

PROCESS OF AND SYSTEM FOR ADVANCING CREDIT FOR CASH COLLECTIONS

Field of the Invention

[0001] The present invention relates to a process of and system for advancing credit for cash collections and, more particularly, relates to the advancing of credit to commercial establishments based upon amounts of cash collected by those commercial establishments during their normal business operations.

Background of the Invention

[0002] With today's fast-paced mentality, individuals and businesses expect instructions and tasks to be quickly acted upon in a wide-range of activities. For example, consumer transactions, via the Internet and at retail stores, are conducted substantially quicker today than years ago due to the use of more sophisticated technology. Similarly, banking transactions occur rapidly, such as the transfer of funds between accounts or electronic transfers to pay for goods or services. Many other examples also are available. There are, however, numerous areas that have not yet been substantially impacted by current technology and other advances. One such area entails the use of physical cash (i.e., coin and currency), in particular, the use of cash by customers who purchase goods or services at retail establishments. In such types of transactions, while the speed at which the transactions themselves take place are relatively short (e.g., a few minutes), the speed at which the cash is subsequently used by the businesses that accepted the cash is enormously slow. More specifically, retailers who take-in relatively large amounts of cash usually employ cash handling services to periodically pickup the cash (e.g., using an armored car service) and to arrange for that cash to be deposited into a bank. Usually, the cash first is transferred to a cash handling facility that counts and processes the cash before it is transferred to a bank. The retailer then is credited with the cash deposit and, upon being credited, is able to utilize the funds. This entire process -- from receiving the cash from customers to receiving the bank credit -- unfortunately often spans several or

more days. Hence, while modern developments have benefited businesses by enabling a multitude of tasks to be carried at remarkably fast rates, companies still currently are unable to make use of their cash collections until the cash undergoes generally several days of processing and handling.

Objects and Summary of the Invention

[0003] In view of the foregoing, it is an object of the present invention to provide retailers with the ability to expeditiously enjoy the benefit of their cash collections.

[0004] It is a further object of the present invention to provide a process that provides credit to retailers at the time of their cash collections as opposed to when the cash is deposited into a bank.

[0005] It is another object of the present invention to enable retailers to enjoy the benefit of their cash collections independent of cash pickup schedules, cash vault cut-off windows and other schedules imposed by third parties.

[0006] To achieve the foregoing and other objects, the present invention entails a process that includes collecting cash by a retailer over a period of time, such as a business day, depositing the collected cash into an electronic safe located at the retailer (e.g., at the retailer's store), calculating at a designated time, such as at the end of day, a total amount of cash that is deposited into the safe over that period of time, and electronically transmitting a data file that identifies the calculated total amount of cash deposited into the safe over that period of time in order to enable for the retailer to be credited by a bank or other financial institution with the total amount that is indicated in the data file.

[0007] As an aspect of the invention, a facility (called process facilitator herein) receives the electronically transmitted data file, and arranges for the retailer to be credited by the bank with the amount of cash deposits indicated in the data file.

[0008] As a further aspect of the invention, the retailer receives the credit before the cash is removed from the retailer's safe.

[0009] As another aspect of the invention, the cash in the retailer's safe is picked-up and then counted at a cash processing facility, and the credit previously provided to the retailer is adjusted if there is a discrepancy between the previously credited amount and the cash count ascertained by the cash processing facility.

[0010] In accordance with another embodiment of the invention, the process is carried out over multiple business days, and the total amount of collected cash is calculated at the end of day of each business day, and a file that identifies the total amount is transmitted each business day.

[0011] As a further aspect of the invention, the cash within the retailer's safe may remain in the safe over those multiple business days.

[0012] As another aspect of the invention, the cash pickup schedule need not coincide with when the cash totals are calculated and transmitted for subsequent credit to the retailer. As yet a further aspect, the amounts identified in the file are broken down by amounts of cash collected over each business day, the credit is provided on a business day basis, and a report is provided to the retailer regarding the amount of credit provided to the retailer broken down by business day.

[0013] In yet a further embodiment of the invention, the retailer has multiple locations and cash is collected at each of the retailer's locations and deposited into a respective safe or safes at each of the retailer's locations. At the end of day for each location, the total cash deposit at the respective location is ascertained and transmitted, and the retailer is credited with the total cash deposits of all of its locations based upon the data in the transmitted files.

[0014] As an aspect of the invention, the "end of day" times at which the cash deposits are ascertained at each retailer location may be different.

[0015] In accordance with a system embodiment of the present invention, a system is provided for providing bank credit to a retailer for cash collections that comprises cash collected by a retailer over a period of time at the retailer location; a safe disposed at a retailer location, the collected cash deposited into the safe, the safe being adapted to calculate, at a designated time, a total amount of cash deposited into the safe

over the period of time, and adapted to electronically transmit a data file identifying the calculated total amount of cash deposited into the safe over said period of time to enable for the crediting of the retailer by a bank with the calculated total amount of cash deposited into the safe as identified in the data file.

[0016] In accordance with another system embodiment of the present invention, a system comprises cash collected by a retailer at a plurality of locations of the retailer; a plurality of safes, each of the safes disposed at a respective one of the plurality of locations of the retailer, cash collected at each of the plurality of locations of the retailer being deposited into a corresponding respective one of the plurality of safes, each of the safes being adapted to calculate a respective total amount of cash deposited into the respective safe and adapted to electronically transmit a respective data file identifying the respective calculated total amount deposited at each of the retailer locations; and a facility for receiving all of the electronically transmitted data files, the facility adapted to arrange for the retailer to be provided with a total credit corresponding to a sum of the calculated total amounts of cash deposited into the safes at each of the retailer locations as identified in the received data files.

[0017] In addition, each of the above-summarized aspects and features identified with respect to the method embodiments of the present invention may be applied, as applicable, to any of the above-summarized system embodiments of the present invention.

[0018] Various other objects, advantages and features of the present invention will become readily apparent to those of ordinary skill in the art from the following detailed description of the invention.

Brief Description of the Drawings

[0019] The following detailed description, given by way of example and not intended to limit the present invention solely thereto, will best be appreciated in conjunction with the accompanying drawings, wherein like reference numerals denote like elements and parts, in which:

[0020] Figure 1 is a block diagram that shows multiple entities that may be involved in a cash collection process that embodies the present invention;

[0021] Figure 2 is a schematic flow diagram that shows in general terms the process for advancing credit to retailers in accordance with the present invention;

[0022] Figure 3 shows the Brink's CompuSafe 4000® safe, which may be employed in the present invention;

[0023] Figure 4 is a diagram useful for describing various features of the present invention; and

[0024] Figure 5 is a flowchart showing in broad terms the overall operation of the present invention.

Detailed Description of the Present Invention

[0025] The present invention pertains to the advancing of credit to commercial establishments, such as retailers, based upon amounts of cash that are collected by those commercial establishments during their normal business operations. In general, the present invention expedites funds availability, improves cash flow and provides other features and benefits to commercial establishments that routinely take-in substantial amounts of cash.

[0026] In accordance with the present invention, the general system/process entails multiple entities. As used herein, an entity generally is a company providing goods and/or services, such as a bank, an armored car service, a retail store (e.g., a department store, a grocery store), a transportation provider (e.g., an airline, a bus company), etc. For convenience, the generic term "retailer" is used herein to refer to a company that provides goods and/or services in exchange for money and where that retailer sometimes (perhaps often) accepts physical cash (paper currency and coin) in exchange for such goods and/or services. A retailer may be disposed at a single location or at multiple locations (e.g., sometimes referred to as a "chain"). As various examples only, a retailer may be a department store, a grocery store, a gas station, or a bus company, each of which may have one or more physical store locations. As set forth herein, the terms "commercial establishment" and "retailer" are interchangeably used to refer to such a company that provides goods and/or services in exchange for money and where physical cash is accepted.

[0027] Referring now to the drawings, Figure 1 thereof is a block diagram that shows multiple entities that may be involved in a cash collection process that embodies the present invention. The entities shown include retailer 10, armored car service provider 20, cash processing facility 30, bank 40, and process facilitator 50. Although five entities are shown, additional entities may also be involved to assist with one or more entities with its respective functions. Further, a single entity may carry out the functions of two or more entities and, thus, the total number of entities involved in the process may be less than the five entities shown in Figure 1. Each of the entities shown in Figure 1 is further described below in connection with the inventive process for advancing credit to retailers.

[0028] Prior to describing the inventive process/system, a discussion of a typical, existing cash collection process is helpful in understanding the benefits of the present invention. As is well known, cash that is collected by a particular retailer may be picked-up by an armored car service which in turn brings the cash to a cash processing facility. The cash processing facility generally counts the cash and deposits the counted cash within a bank. The cash is recounted by the bank and the retailer's bank account is credited with the amount of the deposit. As is appreciated, in such a typical, existing cash collection process, retailers encounter a lag, often a period of several days if not more, between when the retailer acquires funds in the form of cash and when the retailer is able to utilize those funds. For large retailers, the amount of cash collected on a daily basis may total in the tens of thousands or hundreds of thousands of dollars, perhaps more. These funds are unusable, and do not bear interest, during this lag period. Even for businesses that collect relatively small amounts of cash, the cumulative affect of non-use, for example, over a 12-month period, of these funds result in a measurable and meaningful impact on such businesses.

[0029] As described herein, the present invention provides for a novel process/system for advancing credit to retailers based on amounts of cash collected by those retailers during their normal business operations. By advancing such credit, retailers are able to enjoy the benefit of cash collections almost immediately, thereby enabling retailers to immediately bear interest on such funds or to otherwise immediately utilize such funds in manners suitable for the retailers' successful operations.

[0030] Figure 2 of the drawings is a schematic flow diagram that shows in general terms the process for advancing credit to retailers in accordance with the present invention. In describing the inventive process, reference also is made to the various entities shown in Figure 1. Initially, a retailer 10 collects cash in exchange for good and/or services, as shown as step 100. As one example, a grocery store retailer may receive twenty-five dollars in cash from a customer in exchange for a certain amount of groceries that are being purchased by that customer. The collected cash is deposited into a suitable cash receiving device, as shown as step 110. In the grocery store example, the retailer's cashier (or clerk or other employee of the retailer) deposits the cash into an electronic cash register, electronic safe, electronic drop safe, or other device (hereinafter, collectively, "safe"). The cash can be deposited into the safe during the transaction with the customer or after the transaction is completed.

[0031] The safe that receives the cash preferably has the capability to recognize the denomination of the currency and the capability to accumulate the cash deposit totals (the terms "cash deposits" and similar terms and "cash collections" and similar terms are interchangeably used herein) for a predetermined period of time, such as a business day. As one example, a suitable safe that may be employed with the herein-described process of the present invention is the Brink's CompuSafe 4000® safe, which is shown in Figure 3 of the drawings. Some of the features of the Brink's CompuSafe 4000® safe are discussed in U.S. Patent Numbers 5,695,038; 5,975,275; and 5,944,163, which are assigned to the assignee of the present application and are incorporated herein by reference. In the Brink's CompuSafe 4000® safe and as discussed in the foregoing identified patents, bill acceptors within the safe accept the cash and transfer the accepted cash into sealed cassettes disposed within the safe, and a processor produces deposit reports that identify the contents of the sealed cassettes. The deposit reports specifically identify the stored contents by denomination, the total cash deposit, and other information. The Brink's CompuSafe 4000® safe, however, is only one exemplary safe that may be employed. It is noted that the Brink's name and the CompuSafe® mark are registered trademarks of Brink's Network, Inc., the assignee of the present application.

[0032] During the course of the retailer's business day, additional cash is collected during transactions with additional customers and the collected cash is continuously deposited into the retailer's safe. A retailer may have a single safe at a single location, multiple safes within a single location or multiple safes at multiple locations. No matter the case, cash is collected and deposited with each safe, and the amounts deposited are maintained by the safes.

[0033] At a certain time of each day, preferably (although not necessarily) at the close of the retailer's business day, the deposit totals of each of the retailer's safes are calculated, as shown as step 120 in Figure 2. In the above grocery store example, if the grocery store had a single location with two safes, the total deposit amounts of the two safes are obtained to identify the total amount of cash that has been collected by that retailer during the course of the business day. For retailers with multiple locations, the total deposit amounts of all safes within all of the retailer's locations are obtained. In a variation, the total deposit amounts of the safes within a select number of the retailer's locations are obtained. For example, a retailer with stores in different parts of a country (e.g., on both the east coast and west coast of the United States), or in different countries, may desire to employ the process of the present invention separately for its stores in such different areas.

[0034] In any of the examples provided above, it is appreciated that the amount of cash collected by a retailer generally is a function of the size of the retailer, the number of locations (e.g., retail stores) of the retailer, the types of goods/services that are provided, the relative amount of use of credit/debit cards by the retailer's customers, and other factors. In any event, and as illustrated herein, the inventive process for advancing credit to retailers may be applied to retailers of any size who accept payment in the form of cash.

[0035] As mentioned above, deposit totals are calculated at a certain time of each day. The time of day may be defined by the retailer's standard time of close of business day, or the respective store's end of business day. The time may be manually identified each day. For example, a retailer's employee may manually instruct the safe to "close-out" the business day. Further, another time may be selected that does not coincide

with the retailer's business day. In a further variation, deposit totals are calculated every other day, every third day, or at other periods of time. In any event, deposit totals are calculated (or calculated/maintained by the safes during the course of the retailer's operations) at a given point of time. For convenience hereinafter, such given point of time is referred to as "end of day."

[0036] Upon calculating the deposit totals at the end of day, the safe at one retailer location (e.g., 10a shown in Figure 1) creates a data file that contains the deposit totals at that location and electronically transmits the created data file to a process facilitator, such as process facilitator 50 shown in Figure 1. Data file creation and transmission are represented as step 130 in Figure 2. Similarly, respective safes at each of the retailer's other locations (e.g., 10b, 10c) create respective data files that contain the deposit totals at the respective location, and all of the created data files are transmitted to process facilitator 50.

[0037] In a variation of that represented by step 130 as described above, the retailer's safe (or safes for multiple locations) transmits information, either once at the end of day or periodically throughout the day, to another system within or controlled by retailer 10, such as a computer system, to enable that other system to create the above-mentioned data file, which is then transmitted to process facilitator 50. The information may be transmitted to a temporary electronic storage medium located at retailer 10, or may be transmitted securely, for example, to retailer 10's main processing facility (e.g., via an intranet, via a website, etc.). Appropriate data may be transmitted multiple times and periodically within, for example, each business day from the retailer's safe, either directly or indirectly, to a system within or controlled by retailer 10 or to a system within or controlled by process facilitator 50.

[0038] The safe (or safes for multiple locations) within retailer 10 transmits the total amount of cash that has been collected since its previous data transmission, with the last transmission representing such amount at the above-defined end of day. Then, the system to which all of the transmissions are sent calculates, based on all of the data transmissions, the amount of the deposit totals for that safe within retailer 10. In yet another variation, one or more computing systems controlled by retailer 10 or,

alternatively, controlled by process facilitator 50 remotely access the retailer's safes, pulling cash totals at predetermined times.

[0039] Process facilitator 50 includes a suitably programmed computing system (or systems) that receives the electronically transmitted data files. Transmission may occur in any known manner, such as via the Internet, telephone system, a private communications network or other suitable manner. Preferably, transmissions are encrypted to ensure proper security and privacy. Since electronic data transmission and encryption, as well as the hardware/software that are capable to carry out such transmission and encryption, are well known, further description thereof is omitted herein except where necessary for an understanding of the present invention.

[0040] The computing system within process facilitator 50 gathers and accumulates the cash deposit totals of all locations of retailer 10 (e.g., 10a, 10b, 10c, etc.) based on the information contained in the data files transmitted from each location. As each transmission is received, process facilitator 50 processes each data file, each representing a respective location of retailer 10. Upon receiving all of the transmissions, process facilitator calculates the total cash deposit for all locations of retailer 10. The gathering and calculating (accumulating) of the total cash deposit for retailer 10 for that particular business day/time period is represented as step 140 in Figure 2.

[0041] Upon calculating the total cash deposit for all locations of retailer 10, for the relevant time period, process facilitator 50 electronically transmits an encrypted data file containing the total cash deposit information, along with retailer 10 identification information, to bank 40, as represented as step 150 in Figure 2. Bank 40 (or other type of financial institute, collectively referred to herein as a "bank") processes the transmission (e.g., performs identity verification and other security handling as is well known) and credits the bank account of retailer 10 with the identified total cash deposit, as represented as step 160 in Figure 2. In yet a variation, the above-discussed data files are transmitted from retailer 10 to bank 40, which in turn carries out the herein-described functions of process facilitator 50 and then credits retailer 10 based upon the ascertained total cash deposit.

[0042] As described, retailer 10 may have multiple locations (e.g., 10a, 10b, 10c), wherein a safe (or other device) at each location calculates the cash deposit totals at the respective location at the identified end of day and thereafter creates and transmits to process facilitator 50 a respective data file with the deposit total information (along with appropriate retailer location identification data). The “end of day” for each location may occur at the same time of day or may occur at different times of day. For retailers with a relatively large number of stores located, for example, throughout a country or region, different locations may likely have different “end of day” times. As one example, certain retailer locations may have different times of operation, may have the same times of operation but operate in different time zones, or a combination of the two.

[0043] The herein-described inventive process for advancing credit for cash collections beneficially is well suited for large-scale retailers having many locations with different times of operation. Safes at each location accumulate the cash totals for the respective location and at a designated “end of day” for such location create a data file that contains the deposit totals for that location. Over the course of, for example, a 24 hour time period, process facilitator 50 receives and processes these data files from the retailer’s different locations and upon receipt of data files from all of the retailer’s locations, calculates a cash deposit total for all locations and transmits this total to the retailer’s bank, which in turn credits the retailer’s bank account with such total.

[0044] Figure 4 is a diagram that is used to explain the operation of the present invention entailing a retailer with multiple locations and where different locations have different ends of day. For example, and referring to Figure 4, an exemplary retailer has a number of store locations “X” that have an end of day at 6:00pm (each such location identified herein as an “X location”). The exemplary retailer also has a number of other store locations “Y” that have an end of day at 9:00pm (each such location identified herein as a “Y location”). Finally, the exemplary retailer further has a number of store locations “Z” that have an end of day at 12:00am (i.e., midnight) (each such location identified herein as a “Z location”). In accordance with the present invention, on a given business day, such as January 5, a safe (or safes) at each X location ascertains at the end of day of 6:00pm the amount of cash collected between 6:00pm of the previous business day of

January 4 and 6:00pm of the current business day of January 5. Thereafter, the ascertained amount of cash collected during this time period is identified within a data file that is transmitted to a process facilitator. Similarly, on that same day, that is, on January 5, a safe at each Y location ascertains at 9:00pm (i.e., the “end of day” of each Y location) the total amount of cash that was collected at that location between 9:00pm of the previous business day of January 4 and 9:00pm of that day, and such total amount is transmitted to the process facilitator. A safe at each Z location ascertains at 12:00am (i.e., the “end of day” of each Z location) on January 6 the total amount of cash that was collected at that location between 12:00am of the previous business day of January 5 and 12:00am of that business day of January 6, and the ascertained total amount is transmitted to the process facilitator. Process facilitator then sums the reported amounts and arranges for a bank to credit the retailer with the summed amount.

[0045] As illustrated in the above example, the retailer may be provided with a credit each day based upon cash collections that occur over different periods of time within the retailer’s different store locations. Each end of day may represent the time at which a respective retailer location closes. Or, one or more locations of the retailer may close at a time that differs from the respective location’s end of day. Still yet, one or more locations of the retailer may be open 24 hours, that is, not be closed at all. In such cases, a credit may be provided for cash collected at one location at the end of that business day, while a credit may be provided for cash collected at another location at the end of the next business day. For example, cash collected at 8:00pm at a location Y on January 5 will be credited to the retailer at the end of that business day (i.e., at the end of January 5). However, cash collected at 8:00pm at a location X on January 5 will not be credited to the retailer until the end of the next business day, that is, on January 6. If this is not desired, then the “end of day” of particular locations may be modified. But, in any event, it is seen that the herein-described inventive process for advancing credit for cash collections is sufficiently flexible to accommodate retailer locations that have different operating schedules, that operate in different time zones, that perhaps have different cash flow needs, and/or that may have or that desire to have different end of day times. In each of these cases, the present invention enables retailers to receive credit on a basis that is more closely aligned with the volume of their cash collections, and that is not dictated by the

schedule that the cash is picked-up for deposit into a bank or other third party schedule, as further discussed below.

[0046] As described herein, process facilitator 50 receives data files that collectively identify the cash collections at all of the retailer's locations and thereafter ascertains the total credit to be provided to the retailer (e.g., for that business day). In a variation, process facilitator 50 may impose a predefined cut-off time by which data files from all locations of the retailer must be received. Then, at such cut-off time, process facilitator 50 calculates the total cash deposit for those locations that have transmitted the respective data files and transmits such total cash deposit information to bank 40 for subsequent credit to retailer 10 in the amount indicated. In such case, advance credit still is provided even if all of the retailer's locations are unable, for whatever reason, to transmit the data to process facilitator 50. As one example, technical difficulties at a location may prevent or otherwise delay proper processing at such location. No matter the case, the present invention provides advance credit of all, or at least a part, of a retailer's cash deposits. If only a part of the retailer's cash deposits are credited, the non-reported cash deposits may be credited at a later time, such as at the end of the next "end of day."

[0047] As mentioned above, the herein-described inventive process for advancing credit for cash collections expedites funds availability to a retailer. As described above, the "end of day" occurs at a certain point in time. In such case, the retailer is credited once each day for the cash that is collected generally during the preceding 24 hour period. The herein-described process, however, may be carried out multiple times a day, such as at every 12-hour period. Conversely, the process may be carried out less than once per day, such as every other day. For example, smaller retailers (e.g., with only a single location or a few locations) may accumulate relatively little cash each day and, thus, carrying out the process every two or three days may be sufficient for such smaller retailers.

[0048] In yet another variation, a retailer with multiple locations may, in a sense, be treated as multiple retailers. For example, credit may be provided after retailer locations in one part of the country report their deposit totals and then, separately, credit is

provided after the other retailer locations report their deposit totals. Such a subdivision may be based on geographic criteria or other basis.

[0049] In each of the variations described herein, a retailer is credited with the total cash deposits accumulated over a period of time (e.g., each business day) based on deposit totals as reported by each of the retailer's locations. Accordingly, the present invention enables a retailer to enjoy the benefit of its cash receipts almost immediately upon collecting cash from its customers. The cash itself, however, still remains at the retailer location(s) even after the retailer is credited with those cash receipts. Co-pending application serial no. 60/953,557, filed August 2, 2007, owned by the assignee of the present application and incorporated herein by reference, is directed to facilitating novel cash collections deposits (i.e., handling of the physical cash itself) and deposit tracking and such process or portions of such process may employed in conjunction with the herein-described inventive process for advancing credit for cash collections. In any event, regardless of whether the invention described in co-pending application serial no. 60/953,557 is employed, generally an armored car service provider 20 (Figure 1) picks up from retailer 10 the cash deposits at preset periods of time (e.g., daily, twice daily, every other day, weekly, etc.) and transports the deposit bag(s) to a cash processing facility (e.g., cash processing facility 30 shown in Figure 1) for further handling.

[0050] In accordance with the present invention, crediting as described herein does not need to coincide with a business day. In addition, and as mentioned above, a retailer is credited with its cash collections in advance of, sometimes several days or more prior to, when the actual cash reaches the bank. As a particularly beneficial feature of the present invention, a retailer can be provided with credit for its cash collections on a more frequent basis than when those cash collections are picked-up, for example, by an armored car service. For example, for relatively small retailers, a retailer's cash deposits are picked up by an armored car service every other day, or every third day, or based on a cash volume basis, or based on another basis, whereupon that retailer may be credited in accordance with the present invention with its cash collections on a daily basis. In such case, a retailer obtains the benefit of daily credit without incurring the expense of daily cash pick-up. Thus, the present invention disassociates the time and frequency of a

retailer's cash pickup schedule from the time and frequency of when that retailer is credited for its cash collections. More specifically, a retailer is able to enjoy the benefit of its cash collections on a basis that is independent of when those cash collections are actually picked up, when the cash is processed by a third party cash processing facility, or when the cash is deposited into a bank.

[0051] In accordance with the present invention, retailer 10 is credited with its cash collections based on a schedule that is independent from the schedule at which the collected cash is picked-up by an armored car service (e.g., armored car service 20 shown in Figure 1). For example, armored car service provider 20 picks up from retailer 10 the cash at preset periods of time (e.g., daily, twice daily, every other day, weekly, etc.) and transports the cash, preferably stored within secured deposit bags to a cash processing facility (e.g., cash processing facility 30 shown in Figure 1) for further handling. Alternatively, a retailer may manually schedule a cash pickup by armored car service provider 20 based upon the volume of cash that has been collected by that retailer. Regardless of whether cash pickups are pre-scheduled or manually scheduled by the retailer, the retailer is provided with advance credit for its cash collections shortly after the retailer receives that cash.

[0052] Turning now to Figure 5, a flowchart showing in broad terms the overall operation of the present invention, from advancing credit prior to cash pickup through final processing of the cash, is shown. Initially, step 400 in Figure 5 represents the entire, above-described process of providing retailer 10 with advance credit for its cash collections. Thereafter, at a prescheduled time or when the retailer collects a sufficient amount of cash or at another time, retailer 10 arranges or prepares for a cash pickup, as shown as step 410 in Figure 5. Retailer 10 may prepare for a cash pickup in the manner described in application serial no. 60/953,557, identified above, or in any other manner. For example, a manager or other authorized employee or agent of retailer 10 (hereinafter, for convenience, a "manager") initiates a deposit transaction (also called herein "deposit creation"), in preparation for depositing the cash into a bank, by logging onto a secure website of process facilitator 50 (or other entity) and supplies to the process facilitator (via the website) various deposit details including deposit amounts by denomination. In a

variation, and in accordance with the present invention, this information is automatically transmitted or has already been transmitted to process facilitator 50 in any of the manners previously described herein. A deposit ticket is produced and is placed within a deposit bag along with the cash to be deposited. The deposit ticket may be automatically generated and printed, and identifies the amount of each currency denomination, the total amount of cash to be deposited, the retailer identification, a bar-code that uniquely identifies the deposit and other useful information. The deposit ticket and the cash are placed within a tamper-evident bag, and the bag is sealed in preparation for pickup.

[0053] At a prescheduled or manually scheduled time, armored car service provider 20 picks up the sealed bag from retailer 10, as represented as step 420 in Figure 5. Although generally not preferred, particularly for relatively large amounts of cash, the entity that picks up the sealed bag may be a courier or message service that does not employ armored cars. For purposes herein, “armored car service” or other similar term refers to the service that picks-up the cash from the retailer. The armored car service generally performs its standardized pick-up procedures and thereafter transfers the sealed bags to cash processing facility 30 for further handling, as represented as step 430.

[0054] Cash processing facility 30 carries out certain procedures during its handling of each sealed deposit bag. As one example of the procedures carried out by cash processing facility 30, an authorized personnel at cash processing facility 30, who preferably is logged onto a secure website of process facilitator 50 by use of a unique User ID and password, identifies each sealed deposit bag by utilizing a barcode scanner that reads the barcode on the outside of the sealed deposit bag. Upon recognition of the unique barcode by the system, the status of the sealed deposit bag is designated “Received” (or other suitable designation) and the date and time of the status change is recorded.

[0055] After the sealed deposit bag is “received” by cash processing facility 30, cash processing facility 30 verifies the contents of the deposit bag (called, for convenience, “verification” herein), as shown as step 440 in Figure 5. Such verification may occur at any time after receipt, but it need not occur on the same day that the sealed deposit bag is received. For example, verification may occur on the next business (or calendar) day or even on a future date. In any event, verification entails identifying the

deposit bag (by using a barcode scanner), opening the deposit bag, removing the cash contained within the deposit bag and counting the cash to verify that the actual cash content coincides with the deposit detail information identified on the deposit ticket and the electronic data previously supplied by retailer 10 as described above.

[0056] Each sealed deposit bag prior to verification (i.e., upon receipt of the sealed deposit bag) and also during verification is identified by the use of bar-code technology, which includes use of a bar-code on each deposit bag and suitable bar-code reader equipment. However, other identification technology may be employed, including RFID technology in which each deposit bag contains an RFID chip containing a unique ID (preferably embedded within the deposit bag itself), and suitable RFID readers disposed at the retailer and the cash processing facility and optionally by the armored car service provider. Other identification technologies may be employed. As used herein, all references to barcode, barcode readers, etc., shall include other suitable identification technology.

[0057] When the barcode is read at cash processing facility 30, both upon receipt of the sealed deposit bag and during verification, as mentioned above, all information pertinent to the identity of retailer 10, which is pre-stored in a database, including relevant banking information (e.g., the bank account of retailer 10) and all information pertinent to the contents of the deposit bag itself are immediately made available to cash processing facility 30.

[0058] During verification, in accordance with the present invention, if cash processing facility 30 discovers an overage or shortage in the amount of cash contained in the deposit bag(s) as compared to the cash deposit total amounts previously reported by retailer 10 and previously credited to retailer 10 in accordance with the present invention, such overage/shortage is communicated to bank 40 to correct the amount of credit previously provided to retailer 10, as represented as step 450 in Figure 5.

[0059] Historically useful information pertinent to the overage/shortage is stored in a database, including at least the amount of the overage/shortage, the total amount of the deposit, the date and time, the identity of the manager who created the deposit, and other potentially pertinent information.

[0060] Finally, the cash is transferred to bank 40, as shown as step 460 in Figure 5. Cash processing facility 30 (or bank 40 or process facilitator 50) transmits to retailer 10 a report (e.g., an electronic file) that identifies actual cash deposit information for retailer 10 to utilize for reconciliation, tax and other purposes. The report may be an intraday report, a daily report, a weekly report, a monthly report, etc.

[0061] In accordance with a particularly beneficial feature of the present invention, the information transmitted to retailer 10 includes an accounting of the particular business day or business days to which the credit is applied, including a credit breakdown by business day. In such instance, if a deposit amount identified in a data file transmitted from one of the retailer's safes corresponds to cash collected over multiple business days, then the data file preferably includes a breakdown by business day of the respective amounts of cash collected during each of those business days. For example, with reference again to Figure 4, a location "X" has an end of day at 6:00pm as shown, but is open 24 hours a day. If, for example, the retailer's business day coincides with a calendar day, then at 6:00pm on January 5, a data file is created (e.g., by the safe) and then transmitted for that location that identifies the total cash collected from between 6:00pm of January 4 through 12:00am of January 5, and separately identifies the total cash collected from 12:00am through 6:00pm of January 5. With such transmitted information, the total amount of credit provided to the retailer is applied on a business day basis. Thereafter, at the next end of day at 6:00pm on January 6, another data file is created and transmitted for that location that identifies the total cash collected from between 6:00pm of January 5 through 12:00am of January 6, and separately identifies the total cash collected from 12:00am through 6:00pm of January 6, and credit is provided accordingly. From the foregoing example, the total amount of credit provided for the business day of January 5 is based on a first transmission (at or shortly after 6:00pm on January 5) that identifies a partial cash collection on January 5 (i.e., cash collected from 12:00am through 6:00pm) and a second transmission (at or shortly after 6:00pm on January 6) that identifies another partial cash collection on January 5 (i.e., cash collected from 6:00pm through 11:59pm). Accordingly, credit reports are provided to the retailer that identify credit provided on a business day basis, without the need for a single transmission (from the retailer) to identify cash collections over each entire, complete business day. U.S. Patent

Nos. 5,695,038; 5,975,275; and 5,944,163, previously identified, discuss business day reporting in the context of producing reports that identify cash collections broken out by each partial business day and each full business day. Thus, safes with such capability, such as the Brink's CompuSafe 4000® safe, may be employed within the present invention to provide the above-described additional feature of allocating and reporting credit on a business day basis.

[0062] The features and variations described herein may be applied in instances where a retailer's business day coincides with its end of day, or where the business day does not coincide with the end of day, where the business day coincides or does not coincide with a calendar day, and/or where the end of day coincides or does not coincide with the calendar day.

[0063] In addition to the foregoing information provided to the retailer, the retailer additionally may access the system/database of process facilitator 50 to track the retailer's deposits, produce reports, view historical information including exceptions and variances, and receive statistical information including total expected daily deposits.

[0064] For retailers with multiple locations, various data and reports are producible on a store-by-store basis, if desired, to enable individual stores to access their own deposit/credit activity. Moreover, credit and deposit report data are available to the retailer on a store-by-store, select group of stores, or entity-wide basis, immediately or nearly immediately after cash collection and/or crediting the retailer with such cash collection.

[0065] As the foregoing-description sets forth, the present invention expedites funds availability, improves cash flow and provides other features and benefits to commercial establishments who take-in cash as part of their normal business operations. In particular, advance credit is provided to retailers in novel manners that enable retailers to enjoy the benefit of cash collections almost immediately, without having to wait for those cash collections to be picked-up by armored car service providers, processed and counted by third party cash processing facilities and then eventually deposited into a bank. Such post-cash collection activity commonly takes several days, if not more, during which time retailers historically are not able to utilize the cash funds that have been collected.

Retailers, both large and small, are disadvantaged by this lag period. The present invention, however, enables retailers to enjoy the benefit of their cash collections shortly after the cash is received. These benefits are realized regardless of cash pickup schedules, cash vault cut-off windows and other schedules controlled by third parties.

[0066] Having described the present invention including various features and variations thereof, it is intended that the appended claims be interpreted as including the embodiments described herein, the alternatives mentioned above, and all equivalents thereto.

What is claimed is:

1. A process of providing bank credit to a retailer for cash collections, comprising the steps of:

collecting cash by a retailer from a plurality of customers over a period of time;

depositing by the retailer the collected cash into a safe disposed at the retailer;

calculating by the safe, at a designated time, a total amount of cash deposited into the safe over said period of time; and

electronically transmitting a data file identifying the calculated total amount of cash deposited into the safe over said period of time to enable for the crediting of the retailer by a bank with the calculated total amount of cash deposited into the safe as identified in the data file.

2. The process of claim 1, further comprising the steps of receiving by a facility the electronically transmitted data file; and arranging by the facility for the retailer to be credited by the bank with the calculated total amount of cash deposited into the safe as identified in the data file.

3. The process of claim 2, wherein arranging by the facility for the retailer to be credited by the bank occurs before the cash deposited into the safe is physically taken out of the safe.

4. The process of claim 2, wherein arranging by the facility for the retailer to be credited by the bank occurs before the cash deposited into the safe is physically delivered to a financial institute.

5. The process of claim 2, further comprising the steps of transferring the cash deposited into the safe to the bank, verifying the amount of cash to produce a verified

amount; and adjusting the credit previously provided to the retailer based on differences, if any, between the verified amount and the calculated total amount of cash deposited into the safe as identified in the data file.

6. A process of providing credit to a retailer for cash collections, comprising the steps of:

collecting cash by a retailer from a plurality of customers over a plurality of business days;

depositing by the retailer the collected cash into a safe disposed at the retailer;

calculating by the safe, at an end of day for each of the business days, a total amount of cash deposited into the safe between the end of day of a business day preceding the respective business day and the end of day for the respective business day; and

electronically transmitting, at the end of day of each of the business days, a respective data file identifying the respective calculated total amount to enable for the respective crediting of the retailer by a bank with the respective calculated total amount.

7. The process of claim 6, further comprising the steps of receiving by a facility, on each of the business days, the respective electronically transmitted data file; and arranging by the facility for the retailer to be credited by the bank with the respective calculated total amount.

8. The process of claim 7, wherein the cash deposited into the safe over the plurality of business days is not withdrawn from the safe over the plurality of business days.

9. The process of claim 7, further comprising picking up the cash deposited into the safe in accordance with a pickup schedule; and wherein the end of day does not coincide with the pickup schedule.

10. The process of claim 6, wherein each data file identifies the calculated total amount broken down by business day, including a total amount of cash deposited into the safe between the end of day of the preceding business day through an end of the preceding business day, and a total amount of cash deposited into the safe between a beginning of the respective business day and the end of day for the respective business day.

11. The process of claim 10, further comprising the steps of receiving by a facility, on each of the business days, the respective electronically transmitted data file; and arranging by the facility for the retailer to be credited by the bank on a business day basis based on the respective calculated total amounts identified in the respective electronically transmitted data file.

12. The process of claim 11, further comprising the step of providing the retailer with a report identifying amounts of credit provided to the retailer on a business day basis.

13. A process of providing credit to a retailer for cash collections, comprising the steps of:

collecting cash by a retailer from a plurality of customers at a plurality of retailer locations over a period of time;

depositing by the retailer cash collected at each of the retailer locations into safes respectively disposed at the retailer locations;

calculating by each respective safe a respective total amount of cash deposited into the respective safe at each of the retailer locations over the period of time;

electronically transmitting, for each of the retailer locations, a respective data file identifying the respective calculated total amount deposited at each of the retailer locations;

receiving by a facility all of the electronically transmitted data files; and

arranging by the facility for the retailer to be provided by a bank with a total credit corresponding to a sum of the calculated total amounts of cash deposited into the safes at each of the retailer locations as identified in the received data files.

14. The process of claim 13, wherein arranging by the facility for the retailer to be provided by the bank with a total credit occurs before the cash deposited into the safes are physically removed from the safes.

15. The process of claim 13, wherein calculating a respective total amount of cash deposited into the respective safe at each of the retailer locations is carried at a respective designated time for each of the retailer locations, and a designated time for a first of the retailer locations is substantially different from a designated time for a second of the retailer locations.

16. A system for providing bank credit to a retailer for cash collections, comprising:

cash collected by a retailer from a plurality of customers over a period of time at the retailer location;

a safe disposed at a retailer location, the collected cash deposited into the safe by the retailer, the safe being adapted to calculate, at a designated time, a total amount of cash deposited into the safe over the period of time, and adapted to electronically transmit a data file identifying the calculated total amount of cash deposited into the safe over said period of time to enable for the crediting of the retailer by a bank with the calculated total amount of cash deposited into the safe as identified in the data file.

17. A system for providing credit to a retailer for cash collections, comprising:
cash collected by a retailer from a plurality of customers at a plurality of locations of the retailer;

a plurality of safes, each of the safes disposed at a respective one of the plurality of locations of the retailer, cash collected at each of the plurality of locations of the retailer being deposited by the retailer into a corresponding respective one of the plurality of safes, each of the safes being adapted to calculate a respective total amount of cash deposited into the respective safe and adapted to electronically transmit a respective data file identifying the respective calculated total amount deposited at each of the retailer locations; and

a facility for receiving all of the electronically transmitted data files, the facility adapted to arrange for the retailer to be provided with a total credit corresponding to a sum of the calculated total amounts of cash deposited into the safes at each of the retailer locations as identified in the received data files.