METHOD AND SYSTEM FOR TRANSFERRING DATA AND DIRECTING IT TO THE DESIRED PERSON

Abstract: This publication discloses a method and arrangement for transferring and directing information to a desired entity. According to the method, an order is received from a customer (10) through a first information network and a product or service according to the order is sent to the customer (10). According to the invention, a service-specific service number of a second information network is sent to the customer (10) through the first information network, in response to the service-specific service number received from the customer (10) through the second information network, order information is sent to the service provider (12).
Method and system for transmission of data, when ordering services or products

The present invention relates to a method, according to the preamble of Claim 1, for transferring and directing information to a desired entity.

The present invention also relates to an arrangement, according to the preamble of Claim 7, for transferring and directing information to a desired entity.

By utilizing the method described in the following, it is possible to provide a record selected by a customer (for example, a form completed on the Internet) for viewing by a customer service agent during a call made by the customer, or when the call arrives at the customer service.

According to the state of the art, service ordering information is sent customer-specifically to the service provider, for example, as follows:

The problem has been resolved with the aid of a telephone network, for example as follows. Very often, the service provider’s customer service has a database of customers. When a customer calls the customer service, they can be identified on the basis of the caller’s A-number, for example. On the basis of this A-number, a retrieval can be made from the customer database, allowing all of the information concerning the customer to be viewed by the customer service agent.

In the Internet, it is also possible to complete a record, which is recorded in the customer service database with the aid of a browser.

In the telephone network solution, customers themselves cannot influence the contents of the customer service database prior to the call, instead they are based on the database and information made by the customer service itself.

If a customer wishes to confirm by telephone the information of the record of an order placed using the Internet, they must provide some identifier data of the recorded record
over the phone, so that the customer service agent can retrieve the information from the
database.

The invention is intended to solve the aforesaid problems of the state of the art and for
this purpose create an entirely new type of method.

The invention is based on a service order form being completed by means of an
information network such as the Internet and the order information being sent to a
database with the aid of the same network. The person ordering the service is notified,
through the information network, of an order-specifically varying service number, which
the customer can contact, for example, by telephone to confirm the order and/or to check
the progress of the order. If this predefined telephone number is called, the service
provider is provided with the order information, which is linked to the relevant order
service number and simultaneously the call is connected to the service provider for a
possible verbal check or additional comments/additional information.

More specifically, the method according to the invention is characterized by what is
stated in the characterizing portion of Claim 1.

The arrangement according to the invention is characterized by what is stated in the
characterizing portion of Claim 7.

Considerable advantages are gained with the aid of the invention.

Because the method is based on the information provided by the customer being made
available directly with the aid of the Internet to the person answering the call, it is thus
possible to shorten the telephone conversation between the customer and the customer
service agent. This will reduce the possibility of errors and misunderstandings.

Because the information is visible in a ready and clear format on the screen of the
customer service agent’s PC, the customer can be served more quickly. Thus, the
customers do part of the customer service agent’s work.
In the following, the invention is examined with the aid of examples and with reference to the accompanying drawings.

Figure 1 shows an operational block diagram of one arrangement according to the invention.

Figure 2 shows a flow diagram of one implementation of the method according to the invention.

Figure 3 shows a flow diagram of a second implementation of the method according to the invention.

Figure 4 shows an example of one record according to the invention.

One example of the implementation of the invention is the ordering of a pizza through the Internet. The customer selects the pizza and the flavourings they want to order, from the pizzeria's website. Once the customer has selected the necessary items from the Web page, they click a button to send the pizza information to an external database of an intelligent network. By return, the customer receives from the database a service number (e.g., 0100-1299), which they can call. If the customer calls this service number, the call is connected, under the control of the intelligent network, to the owner of the service, i.e. to the pizzeria. When the call arrives at the pizzeria, someone at the pizzeria can retrieve, from the external database, the information on the pizza selected by the customer from the website. Alternatively, the information can be sent automatically to the service provider, in connection with the call. Thus, the information will be already waiting at the pizzeria, when the call is answered.

According to Figure 1, the arrangement according to the invention comprises the customer's 10 components, the operator's 11 components, and the service provider's 12 components. The customer's 10 components include the customer's computer 1 and the customer's telephone 4. The computer 1, typically a personal computer, is connected to a data communications network such as the Internet while correspondingly the telephone 4 is connected to a second information network, typically a normal telephone network.
Naturally, the computer I need not be a traditional desktop computer - it can be, for instance, a laptop computer with a data communications connection capability, or alternatively a computer with a WAP or UMTS communications capability, possibly equipped with other communications properties.

The operator’s 11 components, in turn, include an A-subscriber exchange 5, to which the customer’s telephone 4 can be connected. The A-subscriber exchange 5 is, in turn connected to an SSP centre (Service Switching Point). The SSP centre 5, in turn, communicates with both an SCP (Service Control Point) and a B-subscriber exchange 8. In addition, the SCP 7 is connected to an external database 2. The external database 2 communicates with both the customer’s 10 computer 1 and with the service provider’s customer servers 3.

The equipment of the service provider 12, in turn includes a switchboard 9, which is connected to the operator’s 11 B-subscriber exchange 8, and customer service computers 3, which are connected over data communications connections to the operator’s 11 external database 2. The customer service computers 3 can, in principle, be any computer whatever, which are able in terms of equipment and/or software to communicate with the database 2. If the service provider’s organization is small, the switchboard 9 is unnecessary, and the telephone 10 or telephones can be connected directly to the B-subscriber exchange 8 over an analog or digital connection.

The connections referred to above can be based on either a traditional landline connection, or on a wireless connection. In terms of the invention, what is important is that the components can communicate with each other. This, in turn, can be implemented in many different ways on the basis of the knowledge of one versed in the art.

The following describes a method according to Figure 2, in which the customer uses a browser to record information in an external database.

The customer uses their computer in an Internet connection. They write, in the address field of their browser, the Internet address (URL), which addresses the external database
21, either through the service provider’s website, or directly. For example, there can be a hyperlink to the external database on the service provider’s home page, which can take the form ‘Order pizza’. This link thus leads to the external database, which returns an HTML page 22, defined by the service provider, to the customer’s browser and waits for the customer’s reply 23. The customer completes the sent HTML page 22 and returns the form by clicking 24 a button on the HTML page. The customer’s browser and the external database keep in contact with each other, for example, with the aid of an HTTP or HTTPS protocol. Next, the external database examines the information 25 returned by the browser. If the information’s format and quantity are correct, the external database selects a random, order-specific service number 26 from a service number space. The service number space is part of a number space allocated to this particular service, for example 01001200 - 01001300. If the information is not correct, the customer’s browser is sent notification of the failure of the recording, requested to try again 30, and the process is terminated 31. Once the service number has been selected (e.g., 01001299), the external database records all the information that it has received from the customer, along with the time 27 of the event. The information is recorded as a single record in the database and the retrieval key is set to be the service number randomly selected by the external database, so that the data can be later found unambiguously. Figure 4 shows an example of a record, which records not only the service number, but also the time stamp, the product ordered, additional information, and the price of the product. Notification of the selected service number, to which a call can be made, is returned to the customer, as is information as to how long the recorded information will be retained in the database 28. Finally, the database and browser processing processes are terminated 29.

In the following, a method according to the invention, in which the customer calls the customer service, is described on the basis of the example of Figure 3.

The customer calls the service number 41 they have read from their browser. The call is routed from the A-subscriber exchange to the SSP centre, which sends the service request to the SCP, i.e. to the intelligent network controller 42. The SCP makes a first query from the external database 43. If a record according to the service number is found 44, the database returns the record’s time-stamp field (the first data field of the record) to the SCP. If the record is not found, or the query fails, the SCP commands the SSP centre
to break off the call. From the time field, the SCP can decide, for example, whether the record is still valid or is out of date. If the data is out of date, the data record is deleted from the database 48 and the SCP commands the SSP centre to break off the call 49. If the data is not out of date, the customer’s application commands the SCP to replace the caller’s A-number with the called B-number, i.e. with the service number 46. In that case, the person answering the call sees the called service number in place of the A-number in the telephone’s numerical display. After this, the intelligent network controller returns information to the SSP centre in order to connect the call to the destination number 47 found from the record (the fifth data field of the record).

Alternatively, the information that the time-stamp field is out of date can be acted upon from the service provider’s 12 application and the necessary operations can be carried out manually on out-of-date orders.

The following describes a method according to the invention, in which the customer service agent 3 retrieves the information and answers a call.

When the call reaches the destination subscriber, the called service number appears as the caller’s A-number. On the basis of this number, the person answering the call can use their own browser to carry out a search of the external database. The search can be made immediately the call begins to ring in the subscription, because the number display device is then already displaying the A-number. The customer’s information recorded in the database can then be obtained even before the call is answered. The information can, of course, also be retrieved during the call. Thus the person answering the call has, on their browser, the information that the calling party has selected on their own browser and recorded in the external database.

The destination subscriber (= service provider 12) can have a telephone switchboard extension, an ISDN connection, an analog connection, or a mobile subscription. The main thing is that they have a terminal on which it is possible to see the transferable, varying order-specific service number (e.g., 01001299), either of the display of the telephone or on a number-display device, or similar.
With the aid of a telephone switchboard, it is also possible, on the basis of the A-number coming to the subscription (in this case, the A-number is thus the service number), to retrieve the record completed by the customer from the external database. This requires the switchboard to have the necessary capability. Thus, the customer service agent need not make the retrieval from the database themselves, instead the server attached to the switchboard and its software will make the database retrieval on behalf of the customer service agent.

The method can be utilized not only on the basis of the A-number, but also of the transferor’s number. In this case the transferor’s number will be replaced in the IN network by the service number. This transferor’s number can be shown, for example, in an ISDN subscription and in certain telephone switchboards.

Figure 4 shows an example of one record according to the invention, in which the uppermost data is a retrieval key, the varying service-specific service number (01001299). The first data field contains the time stamp (22:45) of the entry to the database, the second data field the type of pizza (americano), the third data field additional information (oregano), the fourth data field price information (FIM 42,–), and the fifth data field the destination number of the service provider’s customer service (09060557).

The invention can also be used, for example, in automobile repair shops and other similar businesses, for example, as follows. An order is first placed for the service of a car or other device through an information network and, as in the case of the pizza, a service number is received in reply, which, when called, connects to the party carrying out the work, making it possible to agree, outside of the order form, about other related matters. In addition to the above, the same service number and database can also be used when the customer enquires about how much of the service of the device (e.g., a car) has been carried out. In that case, the customer service agent can see from the database what has been done to the device (e.g., the car) so far, when it can be fetched, how much it will cost, etc. The database is thus updated as the maintenance work proceeds. The service number can be reused by a new customer, once the work has been completed and the previous customer has fetched their device (e.g. car). Thus, the customer can be...
provided with the latest possible information on the progress of the work. Of course, there can be even more applications.

In principle, any information at all appearing in the Internet can be recorded in an external database of an intelligent network, because the external database itself is part of the Internet. And if this information is given a service number as an identifier, the information can be identified through a conventional telephone network. According to alternative embodiments of the invention, the information entered through an information network can be left in a database for a longer time and can be updated and read using a browser as required.

Thus, the invention generally relates to a method, in which a browser is used to enter the information of the person ordering a service into a database, a service-specific fixed, however consecutively running, service number being defined as the retrieval key, in which case it is possible with the aid of an intelligent network to connect a call, through the service number, to the correct subscription of the service provider, and the destination subscriber’s information is retrieved using a browser at the service provider’s end. In addition, according to the invention, the person ordering the service is provided with an opportunity, either through the Internet, or alternatively through a telephone network, to examine the operations of the service provider as the service is completed in various stages, as, for example, in the automobile repair shop application.

The monitoring of the progress of the completion of such a service could, if necessary, include the possibility for using a password for the progress of the service.

Once the work has been handed over to the customer, the combination of the service number and password in question can be taken out of use and the same service number can be reused later. The password can be defined with a certain length, automatically and randomly through the operation of the system. By means of this arrangement, it is possible to prevent different customers seeing each other’s orders. The same is not necessarily required for calls answered by service personnel.

Thus, according to the invention, the same service number can be used both when
working by telephone (operation as when using a normal telephone number) and through
the Internet (operation using a user-identifier + password).

According to the invention, invoicing could also be handled in a manner based on
charging for the service-specific varying service number, through a normal telephone
bill.

The method according to the invention can be used, for example, to deliver photographs
to customers. If a customer wishes to order, for example, JPEG-form photographs as
colour prints in a printing shop, the process (colour settings, grey tones, etc.) can be
monitored according to the invention, for example, through the Internet. Similarly, the
method can be applied to other printed products.

For example, orders for flowers can be placed in accordance with the method according
to the invention, in which case the initial order is defined through a network, with a call
to a supplied service-specific, varying service number permitting the final selection of
the product, for example, by means of pictorial information sent through the Internet.

The second information network described in the invention can be, for example, the
Internet, a WAP, or UMTS, or other public or local area network. In this case, the
definition information network is also applied to a telephone network, such as an IN
network (Intelligent Network).
Claims:

1. A method for transferring and directing information to a desired entity, in which method

   - an order is received from a customer (10) through a first information network, and

   - a product or service is sent to the customer (10) according to the order,

   characterized in that

   - a service-specific service number is sent to the customer (10) through a second information network,

   - order information is sent to the service provider (12), in response to the service-specific service number received from the customer (10) through the second information network.

2. A method according to Claim 1, characterized in that the customer (10) is connected to the service provider (12) by means of an information network.

3. A method according to Claim 1 or 2, characterized in that the Internet, a WAP or UMTS network, or other data network is used as the first information network.

4. A method according to Claim 1, 2, or 3, characterized in that a normal landline telephone network, such as an IN network, is used as the second information network.

5. A method according to any of the above Claims, characterized in that the invoicing for the services or products is handled through the billing of the second information network.

6. A method according to any of the above Claims, characterized in that in the method
an opportunity is arranged for the customer to monitor the completion of the service or product at least through the second information network.

7. An arrangement for transferring and directing information to a desired entity, which arrangement includes

- means for receiving an order from a customer (10) through a first information network, and

- means for sending a product or service according to the order to the customer (10),

characterized in that the arrangement includes

- means (2) for sending a service-specific service number of a second information network to the customer (10) through the first information network,

- means (2) for sending order information to the service provider (12), in response to the service-specific service number received from the customer (10) through the second information network.

8. An arrangement according to Claim 7, characterized in that it includes means for connecting the customer (10) to the service provider (12) by means of an information network.

9. An arrangement according to Claim 7 or 8, characterized in that the first information network is the Internet, a WAP or UMTS network, or other similar data network.

10. An arrangement according to Claim 7, 8, or 9, characterized in that the second information network is a normal landline telephone network, such as an IN network.

11. An arrangement according to any of the above Claims, characterized in that it includes means for handling the invoicing for the services or products through the billing
of the second information network.

12. An arrangement according to any of the above Claims, characterized in that the arrangement includes means, by which an opportunity is provided for the customer to monitor the completion of the service or product, at least through the second information network.
Fig. 2

21. Customer's browser requests Web page
22. Send page to customer's browser
23. Wait for reply
24. Customer's browser returns information
25. Are the necessary data included in the information returned by the browser?
26. Select random service number
27. Record customer's information and time in database and set the service number selected above as the retrieval key for the information
28. Send notification of the service number and time to the customer's browser
29. Terminate database process
30. Send error notification to the customer's browser
31. Terminate database process
3. Customer dials B number

4. IN trigger

5. Query external database with the aid of the B number

6. Did the query succeed?

7. Is the service number valid?

8. Replace A number with B number

9. Connect call to the destination number retrieved from the data

10. Delete record from database

11. Break off call
| 01001299 | <- retrieval key, which is also the B number |
| 22:45    | <- first data field |
| americano| <- second data field |
| oregano  | <- third data field |
| 42       | <- fourth data field |
| 096065571| <- fifth data field |

**Fig. 4**
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 17/60
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: G06F, H04M, H04Q

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 database consulted during the international search (name of database and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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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
  "B" earlier application or patent 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 document 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

"I" inter 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

"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

"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

"&" member of the same patent family

Date of the actual completion of the international search: 21 March 2002

Name and mailing address of the ISA/Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Date of mailing of the international search report: 25-03-2002

Authorized officer:

Lars Ekeberg/JAn
Telephone No. +46 8 782 25 00

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INTERNATIONAL SEARCH REPORT

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-12
   because they relate to subject matter not required to be searched by this Authority, namely:
   Schemes, rules or methods of doing business. Although an international search report has been established.

2. ☐ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.

Remark on Protest ☐ The additional search fees were accompanied by the applicant’s protest.
☐ No protest accompanied the payment of additional search fees.

Form PCT/SA/210 (continuation of first sheet (1)) (July 1998)
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