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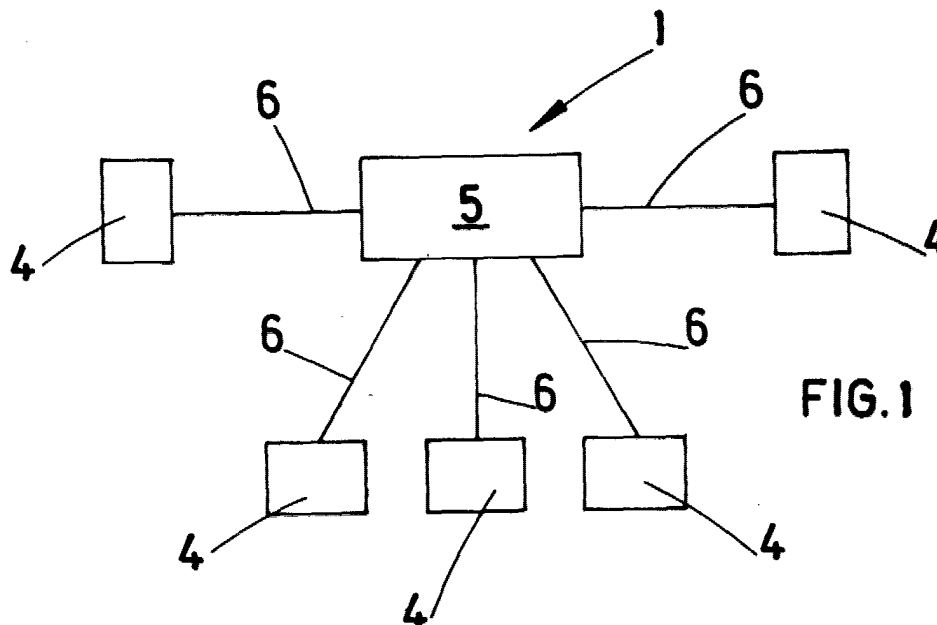
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(54) **Dispensing system for distributing access codes for computer and/or telecommunications services**

(57) A dispensing system for distributing access codes (2), for computer and/or telecommunications services, recorded on associated physical storage media, in particular data storage cards (3), comprises at

least one terminal (4) for recording the access code (2) directly on the card (3) and for subsequently issuing the card (3), said terminal (4) being directly accessible by the purchaser of the abovementioned service(s).



**FIG.1**

## Description

**[0001]** The present invention relates to a dispensing system for distributing access codes for computer and/or telecommunications services, recorded on associated physical storage media such as, for example, plastic or paper cards, said codes allowing access to a wide variety of services consisting for example, by way of indication but not exclusively, of network banking services, electronic diagnostics services, prepaid decremental call cards for telephone and motorway services, discount or special offer coupons, competition and lottery cards, and the like.

**[0002]** At present, the distribution of access codes is commonly performed by means of dispensing machines which, in return for payment of a suitable sum, issue cards with a code pre-printed on the card. This code may be associated with the card by means of a variety of techniques which range from stamping - in printed characters - a highlighted combination of alphanumeric characters or bar codes; or also suitable storage of a code on a magnetic strip or in an electronic circuit associated with the card.

**[0003]** Whatever the technology used for associating the access code with the associated storage media, a time lag exists between allocation of the code and use thereof by the purchaser who accesses the dispensing machine. In other words, the dispensing machine merely dispenses, in return for payment, cards which have been previously prepared elsewhere, using the specific methods of the various abovementioned production techniques and with reference to a precise and single type of service.

**[0004]** This results in numerous drawbacks, a first one of which consists in a not insignificant immobilisation of capital for the manager of the dispensing machine. The manager, in fact, before starting the entire cycle for production of cards to be issued, must necessarily purchase the corresponding access codes, thus immobilising a certain amount of capital, the returns from which will be gradually realised when the cards are later sold.

**[0005]** Owing to the fact that the access codes have an economic value, the time lag, occurring between the moment of purchase and the moment of sale, involves the drawback of a certain fluctuation in their monetary value.

**[0006]** Another drawback lies in the possibility that, during any one of the stages which occurs between allocation of the code (for example during printing at the typographers) and introduction of the cards into the dispensing machine (by an employee), some of the codes may be stolen, cloned, duplicated or more generally misused, with obvious consequences in terms of the safety of the capital spent for their purchase.

**[0007]** Another drawback, which is no less important than the previous drawbacks, consists in the fact that, in the known art, the access codes purchased by the end users cannot be immediately used, in the sense that

activation thereof is not immediate, but, for technical reasons, is subject to a waiting period which may range from one to two days.

**[0008]** The main object of the invention is to overcome the abovementioned drawbacks by making the process of associating the access code with the corresponding physical storage medium intrinsically safe.

**[0009]** In accordance with the invention, this object is achieved by a dispensing system for distributing access codes for computer and/or telecommunications services, recorded on associated physical storage media in particular data storage cards, characterized in that it comprises at least one terminal for recording the access code on the card and for the subsequent card issuing operation, said terminal being directly accessible by the purchaser of the abovementioned service(s).

**[0010]** A second object of the invention is that of practically eliminating the time delay occurring between the moment of acquisition of the code by the dispensing machine manager and the moment of resale thereof to the end user.

**[0011]** For this purpose the system comprises a central control unit and a telematic network connecting each terminal to the central unit, which, in combination with each other, allow the purchase, telematically, one at a time, of the codes to be associated with the various cards and transfer thereof to the terminal only when the end purchaser has made an explicit request therefor by means of activation of the said terminal.

**[0012]** Each terminal in the system may also be provided with means for interfacing with the purchaser, able to provide the said purchaser with a plurality of purchase choices which can be selected from lists of services which vary with regard to the nature of the service provided and/or the purchasable quantity of said service.

**[0013]** This results in the possibility of having terminals which are able to allow the electronic sale not only of a plurality of different services or non-material goods, but also of material goods which may be removed from the associated sales areas in quantities which are defined and/or authorised by the amount prepaid at the time of purchase of a given access code.

**[0014]** If the terminal is also provided with printing means for printing a receipt of payment for sums paid by the purchaser, the said purchaser also has the advantage of being able to refer to a specific terminal which, in the event of a dispute, is physically and perfectly identifiable.

**[0015]** As a result, it is possible to ensure maximum security for the economic transactions corresponding to the telematic sale of services and/or material goods associated therewith.

**[0016]** Further characteristic features and advantages of the invention may be clearly determined from the contents of the claims provided below and from the detailed description which follows, with reference to the accompanying drawings which illustrate a purely exemplary and non-limiting embodiment thereof and in which:

- Figure 1 is a very schematic illustration of the system according to the invention;
- Figure 2 is an illustrative and schematic elevation view of a terminal of the system;
- Figure 3 is a plan view of a medium for storing the access code, which can be purchased by means of the system according to the preceding figures.

**[0017]** With reference to the accompanying drawings 1 denotes in its entirety a dispensing system for distributing access codes 2 for computer and/or telecommunications services, recorded on associated storage media which, in Figure 3, are illustrated in the form of data storage cards 3 which are made, for example, of rigid or non-rigid paper or plastic material, but which may also be realized by continuous strips of thin materials or portions thereof.

**[0018]** The system essentially comprises (Figure 1) one or more terminals 4; a central control unit 5 - which may be located in a remote position with respect to the terminals 4 - and a telematic network 6 which operationally interconnects each terminal 4 to the central control unit 5.

**[0019]** Each terminal 4 is accessible directly by the purchaser of the abovementioned service(s) and is able to: record itself the access code 2 directly on the card 3 and subsequently issue, to the purchaser, the card 3 thus prepared.

**[0020]** The terminals 4 essentially comprise (Figure 2) a local control unit (7); interface means 8, 13 for allowing the exchange of data between the purchaser of the access code 2 and the local control unit 7; payment acceptance means 9, 10a; 10b; means 11, 15 for recording the access code 2 on the card 3; means 14 for issuing the card 3 and printing means 16 for printing a receipt of payment.

**[0021]** More particularly, the interface means include an alphanumeric and/or multi-functional keyboard 8 which can be activated by the purchaser and display means 13 - preferably consisting of a monitor or a video display - for showing not only information messages relating to the current interaction between terminal 4 and purchaser, but also a list of services and the associated access codes 2 which can be acquired on the terminal 4, with advanced payment by the purchaser.

**[0022]** The payment acceptance means comprise, according to a first embodiment, a unit 9 for accepting money in the form of banknotes and/or coins.

**[0023]** Alternatively or by way of a supplement to this embodiment, the abovementioned acceptance means may also comprise a reader of access codes recorded on cards 3. These readers, depending on the possible different types of cards 3, may be realized in the form of a magnetic card reader 10b or by an optical reader of bar codes 10a or conventional printed characters.

**[0024]** The means for recording the code on the card 3 include a printing unit 11 for stamping the access code 2 on the card 3; stamping may also be performed, for

example, by thermal transfer means or also by relief printing of the printed characters.

**[0025]** If the card 3 is of the type comprising a magnetic strip 12, the means for recording the code 2 on the card 3 include in this case a unit 15 for magnetic writing of said magnetic strip 12.

**[0026]** During use, when a purchaser of the access code 2 accesses the terminal 4, he/she activates, by interface means 8; 13 and by means of a local control unit 7, an interaction with the system 1 which allows one to select, from a list of available services, the type of service required and then determine the desired quantities of said service, after display of the list of associated costs.

**[0027]** Once the selection and the corresponding payment has been made by means of one of the payment acceptance means available on the terminal 4, the local control unit 7 activates an exchange of information with the central control unit 5 at the end of which the latter allocates an access code 2 which is to be printed on the card 3.

**[0028]** At this point, the local control unit 7 activates the means for recording the code 2 on the card 3, performing, depending on the constructional design of the terminal 4, stamping of the card 3 or magnetisation of the corresponding magnetic strip 12 or also storage of the access code 2 in the electronic circuitry of the card 3.

**[0029]** At the end of these operations the card 3 ready for use is expelled from the terminal 4 by associated issuing means 14.

**[0030]** The computer link between the central control unit 5 and the local control unit 7 is preferably of the continuous type in order to allow the allocation, in real time, of the access codes 2 available for subsequent recording on the cards 3. As regards, on the other hand, updating of the list of available services and the associated costs, it is possible to adopt conversely a link which can be activated periodically for the purpose of updating the various terminals 4.

**[0031]** The invention thus conceived may be subject to numerous modifications and variations, all of which falling within the scope of the inventive idea. Moreover, all the details may be replaced by technically equivalent elements.

## Claims

1. Dispensing machine for distributing access codes (2), for computer and/or telecommunications services, recorded on associated physical storage media in particular data storage cards (3), characterized in that it comprises at least one terminal (4) for recording the access code (2) on the card (3) and for subsequently issuing the card (3), said terminal (4) being directly accessible by the purchaser of the abovementioned service(s).

2. System according to Claim 1, characterized in that it comprises at least one central control unit (5) and a telematic network (6) which operationally interconnects said one or each terminal (4) to the central unit (5).
3. System according to Claim 2, characterized in that said central control unit (5) is remote with respect to said one or each terminal (4).
4. System according to Claim 1, characterized in that said terminal (4) comprises a local control unit (7); interface means (8, 13) for allowing the exchange of information between the purchaser of the access code (2) and the local control unit (7); payment acceptance means (9, 10a; 10b); means (11; 15) for recording the access code (2) on the card (3); and means (14) for issuing the card (3).
5. System according to Claim 4, characterized in that it comprises printing means (16) for printing a payment receipt.
6. System according to Claim 4, characterized in that the interface means comprise a keyboard (8) which can be activated by the purchaser and means (13) for displaying a list of purchasable services and the associated access codes (2).
7. System according to Claim 4, characterized in that the payment acceptance means comprise a money acceptance unit (9).
8. System according to Claim 7, characterized in that the money acceptance unit (9) is designed to accept banknotes.
9. System according to Claim 7, characterized in that the money acceptance unit (9) is designed to accept coins.
10. System according to Claim 4, characterized in that the payment acceptance means include a reader (10a; 10b) of access codes recorded on a card (3).
11. System according to Claim 4, characterized in that the payment acceptance means include a bar code reader (10a).
12. System according to Claim 4, characterized in that the payment acceptance means include a magnetic card reader (10b).
13. System according to Claim 4, characterized in that the means for recording the code on the card (3) include a printing unit (11) for stamping the access code (2) on the card (3).
14. System according to Claim 13, characterized in that stamping of the access code (2) is performed by means of thermal transfer.
15. System according to Claim 13, characterized in that the printing unit (11) is designed to stamp the access code (2) in relief on the card (3).
16. System according to Claim 4, in which the card (3) is provided with a magnetic strip (12), characterized in that the means for recording the code on the card (3) include a unit (15) for magnetic writing of said magnetic strip (12).
17. System according to Claim 2, characterized in that said central control unit (5) and said one or each terminal (4) are linked to each other by means of the telematic network (6) in order to update the list of available services and the associated access codes (2) which can be purchased.
18. System according to Claim 17, characterized in that said central control unit (5) and said one or each terminal (4) are periodically linked to each other via the telematic network (6).

