SET OF CLAIMS

1. Method for connecting to one another at least two communicating objects (O1-ON), characterized in that it comprises the following steps:

- creating a user account (CU1-CUN) including at least one field concerning one single identifier of the user corresponding to the communicating object (O1-ON) thereof,
- associating to the user account profile accounts (CP1-CPM) such as professional and/or social network accounts and/or an account memorized in a customer data base,
- incorporating, into a general data base (BG), the user accounts (CU1-CUN) and the associated profile accounts (CP1-CPM) of all the users,
- determining search keys (CR) for communicating objects corresponding to fields of the user account and/or the associated profile accounts for communicating objects sought by the communicating object (O1-ON) of a user,
- determining detection keys (CD) for the communicating object corresponding to the fields of the user account and/or the associated profile accounts whereby the communicating object agrees to be detected by other communicating objects,
- detecting, via a detecting communicating object (OD), detectable communicating objects (OD'), i.e. communicating objects able to be detected, within the framework of an authenticated and protected connection without the intervention of the user of the detecting communicating object nor the users of detectable communicating objects,

- exchanging fields of the user accounts (CU1-CUN) and/or associated profile accounts (CP1-CPM), as well as the detection (CD) and search (CR) keys between the detecting communicating object (OD) and the detected communicating objects (OD'),
- identifying common keys between the search keys (CR) for the detecting communicating object and the detection keys (CD) for a detected communicating object,
- comparing the values taken by the common keys between the detecting communicating object (OD) and the detected communicating object (OD') and in case they are equal or very close to one another, then
- notifying the user, via a signal emitted by the communicating object, that at least one communicating object partially or completely corresponding to the search keys (CR) has been detected, and
- connecting the two communicating objects to one another.

2. Method according to claim 1, characterized in that the single identifier (ID1-IDN) is determined from a serial number of the communicating object (O1-ON).

3. Method according to claim 1 ou 2, characterized in that a user account (CU1-CUN) moreover comprises fields concerning an activity of the communicating object (O1-ON) defined by a schedule for the connections to the other communicating objects and/or exchanges via recorded text messages and/or a language of the fields of the user account (CU1-CUN).

4. Method according to any of the claims 1 to 3, characterized in that the connection established between two communicating objects (O1-ON) is a point-to-point connection.

5. Method according to any of the claims 1 to 4, characterized in that it further comprises the step of measuring a distance between the detecting communicating object (OD) and a detected communicating object (OD') and of passing this distance on to the user of the detecting communicating object (OD).

6. Method according to claim 5 characterized in that, for measuring the distance between the communicating objects (O1-ON), the method comprises the following steps:

- synchronizing the clocks of the transponders (17) of the two communicating objects (OD-OD') in order to define a reference instant (t0) common to both transponders (17),
- emitting in a synchronized and bilateral way a reference signal (B),
- measuring from the reference instant (t0) an elapsed time for receiving this reference signal (B),
- measuring in a reciprocal way phases and gains of received signals corresponding to the reference signal (B) sent,
- filtering parasitic phases, and
- calculating the distance from the filtered phases and from the measured gains of the received signals.

7. Method according to any of the claims 1 to 6, characterized in that it further comprises the step of detecting connection occurrences between the various communicating objects (O1-ON).

8. Method according to claim 7, characterized in that it further comprises the step of defining a standard profile (33) for search keys (CR) and detection keys (CD) for the

user of the communicating object (O1-ON) concerned worked out during a running time,

- comparing the standard profile (33) with a list of detection and search keys of the user accounts (CU1-CUN) stored in the general data base (BG), and
- notifying the user about a relevance level for identified profiles calculated from a comparison between the standard profile (33) and the detection and search keys of the user accounts (CU1-CUN),
- proposing to each user via her/his communicating object (O1-ON) a reciprocal and gradual identification.

9. Method according to any of the claims 1 to 8, characterized in that, for establishing the authenticated and protected connection between the communicating objects, the method comprises the following steps:

- emitting a detection signal (A) towards all the detectable communicating objects, this detection signal (A) containing a datum ciphered by a private key/public key system including the identifier (ID1-IDN) of the detecting communicating object (OD), and
- exchanging data according to protocol 802.11 authenticated and protected by means of the ciphered data exchanged based on protocol 802.15.4,
- frames corresponding to the exchanged data being normalized in order to allow a protected point-to-point connection.

10. Method according to claim 9, characterized in that the emission of the detection signal (A) is carried out gradually, this graduality is controlled by an algorithm controlling an emission power based on a predetermined number of communicating objects (O1-ON) to be detected.

11. Method according to any of the claims 1 to 10, characterized in that it comprises the step of geolocating communicating objects (O1-ON) without any GPS system integrated in said communicating objects (O1-ON).

12. Method according to claim 11, characterized in that a communicating object (O1-ON) having established a connection with a set of communicating objects, and an external radio terminal (50) of the WIFI type being accessible by at least one of the communicating objects (O1-ON), the method further comprises the following steps:

- locating this terminal (50) by means of an identifier of the terminal in order to obtain the GPS co-ordinates thereof, and
- interpolating estimated positions of the various communicating objects (O1-ON) with respect to the terminal with the GPS co-ordinates of said terminal in order to obtain an estimated position of each communicating object (O1-ON).

13. Method according to any of the claims 1 to 12, characterized in that it comprises the step of transmitting service data (DS) concerning a technical configuration of the communicating object (O1-ON) and of adapting the connection according to these service data (DS).

14. Method according to claim 13, characterized in that if a detected communicating object (OD') has an accumulator charge state higher than that of the detecting communicating object (OD), the audio and/or video data exchanged are compacted by the detected communicating object (OD').

15. A communicating object for implementing the connection method according to any of the claims 1 to 14, characterized in that it comprises processing means (21) including software instructions allowing to control a detection of other communicating objects (O1-ON), to identify and compare detection (CD) and search (CR) keys, as well as to notify a user and to establish a connection with other communicating objects (O1-ON).

CLAIMS

1. Method for connecting users using at least two communicating objects (O1-ON), comprising the steps of:

- creating, for each communicating object, a user account (CU1-CUN) comprising at least one single identifier field (ID1-IDN) for identifying a user associated with a communicating object (O1-ON) one a hardware server;

- associating at least one already existing user's profile account to the user account (CU1-CUN) associated with the user by the hardware server; the at least one already existing user's profile account (CP1-CPM) consisting of at least one account among an account of a social network, and account of a professional network, or an account stored in a customer database,

- incorporating and storing the user accounts (CU1-CUN) and the associated profile accounts (CP1 and CPM) of all users in a general database by the server;

-the step of associating at least one already existing user's profile consists in obtaining from an holder of the profile account network an authorization allowing the interconnection between said server and a database of the corresponding network different from the general database, in importing the data concerning the already existing user's profile in the general database of the server and in downloading these data forwards the corresponding communicating object (O1-ON),

- so that said single identifier field (ID1-IDN) unifies all the identities of the user for her/his existing profile accounts (CP1-CPM),

- determining search keys (CR) for a communicating object sought by the user's communication object, the search keys (CR) corresponding to fields of the user account to the associated profile account;

- determining detection keys (CD) for the communicating object, the detection keys corresponding to the fields of the user account or the associated profile account and permitting the communication object to be detected by other communicating objects;

- detecting detectable communicating objects (OD') by a detecting communicating object (OD) within a framework of an authenticated and protected connection without the intervention of the user of the detecting communicating object nor the users of detectable communicating objects,

- exchanging fields of the user accounts (CU1 -CUN) and/or associated profile accounts (CP1-CPM), the detection (CD) and search (CR) keys between the detecting communicating object (OD) and the detected communicating objects (OD'),

- identifying common keys between the search keys (CR) for the detecting communicating object and the detection keys (CD) ~~for~~ of a detected communicating object,

- comparing values of the common keys between the detecting communicating object (OD) and the detected communicating object (OD') by at least the detecting communicating object; and

- when the values of the common keys are equal or within predefined proximity of each other, notifying the user of the detecting communicating object that at least one communication object partially or completely corresponding to the search keys has been detected by a signal emitted by the detecting communicating object and connecting the detecting communication object and the detected communication object.

2. Method according to claim 1, characterized in that the single identifier field (ID1-IDN) is determined from a serial number of the communicating object (O1-ON).

3. Method according to claim 1 or 2, characterized in that a user account (CU1-CUN) moreover comprises fields concerning an activity of the communicating object (O1-ON) defined by a schedule for the connections to the other communicating objects and/or exchanges via recorded text messages and/or a language of the fields of the user account (CUI-CUN).

4. Method according to any of the claims 1 to 3, characterized in that the connection established between two communicating objects (O1-ON) is a point-to-point connection.

5. Method according to any of the claims 1 to 4, characterized in that it further comprises the step of measuring a distance between the detecting communicating object (OD) and a detected communicating object (OD') and of passing this distance on to the user of the detecting communicating object (OD).

6. Method according to claim 5 characterized in that, for measuring the distance between the communicating objects (O1-ON), the method comprises the following steps:

- synchronizing the clocks of the transponders (17) of the two communicating objects (OD-OD') in order to define a reference instant (t0) common to both transponders (17),

- emitting in synchronized and bilateral way a reference signal (B),

- measuring from the reference instant (t0) an elapsed time for receiving this reference signal (B),

- measuring in a reciprocal way phases and gains of received signals corresponding to the reference signal (B) sent,

- filtering parasitic phases, and

- calculating the distance from the filtered phases and from the measured gains of the received signals.

7. Method according to any of the claims 1 to 6, characterized in that it further comprises the step of detecting connection occurrences between the various communicating objects (O1-ON).

8. Method according to claim 7, characterized in that it further comprises the step of defining a standard profile (33) for search keys (CR) and detection keys (CD) for the user of the communicating object (O1-ON) concerned worked out during a running time,

- comparing the standard profile (33) with a list of detection and search keys of the user accounts (CU1-CUN) stored in the general database (BG), and

- notifying the user about a relevance level for identified profiles calculated from a comparison between the standard profile (33) and the detection and search keys of the user accounts (CU1-CUN),

- proposing to each user via her/his communicating object (O1-ON) a reciprocal and gradual identification.

9. Method according to any of the claims 1 to 8, characterized in that, for establishing the authenticated and protected connection between the communicating objects, the method comprises the following steps:

- emitting a detection signal (A) towards all the detectable communicating objects, this detection signal (A) containing a datum ciphered by a private key/public key system including the identifier (ID1-IDN) of the detecting communicating object (OD), and

- exchanging data according to protocol 802.11 authenticated and protected by means of the ciphered data exchanged based on protocol 802.15.4,

- frames corresponding to the exchanged data being normalized in order to allow a protected point-to-point connection.

10. Method according to claim 9, characterized in that the emission of the detection signal (A) is carried out gradually, this graduality is controlled by an algorithm controlling an emission power based on a predetermined number of communicating objects (O1-ON) to be detected.

11. Method according to any of the claims 1 to 10, characterized in that it comprises the step of geolocating communicating objects (O1-ON) without any GPS system integrated in said communicating objects (O1-ON).

12. Method according to claim 11, characterized in that a communicating object (O1-ON) having established a connection with a set of communicating objects, and an external radio terminal (50) of the WIFI type being accessible by at least one of the communicating objects (O1-ON), the method further comprises the following steps:

- locating this terminal (50) by means of an identifier of the terminal in order to obtain the GPS co-ordinates thereof, and

- interpolating estimated positions of the various communicating objects (O1-ON) with respect to the terminal with the GPS co-ordinates of said terminal in order to obtain an estimated position of each communicating object (O1-ON).

13. Method according to any of the claims 1 to 12, characterized in that it comprises the step of transmitting service data (DS) concerning a technical configuration of the communicating object (O1-ON) and of adapting the connection according to these service data (DS).

14. Method according to claim 13, characterized in that if a detected communicating object (OD') has an accumulator charge state higher than that of the detecting communicating object (OD), the audio and/or video data exchanged are compacted by the detected communicating object (OD').

15. A communicating object for implementing the connection method according to any of the claims 1 to 14, characterized in that it comprises processing means (21) including software instructions allowing to control a detection of other communicating objects (O1-ON), to identify and compare detection (CD) and search (CR) keys, as well as to notify a user and to establish a connection with other communicating objects (O1-ON).