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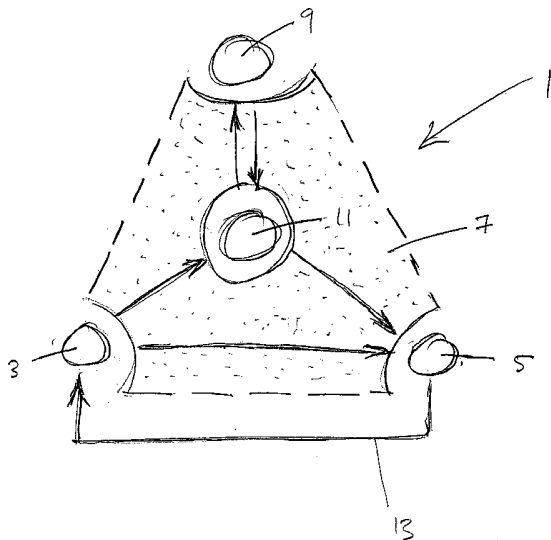
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(54) Title: IMPROVED SECURITY FOR BANK CARD PAYMENTS



(57) Abstract: The invention is a method of providing a secure bank card payment for a transaction between the cardholder and a vendor over a communications network. The communications network will include the Internet, a telecommunications network, and any combination thereof. A cardholder provides payment enabling details of the bank card only to an intermediary rather than to the vendor. The intermediary is also provided with the details of the intended transaction and it is the intermediary that arranges payment to the vendor. The intermediary will issue the cardholder with an electronic voucher by email, preferably, only after the cardholder has been contacted by short message service (SMS) and confirms that the voucher must be issued. The cardholder provides the vendor with the voucher at which time the goods may be dispatched for delivery. The intermediary in turn pays the vendor when it receives the voucher back. The intermediary may be a dedicated independent entity or a bank from which the card is issued.



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IMPROVED SECURITY FOR BANK CARD PAYMENTS

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FIELD OF THE INVENTION

15 The invention relates to a method of providing improved security for bank card payments, in particular for Internet transactions.

BACKGROUND TO THE INVENTION

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The use of bank cards to effect payments is ever increasing. Not only does this avoid the need to carry cash, but it also, probably more importantly, allows payment to be effected over the telephone or Internet. However, to do the latter requires that a cardholder disclose, along with his name, his card number. With
25 these details, a payee can process a legitimate payment. Where these details fall into the wrong hands large amounts of money can be fraudulently stolen. Accordingly, there is some reluctance to disclose details which enable payment especially over the Internet where security and privacy is a problem.

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OBJECT OF THE INVENTION

It is an object of this invention to provide a method which at least partially reduces the risk of disclosing bank card details.

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SUMMARY OF THE INVENTION

In accordance with this invention there is provided a method of providing a bank card payment for a transaction between the cardholder and a vendor over a communications network, wherein the cardholder provides payment enabling details of the bank card to an intermediary, the intermediary is provided with the details of the intended transaction, and the intermediary arranges payment to the vendor.

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The invention further provides for the intermediary to issue the cardholder with a voucher, for the cardholder to provide the vendor with the voucher, and for the intermediary to effect payment to the vendor on presentation of the voucher.

Further features of the invention provide for the intermediary to contact the cardholder and for the cardholder to confirm that the voucher must be issued; and for the intermediary to contact the cardholder on a mobile phone by short message service (SMS).

Further features of the invention provide for the voucher to be electronic; for the voucher to include a code; and for either the cardholder or intermediary to select the code.

Further features of the invention provide for the intermediary to be a dedicated independent entity; or for the intermediary to be a bank from which the card is issued.

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Further features of the invention provide for the communications network to be selected from the Internet, a telecommunications network, and any combination thereof; and for the bank card to be a credit card or a debit card.

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Further features of the invention provide for the payment enabling details to include the card number and name of the cardholder; and for the cardholder or vendor to provide the intermediary with the details of the intended transaction.

10 The word "vendor" is to be given a broad meaning in the context of this specification. It will include any person or entity which offers goods, services, accommodation or any other offering in return for payment.

15 **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention will now be described, by way of example only, with reference to the accompanying drawing

20 Figure 1 which is a schematic illustration of the method.

DETAILED DESCRIPTION OF THE INVENTION

25 With reference to Figure 1, the method of providing improved security for bank card payments is indicated generally by the reference numeral (1).

The payment is for a transaction between a cardholder (3) and a vendor (5). In this embodiment, the transaction is initiated over the Internet (7). The vendor (5)
30 has a website where it offers products for sale. The cardholder (3) selects a particular product which he wants to purchase.

In the ordinary course of events, the cardholder (3) would provide the vendor (5) with payment enabling details of a bank card. Sufficient details are normally the card number and the cardholder's (3) name. The cardholder (3) would also
5 provide an address for delivery of the selected product.

Once the vendor (5) has the payment enabling details, a payment on the bank card to the vendor (5) can be processed from the bank (9) of the cardholder (3).

10 In accordance with the invention, however, the cardholder (3) need only provide the vendor (5) with a delivery address and identify an intended transaction. The details of an intermediary (11) may also be provided.

The cardholder (3) provides his name and the card number to the intermediary
15 (11). Along with this information, relevant details of the intended transaction with the vendor (5) are also provided. The intermediary (11) will then obtain payment of the relevant funds from the bank (9). Payment of the amount owing to the vendor (5) in terms of the specific transaction is then made by the intermediary (11), whereupon the vendor (5) will dispatch (13) the selected product for
20 delivery.

Where the intermediary (11) is suitably accredited, the vendor (5) may be prepared to dispatch (13) the product once the intermediary (11) has confirmed its participation in the transaction. In this case, payment to the vendor (5) will be
25 guaranteed by the intermediary (11) before it is effected.

It will be appreciated that the sequence and nature of the information transferred in communications between the parties, (3) and (5), and the intermediary (11) may be varied in a number of ways to conclude such a transaction.

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In one such variation, the intermediary (11), after it has been contacted and provided with the relevant details, issues the cardholder (3) with a pin number for the transaction. The pin number will be issued once the intermediary (11) has secured payment of the amount in question from the bank (9). The cardholder (3) then provides the vendor (5) with the pin number. The intermediary (11) will, in turn, pay over the amount due to the vendor (5) on presentation of the pin number.

In this case, the unique pin number is a voucher which enables the transaction without the cardholder (3) having to disclose any bank card details to the vendor (5). The pin number represents a code and it will be appreciated that such a code can take any of a number of forms. Such codes are however conveniently alphanumeric. As an alternative to being issued with a code, the cardholder can be allowed to select his own code for a particular transaction.

In another variation, the cardholder (3) will preferably register as a user with the intermediary (11). This will involve, amongst others, providing the intermediary (11) with contact details, which will include a mobile telephone number.

When a payment is to be made, the cardholder (3) provides his name and the card number to the intermediary (11). Along with this information, relevant details of the intended transaction with the vendor (5) together with the amount in question are also provided. The intermediary (11) will request and obtain authorization for the amount from the bank or card company. Based on this, the intermediary (11) will issue a secure electronic purchase voucher to the cardholder (3). The voucher, which may also carry a unique code, is preferably electronic and sent by email to the cardholder's email address. As a precaution, the intermediary (11) will first contact the cardholder (3) by sending a short message service (SMS). This will be a request to confirm that the voucher should be issued. A return SMS from the handset will thus clear the issue of the

voucher. Alternatively, the SMS may include a code which the cardholder must phone in to the intermediary (11).

5 Presentation of the voucher to the vendor (5) will be followed by the dispatch (13) of the goods in question for delivery to the cardholder (3). In this case, payment to the vendor (5) is made when it forwards or communicates details of the voucher to the intermediary (11). The voucher, once it is issued can simply be forwarded as an email or email attachment from the cardholder (3) to the vendor (5) and back to the intermediary (11).

10 Essential to the method of this invention is that the cardholder (3) need only provide full payment enabling details of the bank card to the secure intermediary (11). Necessary online security precautions, which are within the competence of a suitably skilled person, will be provided by the intermediary. The high level of security, reputation and possibly cover in the event of fraudulent loss can be provided by the intermediary (11). The same cannot be said of every vendor (5) with whom a cardholder (3) may potentially wish to enter a transaction.

20 The details of the intended transaction which are provided to the intermediary may vary and can come from either the cardholder (3), the vendor (5) or both. The bank card can be a debit or a credit card and the payment enabling details may be varied.

25 It will be appreciated that the intermediary (11) may also be the bank (9). In this case the bank (9) also operates as intermediary (11) by offering the service as described. The bank (9) acts in both capacities and the communications between the intermediary (11) and the bank can be internal communications.

30 The invention will also apply where a bank card is used to secure goods or services where the vendor does not obtain payment on the bank card. In these

circumstances, the cardholder will pay the vendor directly at a later stage when appropriate.

5 While the described embodiment makes use of the Internet as a communications network, it will be appreciated that a telecommunications network may also be used, either exclusively or in combination with the Internet.

10 Accordingly this method is not limited to Internet transactions for purchase of goods but will also apply to transactions effected verbally over the telephone, in writing by telefax or in any other manner and for services or anything else offered at a price.

15 A cardholder will also be able to have a specific amount of money cleared for payment by the intermediary and have a code issued prior to deciding what the transaction will be.

20 A number of other variations, which do not depart from the scope of this invention, will be appreciated by a person skilled in the art.

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CLAIMS

1. A method of providing a bank card payment for a transaction between the cardholder and a vendor over a communications network, characterized in that the cardholder provides payment enabling details of the bank card to an intermediary, the intermediary is provided with the details of the intended transaction, and the intermediary arranges payment to the vendor.
2. A method as claimed in claim 1 in which the intermediary issues the cardholder with a voucher, the cardholder provides the vendor with the voucher, and the intermediary effects payment to the vendor on presentation of the voucher.
3. A method as claimed in claim 2 in which the intermediary contacts the cardholder and the cardholder confirms that the voucher must be issued.
4. A method as claimed in claim 3 in which the intermediary contacts the cardholder on a mobile phone by short message service (SMS).
5. A method as claimed in any of claims 2 to 4 in which the voucher is electronic.
6. A method as claimed in any of claims 2 to 5 in which the voucher includes a code.
7. A method as claimed in claim 5 in which either the cardholder or intermediary select the code.
8. A method as claimed in any of the preceding claims in which the intermediary is a dedicated independent entity.

9. A method as claimed in any one of claims 1 to 6 in which the intermediary is a bank from which the card is issued.
- 5 10. A method as claimed in any of the preceding claims in which the communications network is selected from the Internet, a telecommunications network, and any combination thereof.
- 10 11. A method as claimed in any of the preceding claims in which the bank card is a credit card or a debit card.
12. A method as claimed in any of the preceding claims in which the payment enabling details include the card number and name of the cardholder.
- 15 13. A method as claimed in any of the preceding claims in which the cardholder or vendor provide the intermediary with the details of the intended transaction.

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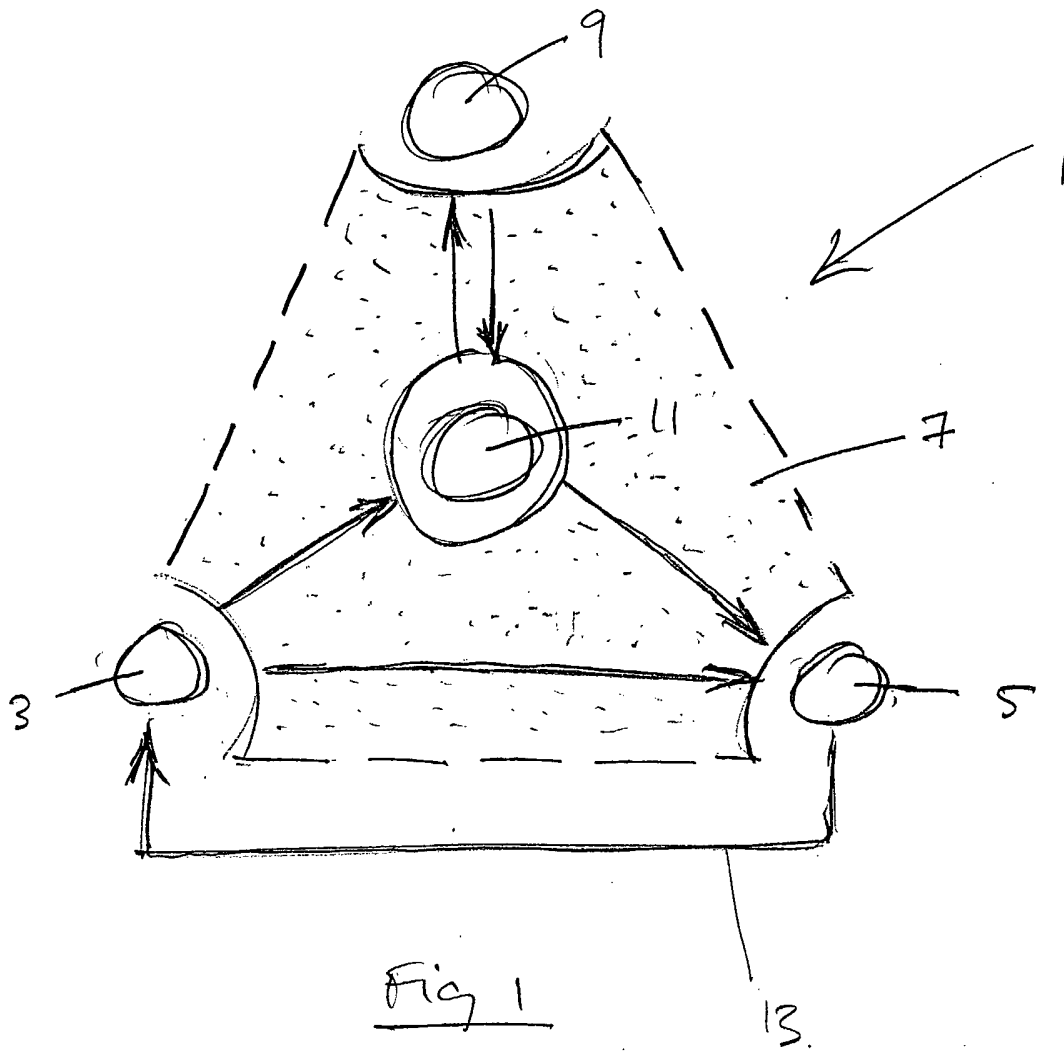


Fig 1

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G06Q30/00 G06Q20/00

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 7 G07F G06F

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

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

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 883 810 A (FRANKLIN ET AL) 16 March 1999 (1999-03-16) abstract column 1, line 66 - column 2, line 55 column 3, line 34 - column 5, line 31 column 6, line 1 - line 11 column 7, line 39 - column 8, line 36 column 9, line 5 - column 11, line 45 figures 1-5	1-13
X	EP 1 077 436 A (CITICORP DEVELOPMENT CENTER, INC) 21 February 2001 (2001-02-21) abstract paragraph '0007! - paragraph '0017! paragraph '0021! - paragraph '0034! figure 3	1-13

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- *E* earlier document but published on or after the international filing date
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INTERNATIONAL SEARCH REPORT

IB2005/002455

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 01/13275 A (FLEETBOSTON FINANCIAL CORPORATION; JUNDA, LAURENCE, E; GEARHART, RANDY) 22 February 2001 (2001-02-22)</p> <p>abstract</p> <p>page 3, line 27 - page 5, line 35</p> <p>page 6, line 28 - page 7, line 6</p> <p>page 8, line 10 - page 9, line 11</p> <p>page 10, line 15 - page 11, line 29</p> <p>page 12, line 1 - line 36</p> <p>page 13, line 35 - page 15, line 13</p> <p>page 16, line 1 - page 17, line 8</p> <p>page 23, line 17 - page 24, line 7</p> <p>figures 1-3</p> <p>-----</p>	1-13
X	<p>WO 98/30985 A (AEROTEL LTD; KAMIL, ZVI; NHAISSI, ELI) 16 July 1998 (1998-07-16)</p> <p>page 2, line 15 - page 5, line 7</p> <p>page 5, line 22 - page 7, line 22</p> <p>-----</p>	1-13
X	<p>GB 2 352 861 A (* INTERNATIONAL COMPUTERS LIMITED) 7 February 2001 (2001-02-07)</p> <p>abstract</p> <p>page 2, line 24 - page 6, line 6</p> <p>-----</p>	1-13
A	<p>WO 03/015043 A (HALTFERN LIMITED; CODRON, IZIDORE) 20 February 2003 (2003-02-20)</p> <p>abstract</p> <p>page 1, line 22 - page 3, line 19</p> <p>page 5, line 4 - line 23</p> <p>figure 2</p> <p>-----</p>	3,4
X	<p>US 6 029 890 A (AUSTIN ET AL)</p> <p>29 February 2000 (2000-02-29)</p> <p>abstract</p> <p>column 1, line 51 - column 2, line 45</p> <p>column 4, line 35 - column 6, line 8</p> <p>figure 1</p> <p>-----</p>	1,2,6,7
A		3-5,8-13
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A		3-5,8-13

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