[005] The remote control application software provided by TeamViewer® requires for a user to remember the identifier assigned to the slave phone, while the remote desktop connection feature packaged with Windows requires several configuration steps. Both also do not allow a landline phone to gain remote control of a mobile phone. The present disclosure describes means to alleviate these shortcomings.

[006] Other desirable features and characteristics will become apparent from the subsequent detailed description and the appended claims, taken in conjunction with the accompanying drawings and this background of the present disclosure.

SUMMARY

[007] According to a first aspect, there is provided a mobile communication device programmable into a slave mode for remote control by a master mobile communication device, the mobile communication device comprising: at least one processor; at least one memory including computer program code; and a communication port coupled to the processor the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to: receive, through the communication port, a signal effected by the master mobile communication device to initialise remote control of the mobile communication device; establish an identity of the master mobile communication device in response to reception of the signal; determine whether the identity is registered in a database containing identities that are authorised to gain remote control of the mobile communication device; detect, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device; validate the detected access code; and grant remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code wherein granting of the remote control further requires the mobile communication device to be configured to transmit a message, to the master communication device, prompting for input of an authentication code; receive the authentication code from the master communication device; and successfully validate the received authentication code.

[008] According to a second aspect, there is provided a mobile communication device programmable into a slave mode for remote control by a master mobile communication device, the mobile communication device comprising: at least one processor; at least one memory including computer program code; and a communication port coupled to the processor, the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to: receive, through the communication port, a signal effected by the master mobile communication device to initialize

remote control of the mobile communication device;
establish an identity of the master mobile communication device in response to reception of the signal;
determine whether the identity is registered in a database containing identities that are authorized to gain remote control of the mobile communication device;
detect, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device;
validate the detected access code; and
grant remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code,
wherein the granted remote control comprises having the mobile communication device being further configured to: allow access to an operating system of the mobile communication device by processing commands targeted at the operating system of the mobile communication device resulting from input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the mobile communication device. According to a further aspect, there is provided a method to effect remote control of a mobile communication device programmable into a slave mode by a master mobile communication device, the method comprising receiving a signal effected by the master mobile communication device to initialise remote control of the mobile communication device; establishing an identity of the master communication device in response to reception of the signal; determining whether the identity is registered in a database of the mobile communication device, the database containing

identities that are authorised to gain remote control of the mobile communication device; detecting, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device; validating the detected access code; and granting remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code wherein the granted remote control comprises:
allowing access to an operating system of the mobile communication device by processing commands targeted at the operating system of the mobile communication device resulting from input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the mobile communication device. According to an aspect, there is provided method to effect remote control of a mobile communication device programmable into a slave mode by a master mobile communication device, the method comprising:
receiving a signal effected by the master mobile communication device to initialize remote control of the mobile communication device;
establishing an identity of the master communication device in response to reception of the signal;
determining whether the identity is registered in a database of the mobile communication device, the database containing identities that are authorized to gain remote control of the mobile communication device;
detecting, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device;
validating the detected access code; and
granting remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code,
wherein granting of the remote control further comprises:
transmitting a message, to the master communication device, prompting for input of an authentication code;
receiving the authentication code from the master communication device; and
validating the received authentication code successfully.

[009] According to a further aspect, there is provided a mobile communication device programmable into a master mode to remote control a slave mobile communication device, the mobile communication device comprising: at least one processor; at least one memory including computer program code; and a communication port coupled to the processor, the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to: transmit, through the communication port, a signal to initialise remote control of the slave mobile communication device; pair the signal with an access code granting remote control of the slave mobile communication device; receive a notification of grant of the remote control after validation of the access code by the slave communication device; and access an operating system of the slave mobile communication device through input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the slave mobile communication device, wherein granting of the remote control further requires for the mobile communication device to be configured to:

receive a message from the slave mobile communication device prompting for input of an authentication code; transmit the authentication code to the slave mobile communication device; and receive a notification of successful validation of the transmitted authentication code from the slave mobile communication device.

[010] According to an embodiment, there is provided a non-transitory computer readable medium for storing a program that when installed into a mobile communication device programs the mobile communication device into a slave mode for remote control by a master mobile communication device, wherein the mobile communication device is configured to receive a signal effected by the master mobile communication device to initialise remote control of the mobile communication device; establish an identity of the master mobile communication device in response to reception of the signal; determine whether the identity is registered in a database containing identities that are authorised to gain remote control of the mobile communication device; detect, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device; validate the detected access code; and grant remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code.

[011] According to an embodiment, there is provided a mobile communication device programmable into a slave mode for remote control by a master mobile

Claims

1.A mobile communication device programmable into a slave mode for remote control by a master mobile communication device, the mobile communication device comprising:
at least one processor;

at least one memory including computer program code; and
a communication port coupled to the processor,
the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to:

receive, through the communication port, a signal effected by the master mobile communication device to initialize remote control of the mobile communication device;
establish an identity of the master mobile communication device in response to reception of the signal;

determine whether the identity is registered in a database containing identities that are authorized to gain remote control of the mobile communication device;

detect, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device;

validate the detected access code; and

grant remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code, wherein granting of the remote control further requires the mobile communication device to be configured to:

transmit a message, to the master communication device, prompting for input of an authentication code;

receive the authentication code from the master communication device; and successfully validate the received authentication code.

2. The mobile communication device of claim 1, wherein the mobile communication device is further configured to, before receiving the signal from the master mobile communication device:

register the identity and the access code with the database.

3. The mobile communication device of claim 1, wherein the mobile communication device is further configured to:

provide for an interval for the input of the access code.

4. The mobile communication device of claim 1, wherein the mobile communication device is further configured to decode the access code provided in one or more of pulse, dual tone multi frequency and speech formats.

5. The mobile communication device of claim 1, wherein the mobile communication device is further configured to:

analyze the signal for presence of the access code;
and
extract the access code from the signal.

6. The mobile communication device of claim 1, wherein the access code comprises a sequence having one or more of symbols, letters and digits.

7. A mobile communication device programmable into a slave mode for remote control by a master mobile communication device, the mobile communication device comprising:

at least one processor;

at least one memory including computer program code; and

a communication port coupled to the processor,
the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to: receive, through the communication port, a signal effected by the master mobile communication device to initialize remote control of the mobile communication device; establish an identity of the master mobile communication device in response to reception of the signal;

determine whether the identity is registered in a database containing identities that are authorized to gain remote control of the mobile communication device; detect, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device; validate the detected access code; and

grant remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code, wherein the granted remote control comprises having the mobile communication device being further configured to:

allow access to an operating system of the mobile communication device by processing commands targeted at the operating system of the mobile communication device resulting from input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the mobile communication device.

8. The mobile communication device of claim 1, wherein the mobile communication device is further configured to:

encrypt data transmitted to the master mobile communication device during the remote control.

9. A method to effect remote control of a mobile communication device programmable into a slave mode by a master mobile communication device, the method comprising:

receiving a signal effected by the master mobile communication device to initialize remote control of the mobile communication device;

establishing an identity of the master communication device in response to reception of the signal;

determining whether the identity is registered in a database of the mobile communication device, the database containing identities that are authorized to gain remote control of the mobile communication device;

detecting, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device; validating the detected access code; and

granting remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code, wherein the granted remote control comprises:

allowing access to an operating system of the mobile communication device by processing commands targeted at the operating system of the mobile communication device resulting from input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the mobile communication device.

10. The method of claim 9, further comprising:
receiving a request to register the source and the access code with the database before receiving the signal from the master mobile communication device.

11. A method to effect remote control of a mobile communication device programmable into a slave mode by a master mobile communication device, the method comprising:
receiving a signal effected by the master mobile communication device to initialize remote control of the mobile communication device;

establishing an identity of the master communication device in response to reception of the signal;

determining whether the identity is registered in a database of the mobile communication device, the database containing identities that are authorized to gain remote control of the mobile communication device;

detecting, upon successful identity determination, whether the signal is paired with an access code granting remote control of the mobile communication device;

validating the detected access code; and

granting remote control of the mobile communication device to the master mobile communication device after successful validation of the detected access code, wherein granting of the remote control further comprises:

transmitting a message, to the master communication device, prompting for input of an authentication code;

receiving the authentication code from the master communication device; and

validating the received authentication code successfully.

12. The method of claim 9, further comprising:
encrypting data transmitted to the master mobile communication device during the remote control.

13. A mobile communication device programmable into a master mode to remote control a slave mobile communication device, the mobile communication device comprising:

at least one processor;

at least one memory including computer program code; and

a communication port coupled to the processor,

the at least one memory and the computer program code configured to, with the at least one processor, cause the mobile communication device at least to:

transmit, through the communication port, a signal to initialize remote control of the slave mobile communication device;

pair the signal with an access code granting remote control of the slave mobile communication device;

receive a notification of grant of the remote control after validation of the access code by the slave communication device; and

access an operating system of the slave mobile communication device through input entered in any one of: an interactive voice response menu, a graphic user interface, or directly on a desktop of the operation system of the slave mobile communication device,
wherein granting of the remote control further requires for the mobile communication device to be configured to:

receive a message from the slave mobile communication device prompting for input of an authentication code;
transmit the authentication code to the slave mobile communication device; and
receive a notification of successful validation of the transmitted authentication code from the slave mobile communication device.

14. The mobile communication device of claim 13, wherein the mobile communication device is further configured to:

send a request to the slave mobile communication device to register an identity with which the mobile communication device uses to gain remote control of the slave mobile communication device.