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- (71) Applicant (for all designated States except US): **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, NJ 10504 (US).
- (71) Applicant (for MG only): **IBM UNITED KINGDOM LIMITED** [GB/GB]; P.O. Box 41, North Harbour, Portsmouth, Hampshire PO6 3AU (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MASTIE, Scott** [US/US]; 7153 Rozena Drive, Longmont, CO 80503 (US). **MITCHELL, Joan** [US/US]; 2400 17th Avenue, Unit 103D, Longmont, CO 80503 (US).
- (74) Agent: **LITHERLAND, David, Peter**; IBM United Kingdom Limited, Intellectual Property Law, Hursley Park, Winchester, Hampshire SO21 2JN (GB).
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**WO 2004/100027 A2**

(54) Title: POINT-OF-SALE ELECTRONIC RECEIPT GENERATION

(57) Abstract:

**POINT-OF-SALE ELECTRONIC RECEIPT GENERATION****FIELD OF THE INVENTION**

The present invention relates generally to transaction receipts, and more particularly, to generation of an electronic receipt at a point-of-sale.

**BACKGROUND OF THE INVENTION**

Business management requires careful tracking of expenses incurred by employees on behalf of the business. Expenses made by employees can take a variety of forms such as travel and meal expenses. Conventional expense tracking includes an employer requiring employees to report expenses, and an accounting and taxation department of the employer to collect expense reports submitted by employees including the paper receipts. The accounting and taxation department then organizes and reviews the expense reports including paper receipts and determines where money is being spent for tracking and tax purposes. In some cases, the employer provides an electronic expense reporting system into which employees can enter expense report data.

The above approach to expense reporting suffers from a number of drawbacks relating to use of paper receipts. First, the approach requires an employee to retain paper receipts for submission as part of the expense report. Since receipts are usually small pieces of paper, it is not an infrequent occurrence that they become lost or are destroyed. Once paper receipts are no longer available, the benefit of tracking expenses is lost. Second, in some cases, an employer provides an electronic reporting system that requires an employee to enter expense data from paper receipts. Entry into an electronic reporting system, while easing expense-reporting burdens in some ways, creates a number of problems. One problem is that even the most conscientious user is apt to make entry errors. For example, one of the benefits of an electronic reporting system is that it allows entry of expense categorizations. Unfortunately, entry of these categorizations is prone to keying errors just like any other data entry, and more importantly, is subject to the employee's subjectivity. Since most employees are unaware of the details and meaning of the myriad of expense categorizations that an accounting and taxation department provides, mis-categorization occurs frequently. Where an electronic reporting system is not provided, the accounting and taxation

department must evaluate paper receipts, which tends to promote discontinuous expense tracking and end-of-tax-year rushes to collect data. Third, in many cases, an employee must provide line-item details for accurate expense reporting purposes because of paper receipts' limitations, e.g., because of size, to communicate all transaction details. In this regard, any expense reporting system, electronic or otherwise, is prone to cheating because of the reliance on employees to honestly expound on the transaction details that the paper receipts purport to record. Fourth, paper receipts, like all paper-based document systems, require large amounts of storage space, which adds further expenses to a business.

In order to minimize the above shortcomings of paper receipts, many businesses allow employees to use credit cards to pay for business expenses. In many cases, credit card charge data may be provided in electronic form to a credit card holder in the form of date, merchant, total bill and, perhaps, an expense category. This information may then be linked to a particular expense account for tracking. While this information is helpful, credit card systems are generally incapable of collecting, storing and providing the extensive transaction details often required for proper expense reporting, e.g., line-item(s) purchased, number of items purchased, purchaser identification, item(s) description, etc. Internet merchants have been known to provide more extensive transaction data in electronic form such as date, merchant and item(s) purchased. Not all purchases, however, can be made using a credit card or over the Internet. For example, some purchases must be made at point-of-sale terminals with cash or check where the paper receipt is the only transaction record available. Surprisingly, in many cases, merchants may want to collect the extensive expense reporting data regarding a transaction for biometric evaluation, but are unwilling to burden customers with all the requisite queries.

In view of the foregoing, there is a need in the art for generation of an electronic receipt at a point-of sale that solves the problems of the related art.

#### **DISCLOSURE OF THE INVENTION**

This invention includes systems, methods and program products for automatically generating authenticated electronic receipts at a point-of-sale for both merchants and customers. These electronic receipts can then be used in place of paper receipts for expense accounting, for

tax purposes, for routing to accounting and taxation departments, and for real-time analysis of cash-flow and budgeting. The invention prevents loss of paper receipts, always provides a legible receipt, removes employee subjectivity, provides extensive transaction details, removes entry errors, reduces physical storage requirements, promotes continuous expense tracking and eases expense-reporting procedures. In addition, the point-of-sale terminal can integrate the electronic receipt with other available coded data and information about the method of payment such as an image of the check, or paper currency bills used. The other available coded data can make categorization of the data for separation into budget, accounting, or tax categories easier.

A first aspect of the invention is directed to a method of providing a receipt to a customer at a point-of-sale, the method comprising the steps of: receiving a receipt instruction including a receipt destination instruction; generating an electronic receipt; and transmitting the electronic receipt to the receipt destination.

A second aspect of the invention is directed to a point-of-sale terminal comprising means for transacting a sale; and means for generating an electronic receipt adapted for transfer to a receipt destination.

A third aspect of the invention is directed to an electronic receipt comprising: a primary key including a unique transaction identifier.

A fourth aspect of the invention is directed to a database comprising: data including a receipt destination identifier and a corresponding electronic receipt destination for receiving an electronic receipt for a purchase made by a customer.

A fifth aspect of the invention is directed to a computer program product comprising a computer useable medium having computer readable program code embodied therein for a point-of-sale terminal, the program product comprising: program code configured to transact a sale; and program code configured to generate an electronic receipt.

The foregoing and other features of the invention will be apparent from the following more particular description of embodiments of the invention.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention will now be described, by way of example only, with reference to preferred embodiments thereof, as illustrated in the following drawings, in which:

FIG. 1 shows a point-of-sale terminal electronic receipt generation environment.

FIG. 2 shows a flow diagram of operation of the invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

For purposes of clarity only, the following description includes the following headers: I. Overview - Electronic Receipt; II. Point-of-Sale Terminal Generation of Electronic Receipt; III. Receipt Destination; IV. Operation; and V. Conclusion.

**I. Overview - Electronic Receipt**

This invention discloses automatically generating authenticated digital receipts in point-of-sale terminals for both merchants and customers. These receipts can then be used in place of paper receipts for expense accounting, for IRS/state proof of expenditure, for routing to bookkeepers/accountants, and for real-time analysis of cash-flow and budgeting. The point-of-sale terminal can integrate the digital receipt with other available coded data and information about the method of payment such as an image of the check, credit card face, paper currency used for payment (or serial number of the bills) or a combination thereof. The other available coded data can make categorization of the data for separation into budget, accounting, or tax categories much easier.

With reference to the accompanying drawings, FIG. 1 is a block diagram of a point-of-sale terminal electronic receipt generation environment 10 in accordance with the invention. In this environment, a customer 12 approaches a point-of-sale terminal 14 (hereinafter "POS terminal 14") to pay for some product(s) and/or service(s) at POS terminal 14. Customer 12 may pay using any now known or later developed methods. For example, customer 12 may use cash 16, a check 18, a credit card 20 and/or a smart card 22. Customer 12 may also use other well known payment mechanisms such as a gift certificate, store credit, etc. Customer 12 may

also include a personal digital assistant 24 (hereinafter "PDA 24") for communicating with POS terminal 14 and/or another payment method. As known in the art, PDA 24 may be any handheld computer system, and may include a communication mechanism (not shown) such as an infrared projector/receiver.

A general overview of environment 10 will now be described - the details of operation will be described below. At the outset, customer 12 approaches POS terminal 14 and may be waited upon by a POS terminal operator (not shown) who takes the customer's payment. Alternatively, in some instances, customer 12 may be allowed to operate POS terminal 14. In any event, customer 12 pays for the product(s) and/or services by presenting suitable payment. POS terminal 14 includes any now known or later developed components for conducting the sales transaction. For instance, POS terminal 14 may include: keyboard, central processing unit (CPU), monitor, bar code scanner, telecommunications system, credit card authentication system, smart card authentication system, PDA communications system, cash drawer, etc. Once POS terminal 14 concludes the sales transaction, an electronic receipt 26 is generated in accordance with the invention. A conventional paper receipt (not shown) may also be generated in a known fashion.

Electronic, or digital, receipt 26 may include any minimal amount of available data that constitutes a primary key (i.e., unique value) in a database to identify a corresponding transaction. In one embodiment, data that may constitute a primary key may include a unique transaction identification. A unique transaction identification may include, for example, a combination of merchant identifier and at least one of a purchase date and a purchase time. However, any combination of available data that creates a unique value (primary key) sufficient to differentiate transactions may be used. Electronic receipts 26 can also be augmented via additional information, such as the merchant id, transaction amount, date, or any other available data, to create other forms of primary keys, or to provide information beyond that which is needed to constitute a primary key. To illustrate, a more robust electronic receipt 26 may include the following fields:

```
:begin receipt.      /* Required field */
:purchase date.     /* Required field */
:time.              /* Optional Field. If provided, should be of the
                    form HH:MM:SS, using a 24-hour clock */
:merchant ID.      /* Required field */
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```
:issuedby.      /* Optional: Issuing agent, if different from
                  merchant.*/

:addr.          /* Optional: Repeating line; one ":addr." tag for each
                  line of the address. */

:phone.         /* Optional: Phone number of the merchant. */

:web.           /* Optional: URL of the merchant. */

:fax.           /* Optional: Fax number of the merchant. */

:source.        /* POS terminal number, clerk ID, or other unique
                  identifier for the transaction. */

:transid.       /* Optional: Transaction ID, if available, for this
                  unique transaction. */

:document.      /* Optional: Document number, or other unique identifier
                  for the transaction, e.g., plane ticket. */

:buyer.         /* Optional: Repeating line; one "customer" line for
                  each line of character data about the customer. */

:merchant add. /* Optional: Repeating line; one ":merchant add." Line
                  for each additional merchant line. */

:payment type. /* Required. Integer value, with one of the following
                  values: */
                /* 00 = Cash */
                /* 01 = Check */
                /* 02 = Charge */
                /* 03 = Gift Certificate */
                /* 04 = Refund or Exchange */
                /* 05 = N/C */
                /* 06 = Other */
                /* 07 - 99 Reserved for additional payment types */

:trans type.    /* Optional. Character field, indicating the transaction
                  type (in person, phone, fax, e-mail, web, etc. */

:chargecard.    /* Optional. Character value of chargecard type, e.g.:
                  "VISA: xxxx xxxx xxxx 3816" */

:purchase total. /* Required. Total cost of the transaction. */

:total tax.     /* Required. Subtotal of the tax associated with the
                  transaction. */

:total tip.     /* Optional: Total Tip, if any. */

:num items.     /* Required. Positive Integer. Number of items in
                  the transaction. */

:item value.    /* Required. The number of ':item' tags must match the
                  ':num items' tag value. */

:item description. /* Required. The number of ':item description'
                  tags must match the ':num items' tag value. */

:item date.     /* Optional: The number of individual items, if
```

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        applicable, e.g., the date of the charge, on a
        hotel. */
:item type.    /* Optional: Character field, indicating charge, credit,
               etc. Assumed to be charge if not specified. */
:image        /* Optional: Image of paper currency or check used for
               payment */
:end receipt.

```

Many retailers such as grocery stores have store cards presented by customers at purchase time to obtain discounts. The relevant information could be collected at the time of applying for the store card or entered later, for example, via a web-based system or other entry system, for the account on the store card.

## II. Point-of-Sale Terminal Generation of Electronic Receipt

With continuing reference to FIG. 1, the details of POS terminal 14 will now be described. POS terminal 14 includes: an imager 40, a check/currency inserter 42, a receipt instruction receiver 44 including a receipt destination retriever 46, an electronic receipt generator 48 including an authenticating data generator 50, a transmitter 52 and other components 54. It should be recognized that while one POS terminal 14 has been illustrated, that a number of terminals 14 may exist within environment 10. For example, in a large retailer, a number of POS terminals 14 exist.

Imager 40 is configured to receive cash 16 in the form of paper currency or bills, and/or checks 18 for scanning into images. Cash 16 may be authenticated in accordance with copending US application no. 10/430025, incorporated herein by reference. As also disclosed in the copending application, check or bill images 58 may be inserted by check/currency inserter 42 into paper receipt 28 or electronic receipt 26, for recordation purposes.

Receipt instruction receiver 46 is configured to receive a receipt instruction 60 from customer 12, and may include a destination retriever 62 (hereinafter "retriever 62"), described in further detail below. A "receipt instruction" 60 includes a receipt destination identifier 64 and a content identifier 66. In terms of communication form, receipt instruction 60 is received by receipt instruction receiver 46 in a physical form or an electronic form. In terms of the former, receipt instruction 60 may be verbally stated by customer 12 and entered to POS



terminal 14 by an operator. In terms of electronic form, receipt instruction 60 may be gathered from a credit card 20 (i.e., when the credit card number is used to retrieve other data), gathered from a smart card 22, transmitted by a customer PDA 24 or some other mechanism of electronic communication.

Receipt destination identifier 64 (hereinafter "RDI 64") is any form of data that expressly indicates, or may be used to determine, where an electronic receipt 26 generated for a transaction for a particular customer 12 is to be sent, i.e., a receipt destination 65. If RDI 64 expressly states receipt destination 65, RDI 64 may take the form of, for example, an Internet protocol (IP) address, a mailing address to receive a saved form (i.e., a CD or diskette) of electronic receipt 26, or any other address capable of being used by POS terminal 14, or its associated merchant, for forwarding electronic receipt 26. If receipt destination 65 is not expressly stated, RDI 64 may include, for example: a customer identification such as the customer's name; a credit card number; a smart card identification; a PDA identifying transmission (e.g., infrared beam); the customer's employer's name or identification; a merchant's customer identification; etc. In this case, retriever 62 functions to access a receipt destination database 68 that includes data including RDI 64 and a corresponding receipt destination 65. For example, for each customer identification (e.g., IBM 123456 [IBM is a registered trademark of International Business Corporation]) used as an RDI 64, a corresponding receipt destination is stored (e.g., IP address 9.99.10.192).

Electronic receipt generator 48 (hereinafter "generator 48") is configured to gather any data desired by a customer 12 per content instruction 66 to be provided in electronic receipt 26, and generate electronic receipt 26. For example, based on the illustrative electronic receipt above, generator 48 would gather: the transaction date and time; merchant name; issuing agent, if different from merchant; merchant address; and the other parameters listed above. If an agreed upon electronic receipt format (e.g., a standard such as used in electronic data formats (EDF)) is in use, generator 48 may function to build an electronic receipt 26 in the same fashion for all customers. Alternatively, personalized electronic receipts 26 based on content instruction 66 may also be possible. In this case, content instruction 66 may be used, for instance, to recall a preferred electronic receipt format from a content database 70 that includes such data. Each electronic receipt format may be generated using, for example, the extensible markup language (XML) or a similar language for providing user defined fields.

Authentication data generator 50 may also be implemented to provide transaction authentication data 72. "Transaction authentication data" 72 is any data that can be used to confirm electronic receipt 26 has not been altered, and may include, for example, receipt contents, date, time, merchant identification, or other data capable of being used to prove the authenticity of electronic receipt 26. Authentication data 72 may be stored at a merchant system 74 for access by receipt destination 65 or transmitted separately to receipt destination 65.

Transmitter 52 is provided to communicate electronic receipt 26 to receipt destination 65. As indicated, electronic receipt 26 may also be communicated to receipt destination 65 and/or merchant system 74. In addition, transmitter 52 may also communicate authentication data 72 to receipt destination 65. Further, as noted above, authentication data 72 may be stored at merchant system 74 for access by receipt destination 65. Transmitter 52 may include any now known or later developed mechanism for communicating electronic data such as a modem, digital signal line (DSL), or other well-known telecommunications system, infrared beam communicator, a local area network, wide area network, etc.

Other components 54 provide any other mechanisms necessary for operation of POS terminal 14 such as mechanisms for transacting a sale, e.g., keyboard, central processing unit (CPU), monitor, bar code scanner, telecommunications system, credit card authentication system, smart card authentication system, PDA communications system, cash drawer, etc.

### **III. Receipt Destination**

With continuing reference to FIG. 1, receipt destination 65 may include a variety of devices and entities, or a combination thereof. For example, receipt destination 65 may include customer PDA 24. That is, electronic receipt 26 is transmitted (by transmitter 52) back to customer 12 at POS terminal 14. Receipt destination 65 may include an expense accounting system 80 such as a customer employer expense reporting system, a customer personal expense tracking system (e.g., Quicken, Microsoft Money, TurboTax [Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both]) and/or a customer accountant expense tracking system. Electronic receipt 26 provides immediate information for cash flow and budget purposes to expense accounting system 80.

Each of these systems may be similar to conventional systems but include mechanisms to take advantage of electronic receipt 26. For example, expense account system 80 may include any now known or later developed mechanism for receiving electronic receipt 26 and automatically applying its content to appropriate application/field(s) of receipt destination 65, e.g., inputs of customer PDA 24, a customer employer expense reporting system such as Quickbooks, or a customer personal expense tracking system such as Quicken, Microsoft Money, TurboTax, or other application. In another example, expense account system 80 may include an expense categorizer 82 capable of organizing each item on electronic receipt 26 into an expense category, e.g., clothing, food, entertainment, etc. In another example, expense account system 80 may include a tax data collector 84 for gathering any data in electronic receipt 26 that may be significant for tax purposes, e.g., sales tax, a deductible expense, a deductible donation, medical expenses, large gifts, etc. Although particular modules are not shown, receipt destination 65 may also provide, via a customer's personal expense tracking system, tracking of personal expenses, tax related expenses and deductions, and general money management. For example, in addition to the above categorizing of expenses, receipt destination 65 may also include mechanisms for setting targets (i.e., budget) for expense category spending and an ability to compare incurred expenses to targets and flag excesses. Joint account holders can utilize receipt destination 65 (i.e., expense tracking systems: personal, through an account or other service provider system) to maintain accurate, up-to-date balances for joint account(s). In this fashion, receipt destination 65 may be used to coordinate spending by a number of individuals, and prevent debt problems. Accordingly, expense tracking may no longer be dependent upon an individual remembering to enter check amounts or credit card purchases to have an instantaneous view of a balance.

Receipt destination 65 may also include a tax authority 86 such as the US Internal Revenue Service (IRS), a state tax department, foreign equivalent of preceding or a combination thereof. Any of the above-described information could be forwarded directly to an account (e.g., a customer employer's client account for billing - not shown), and also tax authority 86, as appropriate. Receipt destination 65 may also include appropriate receipt storage 88 for long term archiving.

With regard to receipt destination database 68, content database 70 and receipt storage 88, it should be recognized that these memories may comprise any now known or later developed data storage system and/or

transmission media, including magnetic media, optical media, random access memory (RAM), read only memory (ROM), a data object, etc., and may reside at a single physical location comprising one or more types of data storage, or be distributed across a plurality of physical systems.

#### **IV. Operation**

Referring to FIG. 2, operation of the above-described invention will now be described. In step S1, a receipt instruction 60 is received by POS terminal 14. Receipt instruction 60 including a receipt destination instruction (RDI) 64 and, perhaps, a content instruction 66. Step S1 may include retrieving receipt destination 65 from a receipt destination database 68 based on RDI 64. In step S2, an electronic receipt 26 is generated by generator 48 of POS terminal 14. Step S3 represents an optional step of generating receipt authentication data 72 at POS terminal 14 using authentication data generator 50, and transmitting receipt authentication data 72 using transmitter 52 to receipt destination 65. In step S4, electronic receipt 26 is transmitted to receipt destination 65. This step may also include automatically applying the contents of electronic receipt 26 to receipt destination 65, e.g., an expense accounting system 80 such as a customer personal expense tracking system. Steps S5 and S6 represent optional steps. In step S5, tax data is collected from electronic receipt 26 by tax data collector 84 of receipt destination 65. In step S6, an expense categorizer 82 of receipt destination 65 organizes an item on electronic receipt 26 into an expense category.

#### **V. Conclusion**

It should be recognized that the components of the above-described invention have been illustrated and described as being in particular locations, that they may be located at different points within the environment and accessed via high-speed communications. Accordingly, the location of components should not be considered limiting.

In the previous discussion, it will be understood that the method steps discussed are performed by a processor, such as a CPU of POS terminal 14, executing instructions of program product stored in memory. It is understood that the various devices, modules, mechanisms and systems described herein may be realized in hardware, software, or a combination of hardware and software, and may be compartmentalized other than as shown. They may be implemented by any type of computer system or other

apparatus adapted for carrying out the methods described herein. A typical combination of hardware and software could be a general-purpose computer system with a computer program that, when loaded and executed, controls the computer system such that it carries out the methods described herein. Alternatively, a specific use computer, containing specialized hardware for carrying out one or more of the functional tasks of the invention could be utilized. The present invention can also be embedded in a computer program product, which comprises all the features enabling the implementation of the methods and functions described herein, and which - when loaded in a computer system - is able to carry out these methods and functions. Computer program, software program, program, program product, or software, in the present context mean any expression, in any language, code or notation, of a set of instructions intended to cause a system having an information processing capability to perform a particular function either directly or after the following: (a) conversion to another language, code or notation; and/or (b) reproduction in a different material form.

While this invention has been described in conjunction with the specific embodiments outlined above, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, the embodiments of the invention as set forth above are intended to be illustrative, not limiting. Various changes may be made without departing from the scope of the invention as defined in the following claims.

**CLAIMS**

1. A method of providing a receipt to a customer at a point-of-sale, the method comprising the steps of:  
  
receiving a receipt instruction including a receipt destination instruction;  
  
generating an electronic receipt; and  
  
transmitting the electronic receipt to the receipt destination.
2. The method of claim 1, further comprising the step of generating receipt authentication data at the point-of-sale, and transmitting the receipt authentication data to the receipt destination.
3. The method of claim 1 or claim 2, wherein the receipt authentication data includes at least one of: receipt contents, date, time and merchant identification.
4. The method of any preceding claim, wherein the electronic receipt includes a primary key in the form of a unique transaction identification.
5. The method of any preceding claim, wherein the receipt destination includes at least one of: a personal digital assistant, a customer employer expense reporting system, a tax authority, a customer personal expense tracking system, a customer accountant expense tracking system and a tax authority.
6. The method of any preceding claim, wherein the transmitting step further includes applying content of the electronic receipt to the receipt destination.
7. The method of any preceding claim, further comprising the steps of collecting tax data from the electronic receipt.
8. The method of claim 7, wherein the tax data includes at least one of: a sales tax paid and a deductible expense.
9. The method of any preceding claim, further comprising the step of organizing an item on the electronic receipt into an expense category.

10. The method of any preceding claim, wherein the electronic receipt includes an image of at least one of paper currency, credit card face and a check, used to make a purchase at the point-of-sale.
11. The method of any preceding claim, wherein the receiving step includes retrieving a receipt destination from a receipt destination database based on a receipt destination instruction.
12. A point-of-sale terminal comprising  
  
means for transacting a sale; and  
  
means for generating an electronic receipt adapted for transfer to a receipt destination.
13. The point-of-sale terminal of claim 12, further comprising means for receiving a receipt instruction.
14. The point-of-sale terminal of claim 12 or claim 13, wherein the means for receiving includes means for retrieving a receipt destination from a receipt destination database based on a receipt destination identifier in the receipt instruction, wherein the receipt destination database includes data including the receipt destination identifier and a corresponding receipt destination.
15. The point-of-sale terminal of any of claims 12 to 14, further comprising means for transmitting the electronic receipt to the receipt destination.
16. The point-of-sale terminal of claim 15, further comprising means for generating receipt authentication data, and wherein the means for transmitting further transmits the receipt authentication data to the receipt destination.
17. The point-of-sale terminal of claim 16, wherein the receipt authentication data includes at least one of: receipt contents, date, time and merchant identification.
18. The point-of-sale terminal of any of claims 12 to 17, wherein the electronic receipt includes a primary key in the form of a unique transaction identification.

19. The point-of-sale terminal of any of claims 12 to 18, wherein the receipt destination includes at least one of: a personal digital assistant, a customer employer expense reporting system, a tax authority, a customer personal expense tracking system, a customer accountant expense tracking system and a tax authority.

20. The point-of-sale terminal of any of claims 12 to 19, wherein the electronic receipt includes an image of at least one of paper currency and a check, used to make a purchase at the point-of-sale.

21. An electronic receipt comprising:

a primary key including a unique transaction identifier.

22. The electronic receipt of claim 21, wherein the unique transaction identification includes a merchant identifier and at least one of a purchase date and a purchase time.

23. A database comprising:

data including a receipt destination identifier and a corresponding electronic receipt destination for receiving an electronic receipt for a purchase made by a customer.

24. A computer program product comprising a computer useable medium having computer readable program code embodied therein for a point-of-sale terminal, the program product comprising:

program code configured to transact a sale; and

program code configured to generate an electronic receipt.

25. The program product of claim 24, further comprising program code configured to receive a receipt destination instruction.

26. The program product of claim 24 or claim 25, wherein the program code configured to receive includes program code configured to retrieve a receipt destination from a receipt destination database based on a receipt destination identifier, wherein the receipt destination database includes data including the receipt destination identifier and a corresponding electronic receipt destination for receiving an electronic receipt of a purchase made by a customer.



27. The program product of claim 25 or claim 26, further comprising program code configured to transmit the electronic receipt to the receipt destination.

28. The program product of claim 27, further comprising program code configured to generate receipt authentication data, and wherein the transmit code further transmits the receipt authentication data to the receipt destination.

29. The program product of any of claims 24 to 27, wherein the electronic receipt includes a primary key in the form of a unique transaction identification.

30. The program product of claim 29, wherein the unique transaction identification includes a merchant identifier and at least one of a purchase date and a purchase time.

FIG. 1

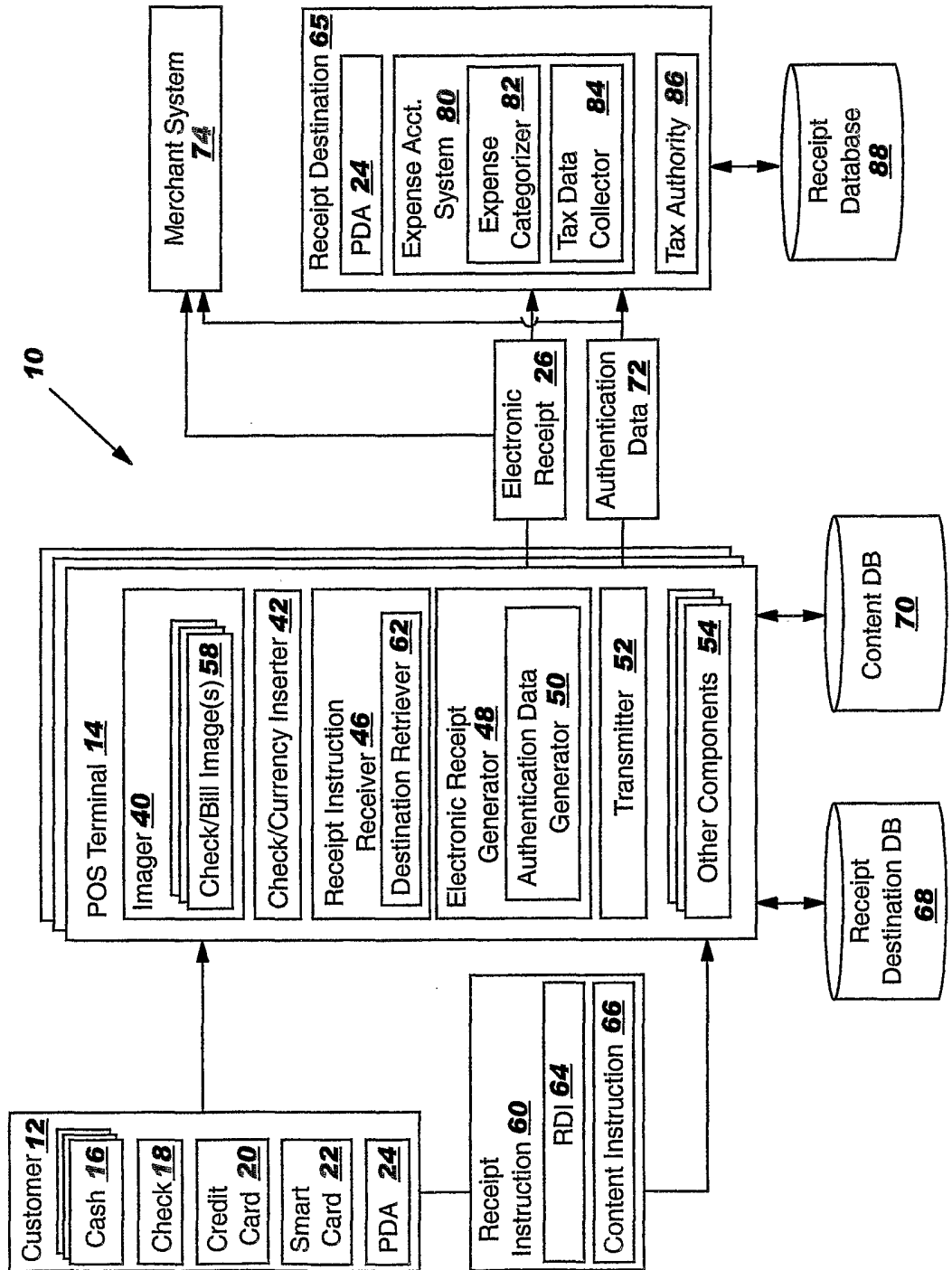
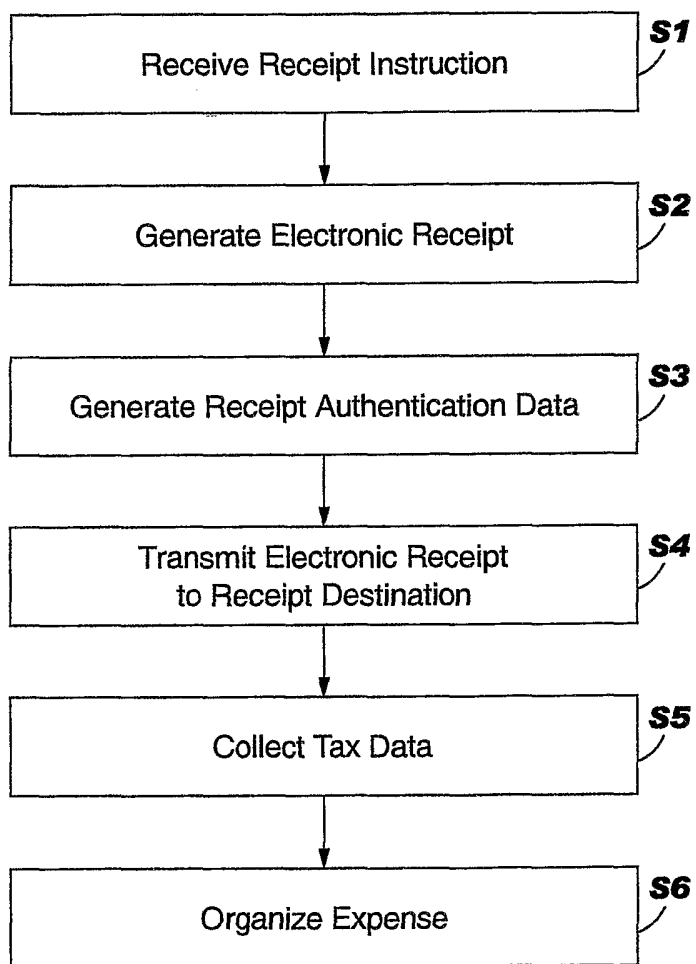


FIG. 2



PATENT COOPERATION TREATY

PCT

DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT

(PCT Article 17(2)(a), Rules 13ter.1(c) and Rule 39)

Applicant's or agent's file reference BLD030021	IMPORTANT DECLARATION	Date of mailing (day/month/year) 13/08/2004
International application No. PCT/GB2004/001856	International filing date (day/month/year) 30/04/2004	(Earliest) Priority date (day/month/year) 06/05/2003
International Patent Classification (IPC) or both national classification and IPC G06F17/60B		
Applicant INTERNATIONAL BUSINESS MACHINES CORPORATION		

This International Searching Authority hereby declares, according to Article 17(2)(a), that **no international search report will be established** on the international application for the reasons indicated below

- The subject matter of the international application relates to:
  - scientific theories.
  - mathematical theories
  - plant varieties.
  - animal varieties.
  - essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes.
  - schemes, rules or methods of doing business.
  - schemes, rules or methods of performing purely mental acts.
  - schemes, rules or methods of playing games.
  - methods for treatment of the human body by surgery or therapy.
  - methods for treatment of the animal body by surgery or therapy.
  - diagnostic methods practised on the human or animal body.
  - mere presentations of information.
  - computer programs for which this International Searching Authority is not equipped to search prior art.
- The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out:
 


the description       the claims       the drawings
- The failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions prevents a meaningful search from being carried out:
 

the written form has not been furnished or does not comply with the standard.

the computer readable form has not been furnished or does not comply with the standard.
- The failure of the tables related to the nucleotide and/or amino acid sequence listing to comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions prevents a meaningful search from being carried out:
 

the written form has not been furnished.

the computer readable form has not been furnished or does not comply with the technical requirements.
- Further comments: SEE FURTHER INFORMATION SHEET

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Jacinta Reddy
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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 203

The claims relate to subject matter for which no search is required according to Rule 39 PCT. Given that the claims are formulated in terms of such subject matter or merely specify commonplace features relating to its technological implementation, the search examiner could not establish any technical problem which might potentially have required an inventive step to overcome. Hence it was not possible to carry out a meaningful search into the state of the art (Art. 17(2)(a)(i) and (ii) PCT; see PCT International Search Guidelines, Chapter VIII, items 1 to 3).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.