invention said UATWT mobile or portable devices are further adapted to update and store at least part of said at least one field of said set of information elements of said user data information updated and stored in the database.

According to the invention each user can have more than one user-associated register but in any case the user-associated register or registers provide what will be termed as user data information.

In more detail, the application module further has communication capabilities and is accessible to the users through a telecommunication network comprising at least a mobile phone network, the Internet or any other network of computers (intranet, Internet or other similar networks). The application module manages communications with and between users including at least:

- receiving search requests from said UATWT mobile or portable devices composed using said at least one program resident in said UATWT mobile or portable device, and/or receiving search requests from said other means;

- performing a query or set of queries to the database and returning a list of found people with common or mutual interests and information associated thereof, in response to a received search request;
- in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carrying out a check for availability or existence of access control information;
- providing anonymous communication between the users; and
- providing information stored or to be stored in at least one field of said user location information of the users of said database or of said UATWT mobile or portable device.

In a particular embodiment said UATWT mobile or portable device is further adapted to receive information and/or measure signal characteristics of a signal received from a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source, in order to be used to obtain user location information.

The measurement of signal characteristics embodies the measurament of the signal power and/or timing information.

Said UATWT mobile or portable device is further adapted to include a short range radio system or device (like Bluetooth, WiFi, UWB, ZigBee, etc), or have a short range radio system or device connected to it.

The referred anonymous communication will include text messages communication that could be SMS, MMS, SMS/MMS premium, EMS, email, etc.

The method of this invention making use of the application module and arquitecture previously disclosed, manages communication among users comprising the following basic steps:

- receive search requests from said UATWT mobile or portable devices composed using said at least one program resident in said UATWT mobile or portable device;
- perform a query or set of queries to the database and return a list of found people with common or mutual interests and information associated thereof, in response to a received search request;
- in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carry out a check for availability or existence of access control information;
- provide anonymous communication between the users; and
- provide at least one field of said user location information of the users.

In addition it is also performed the sign-up and register process of new users, the removal process of a user from the system, etc.

Brief description of the drawings

Other advantages and features of the invention are further described in the detailed description that follows, in reference to the drawings by way of non-limiting examples of certain embodiments of the present invention.

The figures show:

Fig. 1 is a diagram representing the system of the present invention for an embodiment, being the situation shown indicative of the establishment of a communication between two mobiles by using the principles of this invention, and

Fig. 2 is another diagram representing the system of the present invention for the same embodiment of Fig.1, but showing a different situation, when two users communicate with an application module or server in order to establish a condition allowing a communication among them. In addition Fig. 2 also show different means a user can use to access the application module, and create, view or modify its user data information.

Detailed description

As per the embodiment of Fig. 1 the system based on UATWT mobile or portable devices for searching and finding people comprises:

- a plurality of UATWT mobile or portable devices 1a, 1b, providing means for searching and finding people and having communication capabilities, including:
  - one or more programs or parts of programs thereof allowing to compose and send search requests or other requests, compose and send messages, receive search request responses, receive request confirmations or responses and receive messages,
  - storage means including said one program, and data used by said one program;
  - output means to inform user;
  - input means;
- a database 2 containing a set of user-associated registers, and
- one application module 3 or application server having communication capabilities and accessible directly or through another server (web server 4 or firewall 5) or set of servers (groups of web servers 4 and firewalls 5) to the users using a telecommunication network comprising at least a mobile phone network, the Internet or any other network of computers.

In spite of the particular illustration of the drawings, the UATWT mobile or portable devices 1a, 1b, are any of a handheld wireless device, a wireless telephone, a mobile or cellular phone, a wireless Personal Communications System (PCS), a smartphone or a PDA with wireless

communication capabilities and can include a short range radio system or device integrated on or connected to it.

Both said application module and database can be constituted by several interrelated submodules which at the same time can be integrated in at least one server. In an alternative solution said application submodules are integrated in at least one server, and said database or said database submodules are integrated in at least one server.

The cited output means to inform user comprises one or any combination of the following devices:

- at least one display,
- at least one acoustical device,
- at least one output signal to an external display, acoustical device or printer.

In the Figs. a web server 4 or server on the Internet that hosts web pages has been pictured connected to the application module 3. This server 4 can act as Front End to the system and pass a request to the application module 3 to be processed by it.

Firewall 5 provides a barrier between networks that prevents or denies unwanted or unauthorized traffic, allowing connecting a trusted network (on the side of the application module 3) and an untrusted network in a more secure mode.

The application module performs the following tasks:

- updating and storing in said database, at least one field of said information elements of said user data information, each time a user interacts as a sender with said application module sending a search request, and/or sending a request through said UATWT mobile or portable device, or by other means previously mentioned, having communication capabilities.
- managing communications with and between users including at least:
  - receiving search requests from said UATWT mobile or portable devices, composed using said at least one program resident in said UATWT mobile or portable devices, and/or receiving search requests from said other means;
  - performing a query or set of queries to the database, and returning a list of found people with common or mutual interests and information associated thereof, in response to a received search request;
  - in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carrying out a check for availability or existence of access control information;
  - providing anonymous communication between the users; and
  - providing information stored or to be stored in at least one field of said user location information of the users of said database or of said UATWT mobile or portable device.

The invention foresees the use of a location provider center interacting with said application module, in order to supply information about said at least one field of said user location information to be updated.

According to the teaching of this invention, each user is given at least one user-associated register providing a user data information, and said user data information contains at least the following information elements: user ID, user phone number or unique device identification number, and user location information at a given moment; These information elements are made up of one or more fields.

The cited user data information can further comprise one or any combination of the following information elements:

- user password,
- security phrase and answer,
- user email address,
- user age or birth date,
- user gender,
- pointer or file name to retrieve user's photo or user's selected image,
- user personal description,
- user personality description,
- user interest description,
- user description of personal description of a person to look for,
- user description of personality description of a person to look for,
- user description of interest description of a person to look for,
- kind of relationship user is interested in,
- user province and/or town and/or zip code.

In the present description and in order to better define the used terms, the following terminology will be used:

one or any combination of the following information elements:

- age range of the person to look for,
- gender of the person to look for,
- user description of personal description of a person to look for,
- user description of personality description of a person to look for,
- user description of interest description of a person to look for,
- kind of relationship user is looking for,
- location(user province and/or town and/or zip code, and/or area) and/or distance of a person to look for

will be termed as searching information, and

one or any combination of the following information elements:

- user age or birth date,
- user gender,
- user personal description,
- user personality description,
- user interest description,
- kind of relationship user is interested in,
- user province and/or town and/or zip code and/or user's location,

will be termed as user description information.

By personal description is meant information about elements of a group comprising one or any combination of the following elements: Physical appearance, height, weight, body type, hair colour, hair length and type, eyes colour, body art (ring, tattoo or piercing), ethnic origin, dressing style, nationality, languages spoken, marital status, number of children, wish for to have children, educational level, occupation, income, religion, political position, smoker, drinker, living alone or with other people or pets.

The term interest description embraces information about elements of a group comprising one or any combination of the following elements: favourite food, eating habits, hobbies, preferred places to go out, favourite type of music, favourite type of films and favourite sports.

The referred user data information further includes at least one list of messages, chosen from a group comprising one or any combination of the following lists of messages, or pointers to them:

- denied communication requests,
- sent communication requests,
- sent messages,
- received messages,
- deleted messages,
- draft messages,

and the system will also allow users to add, organize, rename and/or delete his/her own messages lists to user data information, and add, move, copy and/or organize the messages on the messages lists; the system will also allow the synchronization of messages lists, acccess and download selected messages, and send or receive the sent and received messages.

According to the invention referred, UATWT mobile or portable devices 1a, 1b are further adapted to update and store at least part of said at least one field of said set of information elements of said user data information updated and stored in the database.

The user location information at a given moment contains user's location, and/or time and/or date when said user's location was requested, stored in said UATWT mobile or portable

device or in said database, or received by said application module, said UATWT mobile or portable device or said database.

User's location will include in general one or more of the following types of location: geographical location, geographical area, base-station cell area, country, region, county, state, province, town, area code, zip code, neighbourhood, street, building, facility or address.

In the embodiment depictured in Fig. 1 the system has been simplified to include two mobiles 1a, 1b, each one associated to a respective user. The user of the mobile 1a on the left of Fig. 1 is connected through a base station 6 to a cellular network, and from it to said application module 3, through the Internet and a firewall 5. This application module 3 has access to database 2, so it can perform the actions described above when a user sends a search to the application module 3, apart from other tasks relating to said database access management, communications management, control of interactions between clients (users) and between client or user of mobiles 1a, 1b, and servers, the application module 3, or a web server 4 associated to it.

After receiving a search request and performing the actions described above, the application module 3 finds a convenient user with his/her mobile 1b according to the sent search request, and offers the possibility to communicate the user of the mobile 1a, anonymously, with the user of mobile 1b (on the right of Fig. 1), being said communication between mobiles 1a, 1b indicated by the dotted line of Fig. 1.

In Fig. 2 all the elements illustrated by Fig. 1 are represented except for the mobile 1b, due to the fact that Fig. 2 represents another situation different form the one shown in Fig, 1, although that using the system proposed for the same embodiment of Fig.1.

In this case, a user of a mobile 1a communicates with the application module 3 to perform the actions described with reference to Fig. 1, and to the web server 4 to perform managing actions, in order to manage data, creating, modifying, updating or just consulting his profile data; this data management is done by the user through said at least one program, a page on the Internet, a secure page on the Internet, or a special page adapted for mobile and portable devices, like a WAP page.

For the same purpose, i.e. for managing data, creating, modifying, updating or just consulting his profile data, a user of a computer 7 communicates with the web server 4, directly through the Internet and passing through said firewall 5; this data management is done by the user through a page on the Internet, a secure page on the Internet, or a user interface in computer 7.

According to an embodiment of the invention the data stored in the UATWT mobile or portable device 1a, 1b, are encrypted.

The system foresee to track a presence information of users through an external presence server alone or in combination with said application module that tracks the connections and

disconnections of said user to the system, and/or the communications with the system using said UATWT mobile or portable device, or said other means.

Presence information of a user will contain one or any combination of the following information elements:

- user connection status,
- user available communication methods,
- user availability schedule
- user's location;

wherein:

- user connection status can be connected, disconnected or busy;
- user availability schedule contains the days and time said user is available to receive any of said user available communication methods from other users or from the application module, and it will be provided by said user or by said presence server; if presence information of user is not obtained from a presence server, said application module will manage user presence and will provide at least the following procedures:
  - it will perform user authentication by checking user ID and password.
  - it will update user connection status if the application module receives communications from a user which user connection status was disconnected, verifying the authentication of said user and then setting said user connection status as connected.
  - if the application module does not succeed to communicate with a user that was connected, the application module will wait a certain time interval and will check again;
  - if after trying a certain number of times the application module still does not succeed to communicate with said user, the application module will increase the time interval and will wait and check again; if after increasing the time interval several times, said user is still busy, the application module will inform the system and/or the user that intended to establish the communication that the user is not connected or that said communication method is not working;
  - if the application module received communications from a user which user connection status is disconnected, the system will very the authentication of said user and then it will set said user connection status as connected;
  - in case the system cannot get a good track of the user due to the type of communication method said user is using, the system will consider the connection status of said as connected, if the system has received within a

certain time interval a search request, request and/or communication from said user, and the time is within said user available schedule.

In order to obtain user location information several strategies have been foreseen:

- in a first alternative, a location provider center interacting with said application module, is used in order to supply information about said at least one field of said user location information to be updated.
- in a second alternative the UATWT mobile or portable devices 1a,1b, are adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source;
- in a third alternative UATWT mobile or portable devices 1a, 1b have a connection to a device adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source, in order to be used to obtain said user location information;
- in a fourth alternative, said UATWT mobile or portable devices 1a, 1b are further adapted to receive at least a satellite signal by itself or from an external device connected to it; said satellite signals can be received from satellites like Global Positioning System (GPS) satellites, Galileo positioning system satellites, or GLONASS satellites.
- in a fifth alternative said UATWT mobile or portable devices 1a, 1b are further adapted to receive information and/or measure signal characteristics of at least a signal received from a short range radio system or devicesaid short range radio system or device is integrated on said UATWT mobile or portable device, or connected to it.
- in a sixth alternative the user of said UATWT mobile or portable devices 1a, 1b manualy introduces its user's location that is transmited to said application module and if necessary it is converted to another user's location format.

Different procedures will be used in the present system to obtain user's location using the received information and/or the measured signal characteristics, like obtaining the Cell ID, calculate the Time difference of arrival (TDOA), or calculate the angle of arrival (AOA).

The referred one program running on said UATWT mobile or portable devices 1a, 1b, offers to the user, when selecting a user contained on said list of found people, at least part of a group comprising one or any combination of the following information elements of said selected user:

- user ID;
- user province and/or town and/or zip code;

- distance between found people and user;
- user location information;
- user age, user date of birth, user horoscope and year of birth, user year of birth or users' age difference;
- user's photo or user's selected image;
- indication of the degree of matching between said user data information of the people on said list and said user data information of the user;
- user gender;
- user personal description;
- user personality description;
- user interest description;
- user description of personal description of a person to look for;
- user description of personality description of a person to look for;
- user description of interest description of a person to look for.

The cited program also includes means to sort out and/or filter said list of found people by any of said information elements, or by any field of said information elements according to user preferences.

Concerning the anonymous communication provided by the system, it will include one or any combination of the following types of communication means:

- text messages,
- chat communication,
- instant messaging communication,
- voice communication,
- video communication;

prepared and/or initiated and/or composed, at least in part, using said one program within said UATWT mobile or portable devices.

According to a particular embodiment of the invention part of said messages or communication means are encrypted.

The voice communication will be established with at least one of the following devices:

- another UATWT mobile or portable device.
- another UATWT mobile or portable device through a voice over Internet Protocol (VoIP) voice communication using Session Initiation Protocol (SIP) or similar protocol.
- a fixed telephone connected through public switched telephone network (PSTN)
- a fixed telephone connected through a plain old telephone service (POTS)
- a computer, a fixed or mobile device using VoIP voice communication using SIP or similar protocol.

- a fixed or mobile device using push-to-talk communication.

The voice communication could also be established with the application module, where it will be recorded and then could be retrieved by one of the previous devices.

Video communication will be established with at least one of the following devices:

- another UATWT mobile or portable device with video communication capabilities.
- another UATWT mobile or portable device through a Video over Internet Protocol video communication using Session Initiation Protocol (SIP) or similar protocol.
- a fixed telephone, computer, or mobile phone with video communication capabilities, or using Video over Internet Protocol video communication using Session Initiation Protocol (SIP) or similar protocol.

After being accepted by the selected recipient a voice and/or video communication an anonymous communication can be established using some of the following methods:

- the system will call both users and will connect them;
- both user will call the system and the system will connect them;
- the user who wants to start the communication will call the system and the system will call the selected recipient and will connect them;
- the selected recipients will call the system when he/she accepts the communication or when it is a suitable time for him/her, the system will call the user who wanted to start the communication and will connect them.

By using the system and method of the invention chat areas or rooms will be created to promote contacts between users who have common characteristics like being or living within a certain distance or area, have similar hobbies or interests, etc. Users will be able to create their own thematic rooms, and invite other users. These chat rooms will be reviewed, controlled and managed by the application module.

The program or programs stored in the UATWT mobile or portable device offers users at least one people classification list to classify found or contacted people, chosen from a group comprising one or any combination of the following people classification lists:

- favourite list (list of preferred users),
- black list (list of users from whom no communication is wanted),
- white list (list of users allowed to have communication with);

said people classification lists being included in said user data information stored in said UATWT mobile or portable device and/or stored in said database.

The system further allows a user to specify a default communication option, to define whether the system should automatically allow, ask or deny communication with people not included on any of the people classification lists, and wherein said default communication option is stored in said database, and/or is stored in said UATWT mobile or portable device.

The system will allow a user to give some score value to the users that he/she adds to his/her person classification list. Said score value will allow the user to sort his/her list. In addition said score value will allow the system to use it for example to:

- ban users that are on several black list and/or have several high negative score values on some black lists,
- give some special offer and/or prize to users that are on several white lists and/or have several high positive score values on some white lists.

Besides, a user will be able to check at any given moment if he/she has been included on one or more people classification list of other users. On a first request, the system will return to said user a reverse classification list of other users that have included him/her in their people classification list. Additionally it can be specified on said reverse classification list which kind of list said user has been included.

A user will be also notified at a given moment that he/she has been added to other user's people classification list, offering him/her links or buttons intended for several actions.

Said several actions, could be:

- add one or more of said other users to some of the user people classification list,
- start the user an anonymous communication with one or more of said other users,
- access to more detailed information of one or more of said other users,

The system can provide to a user the following different types of user lists:

- returned list of found people
- people classification list
- reverse classification list

Adjacent to each userID of said types of user lists, a group comprising one or any combination of the following elements could be added:

- one or more of the information elements of the user data information,
- one or more of the data obtained during the searching procedures,
- usage information and statistics,
- communication information and statistics,
- links or buttons intended for several actions,

said several action, could be:

- add said other users of a list, to some of the user people classification list,
- start the user án anonymous communication with one or more said other users of a list,
- access to more detailed information of one or more of said other users of a list,
- sort the list with descending or ascending order by selecting one or part, of one or more of the previously mentioned elements,

- update the information contained in the list;

the update of the information could also be done automatically by the system;

a user of said users list, or part of his/her information could be highlighted by using one or more of the following methods:

- use a special icon,
- use a different color for the text or the background,
- use a different text font,
- use a different text font style,
- use a different text font size,
- use a special icon,

said list may be implemented using any data structure known in the art, such as a linked list, sorted data array, heapsort data structure, and the like.

This invention also refers to a method for searching and finding people with common or mutual interests which is based on the use of:

- a plurality of UATWT mobile or portable devices 1a, 1b having communication capabilities,
- a database 2 containing a set of user-associated registers, and
- one application module 3 having communication capabilities and accessible to the users through a telecommunication network,

having the features and being interconnected among them as previously defined when describing the system, wherein said method, on the basis of said application module, manages communication with and between users comprising:

- receive search requests from said UATWT mobile or portable devices 1a, 1b composed using said at least one program resident in said UATWT mobile or portable device, and/or receiving search requests from said other means;
- perform a query or set of queries to the database 2 and return a list of found people with common or mutual interests and information associated thereof, in response to a received search request;
- in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carry out a check for availability or existence of access control information;
- provide anonymous communication between the users; and
- providing information stored or to be stored in at least one field of said user location information of the users, of said database or of said UATWT mobile or portable device.

According to the invention the referred user location information at a given moment contains user's location, and/or time and/or date when said user's location was requested, and is stored in said UATWT mobile or portable device or in said database, or received by said application module, said UATWT mobile or portable device or said database.

In an embodiment of the invention, the data stored in the UATWT mobile or portable device is encrypted.

According to another aspect of the proposed method of this invention at least part of said at least one field of the set of information elements of said user data information stored in the UATWT mobile or portable device, and at least one field of said set of information elements of said user data information stored in the database are synchronized, or their synchronization is offered to the user, if they are updated and stored in either said database or said mobile portable device.

Users will be able to create, use, view and modify and store in said UATWT mobile or portable device and/or in said database, a set of searching information for each different kind of search he/she has requested or wants to request.

The list of found people on the last search request will be stored in said UATWT mobile or portable device, and any user will be able to access it.

The inventors have foreseen the following synchronization cases and procedures:

a) Procedure wherein each time the user modifies and stores at least part of at least one field of said set of information elements of said user data information in the UATWT mobile or portable, said system notifies the user and/or synchronizes at least said at least part of said at least one field of said set of information elements of said user data information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

b) Procedure wherein each time the user modifies and stores at least part of at least one field of said set of information elements of said user data information in the UATWT mobile or portable device, said system notifies the user and/or offers the user the synchronization of at least said at least part of said at least one field of said set of information elements of said user data information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

c) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least part of at least one field of said set of information elements of said user data information in the UATWT mobile or portable device, said system notifies the user and/or synchronizes at least said at least part of said at least one field of said set of information elements of said user data

information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

d) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least part of at least one field of said set of information elements of said user data information in the UATWT mobile or portable device, said system notifies the user and/or offers the user the synchronization of at least said at least part of said at least one field of said set of information elements of said user data information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

e) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least part of at least one field of said set of information elements of said user data information related to the search request in the UATWT mobile or portable device, said system notifies the user and/or synchronizes at least said at least part of said at least one field of said set of information elements of said user data information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

f) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least part of at least one field of said set of information elements of said user data information related to the search request in the UATWT mobile or portable device, said system notifies the user and/or offers the user the synchronization of at least said at least part of said at least one field of said set of information elements of said user data information stored in the database with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the UATWT mobile or portable device.

g) Procedure wherein each time the user modifies and stores at least one field of said set of information elements of said user data information in the database through a telecommunication network, said system notifies the user and/or synchronizes at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

h) Procedure wherein each time the user modifies and stores at least one field of said set of information elements of said user data information in the database through a telecommunication network, said system notifies the user and/or offers the user the

synchronization of at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

i) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least one field of said set of information elements of said user data information in the database through a telecommunication network, said system notifies the user and synchronizes at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

j) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least one field of said set of information elements of said user data information in the database through a telecommunication network, said system notifies the user and offers the user the synchronization of at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

k) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least one field of said set of information elements of said user data information related to the search request in the database through a telecommunication network, said system notifies the user and synchronizes at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

l) Procedure wherein each time the user sends a search request or sends a request, if after the last search request it has not been synchronized and the user has modified and stored at least one field of said set of information elements of said user data information related to the search request in the database through a telecommunication network, said system notifies the user and offers the user the synchronization of at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device with said at least part of said at least one field of said set of information elements of said user data information modified and stored in the database.

A conflict during the synchronization occurs, if a synchronization is intended, when at least part of said at least one field of said set of information elements of said user data information stored in the database has been modified and no previous synchronization has been performed, and said at least part of said at least one field of said set of information elements of said user data information stored in the UATWT mobile or portable device, has also been modified and no previous synchronization has been performed.

In the following several procedures related to the calculation of a degree of matching between user data information of users A, and B (A being the user prompting a search request, and B a user found in the database that can be of significance) intended to be implemented within the described method are detailed.

As per a first procedure, said calculation of the indication of the degree of matching between said searching information and user description information of users A and B, respectively, comprises the following steps:

a) calculate the degree of direct matching (Md), calculating the matching between what user A has specified in his/her searching information and user B in his/her corresponding user description information;

b) calculate the degree of reverse matching (Mr), calculating the matching between what user B has specified in his/her searching information and user A in corresponding user description information;

c) after calculating the degree of direct matching (Md) and the degree of reverse matching (Mr), calculate the degree of matching (MD), multiplying a Direct matching coefficient factor (C_{Md}) by the degree of direct matching (Md), and adding the result of multiplying a Reverse matching coefficient factor (C_{Mr}) by the degree of reverse matching (Mr), as per the following formula:

$$MD=C_{Md}Md+C_{Mr}Mr$$

wherein in order to keep the data coherence the sum of both coefficient factors should be equal to one:

$$C_{Md}+C_{Mr}=1$$

Steps a) and b) above cited can be performed in any given order.

A special case of this formula will be when each coefficient factor is equal to ½; then the sum of matching will be the arithmetic mean of the average of the degree of direct matching and the degree of reverse matching. Another special case is when the degree of reverse matching is zero, and them the degree of direct matching is one; this special case will cause that the degree or matching (MD) will be equal to the degree of direct matching; degree of matching of A with B will be:

$$MD_{AB} = C_{Md}\, Md_{AB} + C_{Mr}\, Mr_{BA}$$

degree of matching of B with A will be:

$$MD_{BA} = C_{Md}\, Md_{BA} + C_{Mr}\, Mr_{AB}$$

the formulae to calculate the direct and reverse matching will be:

$Md_{AB} = Mr_{AB} \equiv DA_{AB}$ (degree of adjustment (DA) of A with B)

$Mr_{BA} = Md_{BA} \equiv DA_{BA}$ (degree of adjustment (DA) of B with A)

As explained before in the special case when each coefficient factor is equal to ½ the formulae will be:

$$\text{If } P_{Md} = P_{Mr} = 1/2 \rightarrow MD_{AB} = MD_{BA}$$

$$\text{If } P_{Md} \neq P_{Mr} \rightarrow MD_{AB} \neq MD_{BA}$$

As per a second procedure, said searching information and said user description information of users A and B, have been defined to contain the same kind of information, in order that when the degree of adjustment between the searching information of a user and the user description information of another user is calculated, the information elements contained on both said searching information and said user description information can be compared and checked the degree of resemblance among their information. In order to perform this task:

- each information element has its weight or degree of adjustment (We) that can have a default value defined by the system, or the user can specify them;
- each information element has its proximity weight (Wp), that should be less than one;

If the searching information and the user description information of both compared users do not contain the same information, the proximity weight (Wp) indicate in weight a degree of proximity.

The calculation of the degree of adjustment will be performed by comparing and determining the proximity of the information element of said searching information and the information element of said user description information and using previously described weight, as it is shown in the following formula:

$$DA = (\sum We_i + \sum We_j\, Wp_j) \;/\; \sum We_t$$

i information elements with same information

j information elements with close information

t information elements compared

In case some information being missing during said calculation of the indication of the degree of matching between said searching information and user description information of users A and B, respectively, because the user has not provided it or it is not available at the moment of

performing the calculation, one or a combination of the following solutions will be used during the comparison of information elements with no information:

a) considering the information as it is not important, and consider the comparison result as coincidence.

b) not including this information element on the calculation formula

c) considering the comparison result as no coincidence and apply the weight of no coincidence or the lowest degree of proximity.

A situation can occur when a user not having provided or having incompletely provided some information of some of the information elements of said searching description and/or said user description information. Under such a circumstance, the search method will be different depending on the information available on the information elements of said searching description and said user description information. The invention has considered the following cases and search procedures detailed in the following Table 1:

Table 1

<table>
<tr><td>Data of search user /found user</td><td>Found User Basic Data</td><td>Found User UPI</td><td>Found User SI</td><td>Found User UPI & SI</td></tr>
<tr><td>Search User Basic Data</td><td colspan="4">FastSearch</td></tr>
<tr><td>Search User UPI</td><td colspan="2">FastSearch</td><td>SemiFastSearch</td><td>SemiFastSearch</td></tr>
<tr><td>Search User SI</td><td>FastSearch</td><td>SemiFastSearch</td><td>FastSearch</td><td>SemiFastSearch</td></tr>
<tr><td>Search User UPI & SI</td><td>FastSearch</td><td>SemiFastSearch</td><td>FastSearch</td><td>DetailedSearch</td></tr>
</table>

Search User:The user who sent the search request

Found User: The user with information located on the database and search procedure under checking.

Basic Data: Does not have any information about any information element of User Personal Information or Searching Information

UPI: User Personal Information

SI: Searching Information

SU-UPI: Search User's User Personal Information

FU-UPI: Found User's User Personal Information

SU-SI: Search User's Searching Information

FU-SI: Found User's Searching Information

FastSearch is a search that will select users found in the database that their related information elements of their user data information match the information elements defined on the search request; i.e. gender, within age range, within location area and kind of relationship that a user is interested on. In the returned list any degree of matching indication will not be shown. DetailedSearch will only be possible to be performed when both users to be compared have filled their user personal information and searching information; said DetailedSearch selects users found in the database wherein their related information elements of their user data information match the excluding information elements defined on the search request, and then their degree or matching is calculated; therefore said list of found people will include the users with higher degree of matching.

In case the DetailedSearch does not return enough found users, the same process will be repeated after converting one of more of the excluding information elements to non-excluding information elements. This will be done until enough users are found, or there are not any excluding information to convert. Should be noted, that not all the excluding information elements can be converted to non-excluding. i.e if a user sends a search request searching to a woman for dating the system could never return a man on said list of found people. The system decides, depending on the search request, which information elements are excluding information elements, and which ones can or cannot be converted to non-excluding information elements, but user could also decide it and/or decide the weight values by using said one program. SemiFastSearch is a search similar to a DetailedSearch but that due to some lack of information on any of either users searching information or user personal information, only one part of the DetailedSearch can be done, and then only a partial degree of matching can be returned. An example of said SemiFastSearch will be the search performed by a user that only has said

searching information comparing with other users found in the database that at least have their user personal information.

By default the system will perform the search selecting users from the database that are connected, but a posible implementation can allow user to choose if he/she wants to search for connected and/or disconnected users; because some users may have stop using the service, although there have not unsubscribed, the system can filters and limit the disconnected users using their last connection date and time; the date and time limit is decided by the system, but but user could also decide it by using said one program.

Because the search procedure always returns all the users with higher degree of matching, the system will offer the user the opportunity to select if only the not already found and/or not contacted users appearing on the list.

Another search option will be to only perform the search selecting news users from the database, users that they have become users of the system since last time said user disconnected from the system or a period specified by the system or the user.

Another search option is that the user could choose if the search procedure should return a direct degree of matching, the reverse degree of matching, or the combination of both.

In some situations, the system or a user can decide to promote some events like meetings, parties, interviews, chat rooms, hobbies club activities, sports club activities or other similar activities to be offered to the user or to other users of the system. In these situatations the system will intend to create group of high compatibility, using the degree of compatibility between the users. Any of said meetings, parties, interviews, etc. cited can be real, involving a true meeting among users, or virtual conducted by instance trough a communication means, i.e. Internet duly protected under anonymous route.

In case a user of the system decided to start promoting the events, the process will began using his/her contacts (users from referred user's people classification list) and sending a search request with the required searching information related to the event. The returned list of found users will contain the X users with higher compatibility and said group of users will be added to the list created for said event. This process will be repeated and the X users with higher compatibility will be also added to the list created for said event, until the list has a desired number of users; the desired number of users of the list, and the number X could be defined by the user.

In case the promotion of the event being decided by the system, an ideal user description information and searching information will be created for the event; that ideal user could not be included on any list of found users; the same procedure described in the case of a user will be performed using said ideal user; once the list is created the created ideal user could be erased.

In the list of found people, an indication of the degree of connection among a user who performed a search request of the list and each of the given contacts could be added. With contact network will be termed the group of users included in said user people classification lists.

The procedure to calculate said degree of connection of contacts network will be as following:

1) Count the number of contact each users have of each of the following grades:

grade 0: user is already on the user contact network,

grade 1: contacts that are on both contacts networks,

grade 2: contacts of one contact network that can be connected to the other contacts networks using at least one contact node.

grade 3: contacts of one contact network that can be connected to the other contacts networks using at least two contact nodes

...

grade X: contacts of one contact network that can be connected to the other contacts networks using at least (X-1) contact nodes.

It is evident, that the relations with a degree higher than one, require the degree of connection information of other users, and therefore these users should be users of the system.

According to previous explanations, said degree of connection of contacts network will be calculated using the following formula:

$$\textbf{Degree of connection} = W_0 * N_0 + W_1 * N_1 + W_2 * N_2 + W_3 * N_3 + \ldots + W_X * N_X$$

Another formula that also could be used, to calculate the degree of connection of people that already are included on the other user contact network is as following:

$$\textbf{Degree of connection} = (1-N_0)(W_1 * N_1 + W_2 * N_2 + W_3 * N_3 + \ldots + W_X * N_X)$$

wherein in both formulae:

W_x is the weight for each grade, and it can have different value depending on the type of search and/or user preferences.

N_x is the number of contacts of each grade.

The degree of connection can refer to different type of user lists, like favourite list or other list. In order to unify it and identify the contacts with a unique userID by the system, the number of the mobile phone could be used. In this case, said one program after obtaining the permission from the user could retrieve the names and telephone numbers that are on the agenda of said user's telephone, and use them on the calculation of the degree of connection.

Another option will be calculate the degree of matching indicating which contact are wanted-contacts (positive weight) and unwanted-contacts (negative weight). Then a new Nx, for previous formulae, will be calculated using the following formula:

$$Nx = W_{x+} * N_{x+} - W_{x-} * N_{x-}$$

wherein

W_{x+} is the weight for wanted-contacts of degree "x"

N_{x+} Number of unwanted-contacts of degree "x"

W_{x-} is the weight for unwanted-contacts of degree "x"

N_{x-} Number of unwanted-contacts of degree "x"

The final positive or negative value of the degree of connection with the contact will depend on the positive or negative value of Ni and the weight for each grade (Wi).

In case for a same contact existing several relational paths with the same degree with different sign of the degree of connection, the path more often used will be chosen. In case both path are chosen the same number of times, it will be elected the path that have the same sign that the user has given to the contact of that path.

Another option will be to include the degree of connection in the formula to calculate the degree of matching:

$$\textbf{Total Degree of matching} = W_{MD}\ MD + W_{DC} * DC$$

wherein

W_{MD} in the weigh for the degree of matching.

MD is the degree of matching

W_{DC} is the weigh for the degree of connection.

DC is the degree of connection

As previously explained after receiving a search request the application module performs a query or set of queries to the database and returns a list of found people with common or mutual interests and information associated thereof. The users also will be able to perform an automatic search request. Users will be able to send an automatic search request and the system will return a found user or a list of found people when it will find a suitable user that matches the search request, for example and by way of non-limiting examples of certain embodiments of the present invention the system could inform the user when:

1- a user who search for friendship is within a certain distance of the user.

2- a user has a mutual matching higher than a certain value.

3- a specific user, or users that are in the user's people classification list are within a certain distance of the user.

4- a user has several of the search criteria defined on the automatic search request, like sex, age, kind of relationship user is interested on, height, weight, interests, hobbies, connection matching, own matching, his matching and the mutual matching.

5- a new user is within a certain distance of the user.

Said automatic search request will be stored in the database and the application module will perform an automatic search at least in the following cases:

- when the automatic search request is received;
- when a user gets connected,;
- when a user changes some of his/her descriptions;
- when there is a new user,
- when a user is within a certain distance of another user related with;
- after a user has seen the user data information.

According to the described method one or more automatic search requests can be stored in the cited database.

When the automatic search finds a suitable user or users, the system will inform the user who has sent the automatic search request and will return the found user or a list of found people who send the automatic search request, and/or will inform the found user or users. The user who sends the automatic search request could specify the days and times at which automatic search could be done.

The new found users will be highlighted, or the user could specify that only wants to receive new found users for each automatic search, so that the already found users are send again to the user on the returned found user or returned found users list.

Any user of the system and method here disclosed will be given access to part of other users data information in case of said other users being included in some of the user people classification lists, or in said list of found people. In addition to said part of other users data information available, links or buttons will be provided to the user intended for several actions. Thus any of said other users can be added to some of the user people classification list or an anonymous communication with one of said other users be started.

A list of common matches between said searching information and user description information of both user and other users is provided to said user. Moreover if it is available, a short text, voice and/or video of the other user describing himself/herself, his/her interests, what he/she is looking for and its description, or who he/she is looking for and his/her description is also provided.

Any user can, at any moment filter and restrict the information from his/her user data information that it is public, the information available to be shown to the users that are on his/her

people classification list depending on which people classification lists are they in, and the information that only will be shown to specific user when the user agree to do so. On said list of found people, or when the user wants to start an anonymous communication with other user, the system will inform him/her of the available communication methods to communicate with said other user, by taking into account the communication method available by the user who wants to start the communication and the communication method available by said other user.

One embodiment of the system will use SMS premium and/or MMS premium to send the search requests, and/or the requests and/or the messages of the user from said UATWT mobile or portable devices to said application module.

User will be able to check using said one program, the amount of messages and data having been sent and received, and the associated cost.

The system here described is especially suitable to be used by users to search other users for flirting, dating, friendships, perform some activity together. It further will help in contacting users to share similar or compatible interests, share hobbies, occupational, professional, religious or political interests, share a recent experience, share similar problems, cope against situations like illness or addictions,

CLAIMS

1.- System based on telecommunication mobile or portable devices for searching and finding people with common or mutual interests, comprising:

- a plurality of user-associated telecommunication (UATWT) mobile or portable devices providing means for searching and finding people and having communication capabilities, including:

  at least one program allowing to compose, send and receive search requests and messages;

  storage means including at least said one program, and data used by said at least one program;

  output means to inform user; and

  input means;

- a database containing a set of user-associated registers, each user having at least one user-associated register providing a user data information; said user data information containing at least the following information elements: user ID, user phone number or unique device identification number, and user location information at a given moment; said information elements being made up of one or more fields; and

- one application module having communication capabilities and accessible to the users through a telecommunication network comprising at least a mobile phone network, the Internet or any other network of computers, said application module having access to said database and managing it including at least:

  - updating and storing in said database at least one field of said information elements of said user data information each time a user interacts as a sender with said application module sending a search request and/or sending a request through said UATWT mobile or portable device, or by other means having communication capabilities;

  said application module further managing communications with and between users including at least:

  - receiving search requests from said UATWT mobile or portable devices composed using said at least one program resident in said UATWT mobile or portable devices, and/or receiving search requests from said other means;

  - performing a query or set of queries to the database and returning a list of found people with common or mutual interests and information associated thereof, in response to a received search request;

- in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carrying out a check for availability or existence of access control information;
- providing anonymous communication between the users; and
- providing information stored or to be stored in at least one field of said user location information of the users of said database or of said UATWT mobile or portable device;

wherein said UATWT mobile or portable devices are further adapted to update and store at least part of said at least one field of said set of information elements of said user data information updated and stored in the database;

and wherein said output means to inform user comprises at least one device chosen from a group comprising one or any combination of the following devices:

- at least one display,
- at least one acoustical device,
- at least one output signal to an external display, acoustical device or printer.

2.- System according to claim 1, wherein said user data information further comprises one or any combination of the following information elements:

- user password,
- security phrase and answer,
- user email address,
- user age or birth date,
- user gender,
- pointer or file name to retrieve user's photo or user's selected image,
- user personal description,
- user personality description,
- user interest description,
- user description of personal description of a person to look for,
- user description of personality description of a person to look for,
- user description of interest description of a person to look for,
- kind of relationship user is interested in,
- user province and/or town and/or zip code.

3.- System according to claim 1, wherein said user location information at a given moment contains user's location, and/or time and/or date when said user's location was requested, stored in said UATWT mobile or portable device or in said database, or received by said application module, said UATWT mobile or portable device or said database, said user's location including at least one of the following types of location: geographical location,

geographical area, base-station cell area, country, region, county, state, province, town, area code, zip code, neighbourhood, street, building, facility or address.

4- System according to claim 1, wherein it further includes

an external presence server intended to track a presence information of a user by using, or by tracking with said application module the connections and disconnections of said user to the system, and/or the communications with the system using said UATWT mobile or portable device, or said other means and wherein said presence information of a user will contain one or any combination of the following information elements:

- user connection status,
- user available communication methods,
- user availability schedule
- user's location.

5.- System according to claim 1, wherein said UATWT mobile or portable device is any of a handheld wireless device, a wireless telephone, a mobile or cellular phone, a wireless Personal Communications System (PCS), a smartphone or a PDA with wireless communication capabilities.

6.- System according to claim 1, wherein said UATWT mobile or portable device includes a short range radio system or device integrated on or connected to it.

7.- System according to claim 1, wherein said application module is constituted by several application submodules.

8.- System according to claim 1, wherein said database is constituted by several database submodules.

9.- System according to claim 7 or 8, wherein said application module or said application submodules, and said database or said database submodules are integrated in at least one server.

10.- System according to claim 7 or 8, wherein said application module or said application submodules are integrated in at least one server, and said database or said database submodules are integrated in at least one server.

11.- System according to claim 1, wherein data stored in the UATWT mobile or portable device are encrypted.

12.- System according to claim 3, wherein said at least one field that is updated and stored in said database is a field of said user location information.

13.- System according to claim 12, wherein it comprises a location provider center interacting with said application module in order to supply information about said at least one field of said user location information to be updated.

14.- System according to claim 12, wherein said UATWT mobile or portable device is further adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source, in order to be used to obtain said user location information.

15.- System according to claim 12, wherein said UATWT mobile or portable device has a connection to a device adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source, in order to be used to obtain said user location information.

16.- System according to claim 12, wherein said UATWT mobile or portable device is further adapted to receive at least a satellite signal by itself or from an external device connected to it, in order to be used to obtain said user location information.

17.- System according to claim 12, wherein said UATWT mobile or portable device is further adapted to receive information and/or measure signal characteristics of at least a signal received from a short range radio system or devicein order to be used to obtain said user location information; said short range radio system or device is integrated on said UATWT mobile or portable device, or connected to it.

18.- System according to claim 1, wherein said at least one program offers to the user, when selecting a user contained on said list of found people, at least part of a group comprising one or any combination of the following information elements of said selected user:

- user ID;
- user province and/or town and/or zip code;
- distance between found people and user;
- user location information;
- user age, user date of birth, user horoscope and year of birth, user year of birth or users' age difference;
- user's photo or user's selected image;
- indication of the degree of matching between said user data information of the people on said list and said user data information of the user;
- user gender;
- user personal description;
- user personality description;
- user interest description;
- user description of personal description of a person to look for;
- user description of personality description of a person to look for;

- user description of interest description of a person to look for.

19.- System according to claim 18, wherein it includes means to sort out and/or filter said list of found people by any of said information elements or by any field of said information elements according to user preferences.

20.- System according to claim 1, wherein said anonymous communication includes one or any combination of the following types of communication means:

- text messages,
- chat communication,
- instant messaging communication,
- voice communication,
- video communication.

21.- System according to claim 20, wherein said messages or communication means are prepared using said at least one program within said UATWT mobile or portable device.

22.- System according to claim 20 or 21, wherein at least part of said messages or communication means are encrypted.

23.- System according to claim 2, wherein said at least one program offers user at least one people classification list to classify found or contacted people, chosen from a group comprising one or any combination of the following people classification lists:

- favourite list (list of preferred users),
- black list (list of users from whom no communication is wanted),
- white list (list of users allowed to have communication with);

and wherein said user data information stored in said UATWT mobile or portable device and/or stored in said database further includes at least part of at least one list of said people classification lists.

24.- System according to claim 23, wherein it further allows a user to specify a default communication option, to define whether the system should automatically allow, ask or deny communication with people not included on any of the people classification lists, and wherein said default communication option is stored in said database, and/or is stored in said UATWT mobile or portable device.

25.- System according to claim 24, wherein said user data information further includes at least one list of messages chosen from a group comprising one or any combination of the following lists of messages, or pointers to them:

- denied communication requests,
- sent communication requests,
- sent messages,

- received messages,
- deleted messages,
- draft messages,

and the system will also allow users to add, organize, rename and/or delete his/her own messages lists to user data information, and add, move, copy and/or organize the messages on the messages lists; the system will also allow the synchronization of messages lists, acccess and download selected messages, and send or receive the sent and received messages.

26.- System according to any of the previous claims wherein telecommunication mobile or portable devices for searching and finding people are of two-way telecommunication devices.

27.- Method for searching and finding people with common or mutual interests using the following elements:

- a plurality of UATWT mobile or portable devices having communication capabilities, including:

  at least one program allowing to compose and send search requests and messages;

  storage means including at least said one program, and data used by said at least one program;

  output means to inform user;

  input means;

- a database containing a set of user-associated registers, each user having at least one user-associated register providing a user data information; said user data information containing at least the following information elements: user ID, user phone number or unique device identification number, and user location information at a given moment; said information elements being made up of one or more fields; and
- one application module having communication capabilities and accessible to the users through a telecommunication network comprising at least a mobile phone network, the Internet or any other network of computers, said application module having access to said database and managing it including at least:

  - updating and storing in said database at least one field of said information elements of said user data information each time a user or interacts as a sender with said application module sending a search request and/or sending a request through said UATWT mobile or portable device, or by other means having communication capabilities;

wherein said method, on the basis of said application module, manages communication with and among users comprising:

- receive search requests from said UATWT mobile or portable devices composed using said at least one program resident in said UATWT mobile or portable device, and/or receiving search requests from said other means;

- perform a query or set of queries to the database and return a list of found people with common or mutual interests and information associated thereof, in response to a received search request;

- in response to any received request including a petition to communicate through the system with any found people selected from said list of found people, carry out a check for availability or existence of access control information;

- provide anonymous communication between the users; and

- providing information stored or to be stored in at least one field of said user location information of the users of said database or of said UATWT mobile or portable device.

28.- Method according to claim 27, wherein said user data information further comprises one or any combination of the following information elements:

- user password,
- security phrase and answer,
- user email address,
- user age or birth date,
- user gender,
- pointer or file name to retrieve user's photo or user's selected image,
- user personal description,
- user personality description,
- user interest description,
- user description of personal description of a person to look for,
- user description of personality description of a person to look for,
- user description of interest description of a person to look for,
- kind of relationship user is interested in,
- user province and/or town and/or zip code,

wherein at least one or any combination of the following information elements:

- age range of the person to look for,
- gender of the person to look for,
- user description of personal description of a person to look for,
- user description of personality description of a person to look for,
- user description of interest description of a person to look for,
- kind of relationship user is looking for,

- location(user province and/or town and/or zip code, and/or area) and/or distance of a person to look for

are defined as searching information, and

wherein at least one or any combination of the following information elements:

- user age or birth date,
- user gender,
- user personal description,
- user personality description,
- user interest description,
- kind of relationship user is interested in,
- user province and/or town and/or zip code and/or user's location,

are defined as user description information.

29.- Method according to claim 27, wherein said user location information at a given moment contains user's location, and/or time and/or date when said user's location was requested, stored in said UATWT mobile or portable device or in said database, or received by said application module, said UATWT mobile or portable device or said database, said user's location including at least one of the following types of location: geographical location, geographical area, base-station cell area, country, region, county, state, province, town, area code, zip code, neighbourhood, street, building, facility or address.

30.- Method according to claim 29, wherein it will further track a presence information of a user by using an external presence server, or by tracking with said application module the connections and disconnections of said user to the system, and/or the communications with the system using said UATWT mobile or portable device, or said other means; presence information of a user will contain one or any combination of the following information elements:

- user connection status,
- user available communication methods,
- user availability schedule
- user's location;

and wherein:

user connection status can be connected, disconnected or busy;

and wherein:

user availability schedule contains the days and time said user is available to receive any of said user available communication methods from other users or from the application module, and it will be provided by said user or by said presence server; if presence information of user is not obtained from a presence server, said application module will manage user presence and will provide at least the following procedures:

- it will perform user authentication by checking user ID and password.
- it will update user connection status if the application module receives communications from a user which user connection status was disconnected, verifying the authentication of said user and then setting said user connection status as connected.
- if the application module does not succeed to communicate with a user that was connected, the application module will wait a certain time interval and will check again; if after trying a certain number of times the application module still does not succeed to communicate with said user, the application module will increase the time interval and will wait and check again; if after increasing the time interval several times, said user is still busy, the application module will inform the system and/or the user that intended to establish the communication that the user is not connected or that said communication method is not working;
- if the application module received communications from a user which user connection status is disconnected, the system will very the authentication of said user and then it will set said user connection status as connected;
- in case the system cannot get a good track of the user due to the type of communication method said user is using, the system will consider the connection status of said as connected, if the system has received within a certain time interval a search request, request and/or communication from said user, and the time is within said user available schedule.

31.- Method according to claim 27 wherein in some situations, the system or a user can decide to promote some events like meetings, parties, interviews, chat rooms, hobbies club activities, sports club activities or other similar activities to be offered to the user or to other users of the system intending to create in these situatations by means of the system, a group of high compatibility, using the degree of compatibility between the users.

32.- Method according to claim 31 wherein any of said meetings, parties, interviews, etc. cited can be real, involving a true meeting among users, or virtual conducted by instance trough a communication means, i.e. Internet duly protected under anonymous route.

33.- Method according to claim 27, wherein data stored in the UATWT mobile or portable device is encrypted.

34.- Method according to claim 27, wherein users create, use, view and modify and store in said UATWT mobile or portable device and/or in said database, a set of one or more searching information for each different kind of search he/she has requested or wants to request.

35.- Method according to claim 27, wherein at least part of said user data information stored in the UATWT mobile or portable device is synchronized with at least part of the user data

information stored in the database by using one or a combination of the following communication means:

- text or data messages between the UATWT mobile or portable device and the application module;

-GSM, EDGE, GPRS, UMTS or other mobile communication data connection between the UATWT mobile or portable device and the application module;

- data connection between the UATWT mobile or portable device and the application module through a network connection provided by an external device connected to said UATWT mobile or portable device by a wired connection or by using said short range radio system or device included or connected to said UATWT mobile or portable device.

36.- Method according to claim 34, wherein said at least part of said user data information stored in the UATWT mobile or portable device, and said at least user data information stored in the database are synchronized, or their synchronization is offered to the user, when they are updated and stored in either said database or said mobile portable device, or in the case of a lack of information at either one of said UATWT mobile or portable device or database.

37.- Method according to claim 36, wherein when there is a conflict during the synchronization of said at least one field of said set of information elements of said user data information stored in the database and in the UATWT mobile or portable device, said system notifies the user and/or synchronize using said at least one field that was last updated and stored.

38.- Method according to claim 36, wherein when there is a conflict during the synchronization of said at least one field of said set of information elements of said user data information stored in the database and in the UATWT mobile or portable device, said system notifies the user and offers the user the synchronization using said at least one field stored in the database or in the UATWT mobile or portable device.

39.- Method according to claim 32, wherein said at least one field that is updated and stored in said database is a field of said user location information.

40.- Method according to claim 39, wherein said user location information of a user is obtained through a location provider center and it is stored in said database under control of said application module.

41.- Method according to claim 40, wherein said user location information of a user is determined by said UATWT mobile or portable device of the user through information and/or signal characteristic measures of at least a signal received by said UATWT mobile or portable device from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source; the determined user location information is sent to

the application module, is stored in said database and is stored in said UATWT mobile or portable device.

42.- Method according to claim 39, wherein user location information of a user is determined by said UATWT mobile or portable device of the user through information and/or signal characteristic measures of the signals received from a connected device adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source; the determined user location information is sent to the application module, is stored in said database and is stored in said UATWT mobile or portable device.

43.- Method according to claim 39, wherein user location information of a user is determined by a connected device adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source; the determined user location information is sent to said mobile and portable device; the user location information is sent to the application module by the mobile and portable device, is stored in said database and/or is stored in said UATWT mobile or portable device.

44.- Method according to claim 33, wherein user location information of a user is determined by the application module through information and/or signal characteristic measures of at least a signal received by said UATWT mobile or portable device of the user from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source; said information and/or signal characteristic measures are sent to the application module; the determined user location information and/or said information and/or signal characteristic measures are stored in said database, and/or are stored in said UATWT mobile or portable device.

45.- Method according to claim 39, wherein user location information of a user is determined by the application module through information and/or signal characteristic measures of the signals received by said UATWT mobile or portable device of the user from a device adapted to receive information and/or measure signal characteristics of at least a signal received from at least a nearby cellular base station, at least a nearby UATWT mobile or portable device, or other nearby signal emiting source; said information and/or signal characteristic measures are sent to the application module; the determined user location information and/or said information and/or signal characteristic measures are stored in said database, and/or are stored in said UATWT mobile or portable device.

46.- Method according to claim 39, wherein user location information of a user is determined through at least a satellite signal received by said UATWT mobile or portable device

of the user or by an external device connected to it, and the determined user location information is sent to the application module, it is stored in the database and/or is stored in said UATWT mobile or portable device.

47.- Method according to claim 39, wherein user location information of a user is determined by said UATWT mobile or portable device of the user, through information and/or signal characteristic measures of at least a signal received by said UATWT mobile or portable device of the user further using a short range radio system or device, and the determined user location information is sent to the application module, is stored in said database and/or is stored in said UATWT mobile or portable device; said short range radio system or device is integrated on said UATWT mobile or portable device, or connected to it.

48.- Method according to claim 39, wherein user location information of a user is determined by the application module through information and/or signal characteristic measures of at least a signal received by said UATWT mobile or portable device of the user further using a short range radio system or device, and said information and/or signal characteristics are sent to the application module and/or stored in said UATWT mobile or portable device and/or stored in said database; the determined user location information is stored in said database; said short range radio system or device is integrated on said UATWT mobile or portable device, or connected to it.

49.- Method according to claim 39, wherein user location information of a user is determined by the application module through the user's location that is manualy introduced by the user by means of said at least one program resident in said UATWT mobile or portable device, and received by the application module and wherein if it is necessary said received user's location is converted to another user's location format and will be stored in said UATWT mobile or portable device and/or stored in said database.

50.- Method according to claim 39 to 49, wherein said user location information of a user is obtained by using a combination of two or more of the methods detailed in previous claims 40 to 49.

51.- Method according to claim 40 wherein said user location information of a user is obtained at least on one of the following cases:

- when the user is logged on or connected to the system;
- each time the user sends a search request;
- each time the user sends a request;
- at certain time intervals and it is sent to the application module when the user's location is different from a previous or last stored user's location; when the user's location has not changed for a certain time, the user location information or a notification message is sent to

the application module to inform that the user's location stored on the system is correct and has not changed;

- at certain time intervals the application module queries the UATWT mobile or portable device, or said location provider center, to retrieve its present location and store it on the system.
- each time a predetermined movement (change of position) is detected, so that each UATWT mobile or portable device of a user counts the number of boundary crossings between cells and updates user location information when this number reaches a predefined value;
- in case of a displacement, on a distance based frame, so that each portable or mobile device of a user tracks the distance it has moved since the last update and updates the user location information when the distance reaches a predefined value.

52.- Method according to claim 27, wherein the information of each user contained on said list of found people comprises at least part of a group comprising one or any combination of the following information elements:

- user ID;
- user province and/or town and/or zip code;
- distance between found people and user;
- user location information;
- user age, user date of birth, user horoscope and year of birth, user year of birth or users' age difference;
- user's photo or user's selected image;
- indication of the degree of matching between said user data information of the people on said list and said user data information of the user;
- user gender;
- user personal description;
- user personality description;
- user interest description;
- user description of personal description of a person to look for;
- user description of personality description of a person to look for;
- user description of interest description of a person to look for.

53.- Method according to claim 50, wherein it includes means to sort out said list of found people by any of said information elements or by any field of said information elements according to user preferences.

54.- Method according to claim 27, wherein said at least one program offers to user the list of people found on a last search request.

55.- Method according to claim 27, wherein said anonymous communication is established using messages created by said at least one program of the UATWT mobile or portable device of a user, and comprising at least a user ID of a selected person of interest or recipient;

said messages are sent to the application module;

the application module on receipt of a message, gets the recipient's user ID and the sender's phone number or unique device identification number ; and

a new message is prepared by the application module having the contents of the received message, replacing the recipient's user ID by the sender's user ID, and said message is sent to said recipient after obtaining the recipient's phone number or unique device identification number and the sender's user ID from the application module or the database by using the recipient's user ID and the sender's phone number or unique device identification number.

56.- Method according to claim 27, wherein one or any combination of the following types of anonymous communication means are offered to the user in order to enable him to contact the selected person:

- text messages,
- chat communication,
- instant messaging communication,
- voice communication,
- video communication.

57.- Method according to claim 56, wherein said messages or communication means are prepared using said at least one program within said UATWT mobile or portable device.

58- System according to claim 56 or 57, wherein said messages or communication means are encrypted.

59.- Method according to claim 55 or 56, wherein once a user wants to start a communication, said at least one program will inform the application module about a selected recipient and kind of communication proposed, and the application module will notify the selected person that a user intends to communicate with him/her and the type of communication means, and if the selected recipient accepts, an anonymous communication will be established under control of the application module; if on the contrary the selected user prefers to establish the communication at another time, the system will propose the new time to the user and if it is suitable for the user the communication will be scheduled for that specific time specified by the selected person.

60.- Method according to claim 27 wherein if all devices involved in the communication support a Session Initiation Protocol (SIP), communication negotiations will be established by using the Session Initiation Protocol (SIP) to select a medium (text, voice, video, or any of said

communications means), a transport (a Real Time Protocol (RTP) for real time communications), an encoding (voice and/or video codec to be used), to provide the communication signalling, to indicate the disconnection when the communication is finished by any party, and/or to provide user registration, authentication and/or presence.

61.- Method according to claim 59, wherein if presence information of a user is available, the system will check it and will perform accordingly at any given moment that the system intends to communicate with said user, or intends to notify said user that another user intends to communicate with him/her, as bellow described:

- if said user is connected, the application module will intend the communication according to claim 59
- if said user is disconnected but it is currently within said user availability schedule, the application module will intend the communication according to claim 59
- if said user is disconnected and it is not currently within said user availability schedule, the application module will not intend the communication according to claim 59, until said user is connected or it is within said user availability schedule.
- if said user is busy, the application module will wait until said user connection status change.

62.-Method according to claim 27 wherein users are allowed to send messages and/or communication requests with a receipt and/or open confirmation flags so that the sender will be informed when the selected recipient has received and/or has opened said messages and/or communication requests.

63.- Method according to claim 27, wherein said at least one program offers user at least one people classification list to classify found or contacted people, chosen from a group comprising one or any combination of the following people classification lists:

- favourite list (list of preferred users);
- black list (list of users from whom no communication is wanted);
- white list (list of users allowed/approved to have communication with); and

wherein said user data information stored in said UATWT mobile or portable device and/or stored in said database further includes at least part of at least one list of said people classification lists.

64.- Method according to claim 62, wherein it further allows a user to specify a default communication option, to define if the system should automatically allow, ask or deny communication with people not included on any of said people classification lists, and wherein said default communication option is stored in said database, and/or is stored in said UATWT mobile or portable device.

65.- Method according to claim 63, wherein said user data information further includes at least one list of messages chosen from a group comprising one or any combination of the following lists of messages, or pointers to them:

- denied communication requests,
- sent communication requests,
- sent messages,
- received messages,
- deleted messages,
- draft messages.

and the system will also allow users to add, organize, rename and/or delete his/her own messages lists to user data information, and add, move, copy and/or organize the messages on the messages lists; the system will also allow the synchronization of messages lists, acccess and download selected messages, and send or receive the sent and received messages.

66.- Method according to claim 63, wherein the application module checks said people classification lists defined by the recipient, and automatically decides to allow the communication if a sender is on said favourite list or on said white list of the recipient, or decides to deny the communication if the sender is on said black list of the recipient, and if said sender is not included on any of said people classification lists of the recipient, said default communication option defined by the recipient is checked and executed.

67.- Method according to claim 65 and 66, wherein in case the communication being denied, the application module stores the sender communication request in said denied communication request list of the recipient, and informs the sender that the communication request has been denied.

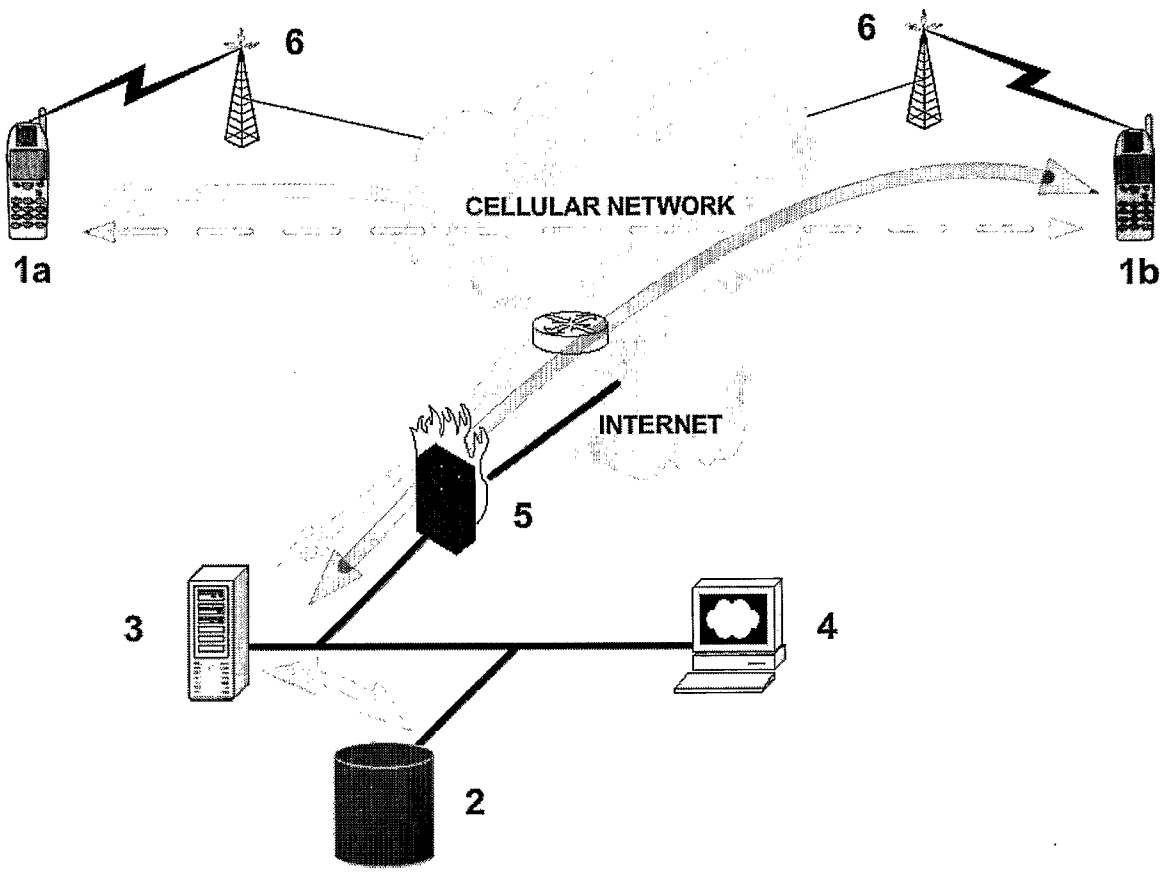

Fig. 1

5

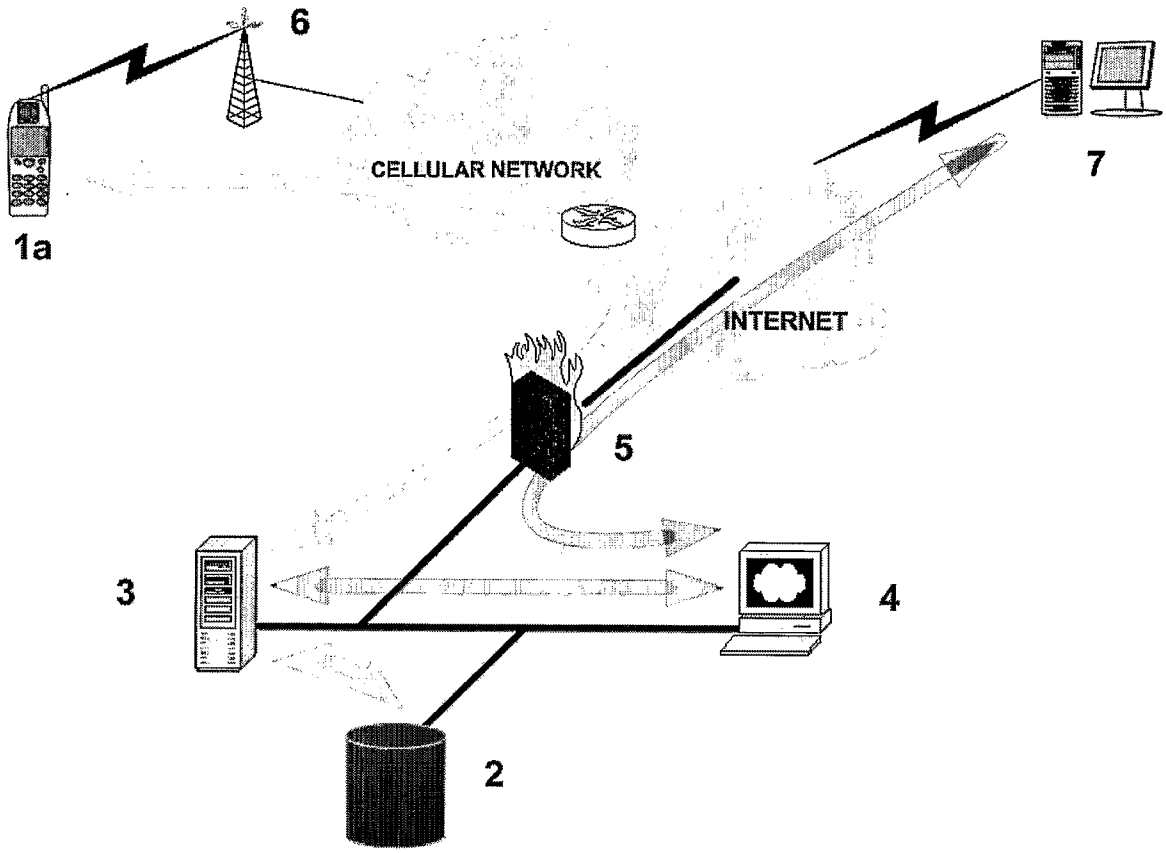

Fig. 2

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2006/000870

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F17/30

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)
G06F

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 practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/97543 A (GRAVITATE INC [US]) 20 December 2001 (2001-12-20) cited in the application abstract the whole document	1-67
X	US 5 963 951 A (COLLINS GREGG [US]) 5 October 1999 (1999-10-05) cited in the application the whole document	1-67
X	WO 01/15480 A (NOKIA CORP [FI]; FRACCAROLI FEDERICO [US]) 1 March 2001 (2001-03-01) the whole document	1-67

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"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)

"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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 February 2007	16/02/2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	DE CASTRO PALOMARES

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2006/000870

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/122810 A1 (MAYER YARON [IL]) 24 June 2004 (2004-06-24) cited in the application the whole document	1-67
A	WO 02/062092 A1 (RUNOLA ESA [FI]; LINDHOLM HEIKKI [FI]) 8 August 2002 (2002-08-08) the whole document	1-67

INTERNATIONAL SEARCH REPORT

Information on patent family members

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