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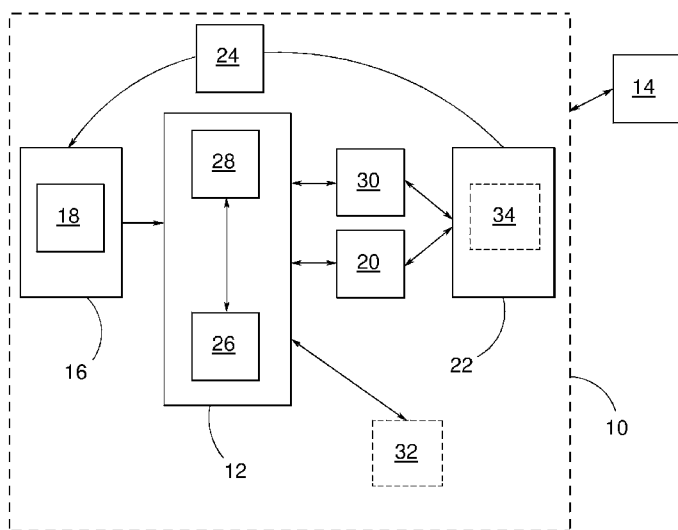
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[Continued on next page]

(54) **Title:** A SYSTEM OPERABLE TO PROVISION FOR A SUBSCRIPTION FOR A MOBILE EQUIPMENT

**Fig. 1**



(57) **Abstract:** The present invention relates to a method and a system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14). The system (10) comprises an identity module (16) for the mobile equipment (12), and being operable to store a temporary identity number, and to comprise an applet means (18). The system (10) comprises a control system (22) operable to send a trigger means (24) to the identity module (16), which trigger means (24) is operable to trigger the applet means (18), which in turn is operable to start a web browser means (26), comprised in the mobile equipment (12), and operable to present a selecting means (28), which in turn is operable to select a telephone number, and to activate the subscription. The control system (22) is operable to change the temporary identity number to an identity number, which is stored on the identity module (16). Furthermore, the system (10) also comprises a Home Location Register (30) operable to store the identity number, and the telephone number as a record.

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## A SYSTEM OPERABLE TO PROVISION FOR A SUBSCRIPTION FOR A MOBILE EQUIPMENT

### *Field of the invention*

5           The present invention relates in a first aspect to a system operable to provision for a subscription for a mobile equipment of a subscriber in a mobile wireless communications network.

          According to a second aspect the present invention relates to a method for provisioning of a subscription for a mobile equipment of a subscriber in a mobile  
10 wireless communications network.

          According to a third aspect the present invention relates to at least one computer program product for provisioning of a subscription for a mobile equipment of a subscriber in a mobile wireless communications network.

### 15           *Background of the invention*

          In the world of today it is quite common that people use mobile phones to perform calls and in the most markets/countries several mobile phone operators exists and compete with each other. Due to this there is a need for operators to keep the current subscribers and also try to reach new subscribers by performing,  
20 for example, marketing and advertising campaigns.

          A subscription in a cellular network is enabled upon purchase and has a pre assigned MSISDN as well as a pre assigned IMSI. These IMSI are stored in the SIM card and cannot be modified by the subscriber. The IMSI/MSISDN are stored as a record in the HLR.

25           The IMSI is used by the HLR in order to identify the subscription and then to act accordingly. For example, when the mobile phone is switched on or moved geographically, the current location (LA) for the subscription is updated and stored in the HLR.

          Systems, external from the HLR point of view, exist that makes it possible  
30 to dynamically change the IMSI on the SIM card from the network/operator. Normally the provisioning process in this case is done using some kind of customer care centre. Solutions where SMSs or USSD communication are used in the provisioning process exists as well.

          Several problems with the current solutions exist.

The “subscriber box” pre packaged by the operator comprises a SIM card and other things like information describing services in the network of the operator. The SIM card in the box is assigned both an MSISDN and an IMSI that might be unused for a long time or even never used, leading to that there might be a  
5 shortage of IMSIs in the network of the operator. Furthermore, the cost for producing the box can also be quite expensive.

The cost for producing SIM cards is currently close to zero, but on the other hand, the cost for storing data (like IMSI) in the HLR is on the rising curve. This leads to a situation where it is very easy to create and pre package SIM cards  
10 since they are quite inexpensive but this gives on the other hand an actual cost for the allocated storage in the HLR.

Each stored record (IMSI) in the HLR leads to a license cost both in the HLR as well in the surrounding systems. The costs can be quite expensive if there are a lot of unused records in the HLR and in the surrounding systems.

15 The operator has a MSISDN assignment scheme where different prefixes are used in different regions. This makes it difficult to distribute SIM cards since they in the current solutions have a pre assigned MSISDN.

The subscriber would like to be able to select his/her phone number among a set of numbers. The way a MSISDN is selected, if even possible, for a  
20 subscriber is often difficult to use and gives a bad user experience.

In order to buy a preferred number, the subscriber must contact the customer care centre of the operator.

The patent document WO 2006/070067 relates to a method for forcing a web browser of a mobile device to display a web page, using a triggering SMS  
25 containing the ULR. The suggested applications include for example customer service and marketing.

The patent document WO 02/067538 relates to a customized client application capable of running on all seven classes of Internet-enabled cellular telecommunications devices whose Internet browser launching capabilities range  
30 from being Class 0 non Internet enabled to Class 6 automatic Internet browser launching. The client application facilitates minimum subscriber intervention for Internet session initiation from an Internet session option of an interactive display message. There is also described a method for displaying a web page on a mobile

device using a pro-active launch browser command standardized under 3 GPP' s Technical Specification (TS) 31. 111.

The patent document US 2009/0287599 relates to a mobile monetary transfer approval process that allows clients to approve or reject monetary transfer requests by utilizing the client's mobile device, such as a cellular telephone and/or personal digital assistant (PDA). From such a client mobile device, user may view pending outgoing and incoming payments and approve or reject them in real time. In addition, an alert may be sent to the client mobile device responsive to the monetary transfer request being initiated. This may allow the client using the client mobile device to know when it is appropriate to go through the approval process, rather than having periodically checked for new monetary transfer requests.

The patent document US 2008/0057957 relates to a wireless modem device that is configured for connection over a cellular carrier network to a second network. The device is initially in a non-activated mode in which the wireless modem device can only be connected to an authorization server of a cellular carrier network and cannot communicate outside the boundaries of an activation service for the wireless modem device. Activation is initiated by the cellular carrier network on receipt of a request from the wireless modem device to access a web resource address (URL) of the second network. The handset is connected to the carrier authorization server if the wireless modem device has not been activated, and is provided with an activation page at the authorization server. The authorization server activates the wireless modem device for wireless connection to the second network through the cellular carrier network.

## 25 ***Summary of the invention***

The above mentioned problems are solved by a system operable to provision for a subscription for a mobile equipment of a subscriber in a mobile wireless communications network according to Claim 1. The system comprises an identity module for the mobile equipment, the identity module is operable to store a temporary identity number (tIN), and to comprise an applet means. The system also comprises a temporary Home Location Register (tHLR) operable to store the temporary identity number (tIN). Furthermore, the system also comprises a control system operable to send a trigger means to the identity module. The trigger means is operable to trigger the applet means, which in turn is operable to start a web

browser means, comprised in the mobile equipment, and operable to present a selecting means. The selecting means is operable to select a telephone number (MSISDN), and to activate the subscription. The control system is then operable to change the temporary identity number (tIN) to an identity number (IN), which is  
5 stored on the identity module. The system also comprises a Home Location Register (HLR) operable to store the identity number (IN), and the telephone number (MSISDN) as a record.

An advantage with the system according to the present invention is that it is very easy for a subscriber to select a preferred telephone number (MSISDN). It  
10 also improves the end user experience since the subscriber always gets redirected to a destination that is preferred by the operator as long as the subscription is not activated.

Another advantage with the system according to the present invention is that it is very simple to use since the subscriber always is redirected to the  
15 preferred destination and does not need to perform many manual steps, like typing in the "provisioning URL". Furthermore, the possibility to give the subscriber a nice experience with operator logos, colors and similar should not be neglected.

A yet further advantage with the system according to the present invention is that it makes it possible to minimize the number of allocated active subscribers  
20 in the operators HLR as well as in the surrounding systems. This implying a minimizing of license costs and allocated space. The system also opens up for a late and personal MSISDN assignment procedure where the subscriber is able to select a preferred telephone number (MSISDN).

A further advantage in this context is achieved if, when the temporary  
25 Home Location Register recognizes the use of the temporary identity number (tIN), the temporary Home Location Register is operable to send a trigger to the control system, which in turn is operable to send the trigger means in the form of a binary SMS.

Furthermore, it is an advantage in this context if the applet means starts  
30 the web browser means by sending a proactive command to the mobile equipment, which in turn is operable to start the web browser means.

A further advantage in this context is achieved if the identity module also is operable to store an Access Point Name (APN), and if the mobile equipment is

operable to use the Access Point Name (APN) in connecting to a support node, comprised in the system.

Furthermore, it is an advantage in this context if the proactive command comprises a web address, and if the web browser means is operable to use the  
5 web address in making a request to a server means, comprised in the control system.

A further advantage in this context is achieved if the server means, in response to the request, is operable to send a web page, comprising the selecting means, to the web browser means.

10 Furthermore, it is an advantage in this context if the control system also is operable to change the Access Point Name (APN) stored in the identity module.

A further advantage in this context is achieved if the control system is in the form of a Dynamic Number Allocation (DNA) system.

15 Furthermore, it is an advantage in this context if the identity module is in the form of a SIM card.

The above mentioned problems are also solved with a method for provisioning of a subscription for a mobile equipment of a subscriber in a mobile wireless communications network according to Claim 10. The method is performed with the aid of a system. The method comprises the steps:

- 20 - with the aid of an identity module for the mobile equipment, to store a temporary identity number (tIN);
- with the aid of a temporary Home Location Register (tHLR), comprised in the system, to store the temporary identity number (tIN);
- with the aid of a control system, comprised in the system, to send a trigger  
25 means to the identity module;
- with the aid of the trigger means, to trigger an applet means, comprised in the identity module;
- with the aid of the applet means, to start a web browser means, comprised in the mobile equipment;
- 30 - with the aid of the web browser means, to present a selecting means;
- with the aid of the selecting means, to select a telephone number (MSISDN), and to activate the subscription;
- with the aid of the control system, to change the temporary identity number (tIN) to an identity number (IN), which is stored on the identity module; and

- with the aid of a Home Location Register (HLR), comprised in the system, to store the identity number (IN), and the telephone number (MSISDN) as a record.

An advantage with the method according to the present invention is that it is very easy for a subscriber to select a preferred telephone number (MSISDN). It  
5 also improves the end user experience since the subscriber always gets redirected to a destination that is preferred by the operator as long as the subscription is not activated.

Another advantage with the method according to the present invention is that it is very simple to use since the subscriber always is redirected to the  
10 preferred destination and does not need to perform many manual steps, like typing in the "provisioning URL". Furthermore, the possibility to give the subscriber a nice experience with operator logos, colors and similar should not be neglected.

A yet further advantage with the method according to the present invention is that it makes it possible to minimize the number of allocated active subscribers  
15 in the operators HLR as well as in the surrounding systems. This implying a minimizing of license costs and allocated space. The method also opens up for a late and personal MSISDN assignment procedure where the subscriber is able to select a preferred telephone number (MSISDN).

A further advantage in this context is achieved if the method also  
20 comprises the steps:

- with the aid of the temporary Home Location Register, to recognize the use of the temporary identity number (tIN);
- to send a trigger to the control system; and
- with the aid of the control system, to send the trigger means in the form of a  
25 binary SMS.

Furthermore, it is an advantage in this context if the step to start the web browser means is performed with the following steps:

- with the aid of the applet means, to send a proactive command to the mobile equipment; and
- 30 - with the aid of the mobile equipment, to start the web browser means.

A further advantage in this context is achieved if the method also comprises the steps:

- with the aid of the identity module, to store an Access Point Name (APN); and

- with the aid of the mobile equipment, to use the Access Point Name (APN) in connecting to a support node, comprised in the system.

Furthermore, it is an advantage in this context if the proactive command comprises a web address, and if the method also comprises the step:

- 5 - with the aid of the web browser means, to use the web address in making a request to a server means, comprised in the control system.

A further advantage in this context is achieved if the method also comprises the step:

- 10 - with the aid of the server means, in response to the request, to send a web page, comprising the selecting means, to the web browser means.

Furthermore, it is an advantage in this context if the method also comprises the step:

- 15 - with the aid of the control system, to change the Access Point Name (APN) stored in the identity module.
- The above mentioned problems are also solved with at least one computer program product according to Claim 17. The at least one computer program product is/are directly loadable into the internal memory of at least one digital computer, and comprises non-transitory software code portions for performing the steps of the method according to the present invention when the at least product
- 20 is/are run on the at least one computer.

An advantage with this computer program product according to the present invention is that it is very easy for a subscriber to select a preferred telephone number (MSISDN). It also improves the end user experience since the subscriber always gets redirected to a destination that is preferred by the operator

25 as long as the subscription is not activated.

Another advantage with this computer program product according to the present invention is that it is very simple to use since the subscriber always is redirected to the preferred destination and does not need to perform many manual steps, like typing in the "provisioning URL". Furthermore, the possibility to give the

30 subscriber a nice experience with operator logos, colors and similar should not be neglected.

A yet further advantage with this computer program product according to the present invention is that it makes it possible to minimize the number of allocated active subscribers in the operators HLR as well as in the surrounding

systems. This implying a minimizing of the license costs and allocated space. The computer program product also opens up for a late and personal MSISDN assignment procedure where the subscriber is able to select a preferred telephone number (MSISDN).

5 It will be noted that the term “comprises/comprising” as used in this description is intended to denote the presence of a given characteristic, step or component, without excluding the presence of one or more other characteristic, features, integers, steps, components or groups thereof.

Embodiments of the invention will now be described with a reference to  
10 the accompanying drawings, in which:

### ***Brief description of the drawings***

Fig. 1 is a block diagram of a system operable to provision for a subscription for a mobile equipment of a subscriber in a mobile wireless  
15 communications network according to the present invention;

Fig. 2 is a flow chart of a method for provisioning of a subscription for a mobile equipment of a subscriber in a mobile wireless communications network according to the present invention; and

Fig. 3 schematically shows a number of computer program products  
20 according to the present invention.

### ***Detailed description of the preferred embodiments***

In fig. 1 there is disclosed a block diagram of the system 10 according to the present invention. The system 10 is operable to provision for a subscription for  
25 a mobile equipment 12 of a subscriber in a mobile wireless communications network 14. As is apparent in fig. 1, the mobile equipment 12 is comprised in the system 10. The system 10 also comprises an identity module 16 for the mobile equipment 12. For the sake of simplicity it is only disclosed one mobile equipment 12 and one identity module 16 in fig. 1. It is pointed out that the system 10 in  
30 principle can comprise a lot of mobile equipments 12, each with an identity module 16. The identity module 16 is operable to store a temporary identity number (tIN), and to comprise an applet means 18, as is apparent in fig. 1. Furthermore, the system 10 also comprises a temporary Home Location Register (tHLR) 20, which is operable to store the temporary identity number (tIN). As also is apparent in fig.

1, the system 10 comprises a control system 20 operable to send a trigger means 24 to the identity module 16. The trigger means 24 is operable to trigger the applet means 18, which in turn is operable to start a web browser means 26, comprised in the mobile equipment 12. The web browser means 26 is operable to present a  
5 selecting means 28, which in turn is operable to select a telephone number (MSISDN), and to activate the subscription. Thereafter, the control system 22 is operable to change the temporary identity number (tIN) to an identity number (IN), which is stored on the identity module 16. As also is apparent in fig. 1, the system 10 furthermore comprises a Home Location Register (HLR) 30 operable to store  
10 the identity number (IN), and the telephone number (MSISDN) as a record.

According to one embodiment, when the temporary Home Location Register 20 recognizes the use of the temporary identity number (tIN), the temporary Home Location Register 20 is operable to send a trigger to the control system 22, which in turn is operable to send the trigger means 24 in the form of a  
15 binary SMS.

Furthermore, according to another alternative, the applet means 18 starts the web browser means 26 by sending a proactive command to the mobile equipment 12, which in turn is operable to start the web browser means 26.

According to yet another embodiment, the identity module 16 is also  
20 operable to store an Access Point Name (APN), and the mobile equipment 12 is operable to use the Access Point Name (APN) in connecting to a support node 32, comprised in the system 10.

Furthermore, according to another alternative, the proactive command comprises a web address, and the web browser means 26 is operable to use the  
25 web address in making a request to a server means 34, comprised in the control system 22.

It is pointed out that the support node 32, and the server means 34, both are disclosed with a broken line in fig. 1, because they are optional.

According to yet another embodiment, the server means 34, in response  
30 to the request, is operable to send a web page, comprising the selecting means 28, to the web browser means 26.

Furthermore, according to another alternative, the control system 22 is also operable to change the Access Point Name (APN) stored on the identity module 16.

According to one embodiment, the control system 22 is in the form of a Dynamic Number Allocation (DNA) system 22.

Furthermore, according to another alternative, the identity module 16 is in the form of a SIM card 16.

5 In fig. 2 there is disclosed a flow chart of a method for provisioning of a subscription for a mobile equipment 12 of a subscriber in a mobile wireless communications network 14. The method is performed with the aid of a system 10 (see fig. 1). The method begins at block 50. Thereafter, the method continues, at block 52, with the step: with the aid of an identity module 16 for the mobile  
10 equipment 12, to store a temporary identity number (tIN). The method continues, at block 54, with the step: with the aid of a temporary Home Location Register (tHLR) 20, comprised in the system 10, to store the temporary identity number (tIN). Thereafter, the method continues, at block 56, with the step: with the aid of a control system 22, comprised in the system 10, to send a trigger means 24 to the  
15 identity module 16. The method continues, at block 58, with the step: with the aid of the trigger means 24, to trigger an applet means 18, comprised in the identity module 16. Thereafter, the method continues, at block 60, with the step: with the aid of the applet means 18, to start a web browser means 26, comprised in the mobile equipment 12. The method continues, at block 62, with the step: with the  
20 aid of the web browser means 26, to present a selecting means 28. Thereafter, the method continues, at block 64, with the step: with the aid of the selecting means 28, to select a telephone number (MSISDN), and to activate the subscription, at block 66. It is pointed out that fig. 2 is illustrated on pages 2, and 3 of the drawings. The method continues, at block 68, with the step: with the aid of the  
25 control system 22, to change the temporary identity number (tIN) to an identity number (IN). Thereafter, the method continues, at block 70, with the step: to store the identity number (IN) on the identity module 16. The method continues, at block 72, with the step: with the aid of a Home Location Register (HLR) 30, comprised in the system 10, to store the identity number (IN), and the telephone number  
30 (MSISDN) as a record. The method is completed at block 74.

According to another embodiment, the method also comprises the steps:

- with the aid of the temporary Home Location Register 20, to recognize the use of the temporary identity number (tIN);
- to send a trigger to the control system 22; and

- with the aid of the control system 22, to send the trigger means 24 in the form of a binary SMS.

According to another alternative, the step to start the web browser means 26 is performed with the following steps:

- 5 - with the aid of the applet means 18, to send a proactive command to the mobile equipment 12; and
- with the aid of the mobile equipment 12, to start the web browser means 26.

According to yet another embodiment, the method also comprises the steps:

- 10 - with the aid of the identity module 16, to store an Access Point Name (APN); and
- with the aid of the mobile equipment 12, to use the Access Point Name (APN) in connecting to a support node 32, comprised in the system 10.

According to another embodiment, the proactive command comprises a web address, and the method comprises also the step:

- 15 - with the aid of the web browser means 26, to use the web address in making a request to a server means 34, comprised in the control system 22.

According to another alternative, the method also comprises the step:

- with the aid of the server means 34, in response to the request, to send a web page, comprising the selecting means 28, to the web browser means 26.

- 20 According to yet another embodiment, the method also comprises the step:

- with the aid of the control system 22, to change the Access Point Name (APN) stored in the identity module 16.

- In fig. 3, some computer program products  $102_1, \dots, 102_n$  according to the present invention are schematically shown. In fig. 3,  $n$  different digital computers  $100_1, \dots, 100_n$  are shown, wherein  $n$  is an integer. In fig. 3,  $n$  different computer program products  $102_1, \dots, 102_n$  are shown, here in the form of CD discs. The different computer program products  $102_1, \dots, 102_n$  are directly loadable into the internal memory of the  $n$  different computers  $100_1, \dots, 100_n$ . Each computer
- 25 program product  $102_1, \dots, 102_n$  comprises non-transitory software code portions for performing all the steps according to fig. 2, when the product/products is/are run on the computers  $100_1, \dots, 100_n$ . The computer program products  $102_1, \dots, 102_n$  may, for instance, be in the form of diskettes, RAM discs, magnetic tapes, magneto-optical discs, USB memories, data files or some other suitable products.
- 30

In below follows a description of the invention implemented in one possible way.

The operator distributes SIM cards with temporary IMSIs to potential subscribers with the intention that they are to be used for provisioning of new  
5 subscriptions. Since the SIM cards are configured with temporary IMSIs they are to be treated as non-provisioned, e. g., it is not possible to make outgoing calls, receive incoming calls or make data connections. They are in a sense captive to the provisioning system or in this case the DNA (Dynamic Number Allocation) system. The SIM cards are apart from the temporary IMSIs equipped with a SIM  
10 card applet that can be triggered from the DNA system.

Upon an IMSI attach to the network 14, the HLR (real 30 or temporary 20) sends a trigger to the DNA system 22. The DNA system 22 notices that it is a temporary IMSI that is about to be provisioned, and thus sends out a binary SMS, or an SMS formatted in a secure way, which SMS triggers the applet on the SIM  
15 card. The SIM card makes a proactive command (Launch/Open Browser) to the mobile device 12, instructing the mobile device 12 to start the built in web browser means 26 using the provided URL in the proactive command. The mobile device 12 uses the APN supplied on the SIM card in the connection to the SGSN (Serving GPRS Support Node) and the web browser means 26 makes an http/https request  
20 to the supplied URL, e. g. the web server 34 in the DNA system 22. The web server 34 serves the web browser means 26 with a web page that contains the information needed for the provisioning procedure to be completed, such as a dialog where the subscriber selects a MSISDN for his/her subscription. The subscriber takes the final step in the procedure when he/she chooses to activate  
25 the subscription on the web page. This step triggers the DNA system 22 to change the temporary IMSI on the SIM card to a real IMSI as well as further provisioning needed for the real HLR 30.

Note that the APN list on the SIM card can be changed by the DNA system 22 or any other external system with the right privileges.

30 It is pointed out that the present invention implies a lot of advantages. The operator does not have to pay for expensive HLR capacity in advance, because an operator normally has many "millions" of identity modules/SIM cards on the market which never gets activated.

The fees for register MSISDN/IMSI at the PTT (Post- och telestyrelsen) (or corresponding authority) is decreasing due to the fact that the operator does not have to register the numbers in advance, but first when they have been activated.

Another advantage with the present invention is that the number of  
5 different identity modules/SIM cards is decreasing, which also saves money. Furthermore, the marking of SIM card boxes with MSISDN is removed. The distribution costs also decreases due to the fact that the boxes delivered to the retailers are more or less identical.

Another advantage is that the license costs in the billing system are  
10 decreasing due to the fact that the operator only has to pay for currently "active" identity modules/SIM cards.

A further advantage is that an operator can have a number of virtual operators and these can have identical identity modules/SIM cards.

The invention is not limited to the described embodiments. It will be  
15 evident for those skilled in the art that many different modifications are feasible within the scope of the following Claims.

**CLAIMS**

1. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14),  
5 **characterized** in that said system (10) comprises an identity module (16) for said mobile equipment (12), said identity module (16) is operable to store a temporary identity number (tIN), and to comprise an applet means (18), and in that said system (10) also comprises a temporary Home Location Register (tHLR) (20) operable to store said temporary identity number (tIN), and in that, when said  
10 temporary Home Location Register (20) recognizes the use of said temporary identity number (tIN), said temporary Home Location Register (20) is operable to send a trigger to a control system (22), comprised in said system (10), and operable to send a trigger means (24) in the form of a binary SMS to said identity module (16), which trigger means (24) is operable to trigger said applet means  
15 (18), which in turn is operable to send a proactive command to said mobile equipment (12) which in turn is operable to start a web browser means (26), comprised in said mobile equipment (12), and operable to present a selecting means (28), which in turn is operable to select a telephone number (MSISDN), and to activate said subscription, whereby said control system (22) is operable to  
20 change said temporary identity number (tIN) to an identity number (IN), which is stored on said identity module (16), and in that said system (10) also comprises a Home Location Register (HLR) (30) operable to store said identity number (IN), and said telephone number (MSISDN) as a record.
- 25 2. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim 1, **characterized** in that said identity module (16) also is operable to store an Access Point Name (APN), and in that said mobile equipment (12) is operable to use said Access Point Name (APN) in connecting to a support  
30 node (32), comprised in said system (10).
3. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim 1, or 2, **characterized** in that said proactive command

comprises a web address, and in that said web browser means (26) is operable to use said web address in making a request to a server means (34), comprised in said control system (22).

5 4. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim 3, **characterized** in that server means (34), in response to said request, is operable to send a web page, comprising said selecting means (28), to said web browser means (26).

10

5. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to any one of Claims 2-4, when dependent on Claim 2, **characterized** in that said control system (22) also is operable to change said Access Point Name  
15 (APN) stored on said identity module (16).

6. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to any one of Claims 1-5, **characterized** in that said control system (22)  
20 is in the form of a Dynamic Number Allocation (DNA) system (22).

7. A system (10) operable to provision for a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to any one of Claims 1-6, **characterized** in that said identity module  
25 (16) is in the form of a SIM card (16).

8. A method for provisioning, with the aid of a system (10), of a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14), said method comprises the steps:

30 - with the aid of an identity module (16) for said mobile equipment (12), to store a temporary identity number (tIN);

- with the aid of a temporary Home Location Register (tHLR) (20), comprised in said system (10), to store said temporary identity number (tIN);

- with the aid of said temporary Home Location Register (20), to recognize the use of said temporary identity number (tIN);
- to send a trigger to said control system (22);- with the aid of a control system (22), comprised in said system (10), to send a trigger means (24) to said identity  
5 module (16) in the form of a binary SMS;
- with the aid of said trigger means (24), to trigger an applet means (18), comprised in said identity module (16);
- with the aid of said applet means (18), to send a proactive command to said mobile equipment (12);
- 10 - with the aid of said mobile equipment (12), to start a web browser means (26), comprised in said mobile equipment (12);
- with the aid of said web browser means (26), to present a selecting means (28);
- with the aid of said selecting means (28), to select a telephone number (MSISDN), and to activate said subscription;
- 15 - with the aid of said control system (22), to change said temporary identity number (tIN) to an identity number (IN), which is stored on said identity module (16); and
- with the aid of a Home Location Register (HLR) (30), comprised in said system (10), to store said identity number (IN), and said telephone number (MSISDN) as a  
20 record.

9. A method for provisioning of a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim  
25 8, **characterized** in that said method also comprises the steps:
- with the aid of said identity module (16), to store an Access Point Name (APN);  
and
  - with the aid of said mobile equipment (12), to use said Access Point Name (APN) in connecting to a support node (32), comprised in said system (10).

30

10. A method for provisioning of a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim 8, or 9, **characterized** in that said proactive command comprises a web address, and in that said method also comprises the step:

- with the aid of said web browser means (26), to use said web address in making a request to a server means (34), comprised in said control system (22),

11. A method for provisioning of a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to Claim 5 10, **characterized** in that said method also comprises the step:

- with the aid of said server means (34), in response to said request, to send a web page, comprising said selecting means (28), to said web browser means (26).

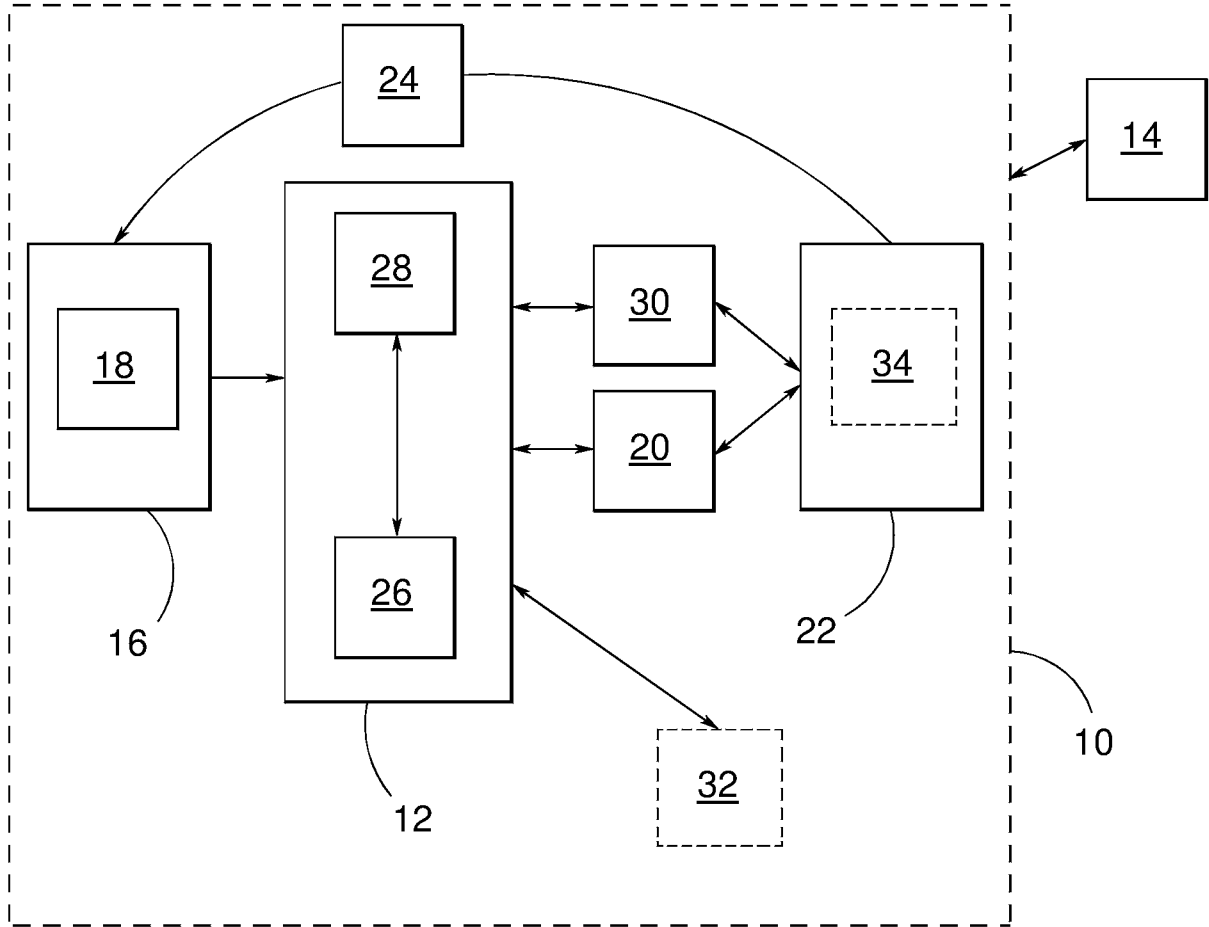
12. A method for provisioning of a subscription for a mobile equipment (12) of a subscriber in a mobile wireless communications network (14) according to any one of Claims 9-11, when dependent on Claim 9, **characterized** in that said method also comprises the step:

15 - with the aid of said control system (22), to change said Access Point Name (APN) stored in said identity module (16).

13. At least one computer program product (102<sub>1</sub>, ..., 102<sub>n</sub>) directly loadable into the internal memory of at least one digital computer (100<sub>1</sub>, ..., 100<sub>n</sub>), comprising non-transitory software code portions for performing the steps of Claim 20 8 when said at least one product (102<sub>1</sub>, ..., 102<sub>n</sub>) is/are run on said at least one computer (100<sub>1</sub>, ..., 100<sub>n</sub>).

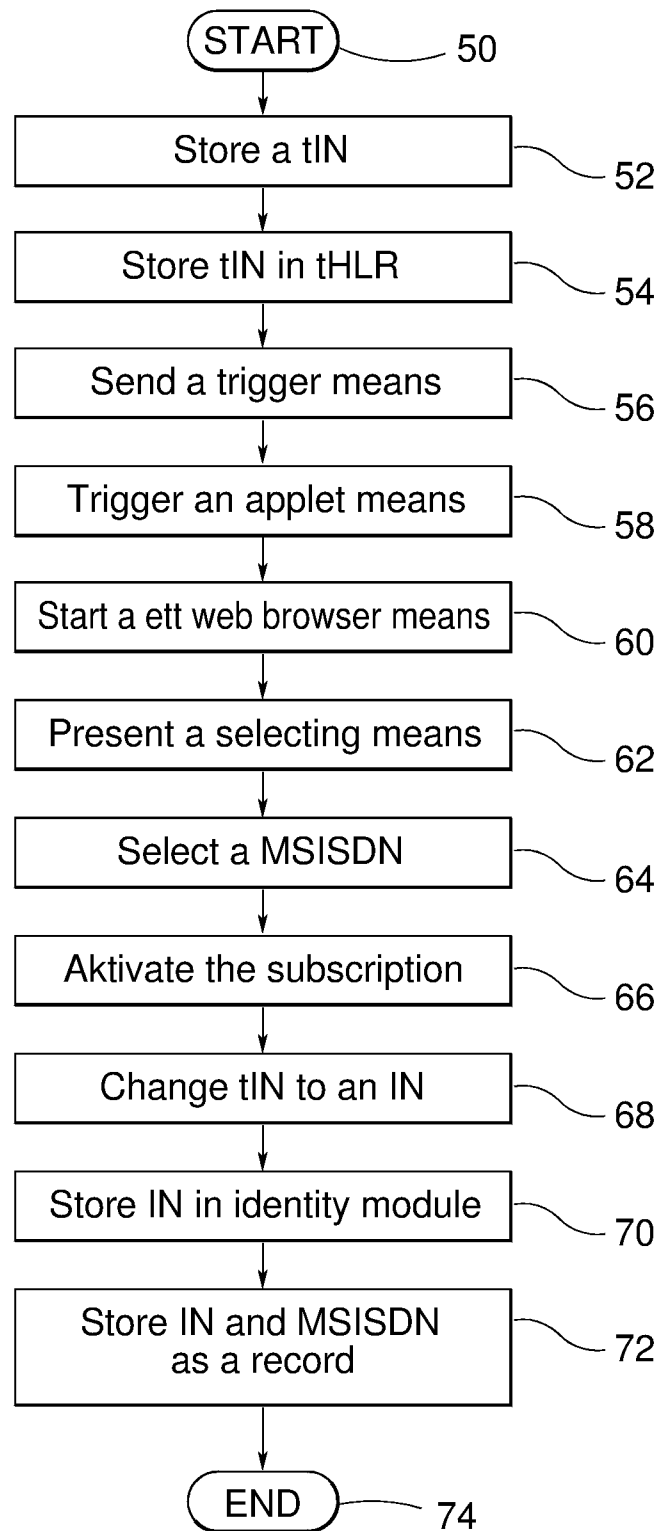
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Fig. 1



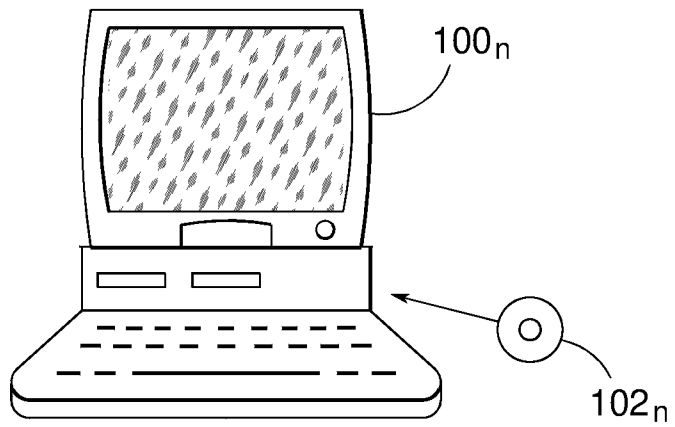
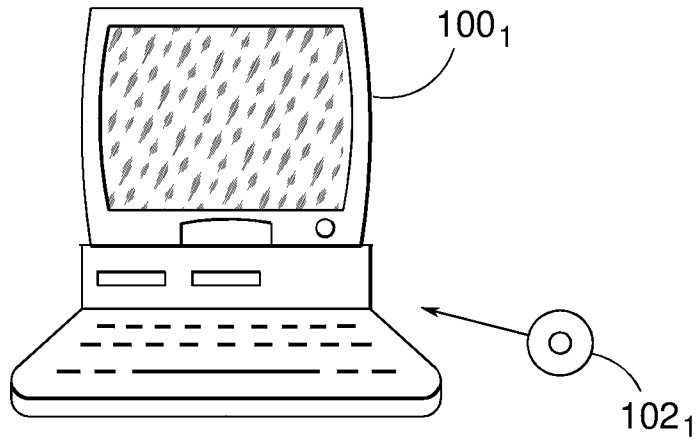
2 / 3

Fig. 2



3/3

Fig. 3



## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE2012/050067

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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)

IPC: H04W

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)

EPO-Internal, PAJ, WPI data, EMBASE, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2010093312 A1 (SMARTTRUST AB ET AL), 19 August 2010 (2010-08-19); abstract; page 4, line 11 - page 5, line 25; figure 1; claims 1-5 --	1-13
Y	EP 2222105 A1 (NTT DOCOMO INC), 25 August 2010 (2010-08-25); abstract; paragraphs [0007]-[0011], [0016], [0024]-[0027], [0035]-[0038] --	1-13



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

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

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Date of the actual completion of the international search

28-05-2012

Date of mailing of the international search report

29-05-2012

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE2012/050067

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	3GPP TS 31.111 V9.4.0 (2011-01); 3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Universal Subscriber Identity Module (USIM), Application Toolkit (USAT) (Release 9)  URL: <a href="http://www.3gpp.org/ftp/Specs/html-info/31111.htm">http://www.3gpp.org/ftp/Specs/html-info/31111.htm</a> ; section 6  --	1-13
A	ETSI TS 102 223 V9.0.0 (2009-10), Smart Cards; Card Application Toolkit (CAT) (Release 9)  URL: <a href="http://www.etsi.org/deliver/etsi_ts/102200_102299/102223/09.00.00_60/ts_102223v090000p.pdf">http://www.etsi.org/deliver/etsi_ts/102200_102299/102223/09.00.00_60/ts_102223v090000p.pdf</a> ; section 6  --	1-13
A	US 20060183500 A1 (CHOI SIMON), 17 August 2006 (2006-08-17); abstract; paragraphs [0003]-[0006], [0014], [0041]-[0055]; figure 1  --	1-13
A	US 7266371 B1 (AMIN UMESH J ET AL), 4 September 2007 (2007-09-04); abstract; column 9, line 3 - column 12, line 33; figures 2-5; claims 1-4  -- -----	1-13

**Continuation of:** second sheet

**International Patent Classification (IPC)**

**H04W 8/20** (2009.01)

**H04W 8/26** (2009.01)

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Cited literature, if any, will be enclosed in paper form.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/SE2012/050067

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US	7266371 B1	04/09/2007	NONE		