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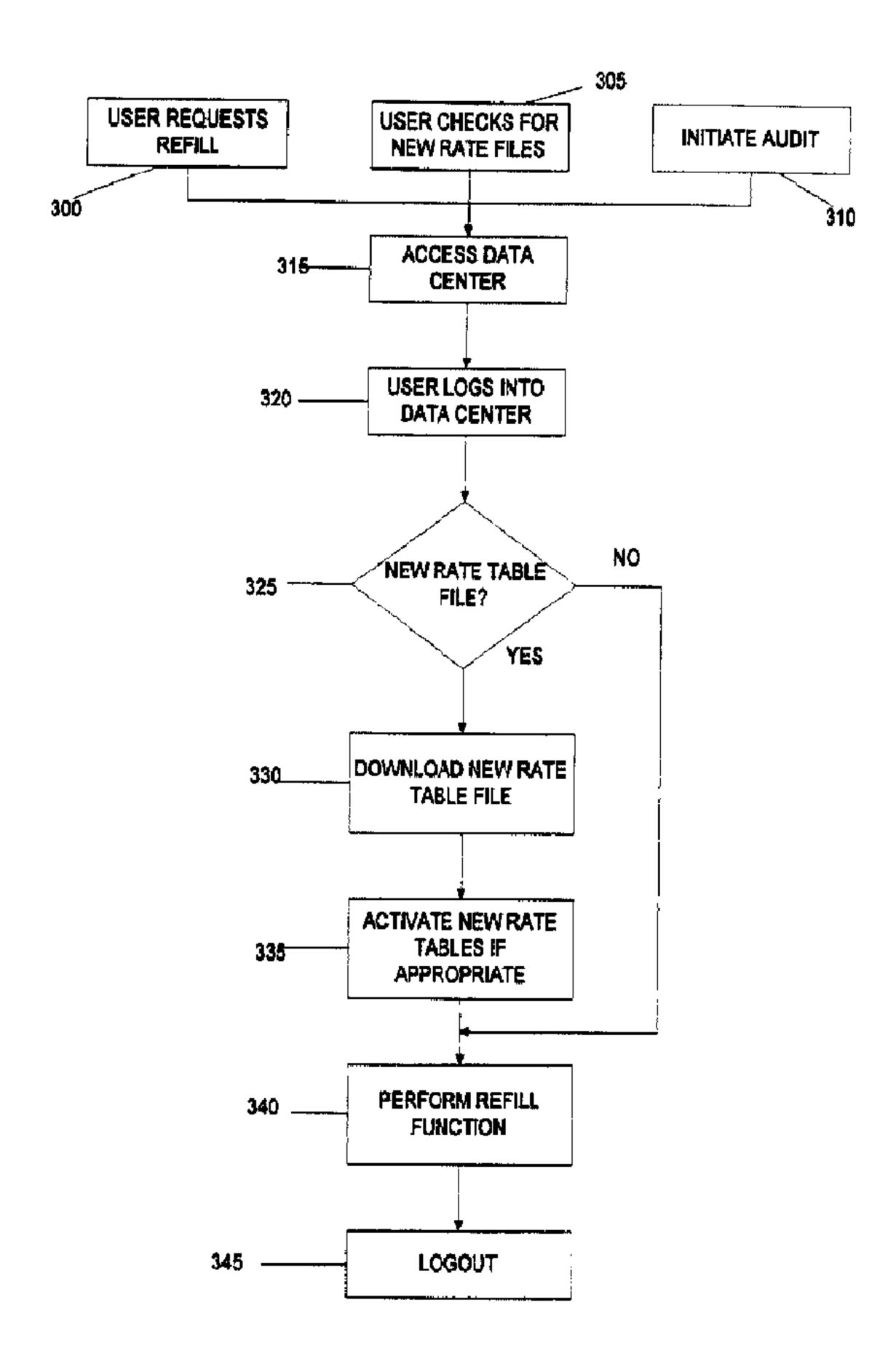
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- (54) Titre: SYSTEME ET PROCEDE PERMETTANT DE SELECTIONNER DYNAMIQUEMENT LES TARIFS POSTAUX APPROPRIES SUR LA BASE DE DONNEES D'AFFRANCHISSEMENT
- (54) Title: SYSTEM AND METHOD FOR DYNAMIC SELECTION OF APPROPRIATE POSTAL RATES BASED ON METERING DATA



(57) Abrégé/Abstract:

A system (10, 20, 30) and method for selecting appropriate postal rates (110, 115, 120) when evidencing postage payment provides new postal rates to a computer (20) responsible for rating mail and provides a date when the new postal rates (110, 115, 120) become effective. The new postal rates (110, 115, 120) and the effective date are stored in the computer (20). When





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(57) Abrégé(suite)/Abstract(continued):

postage evidencing occurs, a selection (215, 220, 225, 230, 240) is made between the current postal rates stored in the computer (20) and the new postal rates for use in evidencing postage payment on a mail piece. The selection is based on the date the mail piece will be submitted for mailing (205, 225, 230, 240).

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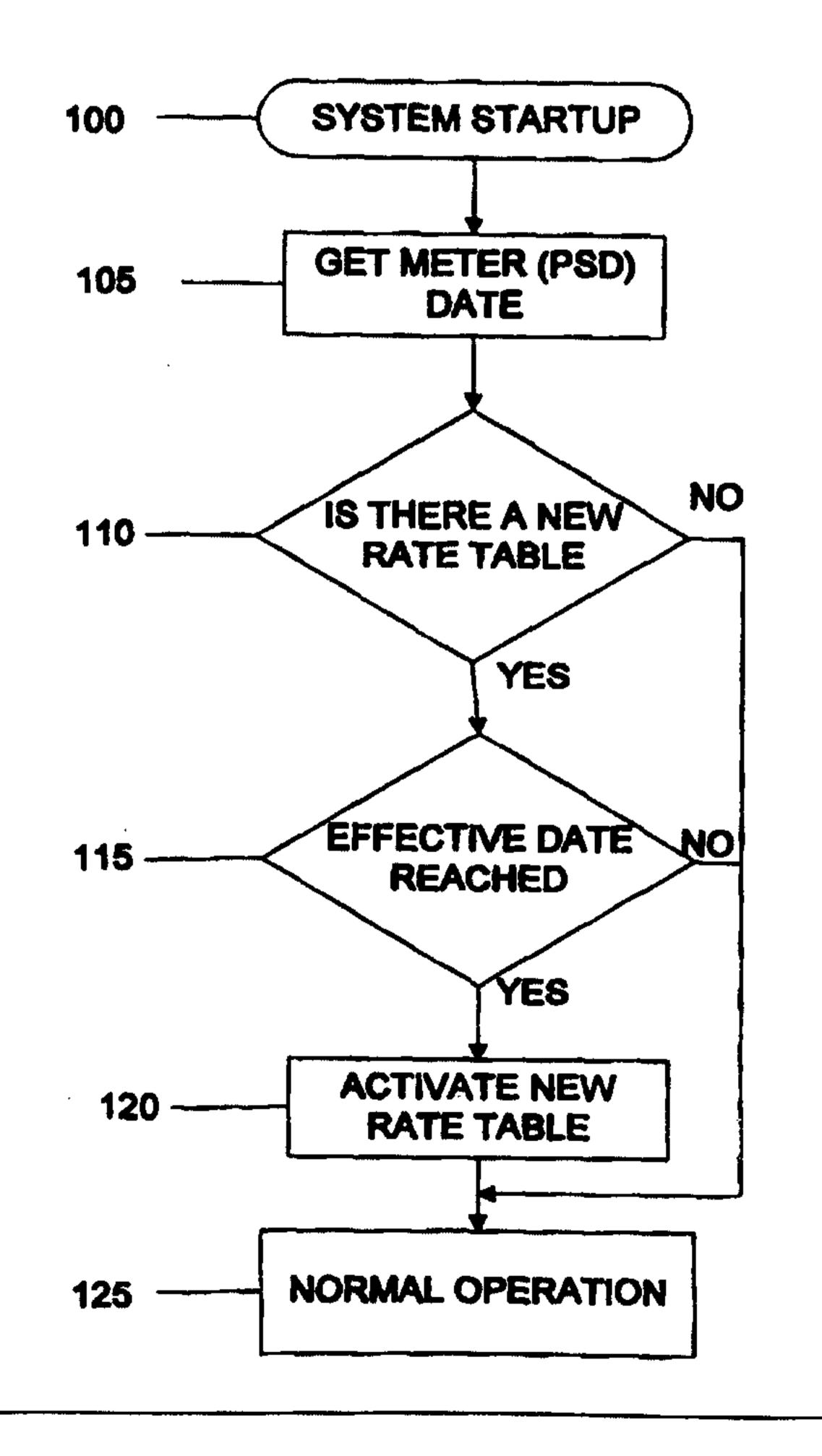
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(57) Abstract

A system (10, 20, 30) and method for selecting appropriate postal rates (110, 115, 120) when evidencing postage payment provides new postal rates to a computer (20) responsible for rating mail and provides a date when the new postal rates (110, 115, 120) become effective. The new postal rates (110, 115, 120) and the effective date are stored in the computer (20). When postage evidencing occurs, a selection (215, 220, 225, 230, 240) is made between the current postal rates stored in the computer (20) and the new postal rates for use in evidencing postage payment on a mail piece. The selection is based on the date the mail piece will be submitted for mailing (205, 225, 230, 240).



B-3-99

SYSTEM AND METHOD FOR DYNAMIC SELECTION OF APPROPRIATE POSTAL RATES BASED ON METERING DATA

Technical Field

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The present invention relates generally to rating of mail for postal system and, more particularly, to a system and method for updating rate information in an open postage metering system.

Related Applications

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The present application is related to the following Canadian Patent Applications: 2,263,437; 2,263,415; 2,263,436; 2,263,434 and 2,263,131 all filed concurrently herewith, all being assigned to the assignee of the present invention.

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Background Art

Presently, there are two postage metering device types: a closed system and an open system. In a closed system, the system functionality is solely dedicated to metering activity. Examples of closed system metering devices, also referred to as postage evidencing devices, include conventional digital and analog (mechanical and electronic) postage meters wherein a dedicated printer is securely coupled to a metering or accounting function. In a closed system, typically the printer is securely coupled and dedicated to the meter, and printing evidence of postage cannot take place without accounting for the evidence of postage. In an open system, the printer is not dedicated to the metering activity. freeing system functionality for multiple and diverse uses in addition to the metering activity. Examples of open system metering devices include personal computer (PC) based devices with single and/or multi-tasking operating systems, multi-mailer applications and digital printers. An open system metering device is a postage evidencing device with a non-dedicated printer that is not securely coupled to a secure accounting module. An open system indicium printed by the

non-dedicated printer is made secure by including addressee information in the encrypted evidence of postage printed on the mailpiece for subsequent verification. See U.S. Patent Numbers 4,725,718 and 4,831,555, each assigned to the assignee of the present invention.

The United States Postal Service ("USPS") has proposed an Information-Based Indicia Program ("IBIP"), which is a distributed trusted system to retrofit and augment existing postage meters using new evidence of postage payment known as information-based indicia. The program relies on digital signature techniques to produce for each envelope an indicium whose origin can be authenticated and content cannot be modified. IBIP is expected to support new methods of applying postage in addition to the current approach, which typically relies on a postage meter to print indicia on mailpieces. IBIP requires printing a large, high density, two-dimensional ("2-D") bar code on a mailpiece. The 2-D bar code encodes information and is signed with a digital signature.

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The USPS has published draft specifications for IBIP. The INFORMATION BASED INDICIA PROGRAM INDICIUM (IBIP) SPECIFICATION, dated June 13, 1996, and revised July 23, 1997, ("IBIP Indicium Specification") defines the proposed requirements for a new indicium that will be applied to mail being created using IBIP. The INFORMATION BASED INDICIA PROGRAM POSTAL SECURITY DEVICE SPECIFICATION. dated June 13, 1996, and revised July 23, 1997, ("IBIP PSD Specification") defines the proposed requirements for a Postal Security Device ("PSD"), which is a secure processor-based accounting device that dispenses and accounts for postal value stored therein to support the creation of a new "information based" postage postmark or indicium that will be applied to mail being processed using The INFORMATION BASED INDICIA PROGRAM HOST SYSTEM SPECIFICATION, dated October 9, 1996, defines the proposed requirements for a host system element of IBIP ("IBIP Host Specification"). IBIP includes interfacing mailer, postal and vendor infrastructures, which a the system elements of the program. The INFORMATION BASED INDIC A PROGRAM KEY MANAGEMENT PLAN, dated April 25, 1997, defines the generation, distribution, use and replacement of the cryptographic keys used by the USPS

product/service provider and PSDs ("IBIP KMS Specification"). The specifications are collectively referred to herein as the "IBIP Specifications".

The IBIP Specifications define a stand-alone open metering system, referred to herein as a PC Meter comprising a PSD coupled to a computer system, such as a personal computer, ("PC") which operates as a host system with a printer coupled thereto ("Host PC"). The Host PC runs the metering application software and associated libraries (collectively referred to herein as "Host Applications") and communicates with one or more attached PSDs. The PC Meter can only access PSDs coupled to the Host PC. There is no remote PSD access for the PC Meter.

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The PC Meter processes transactions for dispensing postage, registration and refill on the Host PC. Processing is performed locally between the Host PC and the PSD coupled thereto. Connections to a Data Center, for example for registration and refill transactions, are made locally from the Host PC through a local or network modem/internet connection. Accounting for debits and credits to the PSD is also performed locally, logging the transactions on the Host PC. The Host PC may accommodate more than one PSD, for example supporting one PSD per serial port. Several applications programs running on the Host PC, such as a word processor or an envelope designer, may access the Host Applications.

U.S. Patents 6,098,058 and 6,085,181, assigned to the assignee of the present invention, disclose various network configurations for open postage metering systems. One version of a network metering system, referred to herein as a "virtual meter", has many Host PCs without any PSDs coupled thereto. The Host PCs run Host Applications, but all PSD functions are performed on Server(s) located at a Data Center. The PSD functions at the Data Center may be performed in a secure device attached to a computer at the Data Center, or may be performed in the Data Center computer itself. The Host PCs must connect with the Data Center to process transactions such as postage dispensing, meter registration, or meter refills. Transactions are requested by the Host PC and sent to the Data Center for remote processing. The transactions are processed centrally at the Data Center and the results are

returned to the Host PC. Accounting for funds and transaction processing are centralized at the Data Center. See, for example, U.S. Patent Numbers 5,454,038 and 4,873,645, which are assigned to the assignee of the present invention.

Various postal services throughout the world have developed rate tables for mail and parcels. These rate tables specify the rate for any given mailpiece (hereinafter "mailpiece" intended to include parcels and other mailable items). The rating may involve a desired class of service, such as first class or third class mail in the United States, the weight of the mail, the size of the mail, the distance of which the mail is to be sent, the level of service, such as next day delivery, and/or a discount associated with a level of work sharing.

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To facilitate a mailer applying proper postage or other charges (such as, for example, insurance or certified delivery or return receipt, etc.) to a mailpiece or to a tape to be adhered to a mailpiece, various devices have been provided such as scales which include rate tables to provide a visual indication to the mailer of the appropriate postage for the given mailpiece to be deposited with the postal service. In some instances, these weighing devices having rating tables allow for the automatic setting of the postage meter print wheels wherein the scale includes a connection to an electronic postage meter and conveys setting information. This now enables a more rapid printing of postage and processing of the mail. One example of such a system is the Pitney Bowes PARAGON™ mailing system wherein mail is weighed and the postage meter print wheels automatically set for imprinting of the proper postage on a mailpiece.

Another system such as that disclosed in U.S. Patent Number 4,855,920 provides a secure accounting unit with a memory including, a rate charge of postage rates for different classes of mail. Yet another system is disclosed in U.S. Patent Number 5,191,533 wherein rate tables are stored in a meter and are employed to set the printing mechanism to a desired amount.

When rate changes occur, It is well known that a mailpiece may be imprinted with an improper postage amount. This can be due to a number of different factors such as the utilization of a wrong rate table, the utilization of an obsolete rate table, or the input of inaccurate data for the rating process.

IBIP Specifications provide for updating rate tables at the appropriate time and disabling operations if the rate tables have not been updated. Although the IBIP Specifications allow predating of mail up to 30 days, they do not provide for the existence of more than one rate table at a time. Since it may take more than one day to complete the preparation of a batch of mail, this presents a problem when the rate change takes effect on the second day of preparing the batch of mail.

Heretofore, updating rate tables has been difficult task. Generally, rate tables are not made available prior to the date the rate change becomes effective. For a traditional electronic postage meter having an electronic postal scale coupled thereto, the rate tables are stored on a PROM that is removably connected to the electronic postal scale. This method is known as an integrated rating, i.e., the rate tables are stored on a device peripheral to the postage meter. Whenever a rate change becomes effective, the current PROM is replaced with a new PROM in which new rate tables are stored. The problem with this method of implementing a rate change is that the PROM can not be added to the system until the expired PROM is removed. It is well known that mailers forget to replace the PROM on the effective date. Since this method does not link the effective date to the rate table, postage may be dispensed used outdated rate tables.

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More recently, updated rate tables have been supplied on computer diskettes. The new rate tables are downloaded at the appropriate time to replace the rate table previously in use. However, once updated, the metering system can no longer use the previous rate table, which has been replaced.

The IBIP Specifications allow a mailer to update the date on a mailpiece for a mailpiece that has an indicium printed thereon with a stale date. This presents a potential problem of misrating when a rate change goes into effect between the printing of the original indicium and date update.

Disclosure of the Invention

It has been found that the present invention allows a mailer to predate mail to take advantage of a rate change without having to wait until the rate change takes effect. The present invention provides a method whereby two rate 5

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tables may co-exist in a metering system at the same time. It has further been found that the present invention prevents stale rating when updating date on mailpiece as permitted by the IBIP Specifications.

When a system contains a rating engine with associated rates that are subject to change, being able to use the proper rates depending on the date of mailing allows a mailer to load the rates on the system whenever the rates are received. The system then determines which rate table is appropriate rather than relying on a mailer loading the rates after the effective date of the change.

When a new rating structure is announced and available for use, the rating file is sent to mailers or may be made available to mailers for online downloading via a bulletin board system (BBS) or Internet. When a mailer loads the file onto the system, it contains an effective date what will indicate the date that the new rates are valid. When a mailer desires to rate a mailpiece, the mailer indicates a date of mailing for the mailpiece. The rate engine uses the date of mailing to determine which rate table will be in effect on that date.

The present invention is suitable for use in PC metering systems and network postage metering systems, including virtual postage metering systems. When the mailer requests the mail to be rated, the mailer also submits a date of mailing to the rating engine. It does not matter whether the rating engine is in the PSD, the host PC, or in a remote device in a network, or at the Data Center for a virtual postage metering system.

According to an aspect of the present invention, there is provided a method for selecting appropriate postal rates when evidencing postage payment, the method comprising the steps of:

providing new postal rates to a processor responsible for rating mail, the processor including storage means;

providing an effective date when the new postal rates become active; storing the new postal rates and the effective date in the storage means along with current postal rates;

providing a posting date for a mailpiece, the posting date being either a current date or a future date;

comparing the posting date to the effective date of the new postal rates;

selecting the new postal rates or the current postal rates stored in the storage means based on a result of the comparison; and

rating the mailpiece for postage evidencing using the selected one of the new postal rates or the current postal rates.

According to another aspect of the present invention, there is provided a system for evidencing postage payment on a mailpiece, comprising:

a host processor coupled to a printer for printing evidence of postage payment;

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means coupled to said host processor for storing current postal rates, new postal rates and an effective date for the new postal rates;

means coupled to the processor for providing a posting date of the mailpiece, the posting date being either a current date or a future date;

means coupled to the host processor for comparing the posting date to the effective date for the new postal rates and selecting the new postal rates or current postal rates stored in the storage means based on a result of the comparison; and

means coupled to the host processor for rating the mailpiece for postage evidencing using the selected one of the new postal rates or the current postal rates.

Description of the Drawings

The above and other objects and advantages of the present invention will be apparent upon consideration of the following detailed description, taken in

conjunction with accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

- Fig. 1 is a block diagram of a virtual postage metering system for dispensing postage embodying the principles of the present invention;
- Fig. 2 is a flow chart of the startup of the virtual postage metering system of Fig. 1, specifically with respect to the appropriate rate table;
- Fig. 3 is a flow chart of the process for rating mailpieces by the virtual postage metering system of Fig. 1 in accordance with the present invention; and
- Fig. 4 is a flow chart of the process performed when the rate table is local to the client.

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Best Mode for Carrying Out the Invention

The following description of the present invention is embodied in a virtual postage metering system. It will be understood by those skilled in the art that the present invention may also be implemented in a PC metering system with the rating engine and tables residing in the PSD, host PC or a network PC. The present invention may further be implemented in a mailing machine with rating capabilities and posting date input capabilities, such as the Pitney Bowes PARAGON™ mailing system.

In describing the present invention, reference is made to the drawings, wherein there is seen in Fig. 1, a virtual postage metering system, generally designated 10. The virtual postage metering system 10 includes a plurality (only one is shown) of personal computer (PC) systems, generally designated 20, each having access to a printer 22 for printing evidence of postage on an envelope or label. PC 20 is connected with a transaction processing Data Center 30 that performs postal accounting and evidencing of postage. The virtual postage metering system 10 allows each mailer to use a conventional PC to remotely obtain evidence of postage payment on an as needed basis. Unlike conventional postage metering systems, virtual postage metering system 10 does not include any meter hardware located at the mailer's site. Nor are any postal funds stored at the mailer's site. All metering and accounting of funds occur at Data Center 30 using functional software and database records

representing each mailer's "postage meter", referred to herein as a "meter account".

The accounting method for virtual postage metering system 10 may be a conventional prepayment or post-payment system. The preferred method a prepayment method wherein each mailer is required to put a minimum amount of money into the mailer's virtual meter account. As account funds drop below a specific level a refill is charged against the mailer's account. An alternate accounting method that is suitable for a virtual postage metering system is a real-time payment method in which the amount of a transaction is charged to a mailer's credit card account when the transaction occurs. This method is referred to herein as a "trickle charge" postage payment, because the mailer does not pay for postage for a mailpiece until the mailer is ready to print the mailpiece.

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In the virtual postage metering system, a "meter" vendor, such as Pitney Bowes Inc., provides the mailer with client software that runs on PC 20, e.g., the client software may be downloaded from the vendor's internet server. Alternatively, the client software may be the Internet browser based home pages that provide user interactions with the Data Center 30. The meter vendor also manages Data Center 30. The client software initiates communications with Data Center 30 which performs metering transactions to evidence postage for single mailpieces or batches of mailpieces. In the preferred embodiment, the client software establishes a connection to the Data Center, and requests postage by providing postal information relating to the requested transactions, such as postage amount, addressee information and (optionally) the origin of deposit for each mailpiece. Data Center 30 receives the postal information, determines the origin zip for the mailpiece(s), performs accounting functions and generates an encrypted evidence of postage payment, such as a token or digital signature, and sends indicium information including the token, to PC 20. PC 20 receives the indicium information, creates an indicium bitmap, which can be displayed on a PC monitor (not shown) and printed on the mailpiece by printer PC 20 then disconnects from Data Center 30 or requests another transaction. The connection between PC 20 and Data Center 30 may be

through a Network Service Provider, such as on the Internet, or by direct dial using the PC's modem.

Virtual postage metering system 10 eliminates the need to maintain and account for traditional metering devices at each mailer's site and provides flexibility for handling requests from multiple origins of deposit by each mailer. Virtual postage metering system 10 also provides value added services that are not available with conventional meter devices, such as, real-time address hygiene, direct marketing services and trickle charge postage payment. Virtual postage metering system 10 provides user authentication by Data Center 30 to identify mailers with valid accounts. When a mailer has been authenticated for each request, for example, by a username, password or other conventional methods, Data Center 30 services the request, and returns indicium information to the PC 20 where the indicium is created and printed on the mailpiece.

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Referring again to Fig. 1, the mailer initiates a postage evidencing transaction by running client software in PC 20, which contacts Data Center 30. At Data Center 30, a Communication Server 32 supports connectivity from various communication technologies and protocols. The Communication Server merges all incoming traffic and routes it to a Function Server 34, which includes application software that supports mailer sign-on, postage dispensing and postal reporting. All mailer and meter information is accessed from a Database Server 36 where the information is securely stored using secure cryptographic processes and protocols as described below. Data Center 30 maintains cryptographic keys for each meter account in Database Server 36. The cryptographic keys are used for postage evidencing and verification as well as for security of the records stored in Database Server 36. A Key Management System 38 administers all cryptographic keys used in virtual postage metering system 10. The cryptographic keys may be distributed to verifiers in remote locations. U.S. Patent No. 5,812,666, issued September 22, 1998, and assigned to the assignee of the present invention, describes such a key management system.

A mailer may establish a meter account through an on-line sign-up process with Data Center 30. During sign-up, the mailer enters, at PC 20, account information, such as user name, password and method of payment.

Any registration fees can be charged at this time. Data Center 30, preferably administered by a meter vendor, such as Pitney Bowes Inc., arranges all meter licenses and agreements between its mailers and the Post.

In virtual postage metering system 10, the PSD does not exist, i.e., there is no metering device coupled to the PC from which postage payment is requested. Virtual postage metering system 10 replaces the accounting and metering functions of the PSD with metering software at PC 20 and mailer account information performed and updated at Data Center 30. The virtual postage metering system 10 provides each mailer with a metering system that has the capability of originating transactions from multiple origins of deposit. See, for example, previously noted Canadian Patent Application No. 2,263,436.

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Various methods can be used to determine the origin of deposit for a requested transaction. For example, a method for determining origin zip code using a caller ID from a telephone call is disclosed in U.S. Patent No. 5,943,658 issued August 24, 1999, and assigned to the assignee of the present invention.

In virtual postage metering system 10, one or more cryptographic modules, referred to herein as secure "boxes", are located within Data Center 30 and are used to perform cryptographic processes. Each secure box is a secure, tamper-evident, tamper-resistant and tamper-responding device, including a processor and memory, that stores encryption keys and performs cryptographic operations using the keys within the secure boundary of the device. Data Center 30 includes several types of secure boxes, which are described below. In the preferred embodiment, Data Center 30 includes multiple boxes of each type for redundancy and performance.

Key Management System 38 includes a manufacturing box (not shown) that provides top-level keys used to generate random numbers for seeding each of the other secure boxes. By sharing a common cryptographic key, the secure boxes communicate securely within Data Center 30. Key Management System 38 also includes a "steel" box (not shown) that shares a common key with meter box 44 (described below) to encrypt/decrypt master token keys for postage

evidencing transactions for each meter account. The steel box merges a vendor key and a postal key into one record in cipher text. For each meter account, Data Center 30 creates a logical meter, i.e. a meter record, in Database Server 36 by generating a token key using the vendor and postal keys, initializing meter registers (ascending and descending), meter freshness data (described below) and other postal information as part of the meter record, and then storing the meter record in Database Server 36.

Data Center 30 also includes a meter box 44 that shares a secret key with the steel box for decrypting the token key encrypted in the meter record. Meter box 44 also holds the key used for digital signature of transaction records. The only other information stored in meter box 44 is freshness data for each meter record processed by meter box 44. For each postage transaction, meter box 44 generates at least one digital token or signs the postage transaction, and updates the meter record corresponding to the transaction. Each meter record in Database Server 36 includes postal funds as well as the token keys in cipher text. Meter box 44 uses the token keys to generate tokens, updates the postal funds in the meter record, and signs the updated meter record. In this manner, meter box 44 performs and controls the secure accounting for each transaction. Meter box 44 can also be used to verify the token or the transaction signature for verification of the postage evidencing for the transaction.

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Data Center 30 also includes an authentication box 40 that shares a different secret key with the steel box to decrypt an user authentication key stored in cipher text in Database Server 36. Authentication box 40 also executes the authentication algorithms using the decrypted authentication key to authenticate a mailer. This function may be added to the steel box of key management system 38 to eliminate the need for a separate box at Data Center 30.

Finally, Data Center 30 includes an transaction box 42 that shares another secret key with the steel box to sign user transaction records other than the meter records signed by meter box 44, such as logins and login history records. Transaction box 42 later verifies the transaction record signature when the next transaction is requested.

It will be understood that the functions described for meter box 44, authentication box 40 and transaction box 42 can be logically separated and combined in one box. In the preferred embodiment of the present invention, at least the functions of authentication box 40 and meter box 44 are performed in separate secure boxes.

Referring now to Fig. 2, a startup process for the virtual postage metering system 10 (or a PC meter system) is shown for obtaining an active rate table. At step 100, the system startup begins. At step 105, the date is obtained, preferably from a secure real-time clock in meter box 44. (For a PC metering system the date is obtained from a secure real-time clock in the PSD). At step 110, the system determines if a new rate table is available. If not, then at step 125, normal system operation continues. If a new rate table is available, then at step 115, the system checks if the effective date of the new rate table has been reached. If not, then at step 125, normal system operation continues. If yes, then at step 120, the new rate table is activated.

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For past and present postal systems, rating files contain an effective date, but do not allow multiple files to be loaded simultaneously. In accordance with the present invention, multiple rating files may be loaded simultaneously, with a small software layer that "brokers" requests to the appropriate rating database based on the mailer's requested date of mailing. The present invention may be realized with minimal impact on current and future postal systems. Heretofore, a rate change has not affected the software interface to the rating engine, but only affects the rating data being used. The present invention provides for the storage of multiple rating files and the selection, through a modified software interface, of the appropriate file base on the mailing date selected by the mailer.

In accordance with the present invention, when a new rating structure is announced and declared ready for use, for example by a meter vendor, mailers may load the new rating files onto their respective systems immediately, rather than having to wait for the effective date of the change. This prevents typical problems associated with a rating change, such as loading a file too early, or forgetting to load the file on the correct date. Rating files may be distributed via standard methods, including diskette, CD-ROM, online BBS and the Internet.

The software interface will, when requested to rate a mailpiece or present a list of class ad/or special service choices, be given the date of mailing. The software then will search the system for all rating files specific to that carrier and dynamically select the correct rate structure based on the effective date indicated by the rating file. The service will be performed as appropriate, or an error returned if the requested services do not exist. The software system can optionally delete the older rating files as appropriate based on the date of the meter box 44 (or PSD in the case of a PC metering system).

Referring now to Fig. 3, the process for rating mailpieces by in accordance with the present invention is shown. From normal operation for postage evidencing requests, at step 200, the mailer, also referred to herein as the user, selects, for example by keyboard entry or communications port, a date of mailing, at step 205. The user selects, at step 210, the rate or print functions. At step 215, the system checks if there is a new rate table in addition to the current active rate table. If not, then, at step 240, the current rate table is used to perform the rating function. If a new rate table exists, then, at step 220, the system determines if the selected date of mailing is later than or the same as the effective date of the new rate table. If the system, at step 225 determines that the date of mailing is earlier than effective date of the new rate table, then, at step 240, the current rate table is used to perform the rating function. If the date of mailing is the same as or later than effective date of the new rate table, then, at step 230, the new rate table is used to perform the rating function.

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In the preferred embodiment of the present invention, for virtual postage metering system 10, the rating engine is located at Function Server 34 and the rating tables are stored in Database Server 36. In an alternate embodiment for virtual postage metering system 10, the rating engine and rating table reside in PC 20. It will be understood that this process is also suitable for a PC metering system with the rating engine and rating table residing in a local PSD, a host PC or a network metering system or some combination thereof.

Referring now to Fig. 4, a process performed in virtual postage metering system 10 when the rate table is local to the user is shown. The process begins with the user communicating with Data Center 30, such as requesting refill of postage value, at step 300, checking for new rate tables, at step 305, or initiating

an audit of the PSD (for a PC metering system), at step 310. At step 315, communications with Data Center 30 have been established, and, at step 320, the user logs into Data Center 30. At step 325, during the communication session a check is made to determine if new rate tables exist. If new rate tables do not exist, then, at step 340, the appropriate functions, such as refill or audit, are performed. If new rate tables do exist, then, at step 330, the new rate tables are downloaded to PC 20. At step 335, the new rate tables are activated if the effective date is current or past. At step 340, the appropriate functions are performed and the user logs out, at step 345. As with Fig. 3, this process is also suitable for a PC metering system with the rating engine and rating table residing in a local PSD, a host PC or a network metering system or some combination thereof.

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It has also been found that the present invention provides a solution to the problem of a mailer printing an updated date for an indicium previously printed and a rate change having taken effect since the indicium was printed. The present invention requires date entry of original indicium, or selection from a transaction log of the original mailpiece, by the user requesting an updated date to be printed. The system determines if additional postage is required because of a rate change and notifies the user if additional postage is required instead of printing the updated date. PC 20 prints the indicium for additional postage. The system could also notify the user if the rate change has lowered the required postage so that the user may apply for a refund.

It will be understood that, although the embodiments of the present invention are described as postage metering systems, the present invention is applicable to any value metering system that includes transaction evidencing, such as monetary transactions, item transactions and information transactions.

While the present invention has been disclosed and described with reference to embodiments thereof, it will be apparent, as noted above, that variations and modifications may be made therein. It is, thus, intended in the following claims to cover each variation and modification that falls within the true spirit and scope of the present invention.

Paragon is a trademark of Pitney Bowes Inc.

What is claimed is:

1. A method for selecting appropriate postal rates when evidencing postage payment, the method comprising the steps of:

providing new postal rates to a processor responsible for rating mail, the processor including storage means;

providing an effective date when the new postal rates become active; storing the new postal rates and the effective date in the storage means along with current postal rates;

providing a posting date for a mailpiece, the posting date being either a current date or a future date;

comparing the posting date to the effective date of the new postal rates; selecting the new postal rates or the current postal rates stored in the storage means based on a result of the comparison; and

rating the mailpiece for postage evidencing using the selected one of the new postal rates or the current postal rates.

- 2. The method of claim 1 wherein the new postal rates are selected when the posting date is the same as or later than the effective date.
- 3. The method of claim 1 wherein the processor is located at a data center remote from a local printer printing the postage evidencing.
- 4. The method of claim 1 wherein the processor is a host processor coupled to a printer printing the postage evidencing.
- 5. The method of claim 1 wherein the processor is located a network server remote from a local printer printing the postage evidencing.
- 6. The method of claim 1 wherein the processor is a secure processor coupled to a host processor in an open postage metering system.
- 7. A system for evidencing postage payment on a mailpiece, comprising:

a host processor coupled to a printer for printing evidence of postage payment;

means coupled to said host processor for storing current postal rates, new postal rates and an effective date for the new postal rates;

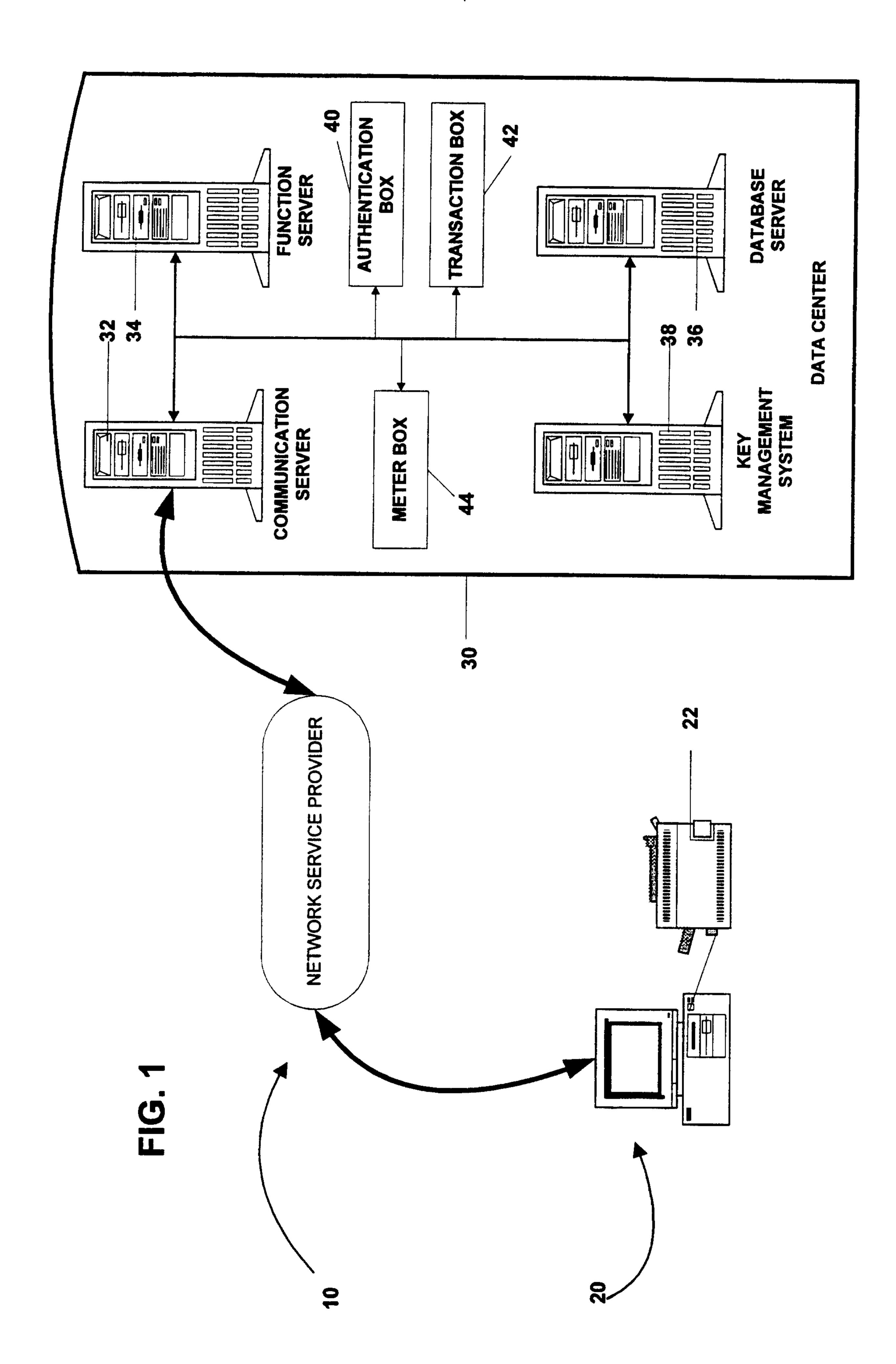
means coupled to the processor for providing a posting date of the mailpiece, the posting date being either a current date or a future date;

means coupled to the host processor for comparing the posting date to the effective date for the new postal rates and selecting the new postal rates or current postal rates stored in the storage means based on a result of the comparison; and

means coupled to the host processor for rating the mailpiece for postage evidencing using the selected one of the new postal rates or the current postal rates.

- 8. The system of claim 7 wherein the means for rating is in the host processor.
- 9. The system of claim 7 wherein the means for rating is in a remote processor located at a data center.
- 10. The system of claim 7 wherein the means for rating is in a network server remote from the host processor.

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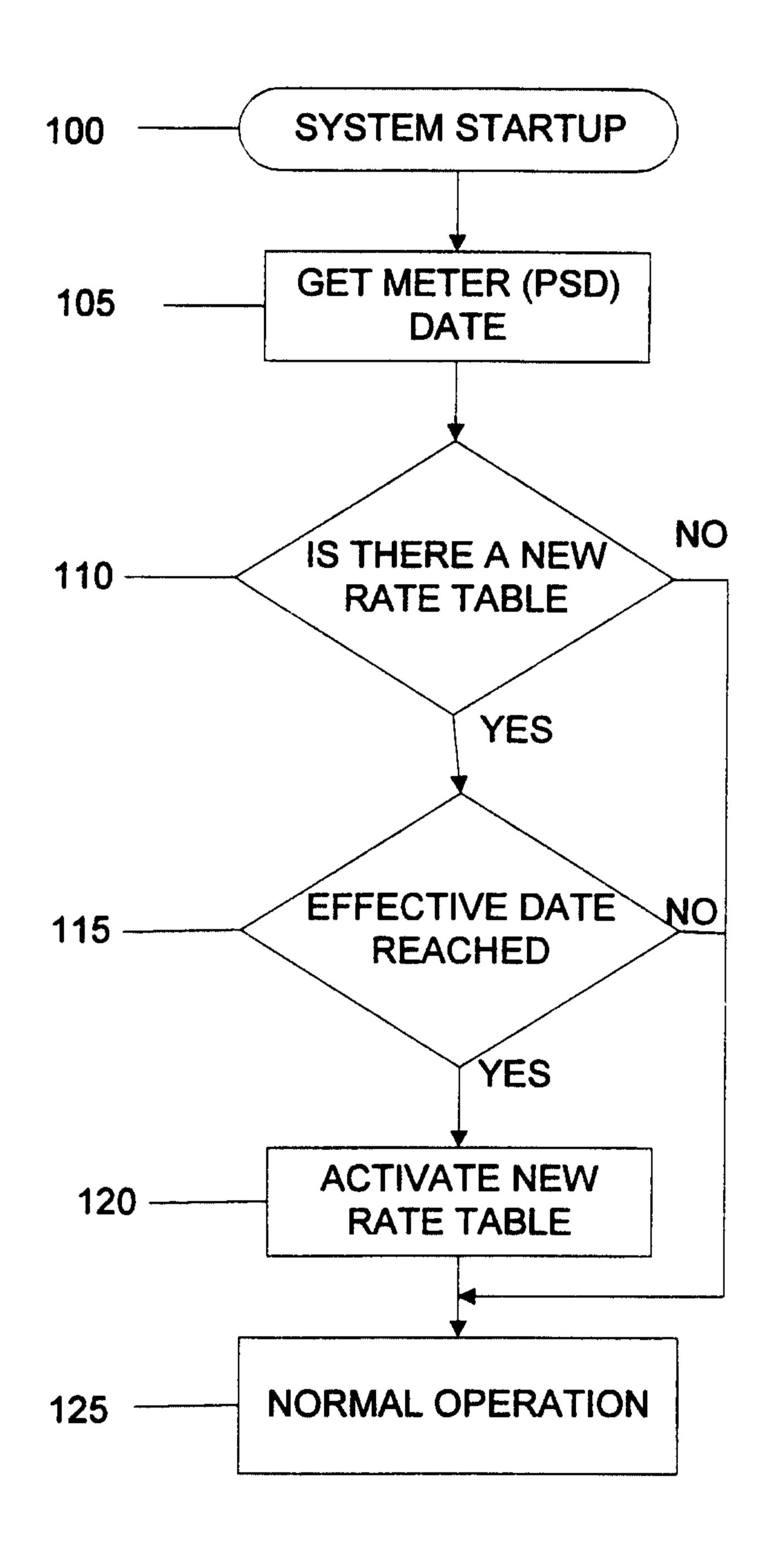


FIG. 2

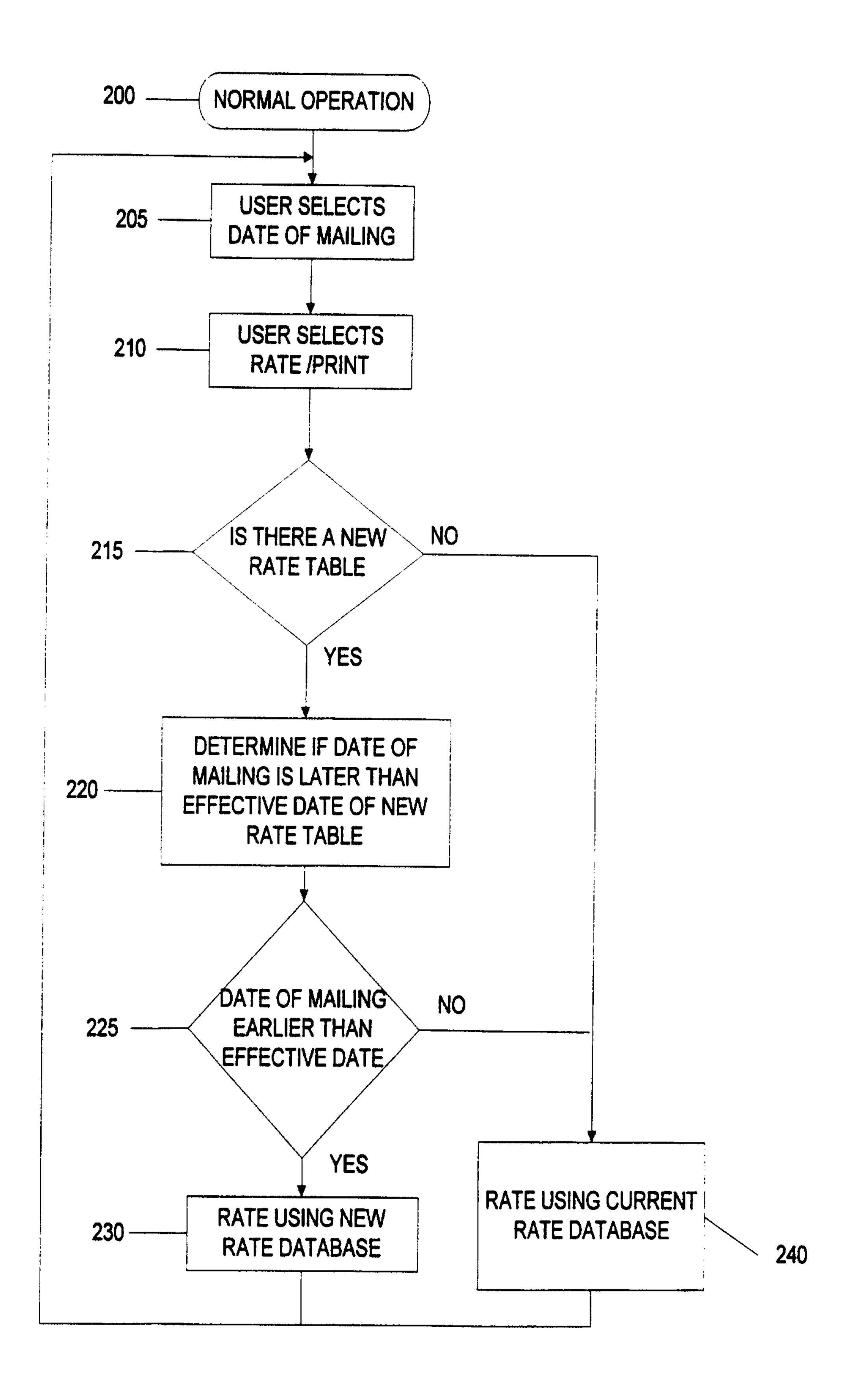


FIG. 3

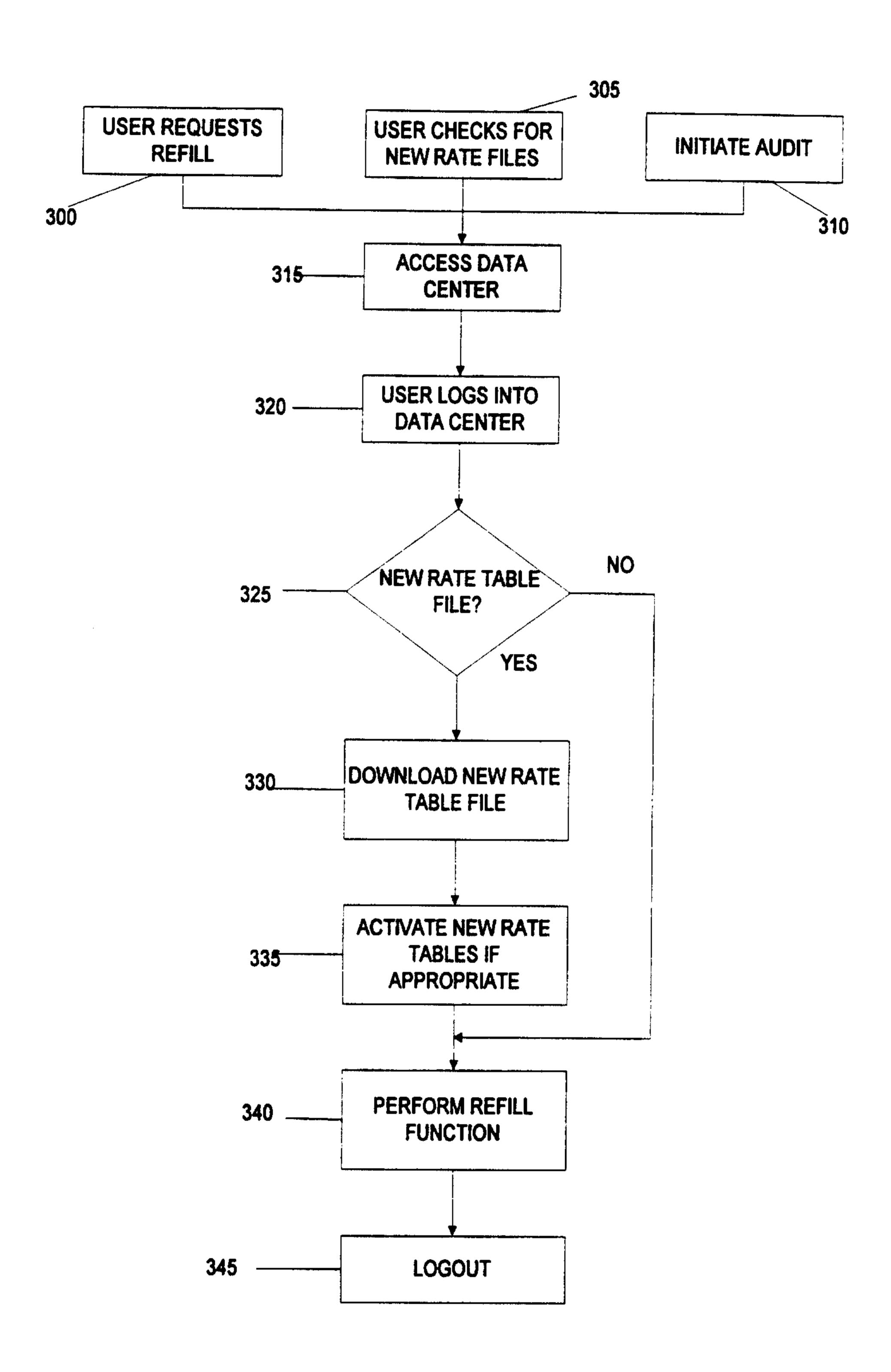


FIG. 4

