Method for increasing the efficiency of trade

The invention relates to a method for increasing the efficiency of trade, whereby the customer, in order to obtain a physical substitute needed for acquisition/exploitation or like of a product, service and/or like, gets contact by his/her own data processing apparatus, such as a personal computer, a data communicator or like via open data communications, such as through intranet, internet, modem or like with a server, whereby after getting connection, chooses, confirms and pays the desired product, service and/or like, whereafter the server, after verification of personal, communications, credit information and/or like confirms correctness of the trade occasion and transmits a receipt or like to the customer giving evidence at least of validity of the trade occasion.

The type of principle as described above is working nowadays in sale of tickets e.g. of different kinds of traffic companies or e.g. of service suppliers arranging entertainment occasions, whereby the customer may get contact by his/her own computer via internet with the service suppliers server and reserve, pay and on the other hand also receive a receipt giving right to the actual ticket. Nowadays exploitation of the actual service being bought, such as of a ticket enabling access to the entertainment occasion, requires however, that the customer goes to get the ticket, that has been reserved, in advance. A crucial disadvantage of this type of activity is the fact, that the customer must first of all still go to get the actual ticket separately and on the other hand the fact, that the service supplier must first of all mail the ticket to the customer and on the other hand keep also those customers queuing, that have already reserved the tickets in advance, that is why the quality of custo-

mer service suffers disproportionately much only because of a two-stage sale of tickets.

On the other hand e.g. in application document DE 196 34 169 or patent US 5,239,480 there has been represented a system, which comprises separate self-service terminals, that are connected by a closed net (US 5,239,490) or e.g. by a modem (DE 196 34 169) with certain servers, e.g. with organizers of different kinds of sports, theatre, musical occasions or the like. Each terminal has first of all devices required for the purchase occasion as well as printers so, that the customer may choose and pay the tickets for the desired occasion from the sources being connected to the net and print the same for himself/herself in order to enable access to the occasion in question. First of all such a problem is involved with this solution, that putting up and maintenance of the system in question is very expensive, because a very massive entirety is required, in which each terminal is connected to all servers of the occasion organizers being connected to the system. This is why the customer has first of all a very limited possibility in practice to choose occasions, because it is not very easy in practice to couple a very large amount of sources with a closed system, that is why the solution in question is applicable mostly in rather limited environments only. In addition to that the customer must always naturally operate with a terminal being connected to the system. Thus, in case the type of net in question ought to be as customer friendly as possible, these terminals should be very widely spread. This is why population living particularly in scattered settlement is of a totally different value in practice when compared to population centers, in which bringing about of the system may be able to be carried out satisfyingly even to a certain amount.

The method according to this invention is aimed to achieve a decisive improvement in the problems described above and thus to raise essentially the level of prior art in the field. In order to bring about this aim, the method according to the invention is primarily characterized by, that the server forms during the connection at least an identifier relating to the customer and transmits the same after an accepted payment to the customer, whereafter the customer produces a physical substitute comprising at least the above identifier by means of his own data processing apparatus.

The most crucial advantages of the method according to the invention are first of all simplicity, reliability and usefulness of the same in most heterogeneous connections and purposes. The method according to the invention may be exploited very well in connection with actual sale of tickets as well as e.g for selling of different kinds of products. A crucial advantage of the method according to the invention is furthermore the fact, that whoever may carry out all needed purchasing measures, that is choose, confirm and carry out payment relating to e.g. the desired service or occasion by means of the nearest PC or by means of his own personal data communicator, such as e.g. by a GSM phone or e.g. by a so called pocket computer equipped with data communications, whereafter the server produces also the actual physical substitute or e.g. an access ticket to the occasion in question directly by means of the customers data processing unit. Above all not any kind of an already existing closed net, that is connected e.g. to certain service suppliers, is thus not anymore requested, but instead always the widest possible existing net may be exploited in this connection meaning e.g. internet as such. This is why the customer has naturally also the widest possible selection of service suppliers in use. Furthermore as

an advantageous embodiment of the method, the service supplier may advantageously check the identifier of the physical substitute being produced for the customer by exploiting e.g. an automatic reading device, which after notifying correctness e.g. of an EAN-code of the ticket being produced by the customer enables finishing of the trade or e.g. access to an exhition.

Advantageous embodiments of the method according to the invention are represented in the independent claims related to the method.

In the following description the invention is described in detail with reference made to the accompanying drawings fig. 1a, 1b and fig. 2a, 2b, in which the principle of the method according to the invention has been shown as an example being carried out in four alternative ways.

The invention relates to a method for increasing the efficiency of trade, whereby the customer, in order to obtain a physical substitute needed for acquisition/exploitation or like of a product, service and/or like, gets contact by his/her own data processing apparatus X, such as a personal computer, a data communicator or like via open data communications Y, such as through intranet, internet, modem or like with a server A, whereby after getting a connection, chooses, confirms and pays the desired product, service and/or like, whereafter the server A, after verification of personal, communications, credit information and/or like confirms correctness of the trade occasion and transmits a receipt or like to the customer, giving evidence at least of validity of the trade occasion. The server A forms during the connection at least an identifier 1 relating to the customer and transmits the same after an accepted payment to the customer, whereafter the customer produces a

physical substitute 2 comprising at least the above identifier by means of his/her own data processing apparatus X.

In this connection the server may be carried out in addition to present server solutions also by means of a concrete part entirety belonging e.g. to the apparatus of e.g. the net server supplier or of the actual service supplier or alternatively solely by a software solution, that is connected to a suitable point in the process described above, starting from the contact takers device all the way to the device of the final service supplier.

Furthermore as an advantageous embodiment of the method, the identifier 1 of the physical substitute 2 having been produced by the customer is being checked in connection with exploitation or like of the product, service and/or of the like acquisition preferably by means of an automatic reading device B, which after establishing validity of the physical substitute 2 enables finishing of the trade, such as delivering the article being bought or enabling access to the resort, that the customer is entitled to by the payment.

Furthermore as an advantageous embodiment the server A produces an optically readable verifier, such as an EAN-code 1a or like, that is included in the physical substitute 2, that is being produced by the customer by a printer Z of his/her own data processing apparatus. It is on the other hand possible to operate in such a manner as well, that the server A collects the identifier 1 regarding the customer as a graphic page, that is being printed by the printer Z of the customers' own data processing apparatus.

Furthermore as an advantageous embodiment of the method the identifier 1 being transmitted by the server A is being written out by means of the customers' data processing apparatus to a memory means, that is to be carried along, such as a memory card, a smart card or like.

In figs 1a, 1b and 2a the server A is placed physically between the service supplier T and the customer X, whereby the server is during the same connection Y advantageously in connection with the service supplier T, also, in order to inform about the purchase occasion. The validity of the identifier 1 being given to the customer is being checked e.g. according to the principle shown in fig. 1a in a way, that the reading device B gets contact with the server A or alternatively as shown in fig. 1b by a contact of the reading device B directly with the service supplier T. The solution shown in fig. 2a differs from the solution being presented in fig. 1a in such respect, that the identifier 1 is booked directly to the customers' data communicator X, which in this connection acts thus, also, as the actual physical substitute 2, the validity of which may be checked by the automatic reading device B after connection with the server A and/or with the service supplier T. The solution being represented furthermore in fig. 2b differs from the above primarily in such respect, that the customer server A, e.g. particularly a program being developed for this purpose, is placed in an integrated manner to the device environment of the service supplier T.

Furthermore as an advantageous embodiment of the method, checking of the physical substitute, such as of a ticket or like, is being carried out contactlessly on remote reading principle, such as by means of an iductive, capasitive and/or like remote reading device operating by electromagnetism or by means of

one operating e.g. on radio frequency and/or accordingly. In addition to the above so called optical solutions may possibly come into question as well or solutions based on infrared radiation. In this way first of all a very fluent checking of tickets is enabled by means of a device entirety, which is able to monitor continuously the stream of customers and to let e.g. one customer at a time through a passage gate without the need for checking each single ticket visually. In this connection it may be furthermore advantageous to exploit also other kinds of monitoring systems for the stream of customers, such as video cameras or like.

The type of method described above enables also collecting of wider information than before and gathering even of totally new kind of information about customers immediately during the purchase occasion, because all the services are being sold exploiting the same system, whereby most heterogeneous profile information may be collected about the customer e.g. with a view to customer follow-up, marketing, statistical or the like purposes.

The method being described above is applicable for arranging of most heterogeneous public occasions, e.g. of exhibitions, festivals, concert hall occasions, sport events, the Olympics etc. The method may be exploited in centralized sale of tickets furthermore for activities of e.g. airline companies, shipping companies, bus companies etc. The method may be furthermore exploited also in so called tax free selling or in mail-order business and in deliveries of the same as well. The method may be applied for in internal services of companies as well e.g. concerning employment benefits etc. The method may be applied for on the other hand also in public administration, e.g. in health care as well as in transmit-

ting of both medicine and operational diagnostics, or on the other hand in social services e.g. in transmitting of financial aids or the like.

It is obvious, that the invention is not limited to the described or presented examples above, but it can be modified within the basic idea even to a great extent. It is thus possible instead of a PC to take advantage of e.g. a GSM phone or like, that is connected to a printer, which enables the customer to act as described above after getting a connection. On the other hand along development of techniques it is probable, that the amount of present loadable payment cards, such as trade instruments of the type of e.g. telephone cards increase to such extent, that devices loading these cards will be available also for private use in a way, that the principle described above may be exploited also by loading cards by means of home computers as well. Naturally all kinds of memory instruments of the future, that may be carried along, come into question when acting according to the basic principle of the invention or in other words when the customer gets contact with a server or like of the service supplier, which after carrying out the payment event transmits an identified identifier to the client, which the customer may write out by means of his own data processing unit in a most suitable way in this purpose. Correspondingly the service supplier may use e.g. traditional visual checking, optical reading or other e.g. electromagnetically operated, such as iductive, capasitive or the like remote reading devices in order to check the customers' physical substitute or e.g. ticket.

Claims

1. Method for increasing the efficiency of trade, whereby the customer, in order to obtain a physical substitute needed for acquisition/exploitation or like of a product, service and/or like, gets contact by his/her own data processing apparatus (X), such as a personal computer, a data communicator or like via open data communications (Y), such as through intranet, internet, modem or like with a server (A), whereby after getting a connection, chooses, confirms and pays the desired product, service and/or like, whereafter the server (A), after verification of personal, communications, credit information and/or like confirms correctness of the trade occasion and transmits a receipt or like to the customer giving evidence at least of validity of the trade occasion, **characterized** in, that the server (A) forms during the connection at least an identifier (1) relating to the customer and transmits the same after an accepted payment to the customer, whereafter the customer produces a physical substitute (2) comprising at least the above identifier by means of his/her own data processing apparatus (X).

2. Method according the claim 1, **characterized** in, that the identifier (1) of the physical substitute (2), having been produced by the customer is being checked in connection with exploitation or like of the product, service and/or of the like acquisition preferably by means of an automatic reading device (B), which after establishing validity of the physical substitute (2) enables finishing of the trade, such as delivering the article being bought or enabling access to the resort, that the customer is entitled to by the payment.

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3. Method according to claim 1 or 2 above, characterized in, that the server (A) produces an optically readable verifier, such as an EAN-code (1a) or like, that is included in the physical substitute (2), that is being produced by the customer by a printer (Z) of his/her own data processing apparatus.

4. Method according to any of the claims 1-3 above, characterized in, that the server (A) collects the identifier (1) regarding the customer as a graphic page, that is being printed by the printer (Z) of the customers' own data processing apparatus.

5. Method according to any of the claims 1-4 above, characterized in, that the identifier (1) being transmitted by the server (A) is being written out by means of the customers' data processing apparatus to a memory means, that is to be carried along, such as a memory card, a smart card or like.

6. Method according to any of the claims 1-5 above, characterized in, that the identifier (1) being transmitted by the server (A) is being checked in connection with exploitation or like of the product, service and/or of the like acquisition contactlessly on remote reading principle, such as by means of an inductive, capasitive and/or like remote reading device operating by electromagnetism or by means of one operating on radio frequency and/or accordingly.

