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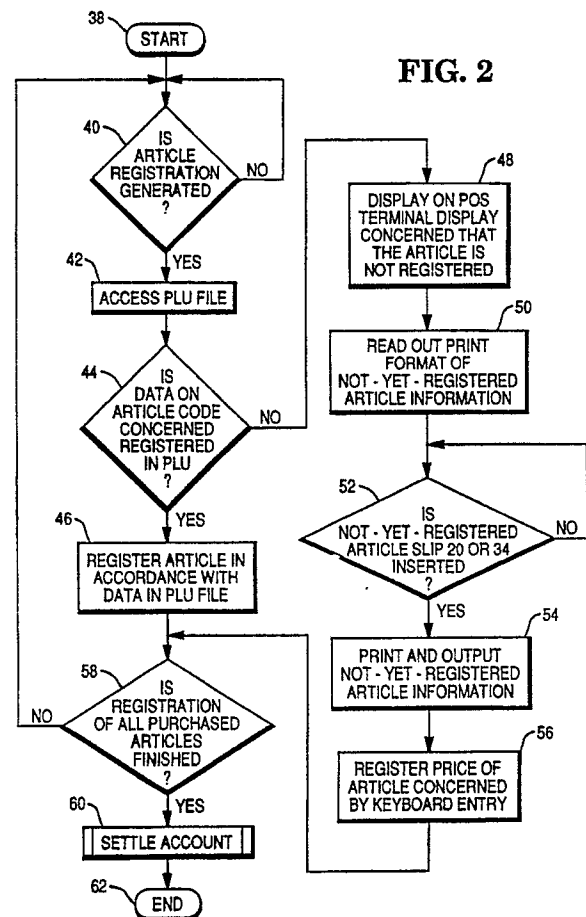
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Method for updating a checkout system.

In a method for updating a PLU file in a POS terminal, slips (20,34) having a dedicated format for printing data corresponding to a not-yet-registered article are prepared in advance of retail transactions. When a not-yet-registered article is encountered during a retail transaction, a message is displayed (48) on a display of the POS terminal to inform the operator that the particular article is not registered in the PLU file. The operator then inserts a dedicated slip (20,34) into a print slot of a printer on the POS terminal in order to print (54) article data (such as a message that the article is not-yet-registered, a code number for the article, a date and time for the transaction, and the like) thereon. The dedicated slips (20,34) are handed over to the manager of the store who then updates the PLU file to include information (such as unit price and article name) for any not-yet-registered articles.



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## METHOD FOR UPDATING A CHECKOUT SYSTEM

This invention relates to a method for updating a price look-up (PLU) file for a not-yet-registered article in a point of sale (POS) terminal which is used in a checkout system in a retail establishment.

The use of Universal Product Code (UPC) labels or bar codes to identify purchased articles or merchandise items in a checkout system of a retail establishment has become very common. The typical checkout system includes a point of (POS) terminal having an optical scanner for scanning the bar codes on the purchased articles or items. The scanner is usually located in a checkout counter, but it may be hand-held by an operator of the terminal. In either case, when a customer purchases articles, he brings them to the checkout counter. The operator at the checkout counter then uses the optical scanner to scan the bar code affixed to the articles. The optical scanner generates electrical data signals corresponding to the bar code on the label. The data signals are typically used by the POS terminal to "look up" or locate a price for the article in a price look (PLU) table or file stored in the POS terminal or stored in a remote in-store processor which is coupled to the POS terminal. The price located for the article is then transmitted to the POS terminal.

In a checkout systems which utilize bar codes, it is necessary to register information (such as the article name, unit price, and/or class code) for each article in the inventory of the retail establishment. It is not uncommon that the information corresponding to some articles will not be registered in the PLU file at the time the article is purchased because the article is a new arrival, because of a large volume of articles in the inventory of the retail establishment, or because the article was mis-registered in the PLU file due to human error. When such information is not yet registered or is mis-registered in the PLU file it will be collectively referred to hereinafter as "not-yet-registered".

It is an object of the present invention to provide a method of updating a price look up file for a not-yet-registered article in a checkout system.

Therefore, according to the present invention, there is provided a method for updating a price look up file for a not-yet-registered article in a point of sale terminal which is used in a checkout system, characterized by the steps of:

- (a) inputting bar code data corresponding to the not-yet-registered article into said terminal;
- (b) printing, under the control of said terminal, data corresponding to the not-yet-registered article on a slip having a dedicated format; and
- (c) updating said file in said checkout system

with information for that article in response to the data printed on said slip.

It will be appreciated that a method according to the present invention has the advantage that accurate updating of the PLU file can be achieved, without inconveniencing a customer. An additional advantage is that the provided slips provide management information which can assist in checking on the article management system of the retail establishment.

One embodiment of the present invention will now be described by way of example, with reference to the accompanying drawings, in which:-

### Brief Description of the Drawing

Figs. 1A and 1B illustrate two slips having separate formats for formatting data corresponding to a not-yet-registered article; and

Fig. 2 is a flow chart of a method of this invention.

Figs. 1A and 1B show a slip 20 and 34, respectively, which may be used in a checkout system which includes the preferred embodiment of this invention. The slip 20 has a dedicated print format which is used to organize data 21 corresponding to an article (not shown) being purchased by a customer. The print format on the slip 20 includes an article code 24 which corresponds to a UPC label or bar code (not shown) affixed to the article. The dedicated format of the slip 20 includes a place for a message 22, a date/day/time 26, a store branch number 28, and register number 30, as shown in Fig. 1A. This data 21 is indispensable to investigate and confirm the time and place, for example, where the not-yet-registered article was encountered. The slip 20 may also include a place for a memo 32 where a memo or note (not shown) may be printed.

As shown in Fig. 1B, the slip 34 includes the dedicated print format for data 21 that is the same format used for the slip 20, except that there is no memo 32 and the article code 24 on the slip 20 is replaced by an article code 36. The article code 36 includes a numeric article code 36-1 and a bar code 36-2 corresponding to the numeric article code 36-1. The bar code 36-2 facilitates avoiding clerical errors, for example, when the numeric article code 36-1 is inputted into an in-store processor (not shown by the operator). For example, when the not-yet-registered article is encountered, the operator inserts the slip 20 into a printer (not shown) in the POS terminal (not shown) and the printer prints the data 21 onto the slip 20, as

described later herein. The slip 20 is then handed over to a manager of the retail establishment, whereupon the manager updates a PLU file which resides in either the POS terminal or in an in-store processor (not shown) coupled to the POS terminal to include article information (such as article price and name). However, it may be troublesome and inaccurate to input the 13 digits of the article code 24 by using a keyboard coupled to the POS terminal, for example, because of the likelihood that a clerical error in inputting the article code 24 may occur. To avoid this problem, the slip 34 may be used instead of slip 20. The bar code 36-2 on the slip 34 can be read or scanned by an optical scanner (not shown) connected to the POS terminal. This facilitates inputting the numeric article code 36-1 accurately.

Fig. 2 is a flow chart of the purchased article registering operation used in a preferred embodiment of this invention. Assume that an operator has started "ringing up" or registering articles (not shown) that a customer has purchased, as represented by block 38 in Fig. 2. Each purchased article has a UPC label or bar code (not shown) affixed thereto, and the bar code is read or scanned by an optical scanner (not shown) which is connected to the POS terminal, as described earlier herein. After the article registering process has begun (block 40), the POS terminal accesses the PLU file (block 42). If the numeric article code 36-1, for example, is registered in the PLU file, a price for the purchased article is accessed from the PLU file, a price for the purchased article is accessed from the PLU file and article is registered as illustrated by blocks 44 and 46.

However, if the numeric article code 36-1 is not registered in the PLU file, an indication or display that the article is not registered in the PLU file is made on the display of the POS terminal (block 48). The print format of the data 21 (Figs. 1A and 1B) corresponding to the not-yet-registered article, which has been optionally set in advance by the operator, is read out or displayed on the display of the POS terminal (block 50 in Fig. 2). The operator at the POS terminal then inserts the slip 34, for example, into the printer of the POS terminal having the same format (block 52 in Fig. 2). After this slip 34 is inserted into the printer of the POS terminal, the data 21 is printed thereon (block 54). The price of the particular article is manually inputted by the operator under the operation of the keyboard (not shown) of the POS terminal (block 56). The operator obtains the price from the price label which is affixed to the article.

The operator registers other articles in the same manner beginning at block 38. After all the articles purchased by the customer having been registered (block 58), the customer settles his ac-

count (block 60) and the article buying and selling transaction is complete (block 62).

The slips 34 for the not-yet-registered articles are handed over to the manager of the store at the completion of the transaction or of a plurality of transactions. The manager sequentially updates the PLU files to include information, such as the price, name, class, and the like for the not-yet-registered articles. This permits the manager of the store to investigate the article price, name, class and other data 21 based on the slip 20 or the slip 34, thereby permitting him to accurately update the PLU file.

## Claims

1. A method for updating a price look up file for a not-yet-registered article in a point of sale terminal which is used in a checkout system, characterized by the steps of: (a) inputting bar code data corresponding to the not-yet-registered article into said terminal; (b) printing, under the control of said terminal, data corresponding to the not-yet-registered article on a slip (20,34) having a dedicated format; and (c) updating said file in said checkout system with information for that article in response to the data printed on said slip (20,34).

2. A method according to claim 1, characterized in that said checkout system includes a processor coupled to said terminal, said processor having said price look up file stored therein, said updating step further including the step of utilizing said slip (20,34) to update said price look up file in said processor.

3. A method according to claim 2 characterized in that said updating step further includes the step of using said terminal to input article information into said processor.

4. A method according to claim 1, characterized in that said printing step further includes the step of retrieving said data directly from the not-yet-registered article.

5. A method according to claim 1, characterized in that said data of said printing step includes an article code number corresponding to the not-yet-registered article.

6. A method according to claim 5, characterized in that said data of said printing step includes a bar code corresponding to the article code number on said slip (34).

7. A method according to claim 1, characterized in that said printing step includes the step of inserting said dedicated format slip (20,34) into a printer of said terminal for printing said data.

8. A method according to claim 1, characterized in that said inputting step includes the step of scanning a bar code on the not-yet-registered article.

**FIG. 1A**

20

NOT - YET - REGISTERED ITEM SLIP

- MESSAGE 22
- 21 NO MESSAGE IN PLU FILE
- ARTICLE CODE 24
- 21 4902201030488
- DATE / DAY / TIME 26
- 21 JUNE 21, WED. 16:35
- BRANCH NO. 28
- 21 0125
- LANE NO. / REGISTER NO. 30
- 21 12 / 056
- MEMO 32

**FIG. 1B**

34

NOT - YET - REGISTERED ITEM SLIP

- MESSAGE 22
- 21 NO MESSAGE IN PLU FILE
- DATE / DAY / TIME 26
- 21 JUNE 21, WED. 16:35
- BRANCH NO. 28
- 21 0125
- LANE NO. / REGISTER NO. 30
- 21 12 / 056
- ARTICLE CODE 36
- 21 36-2
- 21 36-1
- 21 4902201030488

FIG. 2

