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(54) Title: MONEY TRANSFER USING CELLULAR NETWORKS

(57) Abstract: A method of transferring money from a first user to 
another user through a cellular network is disclosed. The 
method includes the first user buying a voucher of a specified 
money from a bank and sending a USSD string to a cellular 
network, the cellular network authorizing details provided by 
the first user, sending a notification to the first user confirming 
transfer of the money to the second user, sending the second 
user a notification informing receipt of the money from the first 
user, sending the second user a secret code, a vendor confirming 
details provided by second user by contacting the cellular net- 
work, the cellular network further confirming the second user, 
authorizing the vendor to pay the specified money to the second 
user, crediting the money to the vendor account, and sending a 
confirmation to the first user notifying the second user has 
received the cash.
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— with international search report (Art. 21(3))
MONEY TRANSFER USING CELLULAR NETWORKS

BACKGROUND

Technical Field

[001] The embodiments herein relate to monetary transaction systems and methods and more particularly, to electronic transferring of money via a third party.

Description of the Related Art

[002] Many electronic cash payment systems and methods have been proposed to transfer money from one user to another. Each of these systems requires a complex series of transactions and verifications to ensure that the overall transaction occurs securely.

[003] There also exist various agent-based money transfer services, such as those provided by Western Union, Money Gram, Cyber Cash and the like. Usually, these services involve a series of pre-transaction steps which are to be performed to establish a relationship with the intermediate agent. Also, establishing relationships with the intermediary is time consuming and requires submission of more documentation than many would prefer. The agent-based services require a payer to go to an agent's facility, have money transferred to a site near the payee, who then needs to approach the same transfer agent's site at the same location or another location to receive the money, which is a slow and often inconvenient arrangement.

[004] Generally, the Electronic Fund Transfer (EFT) systems cannot satisfy the need for an automated transaction system that provides for the transfer of universally
accepted economic value outside of the banking system. In case of money transactions using cellular communication devices, as in the case of "PayPal Mobile", the paying customer needs to register the mobile number with the agent site on internet and then transfer the money from the bank account to another customer's cellular communication device number, or email-id or the like. The second customer then needs to claim the received amount by registering on the agent site. The cellular device money transaction service necessitates the users to share bank account details with the agent site and also the transaction process is complicated. Further, implementation of this method requires attaining account information from all banks in a particular geographic area.

SUMMARY

[005] In view of the foregoing, an embodiment herein provides a method of transferring money from a first user to a second user using a cellular network. The method comprises first user sending details to cellular network of the first user, the cellular network authorizing the details provided by the first user, cellular network sending a notification to the first user confirming transfer of the money to the second user, cellular network sending the second user a notification informing receipt of the money from the first user, cellular network sending the second user a secret code, a vendor confirming details provided by the second user to the vendor by contacting the cellular network, the cellular network confirming the details of the second user provided by the vendor, cellular network authorizing the vendor to pay the money to the second user, cellular network sending a query to the second user for confirming receipt of the money, and crediting the money to account of the vendor, on the second user confirming...
the query. The first user sends the details to the cellular network using at least one of an Unstructured Supplementary Service Data (USSD) string, a Short Message Service (SMS) message or an Interactive Voice Response (IVR) menu. The details send by the first user to the cellular network comprises of an access code, number of a voucher obtained by the first user, and Mobile Station International ISDN number (MSISDN) of the second user. The first user sends the details in a string format *
<access_code>*<voucher number>*<msisdn of second user># to the cellular network.

[006] The cellular network authorizes the voucher number and MSISDN of the second user on reception of the details from the first user. The vendor confirms the second user by providing MSISDN of the second user and the secret code provided by the second user to the cellular network, wherein the vendor uses a format *
<access_code>*<code>*<msisdn of second user># for confirming the second user. The vendor may also use an Interactive Voice Response (IVR) menu or a Short Message Service (SMS) message for confirming the second user by providing MSISDN of the second user and the secret code provided by second user to the cellular network. The cellular network marks the voucher number as transferred on crediting the money to account of the vendor and sends a confirmation that second user has received the money to the first user on the second user confirming receipt of the money.

[007] Embodiments herein further disclose a network comprising at least one means adapted for receiving details from a first user transferring money to a second user, authorizing details of the second user provided by the first user, sending a notification to the first user confirming transfer of money to the second user, sending the second user a notification informing receipt of the money from the first user, sending the second user a
secret code, confirming the second user by verifying details provided by the vendor, authorizing the vendor to pay the money to the second user, sending a query to the second user for confirming receipt of the money, and crediting the money to account of the vendor on the second user confirming the query. The cellular network comprises at least one means adapted for sending a notification to the vendor on completion of transfer of the money to the second user.

[008] These and other aspects of the embodiments herein will be better appreciated and understood when considered in conjunction with the following description and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[009] The embodiments herein will be better understood from the following detailed description with reference to the drawings, in which:

[0010] FIG. 1 is a block diagram illustrating the elements involved in electronic transferring of money from one user to another user in a cellular communication network, in accordance with the embodiments herein;

[0011] FIG. 2 is a block diagram illustrating an example Service Control Point (SCP), in accordance with the embodiments herein;

[0012] FIG. 3 is a schematic diagram illustrating the call flow for transfer of money from one user to another user in a cellular communication network, in accordance with the embodiments herein; and

[0013] FIG. 4 is a flowchart illustrating a method of transferring money electronically from one user to another user in a cellular communication network, in
accordance with the embodiments herein.

DETAILED DESCRIPTION OF EMBODIMENTS

[0014] The embodiments herein and the various features and advantageous details thereof are explained more fully with reference to the non-limiting embodiments that are illustrated in the accompanying drawings and detailed in the following description. Descriptions of well-known components and processing techniques are omitted so as to not unnecessarily obscure the embodiments herein. The examples used herein are intended merely to facilitate an understanding of ways in which the embodiments herein may be practiced and to further enable those of skill in the art to practice the embodiments herein. Accordingly, the examples should not be construed as limiting the scope of the embodiments herein.

[0015] The embodiments herein achieve a method for transferring money from one user to another user using a cellular communication device through a cellular communication network. Referring now to the drawings, and more particularly to FIGS. 1 through 4, where similar reference characters denote corresponding features consistently throughout the figures, there are shown embodiments.

[0016] The embodiment herein discloses a method of electronically transferring a specified monetary value instantaneously from one user to another user through a cellular network. A user that needs to transfer money, hereinafter referred to as first user, buys a prepaid voucher of specified monetary value from the market and sends an Unstructured Supplementary Service Data (USSD) string containing the voucher number and Mobile Station International ISDN number (MSISDN) of another user to Home Location
Register (HLR) of a cellular network. The Service Control Point (SCP) of cellular network authorizes the details provided by the first user and sends a notification along with a secret code to the recipient of the money as desired by the first user, hereinafter referred to as the second user. The notification sent by SCP to the second user informs the second user about the reception of money from the first user. The second user then provides the secret code to a vendor who sends a message with the secret code and MSISDN of second user to the SCP of a cellular network through a HLR. SCP then confirms the second user and authorizes the vendor to pay the money to the second user. The network then transfers the money to the account of the vendor, on confirming the reception of money by the second user. Further, the network marks the voucher number as transferred and notifies the first user that the second user has received the money.

FIG. 1 is a block diagram illustrating the elements involved in electronic transferring of money from one user to another user in a cellular communication network, in accordance with the embodiments herein. The first user 101 buys a voucher of a specified monetary value that is to be sent to the second user 105. The vouchers are available as prepaid vouchers, for instance prepaid vouchers for mobile phones, landline Prepaid Cards such as India Telephone (TT) Cards, Callow Cards, Foreign Language Proficiency Pay (FLPP) Recharge Coupons and the like, in the market. The first user 101 then sends an Unstructured Supplementary Services Data (USSD) string to HLR 103 of the cellular network 102 of the first user 101. The USSD string sent by the first user 101 to the HLR 103 comprises the fields of an access code, the number of the voucher purchased by the first user 101 and the MSISDN of the second user 105. For instance, the first user 101 usually sends the details in a string format `<access_code>`<voucher
number>*<msisdn of second user># to the cellular network 102. Service Control Point (SCP) 104 of the cellular network 102 authorizes the voucher number and MSISDN of the second user 105. The SCP 104 then indicates the voucher number as used. Further, the SCP 104 sends a notification to the first user 101 indicating that the money would be transferred to second user 105. The SCP 104 also sends a notification message to the second user 105 informing about the reception of money from the first user 101 accompanied by a secret code. The second user 105 approaches a vendor 106 and provides the secret code to the vendor 106. The vendor 106 sends a message to the SCP 104 of the cellular network 102, where the message comprises fields of access code of the vendor, the secret code given by the second user 105 and the MSISDN of the second user 105. For instance, the vendor 106 uses a format *<access_code>*<code>*<msisdn of second user># for confirming the second user 105 with the cellular network 102. The SCP 104 authorizes the secret code and MSISDN of the second user 105 and sends an authorization message to the vendor 106 to pay the specified amount to the second user 105. The second user 105 receives an USSD notification from SCP 104 querying the reception of the money. The second user 105 sends a confirmation to SCP 105 on receiving the money from the vendor. SCP then marks the voucher number as transferred and credits the money to the mobile account of the vendor 106. Further, the first user 101 receives a notification informing that the money has been transferred to the second user 105 and vendor 106 receives a notification that the transaction is complete.

[0018]FIG. 2 is a block diagram illustrating an exemplary Service Control Point (SCP), in accordance with the embodiments herein. The SCP 104 includes a connection
unit 201, a control unit 202 and a memory unit 203. The control unit 202 is a processor or a group of processors executing the instructions of the operating system stored in the memory unit 203. The USSD service, present in the control unit 203 of the SCP 104, implements the money transfer service. USSD service is mostly used to query the available account balance and other similar information in cellular networks. USSD is a session oriented service and the users can enter the Unstructured Supplementary Services Data (USSD) command direct from the cellular phone screen. The memory units 203 comprise of a hard disk or RAM modules to store, for example, voucher details provided by the first user 101, vendor 106 details, user accounts, program code sequences executed by the control unit 202 and the like. Control unit 202 also influences the functions of connection unit 201 in establishing connection between the first user 101, the second user 105 and the vendor 106.

[0019] FIG. 3 is a schematic diagram illustrating the call flow for transfer of money from one user to another user in a cellular communication network, in accordance with the embodiments herein. The first user 101 buys a voucher of a specified monetary value to be transferred to the second user 105 from the market. The first user 101 then sends a USSD string to HLR 103 of the cellular network 102. The USSD string sent by the first user 101 to the HLR 103 comprises the fields of an access code, the number of the voucher purchased by the first user 101 and the MSISDN of the second user 105. For instance, the first user 101 usually sends the details in a string format *<access_code>*<voucher number>*<msisdn of second user># to the cellular network 102. The HLR 103 then transmits the USSD string to the Service Control Point (SCP) 104 of the cellular network 102. The SCP 104 of the cellular network 102 authorizes the
voucher number and MSISDN of the second user 105 and marks the voucher number as used. Further, the SCP 104 sends a notification to the first user 101 indicating that money would be transferred to the second user 105. The SCP 104 then sends a notification message and a secret code to the second user 105 informing about the reception of money from the first user 101. The second user 105 approaches a vendor 106 and provides the secret code received from the SCP 104 to the vendor 106. The vendor 106 sends a message to the SCP 104 of the cellular network, where the message comprises the fields of access code of the vendor, the secret code given by the second user 105 and the MSISDN of the second user 105. The vendor 106 uses a format *<access_code>*<code>*<msisdn of second user># for confirming for confirming the second user 105 with the cellular network 102 as instanced. The SCP 104 authorizes the secret code and MSISDN of the second user 105 and sends an authorization message to the vendor 106 to pay the specified amount to the second user 105. The second user 105 receives an USSD notification from SCP 104 querying the reception of the money. The second user 105 sends a "Yes" to SCP 105 on receiving the money from the vendor. SCP then marks the voucher number as transferred and credits the money to the mobile account of the vendor 106. Further, the first user 101 receives a notification informing that the money has been transferred to the second user 105 and vendor 106 receives a notification that the transaction is complete. The commission structure involved in the money transfer includes a vendor selling the voucher to the first user 101, the vendor 106 paying the money to the second user 105 and the operators of the cellular network.

[0020]FIG. 4 illustrates a flowchart depicting a method of transferring money electronically from one user to another user in a cellular communication network, in
accordance with the embodiments herein. The first user 101 buys (401) a voucher of required monetary value to be transferred to the second user 105 from a vendor. The first user 101 then sends (402) a USSD string to HLR 103 of the cellular network 102 of the first user 101. The USSD string sent by the first user 101 to the HLR 103 comprises the fields of an access code, the number of the voucher purchased by the first user 101 and the MSISDN of the second user 105. The first user 101 sends the details in a string format \(*<\text{access\_code}>*<\text{voucher\_number}>*<\text{msisdn\_of\_second\_user}>#\) to the cellular network 102. The Service Control Point (SCP) 104 of the cellular network 102 authorizes (403) the voucher number and MSISDN of the second user 105. The SCP 104 then marks the voucher number as used. Further, the SCP 104 sends (404) a notification to the first user 101 indicating that money would be transferred to the second user 105. The SCP 104 also sends (405) a notification message to the second user 105 informing the reception of money from the first user 101 and a secret code. The second user 105 approaches a vendor 106 and provides (406) the secret code to the vendor 106. The vendor 106 confirms (407) the second user 105 by sending a message to the SCP 104 of the cellular network, where the message comprises the fields of access code of the vendor, the secret code given by the second user 105 and the MSISDN of the second user 105. The vendor 106, for instance, uses a format \(*<\text{access\_code}>*<\text{code}>*<\text{msisdn\_of\_second\_user}>#\) for confirming for confirming the second user 105 with the cellular network 102. The SCP 104 authorizes (408) the secret code and MSISDN of the second user 105 and sends (409) an authorization message to the vendor 106 to pay the specified amount to the second user 105. The network 102 then checks (410) with the second user 105 to check if the amount has been received by the second user 105. If the money is paid to the second
user 105 and the second user 105 confirms the reception of the money by sending a "Yes" as a reply to the network 102 query, the network 102 credits (411) the money to mobile account of the vendor 106. Further, the network 102 notifies (412) the first user 101 that the money has been transferred to the second user and the vendor 106 receives a notification that the transaction is complete. If the query on reception of money is not confirmed by the second user 105, the network 102 aborts (413) the money transaction to vendor account and the vendor need to restart the transaction. The various actions in method 400 may be performed in the order presented, in a different order or simultaneously. Further, in some embodiments, some actions listed in FIG. 4 may be omitted.

[0021] The embodiment disclosed herein, where the first user 101 sends information to the HLR of the cellular network regarding the voucher information and the identity of the second user 105, may alternately involve the first user 101 using an Interactive Voice Response (IVR) to communicate to the network the voucher number and the MSISDN of the second user 105.

[0022] The embodiment disclosed herein, where the first user 101 sends information to the HLR of the cellular network regarding the voucher information and the identity of the second user 105, may alternately involve the first user 101 using a Short Message Service (SMS) message to communicate to the network the voucher number and the MSISDN of the second user 105.

[0023] The embodiment disclosed herein, where the vendor 106 sends information to the HLR of the cellular network for confirming the identity of the second user 105, may alternately involve the vendor 106 using an Interactive Voice Response (IVR) to
communicate to the network the access code of the vendor 106, the secret code as provided by the second user 105 and the MSISDN of the second user 105.

[0024] The embodiment disclosed herein, where the vendor 106 sends information to the HLR of the cellular network for confirming the identity of the second user 105, may alternately involve the vendor 106 using a Short Message Service (SMS) message to communicate to the network the access code of the vendor 106, the secret code as provided by the second user 105 and the MSISDN of the second user 105.

[0025] The embodiment disclosed herein can be integrated with the Intelligent Network (IN) products. The embodiment herein permits the money to be transferred from one user to another without necessitating the sender or receiver to have a bank account, facilitates immediate money transfer to other users, does not require internet connectivity, no need to register the mobile numbers with the network to transfer the money, and the service is in active mode even when the subscriber is in roaming condition.

[0026] The embodiments disclosed herein can be implemented through at least one software program running on at least one hardware device and performing network management functions to control the network elements. The network elements shown in Fig. 1 include blocks which can be at least one of a hardware device, a software module or a combination of hardware device and software module.

[0027] The embodiment disclosed herein specifies that the money transfer service can be hosted as a separate entity or in combination with the already existing elements of the network. Therefore, it is understood that the scope of the protection is extended to such a program and in addition to a computer readable means having a message therein, such computer readable storage means contain program code means for implementation
of one or more steps of the method, when the program runs on a SCP or any suitable programmable device. The method is implemented in a preferred embodiment through or together with a software program written in e.g. Very high speed integrated circuit Hardware Description Language (VHDL) or C, C++, Java, or using another programming language, or implemented by one or more VHDL, C, C++, or Java processes or routines, or several software modules being executed on at least one hardware device. The hardware device can be any kind of device which can be programmed including e.g. any kind of computer like a server or a personal computer, an FPGA, a processor, or the like, or any combination thereof, e.g. one processor and two FPGAs. The device may also include means which could be e.g. hardware means like e.g. an ASIC, or a combination of hardware and software means, e.g. an ASIC and an FPGA, or at least one microprocessor and at least one memory with software modules located therein. Thus, the means are at least one hardware means and/or at least one software means. The method embodiments described herein could be implemented in pure hardware or partly in hardware and partly in software. The device may also include only software means. Alternatively, the invention may be implemented on different hardware devices, e.g. using a plurality of CPUs.
CLAIMS

What is claimed is:

1. A method of transferring money from a first user (101) to a second user (105) using a cellular network (102), said method comprising steps of

   said first user (101) sending (402) money transfer information to cellular network (102) of said first user (101);

   said cellular network (102) authorizing (403) said information provided by said first user (101);

   said cellular network (102) sending (404) a notification to said first user (101) confirming transfer of said money to said second user (105);

   said cellular network (102) sending (405) said second user (105) a notification informing receipt of said money from said first user (101);

   said cellular network (102) sending (406) said second user (105) a secret code;

   a vendor (106) confirming (407) information provided by said second user (105) to said vendor (106) by contacting said cellular network (102);

   said cellular network (102) confirming said information of said second user (105) provided by said vendor (106);

   said cellular network (102) authorizing (409) said vendor (106) to pay said money to said second user (105);

   said cellular network (102) sending a query to said second user (105) for confirming receipt of said money; and

   said cellular network (102) crediting (411) said money to account of said vendor, on said second user (105) confirming said query;.
2. The method as claimed in claim 1, wherein said first user (101) sends (402) said information to said cellular network using an Unstructured Supplementary Service Data (USSD) string.

3. The method as claimed in claim 1, wherein said information send by said first user (101) to said cellular network comprises of
   an access code;
   number of a voucher, said voucher obtained by said first user (101); and
   Mobile Station International ISDN number (MSISDN) of said second user (105).

4. The method as claimed in claim 1, wherein said first user (101) sends said information in a string format *
   <access_code>*<voucher number>*<msisdn of second user># to said cellular network (102).

5. The method as claimed in claim 1, wherein said first user (101) uses an Interactive Voice Response (IVR) menu for sending (402) said information to said cellular network (102).

6. The method as claimed in claim 1, wherein said first user (101) uses a Short Message Service (SMS) message for sending (402) said information to said cellular network (102).
7. The method as claimed in claim 1, wherein said cellular network (102) authorizes said voucher number and MSISDN of said second user (105) on reception of said information from said first user (101).

8. The method as claimed in claim 1, wherein said vendor (106) confirms said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).

9. The method as claimed in claim 1, wherein said vendor (106) uses a format *<access_code>*<code>*<msisdn of second user># for confirming said second user (105).

10. The method as claimed in claim 1, wherein said vendor uses an Interactive Voice Response (IVR) menu for confirming said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).

11. The method as claimed in claim 1, wherein said vendor uses a Short Message Service (SMS) message for confirming said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).
12. The method as claimed in claim 1, wherein said cellular network (102) marks said voucher number as transferred on crediting (411) said money to account of said vendor (106).

13. The method as claimed in claim 1, wherein said cellular network (102) sends a confirmation to said first user (101) on said second user (105) confirming receipt of said money.

14. A network comprising at least one means adapted for

- receiving money transfer information from a first user (101) transferring money to a second user (105);
- authorizing (403) information of said second user (105) provided by said first user (101);
- sending (404) a notification to said first user (101) confirming transfer of money to said second user (105);
- sending (405) said second user (105) a notification informing receipt of said money from said first user (101);
- sending (406) said second user (105) a secret code;
- confirming (407) said second user (105) by verifying information provided by said vendor;
- authorizing (408) said vendor (106) to pay said money to said second user (105);
- sending a query to said second user (105) for confirming receipt of said money; and
crediting (41 t) said money to account of said vendor (106) on said second user (105) confirming said query.

15. The network as claimed in claim 14, wherein said cellular network (102) comprises at least one means adapted for sending (412) a notification to said vendor (106) on completion of transfer of said money to said second user (105).
What is claimed is:

1. A method of transferring money from a first user (101) to a second user (105) using a cellular network (102), said method comprising steps of

   a) said first user (101) sending (402) money transfer information to cellular network (102) of said first user (101);

   b) said cellular network (102) authorizing (403) said information provided by said first user (101);

   c) said cellular network (102) sending (404) a notification to said first user (101) confirming transfer of said money to said second user (105);

   d) said cellular network (102) sending (405) said second user (105) a notification informing receipt of said money from said first user (101);

   e) said cellular network (102) sending (406) said second user (105) a secret code;

   f) a vendor (106) confirming (407) information provided by said second user (105) to said vendor (106) by contacting said cellular network (102);

   g) said cellular network (102) confirming said information of said second user (105) provided by said vendor (106);

   h) said cellular network (102) authorizing (409) said vendor (106) to pay said money to said second user (105);

   i) said cellular network (102) sending a query to said second user (105) for confirming receipt of said money; and

   j) said cellular network (102) crediting (411) said money to account of said vendor, on said second user (105) confirming said query.
2. The method as claimed in claim 1, wherein said first user (101) sends (402) said information to said cellular network using an Unstructured Supplementary Service Data (USSD) string.

3. The method as claimed in claim 1, wherein said information send by said first user (101) to said cellular network comprises of
   an access code;
   number of a voucher, said voucher obtained by said first user (101); and
   Mobile Station International ISDN number (MSISDN) of said second user (105).

4. The method as claimed in claim 1, wherein said first user (101) sends said information in a string format *<access_code>*<voucher number>*<msisdn of second user>*# to said cellular network (102).

5. The method as claimed in claim 1, wherein said first user (101) uses an Interactive Voice Response (IVR) menu for sending (402) said information to said cellular network (102).

6. The method as claimed in claim 1, wherein said first user (101) uses a Short Message Service (SMS) message for sending (402) said information to said cellular network (102).
7. The method as claimed in claim 1, wherein said cellular network (102) authorizes said voucher number and MSISDN of said second user (105) on reception of said information from said first user (101).

8. The method as claimed in claim 1, wherein said vendor (106) confirms said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).

9. The method as claimed in claim 1, wherein said vendor (106) uses a format 
   *<access_code>*<code>*<msisdn of second user># for confirming said second user (105).

10. The method as claimed in claim 1, wherein said vendor uses an Interactive Voice Response (IVR) menu for confirming said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).

11. The method as claimed in claim 1, wherein said vendor uses a Short Message Service (SMS) message for confirming said second user (105) by providing MSISDN of said second user (105) and said secret code provided by said second user (105) to said cellular network (102).
12. The method as claimed in claim 1, wherein said cellular network (102) marks said voucher number as transferred on crediting (411) said money to account of said vendor (106).

13. The method as claimed in claim 1, wherein said cellular network (102) sends a confirmation to said first user (101) on said second user (105) confirming receipt of said money.

14. A Home Location Register (HLR) (103) in a network (102) comprising at least one means adapted for

   receiving money transfer information from a first user (101) transferring money to a second user (105);

   sending (404) a notification to said first user (101) confirming transfer of money to said second user (105);

   sending (405) said second user (105) a notification informing receipt of said money from said first user (101);

   receiving (406) a secret code from said second user (105);

   confirming (407) said second user (105) by verifying information provided by a vendor;

   sending a query to said second user (105) for confirming receipt of said money;

   and

   crediting (411) said money to account of said vendor (106) on said second user (105) confirming said query.
15. The HLR as claimed in claim 14, wherein said network (102) comprises at least one means adapted for sending (412) a notification to said vendor (106) on completion of transfer of said money to said second user (105).

16. A Session Control Protocol (SCP) in a network (102) comprising at least one means adapted for

   authorizing (408) a vendor (106) to pay said money to said second user (105);

   sending a notification to the first user (101) indicating that money would be transferred to the second user (105);

   authorizing (403) information of said second user (105) provided by said first user (101) and;

   sending a notification message and a secret code to the second user 105 informing about the reception of money from the first user 101.
FIG. 1
FIG. 2
First User 101

HLR 103

SCP 104

Second User 105

Vendor 106

USSD String

SCP authorizes voucher no and MSISDN

Notifies User B

Vendor sends authorization request to SCP

Vendor receives authorization to pay cash amount to second user

Is money received?

Money received

Money transferred to vendor

Transaction successful

USSD String

Money transferred to second user

FIG. 3
First user buys a voucher of required cash amount

First user sends a USSD string to cellular network

Network authorizes the voucher number and MSISDN of second user

Network sends notification messages to first user

Network sends notification messages and code to second user

Second user provides code to vendor

Vendor confirms details provided by second user

Network authorizes second user

Network sends authorization to the vendor to pay to the second user

Is cash amount received?

No: Transaction is aborted and vendor restarts the transaction

Yes: Network credits cash amount to vendor's mobile account

Network notifies the delivery of cash amount to first user

FIG. 4
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

**INV. G06Q20/00**

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):

G06Q

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**

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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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Further documents are listed in the continuation of Box C

See patent family annex

- **“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

Date of the actual completion of the international search 11 December 2009

Date of mailing of the international search report 13/01/2010

Name and mailing address of the ISA/

European Patent Office, P B 5818 Patentlaan 2 NL - 2280 HV Rtpwijk
Tel (+31-70) 340-2040, Fax (+31-70) 340-30-16

Authorized officer

Spitaler, Thomas

Form PCT/ISA/210 (second sheet) (April 2005)
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<td>A</td>
<td>NICK HUGHES, SUSIE LONIE: &quot;M-PESA: Mobile Money for the &quot;Unbanked&quot;&quot; &lt;br&gt;INNOVATIONS: TECHNOLOGY, GOVERNANCE, GLOBALIZATION, &lt;br&gt;vol. 2, no. 1-2, 12 June 2007 (2007-06-12) &lt;br&gt;, pages 63-81, XP002558500 &lt;br&gt;ISSN: 1558-2477 &lt;br&gt;page 63 - page 64 &lt;br&gt;page 68 - page 71 &lt;br&gt;page 74 - page 75 &lt;br&gt;page 78 &lt;br&gt;figure 2</td>
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<td>WO 00/33264 A1 (SWISSCOM AG [CH]; MARTSCHITSCH ANDREAS [CH]) &lt;br&gt;8 June 2000 (2000-06-08) &lt;br&gt;page 2, line 22 - page 3, line 25 &lt;br&gt;page 6, line 26 - page 7, line 34 &lt;br&gt;figure 2</td>
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<td>Patent document</td>
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