



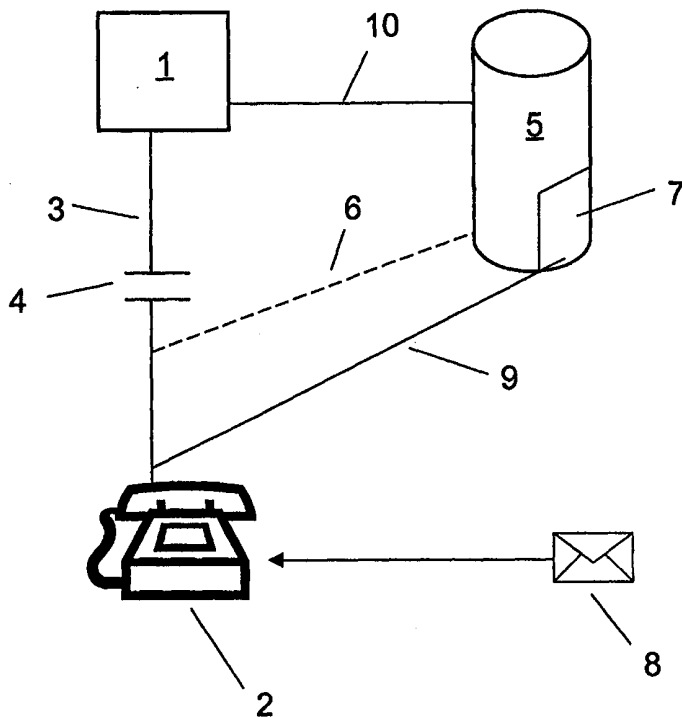
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<p>(21) International Application Number: PCT/SE99/01691 (22) International Filing Date: 24 September 1999 (24.09.99) (30) Priority Data: 9803244-4 24 September 1998 (24.09.98) SE 9901721-2 27 May 1999 (27.05.99) SE (71) Applicant (for all designated States except US): JAROD WORLDWIDE LTD. [-/-]; P.O. Box 3149, Pasea Estate, Road Town, Tortola (VG). (72) Inventors; and (75) Inventors/Applicants (for US only): MARUSZEWSKI, Per [SE/BE]; Avenue Brugmann 161/3, B-1190 Brussels (BE). FYLKING, Gert [SE/SE]; Tjärhovsgatan 3, S-116 21 Stockholm (SE). ASCHBERG, Robert [SE/SE]; Renstiernas gata 14, S-116 31 Stockholm (SE). RINGBRO, Olle [SE/SE]; Åsögatan 123, S-116 24 Stockholm (SE). (74) Agents: KARLSTRÖM, Lennart et al.; Noréns Patentbyrå AB, P.O. Box 10198, S-100 55 Stockholm (SE).</p>	<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. In English translation (filed in Swedish).</p>	

(54) Title: A METHOD OF SETTING-UP A TELECOMMUNICATIONS CONNECTION AND A CARD READER FOR USE IN CONNECTION WITH THE METHOD

(57) Abstract

The invention relates to a method of establishing a telecommunications connection in a fixed telecommunications network, by entering a code on a subscriber terminal (2) and therewith connect the subscriber terminal to an Operator server (5), wherein the subscriber has a prepaid telephone account (7) from which costs entailed by the telecommunications traffic are drawn. The invention also relates to a card reader which functions to connect the subscriber telecommunication to the prepaid telephone account with the aid of card-carried information. The invention also enables a subscriber who chooses to receive readable or audible information, such as advertising messages, to obtain direct economic compensation.



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A METHOD OF SETTING-UP A TELECOMMUNICATIONS CONNECTION AND A
CARD READER FOR USE IN CONNECTION WITH THE METHOD

The present invention relates to a method of setting-up a
5 telecommunications connection in a fixed telecommunications
network, and in particular to enable the use of a telephone
line that has been disconnected or cut-off and the use of a
prepaid telephone account. The invention also relates to a
card reader which is designed for use in connection with the
10 method and which is connected in a fixed telecommunications
network so that a card can be read by the card reader and
therewith establish communication with the prepaid telephone
account.

15 A large number of telephone subscribers have their subscrip-
tion revoked and their telephone disconnected as a result of
failing to pay their telephone bills. These telephone sub-
scribers are debarred from all forms of telephone communica-
tion, both incoming and outgoing telephone calls, and also
20 from communication via a computer. Many of these subscribers
are also refused the possibility of signing for a fixed tele-
phone subscription because they do not have the credit wor-
thiness that is required by present-day telephone companies
before allowing a person to sign for a telephone subscrip-
25 tion. Those persons who are unable to obtain a permanent
telephone subscription for these reasons are normally unable
to obtain a mobile telephone subscription and will thus be
totally excluded from any form of telecommunication.

30 These problems derive from the basic problem that telephone
calls made from a standard telephone connection are paid in
arrears.

Accordingly, one object of the present invention is to provide a method which enables a telephone call made through a fixed telephone network, such as a public switched telephone network, to be paid for at the same time as the call is made.

5

Another object of the present invention is to provide a card reader which in conjunction with a card inserted therein provides a connection that enables a telephone call made via the fixed telephone network to be paid for at the same time as the call is made, and in particular to establish communication with the prepaid telephone account through the medium of a card read by the card reader.

10

A further object of the invention is to provide a method with which economic compensation can be given to the subscriber who elects to participate in a written or spoken message, for instance a readable or an audible advertisement, said economic compensation being effected by updating the balance of the subscriber's telephone account.

15

Still another object of the invention is to enable products and services to be purchased via the telecommunications connection, where payment for the product or service in question is deducted from the telephone account.

20

Still another object of the invention is to enable funds to be transferred from the balance of the telephone account to the telephone account owned by another subscriber, with the aid of said telecommunications connection.

25

These objects have been achieved in accordance with the invention as defined in the following Claims.

30

The invention will now be described in more detail with reference to non-limiting embodiments thereof and with reference to the accompanying drawings, in which **Fig. 1** is a diagrammatic illustration of how an inventive method can be implemented; and **Fig. 2** is a schematic illustration of an inventive card reader.

The fixed telephone network or public switched telephone network will include one or more telephone Operators 1 to which telephone subscribers 2 can be connected via fixed telephone lines 3. The subscriber is able to reach other subscribers through these fixed telephone lines 3, by virtue of telecommunications traffic being connected to these other subscribers through the telephone Operator 1. The telephone subscriber normally establishes a call connection with the aid of his/her terminal, which may be a conventional telephone or a computer, such as a personal computer, which may be connected to the telephone network through the medium of a modem. If the telephone subscriber 2 is not credit worthy or has mismanaged his/her earlier payments to the telephone Operator 1, the fixed telephone line 3 will be cut-off or disconnected as indicated at 4. The telephone line 3 is still present physically and the subscriber connection has a fixed address which remains the same regardless of the subscriber telephone number on the connection concerned.

When the fixed telephone line 3 is disconnected in the abstract sense of the word, the subscriber connection means can still be connected to a special Operator server 5 via the fixed telephone line. The connection 6 to the Operator server 5 may be arranged so that the subscriber can only reach the server 5 when the telephone line 3 has been disconnected or cut-off, although the subscriber 2 is still unable to use the

connection means 6 to make a telephone call or to perform any other form of telecommunication. The subscriber has been informed of the fact that the subscription has been terminated and that he/she has the option of obtaining a prepaid telephone account 7 and therewith enabling him/her to use his/her telecommunications connection means via the server.

The subscriber can obtain such a prepaid telephone account, by purchasing a so-called code envelope 8 from a special sales point, for instance from a telecommunications shop, a post office or a gasoline station, for instance. The code envelope 8 includes a telephone number, suitably printed on the outside of the envelope 8, so that the subscriber is able to choose his/her new telephone number. Inside the envelope, there is a code which the subscriber must enter in order for his/her new telephone subscription with a prepaid telephone account 7 to be activated by the server 5. The envelope will, of course, also contain instructions as to how the subscriber shall effect activation of the new telephone subscription. For instance, the subscriber 2 may enter the code given in the envelope 8 via his telephone or via some other telecommunications equipment, e.g. a PC, by virtue of the fact that the connection 6 with the server 5 allows the code to be entered. When the server 5 receives the entered code, it checks that the code agrees with a telephone account 7 that has already been laid up in the server 4, and thereafter opens a new telecommunications line 9 for the subscriber 2, this new telecommunications line passing via the server 5 and a connection line 10 to the telephone operator 1 concerned. This enables the subscriber 2 to utilise the public telephone network via the new telecommunications line 9 in the same way as all other subscribers, although with the limitation that he can only do so when there are sufficient funds in his

telephone account 7. Other persons are also able to reach the subscriber 2 via the telephone number received by the subscriber when purchasing the code envelope 8.

5 The server 5 monitors the balance of the telephone account 7 of each individual subscriber 2 and, during ongoing telecommunications traffic, subtracts the traffic costs from the balance of the account.

10 The telephone account 7 may conveniently include both a fixed fee for the use of a line for a given period of time, and a balance, or sum, at disposal for the direct telecommunication, "call fee". As the bottom of the disposable funds approaches, both with respect to time for which the use of a
15 line has been paid and with respect to the balance of funds for "call fees", a warning signal is given to the effect that the account requires further funding. This warning can either be given in the form of a voice message in the case of an ongoing call, or in the form of a readable message in the
20 case of a PC connection.

When it is necessary to fund the telephone account, the subscriber can purchase a new code envelope 8. This new code envelope may conveniently lack a telephone number and include
25 solely the code that shall be entered by the subscriber through his telephone or personal computer in order for the telephone account to be updated with the sum corresponding to the price paid by the subscriber for the code envelope. The sum corresponding to this purchase may also be divided into a
30 fixed fee and a "call fee". However, it may be so that the subscriber himself must enter information as to how he wishes the sum involved to be divided between a fixed fee and a traffic fee, on the basis of his own requirements. Such sup-

plementary code envelopes for replenishing a telephone account can be made available for different sums to suit subscribers that have different needs. The subscriber may also replenish the telephone account through a bank payment or postgiro payment, or by a direct bank transfer.

The subscriber is able to use the telecommunications connection in the same way as any other subscriber, provided that the telephone account 7 shows a positive balance. However, when the account reaches zero, the server 5 will release the connection of the subscriber 2. This release, however, may include retaining information relating to the earlier opened telephone account 7 of the subscriber 2 in the operator server 5 for a given period of time, for instance twelve months, from the time that the account was last used, and the subscriber can reactivate the telephone connection at any time during this period while keeping the telephone number earlier obtained, provided that he replenishes the telephone account 7 by purchasing a code envelope and entering the requisite code for reactivating the telephone account.

The operator server 5 can be operated by one of the telephone Operators 1, although it may, of course, alternatively be operated by a company that is not associated with these Operators. When a direct connection with the telephone operator is cut-off, the telephone Operators 1 are able to reconnect the subscriber concerned solely for contact with the server 5 that has the prepaid telephone account. This may be arranged so that a part of the fixed fee paid for a part of the cost of the prepaid telephone account is transferred to the telephone Operator who disconnected the subscriber, in repayment of the subscriber's debt to this Operator.

Instead of using a code envelope that includes a code which must be entered by the subscriber in order to activate the prepaid telephone subscription, it is possible in accordance with the invention to use a telephone card in the form of a smart card which makes available a prepaid sum and which also includes means of identification that can be used for setting up a connection with the Operator server 5, and which can be used in a card reader connected to the subscriber telephone connection means to send information from the card to a server 5 for activation of the prepaid telephone account. Such a card may also be used for direct "electronic" replenishment of the account on the card for later transmission to the telephone account 7.

Fig. 2 illustrates a card reader 11 which, in accordance with the invention, is constructed as an intermediate plug for insertion into a conventional telephone jack, and is provided with a socket 12 for receiving the plug of a conventional telephone. The card reader also includes a card insertion slot 13, the card used preferably being a so-called smart card.

An inventive card reader may also be used in other fields. For instance, the card inserted into the card reader may have been allocated a telephone number which is read by the card reader and forwarded to the telephone station or switching centre. In this case, a telephone call connected to the telephone number associated with the card or the code is connected to the jack in which the card adapter is inserted. This enables a telephone number associated with a telephone card or some other smart card inserted in the card reader to direct calls incoming to the telephone number concerned to

the telephone jack into which the card reader is inserted, regardless of its location.

An inventive card reader can also be used to prevent unauthorised use of a telephone subscription in a telephone jack that is connected to the telephone network. In this case, the card reader is constructed so that it can be locked firmly in a telephone jack into which it has been inserted, such as to prevent its removal for easy bypassing of the card reader. Although not shown, the card reader may include to this end a locking device which will enable the card reader to be firmly locked when inserted into a telephone jack. Such a locking device may be formed integrally with the guide pin present on the telephone plug and arranged to grip behind the outer casing of the telephone jack.

The card reader 11 may include a display 14, e.g. an LCD, liquid crystal display, on which the balance of the telephone account concerned, or some other information, can be shown. The display 14 may also be used to show the cost of the ongoing call and also the number of the card inserted in the card reader, that is when the card is provided with a number.

A card reader according to the invention can also be used within local telephone networks and private branch exchanges, i.e. telephone networks that are governed by a central exchange in a company, governmental institutions, hospitals or the like. Such local networks will include restrictions as to which outgoing telephone calls can be made from a telephone. These so-called lockouts established in the exchange can be bypassed, by inserting an inventive card reader as an intermediate plug and inserting a card into the card reader, wherewith the cost of outgoing calls can be subtracted di-

rectly from the telephone account associated with the card. This facility can be used in hotel rooms, where hotel guests are reluctant to make outgoing calls because of their high cost.

5

A card reader and a telephone card that permits incoming calls to be received enables the frequent traveller to be reached on one and the same telephone number in the public switched telephone network, in principle throughout the world, in the same way as he/she can be reached via the mobile telephone networks.

The card used in the adapter according to the invention may also be a combination card that can be used in both a card reader and in mobile telephones, therewith enabling the user to be reached on one and the same telephone number, regardless of whether he is connected to the public switched network or must be reached via the mobile telephone network, and also enabling the caller to utilise the cheapest call tariff at that moment in time.

The external appearance of the actual card reader and its input and output connections must be adapted to the standard applicable to the respective telephone network in which the card reader can be used.

The card reader need not necessarily be designed as an intermediate plug, but may have the form of a card reader that includes a card insertion opening and that is formed integrally with a typical telephone jack and with which no connection to the telephone network can be achieved unless a valid telephone card is inserted into the card reader of the telephone jack.

In the case of a connection means of this kind, the telephone connections of future buildings can be allowed to lie latent and be activated by inserting a valid telephone card. In the case of apartments in which several telephone jacks are installed, each of the apartments may be fitted with a main telephone jack that is equipped with a card reader, this jack being the first in the internal network in the apartment, such that all telephone jacks can be activated for use by inserting a telephone card in said card reader. Alternatively, each telephone jack may be equipped with a card reader into which a telephone card must be inserted in order to utilise said jack, where, for instance, different members of the family have cards which are subsidiary to the main card, optionally with an own telephone number, so that a check can be kept of the telephone costs incurred by the children in the family, for instance.

The advantage gained by the telephone Operators would then be that the costs of telephone calls are prepaid, while the tenant or owner of a house or apartment will be able to choose which telephone Operator to use when several different telephone Operators are commercially available. Another advantage gained by the tenant or house owner is that unauthorised use of the telephone can be prevented, by supplementing the card with a code that must be dialled before the telephone can be used.

A fixedly mounted telephone connection means may also be provided with a telephone card insertion slot into which a telephone card is inserted so as to be read by the card reader arranged in the connecting jack.

As before mentioned, the inventive connection means may also be integrated in a telephone that is connected to a "passive" telephone jack, with the advantages mentioned above with respect to said connection.

5

It will be understood that a connection means or a card reader need not be used solely for inter-telephone communication and that it lies within the concept of the invention to use said connection means or card reader for other prepaid services, such as for data communication and/or in a TV/radio cable network, where the card reader together with the card inserted therein governs what is allowed to pass through the connection/card reader.

15 A card reader or an aforesaid connection means that includes a telephone card insertion slot may also include one or more further slots for the insertion of further cards, these cards being intended for different purposes or for different users, for instance. For example, in addition to the slot intended to receive the card belonging to the tenant or home owner, 20 the connection means or card reader may include space for a guest card that can be used by a temporary visitor. The card reader or connection means may also be provided with slots of different sizes for accommodating large or small cards, for instance. Switching between different cards inserted in the 25 adapter/connector can be achieved with some known technique, for instance by allocating a code to the card that shall be used to make ongoing calls. In the case of calls incoming to a card reader or to a connection means into which several 30 cards are inserted, the number called can be shown on the card reader display or on a display mounted directly on the connection means or, alternatively, on a telephone apparatus coupled to said connection means.

A connection means or card reader according to the foregoing may also be designed to enable an emergency telephone number, e.g. 112 in Sweden, to be called despite the absence of a
5 card in the card reader. The same applies to a telephone subscription that has been revoked when the subscriber is still able to reach the server 5, even though he may not have had time to open a prepaid telephone account 7, or if the account is invalid because it has reached a zero balance.

10

A significant part of the invention is to provide a method which will enable economic compensation to be given to the person who chooses to participate in a readable or audible message, such as an advertisement, this compensation being
15 given in the form of a telephone account update.

It is known to permit a third party to pay the whole of the cost of a telephone call between two telephone subscribers, or parts of said cost, for instance by sponsoring or by lis-
20 tening to advertising messages. This is put into effect by the caller first dialling a prefix prior to dialling the telephone number, which therewith connects the caller to the telephone network via the telephone connection of the third party, wherewith the costs of the calls made will be paid by
25 said third party. Such a commercially available system includes both the caller and the called person to listen to advertising messages offered by the third party on behalf of companies that wish to advertise their products or services, wherewith the cost of the call is debited to the telephone
30 subscription of the third party.

The aforesaid system can be used in the public switched telephone network by those who have a fixed telephone subscrip-

tion, but cannot be utilised by the person that has a prepaid subscription in the public network, since the cost of the call is already debited in conjunction with setting-up a connection with the telephone network.

5

It is therefore an object of the invention to provide a method which will enable a person calling via a prepaid account in a fixed telephone network or public switched network to be compensated economically.

10

The transmitted readable or audible information may, for instance, be an advertising message, and the economic compensation can be paid by updating the balance on the prepaid telephone account of the subscriber.

15

The purpose of this part of the inventive concept is to enable a telephone subscriber who makes a call with the aid of a prepaid telephone account in the, e.g., public switched telephone network to be paid for at least a part of his call, e.g., by listening to an advertising message, this payment being made by the person broadcasting the advertisement. In this regard, prior to dialling the telephone number to which he wishes to be connected, the subscriber dials a prefix which couples the call to a computer unit of a third party, this computer unit containing advertising "spots". The advertisement purchaser who has elected to subsidise the telephone subscriber who listens to the advertising message is then able to send data for updating the telephone account of said subscriber.

30

This updating of the subscriber's telephone account may be in the form of adding the number of units or marks to the account, by transferring "money" to the account, or by updating

the account with other data. The updating concerned may also be effected by transferring to the subscriber's account digital information relating to rebates or bonus options that can later be used in conjunction with the purchase of products.

5

The advertisement transmitted from the computer unit may be neutral, i.e. of equal interest to all receivers, although it may also be directed particularly to the advertisement receiver, such as an advertisement which is adapted geographically to the district or area from which the call was made, or adapted to information stored with respect to the subscriber or to the owner of the Operator server.

10

The telephone account may also be programmed with a code that connects the subscriber automatically to the computer unit of the third party when making a telephone call, without requiring the subscriber to dial a prefix to this end.

15

The procedure may be such that the advertisement concerned will be sent to the subscriber before his call to another subscriber has been connected, or, alternatively, may be such that both subscribers listen to the advertisement simultaneously. The procedure followed may be such that the calling subscriber will receive greater compensation when two subscribers listen simultaneously to the advertisement, than when the calling subscriber is the sole listener.

20

The procedure may also be such as to enable a telephone subscriber to contact the computer unit of the third party solely to listen to advertising messages and not to establish a telephone connection with a third party. In order for the telephone subscriber to be able to obtain some compensation for listening to an advertisement, the computer unit of said

30

third party may be caused to transmit during transmission of the advertisement a message that requires action on the part of the listener in order for the subscriber to be sure that he will receive compensation, for instance by requesting the
5 listener to press on his telephone keypad a particular button chosen randomly by the computer unit.

A telephone card reader used in the public switched telephone network for instance will preferably include a display on
10 which at least some information can be shown, and will also include one or more buttons which enable the subscriber to select from a menu that is transmitted when setting up a telephone connection or in conjunction with transmitting said information, advertisement. Such a card reader may also be
15 equipped with a loudspeaker over which the advertising messages can be heard directly.

The advertisements transmitted by the computer unit of the third party may conveniently be grouped in different areas of
20 interest and the different menus relating to such areas displayed on the card reader, so that the subscriber is able to select an advertisement in the area in which he is most interested, by appropriate button selection. The different groups may include:

- 25 1. Cars and motorcycles
2. Computers
3. Travel and leisure
4. Economy
5. House and home
- 30 6. Film and music
7. Culture and theatre
8. Literature
9. Clothing

10. Food

and so on.

The areas of interest selected by a given telephone sub-
5 scriber may be given priority, so that these areas will be
presented first to the user. Information with respect to such
priorities may conceivably be stored in the computer of the
advertisement promoter or, alternatively, may be stored in
the telephone account of the telephone subscriber.

10

Information concerning the user, e.g. name, address, etc.,
will preferably be written into and stored on the telephone
account or in the computer unit of the third party and be
transferred to the information broadcaster in order to place
15 catalogue orders, to be included in customer registers, and
the like. Preferably, it will also be possible for the user
to change or erase the information and also to change infor-
mation as to whether he is willing or unwilling to receive
advertising messages, and also to change the type of adver-
20 tisement in which he is interested.

In addition to using telephone reception options, it is also
conceivable to set-up the connection to Internet via a com-
puter and that corresponding advertisement transmission func-
25 tions are sent to the screen of the computer. It is also
possible for the user to be linked automatically to the ad-
vertiser's home page and that any benefits offered can be
sent to the subscriber's computer, possibly for printout in
addition to updating the subscriber's telephone account.
30 Naturally, this may take place directly or through the medium
of a connected card reader and a card. The card reader may be
designed as an intermediate plug or may be an integral part
of the computer.

When coupling to Internet through the medium of a telephone account while implementing the method according to the invention, the telephone account may also be used for payment of goods or services ordered via the Internet connection. This may preferably concern payment of small sums on each occasion.

It also lies within the concept of the invention to transfer large sums from the balance of a telephone account and the transfer need not only concern payment for goods or services purchased with the aid of the card, but may concern a transfer to some other telephone account that is used in a corresponding manner, or to a bank account.

The procedure followed in compensating the recipient of information or for the transfer of "money" or the purchase of goods can be applied in a corresponding manner by a mobile telephone subscriber, provided that the mobile telephone Operator can offer these services.

When using a card reader and a so-called smart card or a mobile telephone card where the card reader has a write function that enables the smart card to be updated, the sum, and therewith the balance, can be stored directly on the card instead of being stored in the telephone account at the Operator server.

In order to ensure that the user will not break the connection when large sums are involved, in order to avoid updating of the telephone card after having given instructions concerning a large transaction from the card, all of the information relating to the card balance can be taken from the

card and stored temporarily in the computer unit of the third party. Subsequent to completion of the transactions, the card balance is updated in the computer unit and then returned to the telephone card. Should the connection between the telephone subscriber and the computer unit of the third party be
5 broken whilst the computer unit collects the balance information from the telephone card for some reason or other, this information can be replaced in the card on the next occasion on which the subscriber connects to the computer unit through
10 the medium of the telephone card.

In a corresponding manner, a telephone subscriber is also able to transfer money from the balance of his own telephone account or telephone card to the telephone account or the
15 telephone card of another telephone subscriber. In this case, the telephone subscriber may enter information concerning the transfer of a sum of money to the telephone account or telephone card of the other subscriber and the balance then drawn directly from the balance of said telephone subscriber and
20 stored in the computer unit of the third party. The balance on the telephone account or on the telephone card of said other subscriber can then be updated automatically when said other subscriber later connects himself to the computer unit of said third party.

CLAIMS

1. A method of setting-up a telecommunications connection in a fixed telephone network, **characterised** in that a
5 subscriber (2) connects his telecommunication line to an Operator server (5) by entering a code on a subscriber terminal, said subscriber having a prepaid telephone account (7) from which telecommunication traffic costs are drawn.
- 10 2. A method according to Claim 1, **characterised** in that in the case of a telephone subscription being revoked and the telephone disconnected (4), a communication line (6) is left open to enable the subscriber (2) to send a code to the Operator server (5) while all other lines of communication are
15 inaccessible.
3. A method according to Claim 1, **characterised** in that in the event of a telephone subscription being revoked and the telephone disconnected (4), a communication line (6) is
20 left open to allow the subscriber (2) to send a code to the Operator server (5) and to ring an emergency number, such as Swedish emergency number 112, but where all other lines of communication are inaccessible.
- 25 4. A method according to any one of the preceding Claims, **characterised** in that the subscriber (2) can add further sums to the balance on his telephone card (7), by entering a further code.
- 30 5. A method according to any one of the preceding Claims, **characterised** in that the subscriber can add further sums to the balance of his telephone account, by agreeing to receive readable or audible information.

6. A method according to Claim 5, **characterised** in that said information is an advertising message.

5 7. A method according to Claim 6, **characterised** in that the information sent to the subscriber is advertising material arranged in groups in accordance with areas of interest, where the subscriber is able to choose a particular area of interest.

10

8. A method according to Claim 7, **characterised** in that the order in which the groups of advertisements are presented can be chosen by the subscriber.

15

9. A method according to any one of Claims 5-8, **characterised** in that the information sent to the subscriber includes a message which requires a response from the subscriber in order for updating of the subscriber telephone account to take place.

20

10. A method according to any one of the preceding Claims, **characterised** in that the subscriber is able to use the balance on his telephone account to pay for goods or services purchased via the telephone communications connection.

25

11. A method according to any one of the preceding Claims, **characterised** in that the subscriber is able to transfer sums from his balance on his telephone account to the telephone account of another subscriber, by entering communications codes.

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12. A method according to any one of the preceding Claims, **characterised** in that the code for setting-up said connection is entered with the aid of a card reader (11) connected to the telecommunications network, and a card inserted in the card reader, said card containing the information and possibly also the codes required to set-up said communication.

13. A card reader for reading information on a card inserted therein and connected to a fixed telecommunications system, **characterised** in that the card reader (11) is adapted to connect the telecommunication line (9) to an Operator server (5) from information read from the card, where the subscriber has a prepaid telephone account (7) from which the cost of the telecommunications traffic shall be drawn.

14. A card reader according to Claim 13, **characterised** in that it includes a display (14) for showing different options that can be selected by the telephone subscriber, and at least one selector button with which the subscriber is able to choose a desired function from the information shown on the display.

15. A card reader according to Claim 13 or 14, **characterised** in that the card reader (11) includes a telephone card insertion slot (13).

16. A card reader according to any one of Claims 13-15, **characterised** in that the card reader (11) has the form of an adapter for insertion into a telephone jack as an intermediate plug.

17. A card reader according to Claim 16, **characterised** in that the adapter can be locked firmly in a telephone jack.

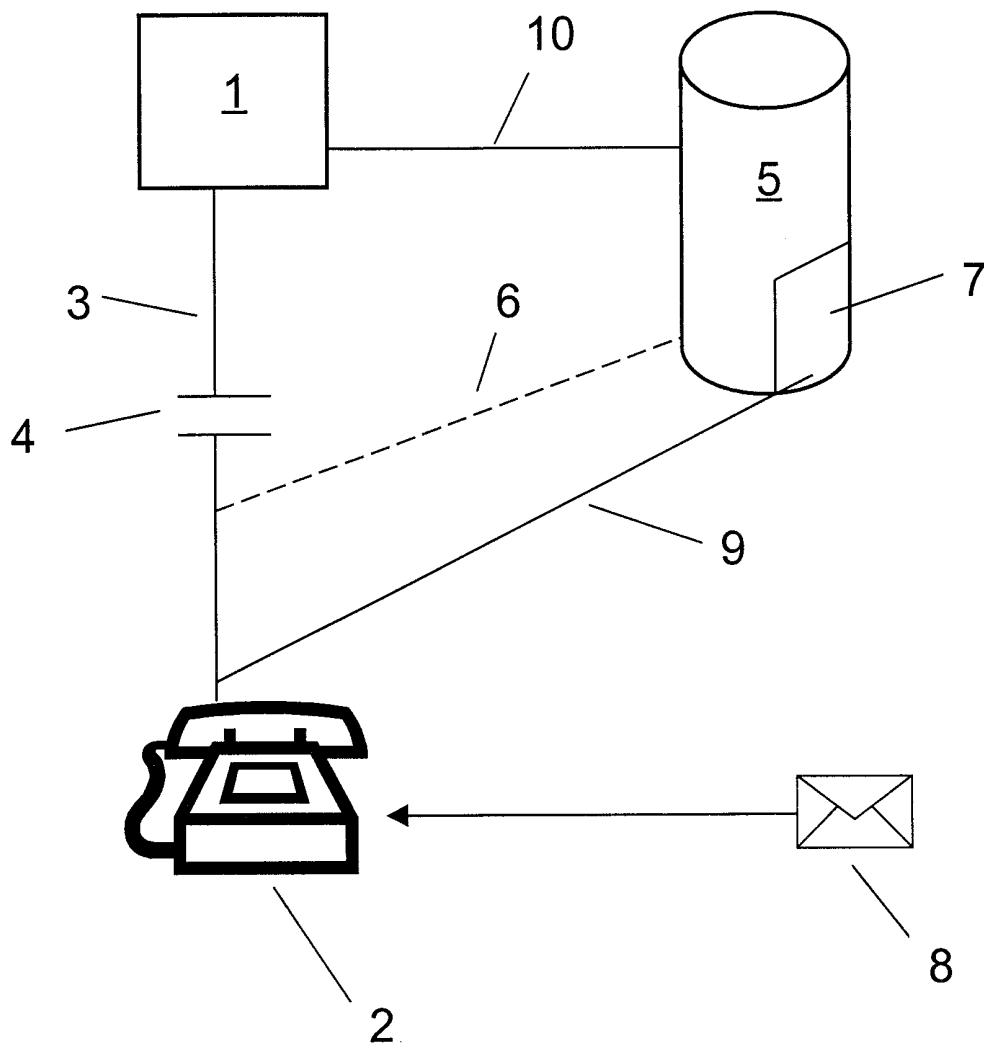


Fig.1

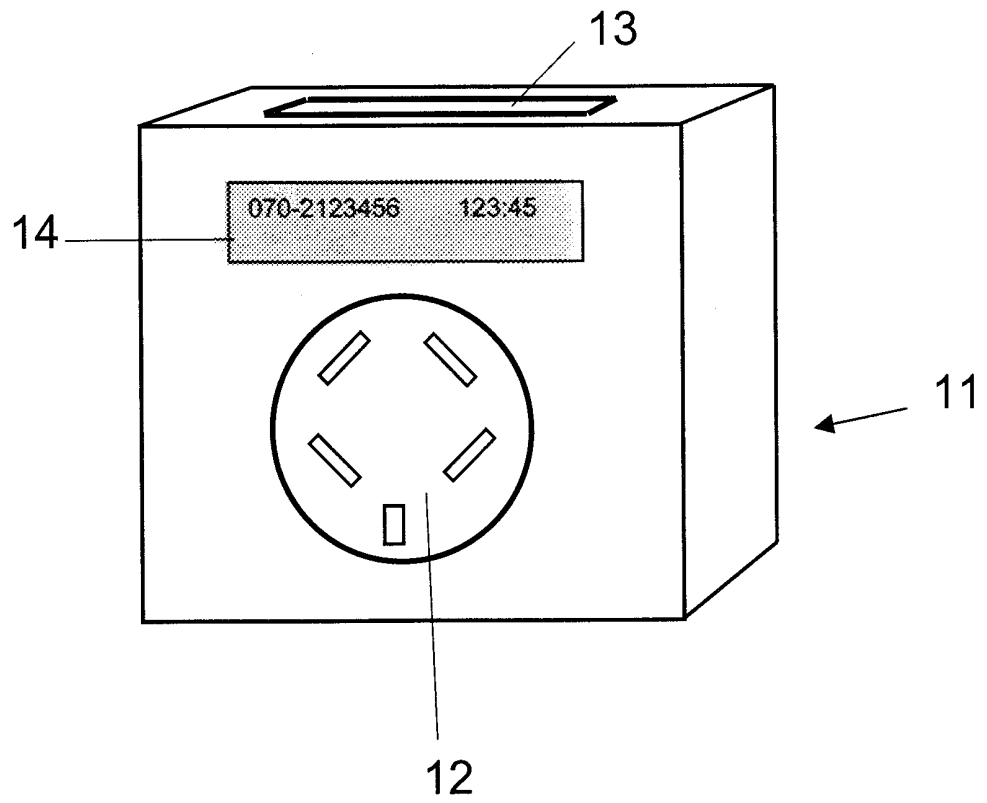


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/01691

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04M 15/00, H04M 17/00, H04M 3/487
 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)

IPC7: H04M

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

SE,DK,FI,NO classes as above

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5504808 A (JAMES N. HAMRICK, JR.), 2 April 1996 (02.04.96), column 3, line 18 - column 10, line 10, figures 1A-3, abstract	1-2,4
Y	--	3,5-17
Y	DE 19532086 A1 (HOLZER, BURKHARD), 6 March 1997 (06.03.97), column 1, line 56 - column 4, line 25, figure 1, abstract	3,12-17
Y	WO 9832275 A1 (GRATISTELEFON SVENSKA AB ET AL), 23 July 1998 (23.07.98), page 3, line 1 - page 8, line 4, figure 1, abstract	5-8
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Further documents are listed in the continuation of Box C. See patent family annex.

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

Date of the actual completion of the international search	Date of mailing of the international search report
29 February 2000	07 -03- 2000
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Roland Landström/MN Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/01691

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4850007 A (PATRICK J. MARINO ET AL), 18 July 1989 (18.07.89), column 1, line 39 - column 6, line 3, figures 1-2, abstract --	5-9
Y	SE 460511 B (JOHAN HENRIK BENDZ), 16 October 1989 (16.10.89), page 3, line 6 - page 12, line 16, figures 1-3, abstract --	10-11
Y	GB 2200516 A (RICHARD DREWICKI), 3 August 1988 (03.08.88), page 11, line 19 - page 12, line 7, figures 2-3 -- -----	16-17

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Information on patent family members

02/12/99

International application No.

PCT/SE 99/01691

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