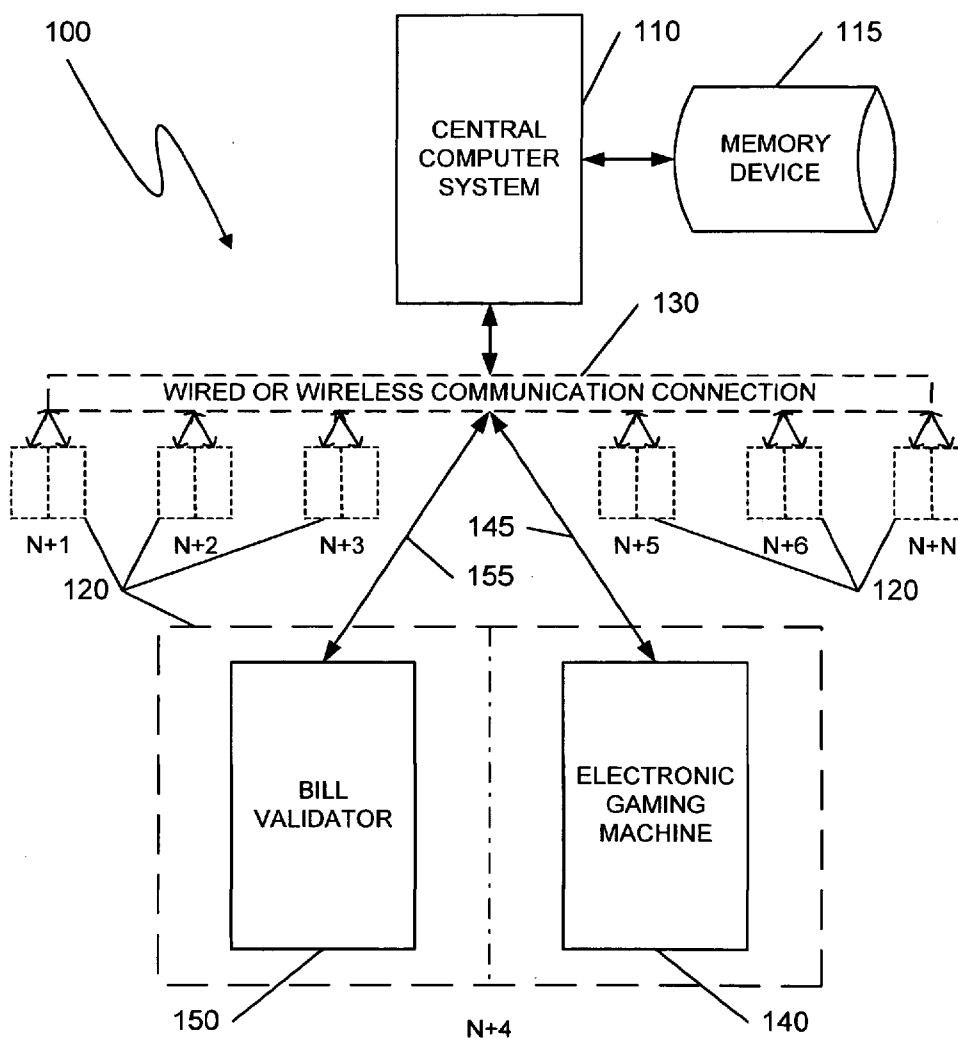


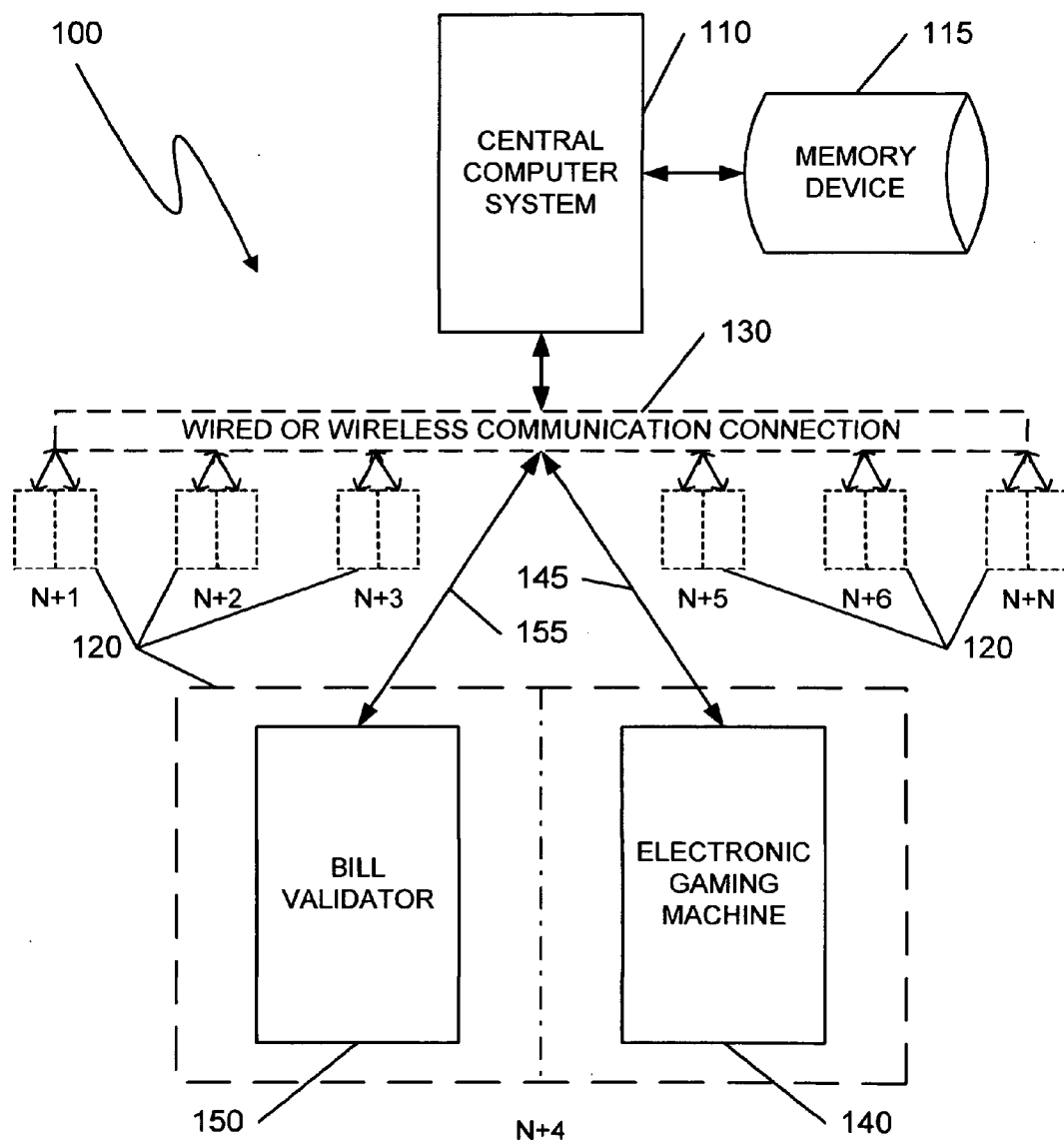


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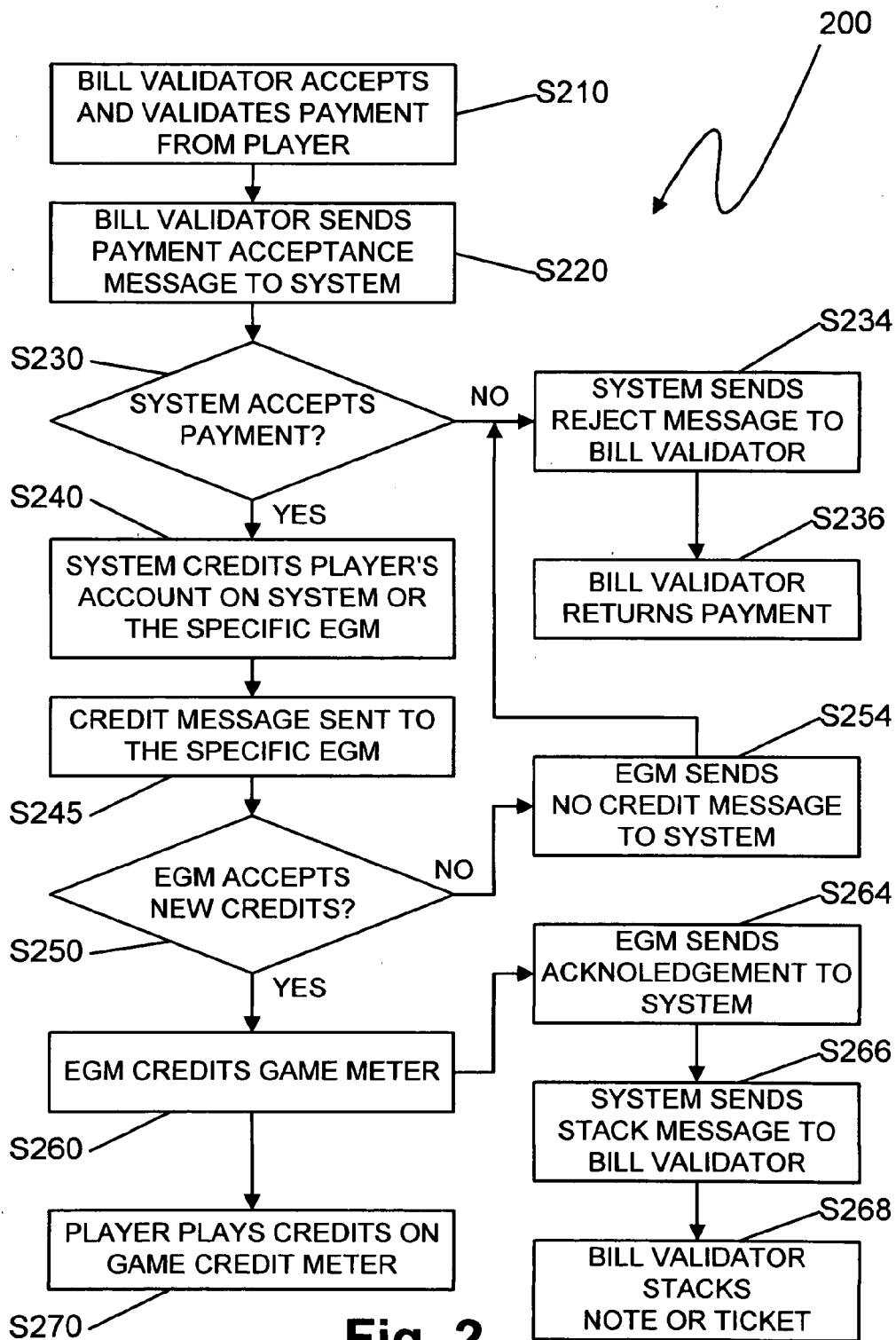
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**Mishra**(10) **Pub. No.: US 2012/0122565 A1**(43) **Pub. Date: May 17, 2012**(54) **GAMING SYSTEM BILL VALIDATOR**(52) **U.S. Cl. .... 463/25**(75) **Inventor: Kunal Mishra, Las Vegas, NV (US)**(57) **ABSTRACT**(73) **Assignee: JCM AMERICAN  
CORPORATIONS, Las Vegas, NV  
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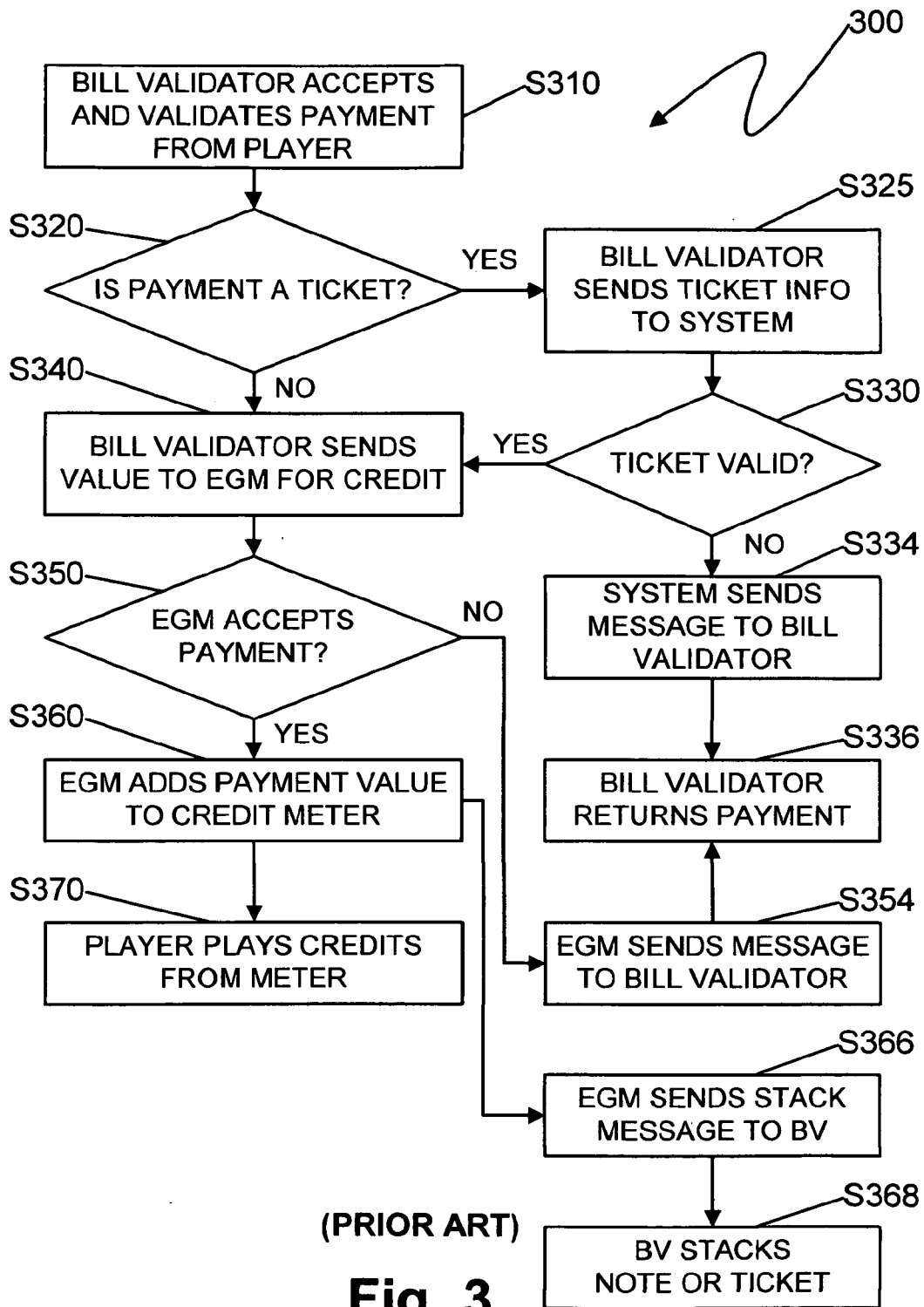
A method and system for player payment management In a multiple electronic gaming machine (EGM) environment is described. Multiple bin validators (BVs) throughout a casino receive payments of various fund types. A central computer system (CCS) associates these payments with a given adjacent EGM though there is no direct electronic communication between EGM and BV. In this method and system, the BV only directly communicates with the CCS. The CCS in turn provides the sole and complete management function for crediting BV player payments to appropriate EGMs. The BV is preferably not housed within the EGM, but alternatively can be in the same housing. This advantageous method eliminates the need for EGMs to communicate with or manage the operation of a BV or other payment device. This system also allows existing casino systems to be upgraded with local BVs, without the need to rewire or reprogram existing EGMs.





**Fig. 1**

**Fig. 2**



## GAMING SYSTEM BILL VALIDATOR

### TECHNICAL FIELD

**[0001]** The invention relates to an electronic game machine (EGM) management system for user friendly acceptance of articles of value within a casino or other multiple electronic game machine environments. In particular, the present invention relates to a system and method for managing payments made through multiple local Bill Validators (BVs) at a system level.

### BACKGROUND ART

**[0002]** The present invention is generally directed to a system and method of providing multiple bill validation devices in a casino or other gaming establishment having numerous electronic gaming machines such as slot machines and a central computer system for managing the accounts into which payments are deposited.

**[0003]** It is generally known that the playing of games on electronic gaming machines is increased by simplifying the ways in which the perspective players can make payments for credit on the respective gaming machines. When a player has played a given gaming machine for a period of time and depleted his credits on that machine, he is more likely to continue playing the game if it is easy to make a payment for additional credits without leaving that specific gaming machine.

**[0004]** Currently in some countries and locations it is common to include inside the housing of an electronic gaming machine a bill validator which can easily accept and validate payments made with multiple denominations and types of currency as well as other value bearing instruments like tickets. Such a captive bill validator will determine whether a received note or ticket is valid and its denomination or value then electronically communicate the payment information to the host electronic gaming machine's processing unit for registration on the game credit meter. Installations of such systems of hundreds of gaming machine and bill validator combinations in casinos have been proven to increase the volume of credits played on each machine.

**[0005]** One problem with such systems is that each host gaming device must also contain independent copies of proprietary software to manage the interface with various types and brands of bill validators. Such software must be maintained and updated at various times to provide for improvements and replacements of the resident bill validator. Significant amounts of labor and down time are required to maintain each independent game/validator unit. The electronic gaming machine must also maintain communications with both the bill validator and the central computer system which monitors gaming activity and provides updates to game software.

**[0006]** Another problem exists in some countries, locations or jurisdictions where the installations of slot machines which directly communicate with bill validators are not allowed by law. In such cases it has been customary to provide only a means to make payments at a few centralized locations within the casino for application to the player's account in the central computer database. When such deposits are made the player can then play any given slot machine in communication with the casino's central computer system. This system has the inherent inability to increase game play by allowing a player to continue play without leaving the specific gaming machine in order to make a deposit to his account.

**[0007]** In view of the above difficulties it would therefore be beneficial to provide a system and method which provides for a player's convenient localized payment to a central account or a specific electronic game machine without leaving the gaming machine said player is currently playing.

**[0008]** It would be a further benefit to provide such a convenience without the requirement that each electronic gaming machine need communicate or interface with a bill validator.

### SUMMARY OF INVENTION

**[0009]** A method and system for obtaining credits to play a gaming machine in a casino environment is provided.

**[0010]** The system may be effectively utilized by a casino or other gaming establishment with multiple electronic gaming machines which all can be electronically connected to the casino's central computer system. The electronic gaming machines (EGMs) can be slot machines or other electronic gaming devices. The central computer comprises the ability to communicate with numerous electronic gaming machines as well as numerous bill validators either by wired or wireless connection. This computer system also comprises sufficient memory to maintain the continuous status of all current player accounts and information regarding all valid value tickets issued by the casino. The central computer system can accept and validate value and ticket information transmitted from any bill validator as well as information to identify the electronic game machine with which the value information is to be associated. The central computer system can transmit to any of the networked electronic game machines the account information required to register additional credits on the electronic game machine. The central computer system can also transmit information/instructions to the bill validator for disposition and management of accepted and/or rejected notes and tickets.

**[0011]** The method contemplates accepting a player's payment at a bill validator adjacent to the electronic game machine he is currently playing such that said payment can be credited directly to a designated electronic game machine with which the BV is associated or optionally accumulated into the player's personal account in the central computer system of the casino. The method also contemplates directly communicating information between the bill validators and the central computer system. Further the method provides for the independent communication between the central computer system and a multiplicity of the electronic gaming machines in the casino.

### BRIEF DESCRIPTION OF DRAWINGS

**[0012]** The invention will be described in conjunction with the following drawings, wherein:

**[0013]** FIG. 1 is a system diagram illustrating the components of an embodiment of the inventive gaming system;

**[0014]** FIG. 2 is a simplified flow diagram showing the basic steps of an embodiment of the inventive method;

**[0015]** FIG. 3 is a simplified flow diagram showing the basic steps of a current state-of-the-art method;

### DESCRIPTION OF EMBODIMENTS

**[0016]** Exemplary preferred embodiments are discussed below with respect to the figures and diagrams.

**[0017]** In some countries and locations gaming laws or regulations do not permit the direct communication between a bill validator and an electronic game machine. In these areas

credits are maintained in a player's account on a central computer system but can only be purchased at certain centralized or secure locations within the casino. The player can then go to any electronic game machine within the casino to play those credits until depleted. Then the player must suspend play until he can go to one of these payment locations to replenish his account. By the time he returns to the electronic game machine he was previously playing it may be occupied by another player. This frequently happens since it is a common practice for some players to watch for and quickly move to electronic game machines that have been played for a long period of time without a payout once the unsuccessful player leaves. It would not be uncommon for a player who has depleted his credits after a long period of playing time to leave the casino instead of purchasing more credits since there is no guarantee of being able to continue play on the same electronic game machine until a payout occurs.

**[0018]** One embodiment of a gaming system (100) of the present invention as shown in FIG. 1 would typically be used in a casino where multiple electronic gaming machines would be provided for use. The term casino can be taken to mean any classic casino or alternatively any other facility or gaming establishment which manages multiple electronic gaming machines. This gaming system (100) and the gaming method (200) below are of particular value for use in casinos located in the countries mentioned above where restrictions exist.

**[0019]** The gaming system (100) includes a central computer system (110) that can be of any size with sufficient processing capacity to service the number of electronic gaming machines and bill validators present in the networked system. This central computer system (110) must also have significant memory to store all the information required to support the number of devices networked with the system as well as all transaction, ticket, and player information for the volume of gaming handled in the casino. This memory can be integral with the central computer system (110) or alternatively comprised of a separate memory device (115) as shown in FIG. 1.

**[0020]** The configuration shown in FIG. 1 depicts a number of corresponding or associated electronic game machine and Bill Validator combinations (120) which are all networked to the central computer system (110) by wired or wireless connection (130) to provide for high speed simultaneous communications between the central computer system (110) and each respective electronic game machine (140) and Bill Validator (150) as detailed in N+4. There are N+N numbers of associated electronic game machine and Bill Validator combinations (120) shown in FIG. 1 where each would be comprised of an electronic game machine (140) and a Bill Validator (150).

**[0021]** Each Bill Validator (150) or other payment acceptance device has its own direct communication channel or connection (155) to the central computer system (110) and in turn each electronic gaming machine (140) has its own direct communication channel or connection (145) to the central computer system. These connections are communicatively exclusive since there is no communication or information passed directly between a payment acceptance device or Bill Validator (150) and an electronic game machine (140). There is an obvious advantage in this configuration since each electronic game machine (140) will no longer require the proprietary protocols or software to communicate with any of the payment acceptance devices or Bill Validators (150). It should be understood that the various specific communica-

tion connections, boards, switches, and routers which may be required to achieve the network communication functions for the invention are not shown but are commonly known in the art.

**[0022]** It should also be noted that the embodiment of associated pairs of an electronic game machine (140) and corresponding or associated Bill Validator (150) are shown. These associated pairs should be operatively close to one another or adjacent to one another and may even be housed in the same cabinet to facilitate easy player recognition of the Bill Validator to be used to obtain additional credits for play on his current electronic game machine (140). The fact that no direct communication exists between the Bill Validator and the electronic game machine (140) to which it corresponds would be transparent to the player's operation of the invention. In an alternative embodiment one can appreciate that a Bill Validator (150) can be operatively close to more than one electronic game machine (140). For example a single Bill Validator (150) could be placed between two electronic game machines (140) and provide a switch or selection method by which the player can indicate the electronic game machine (140) to which the payment should be directed.

**[0023]** This system and method is described in terms specific to the preferred payment acceptance device being a standard Bill Validator such as Japan Cash Machine's UBA™ bill validator which may be programmed to accept multiple denominations as well as different countries' currencies. These bill validators also routinely accept various bar coded Ticket-in-Ticket-out or "TITO" tickets and other casino value coupons. However, while Bill Validators (150) are preferred, it should be obvious that any payment accepting device falls within the scope intended herein. Such payment acceptance devices could accept other forms of payment like credit cards or even wireless mobile devices with the ability to communicate valid payment information to the payment accepting device through any wireless cell or internet means known in the art.

**[0024]** The inventive gaming method (200) depicted by FIG. 2 shows the principle steps to process payments made to a specific game or electronic gaming machine from a payment acceptance device which is operatively close enough to the electronic game machine currently being used by a player thus enabling the player to make payment to add credits to his game without leaving or suspending play on that game as described previously in some countries.

**[0025]** When the credits registered on the player's game displayed on the electronic game machine (140) have been depleted, he would be able to insert currency, tickets or other means of payment to the Bill Validator (150) associated with the electronic game machine (140) which then in S210 validates the accepted payment. When the means of payment are in the form of currency, this validation comprises a determination of the monetary value and that it is not a counterfeit document. For other non-currency means of payment, this validation may comprise determining the monetary value and some form of validating identification information. When the means of payment is in the form of a TITO ticket, this validation comprises a determination that it contains a valid bar coded number sequence.

**[0026]** The bill validator (150) in S220 directly and exclusively transmits a payment acceptance message to the central computer system (110) which is simply referred to as the "system" in these method steps. It is exclusively transmitted to the central computer system (110) since there is no direct

communication between the Bill Validator (150) and any of the electronic game machines (140). This payment acceptance message is comprised of the information required for the system to make a gaming system decision in S230 to accept or reject the payment. This information may include such components as monetary value, validity identification, bar code number, and asset number of the Bill Validator and/or electronic game machine to which the payment is to be directed. Each Bill Validator (150) and electronic game machine (140) has a unique asset number which identifies it to the central computer system (110) within the casino. The central computer system (110) can be preprogrammed with the corresponding electronic game machine (140) asset number for any payment acceptance message sending Bill Validator (150) asset number. Alternatively the payment acceptance message may contain a specific selected electronic game machine (140) asset number indicating the electronic game machine (140) to which the purchased credits are to be directed.

[0027] If the system rejects the payment at this point (S230), it sends a reject message to the Bill Validator (150) in S234. One of the various reasons for rejection by the system could be that the TITO ticket bar code number identifies a ticket that has already been redeemed. In S236 the Bill Validator (150) would then return the rejected note or ticket to the player.

[0028] If the system accepts the payment at this point (S230), in S240 the system then, based on information in the payment acceptance message, either credits the player's account on the gaming system or on the designated specific electronic game machine (140). If the electronic game machine (140) is to be credited the central computer system (110) directly and exclusively transmits a credit message to that specific electronic game machine (140) in step S245.

[0029] The electronic game machine (140) that receives the credit message now makes the final decision to accept or reject the credits in step S250. If it rejects the new credits the electronic game machine (140) would then in S254 send a no-credit message back to the central computer system (110), and the process of steps of S234 and S236 would then be executed. Some possible reasons for a rejection by the electronic game machine (140) would be technical malfunctions of the electronic game machine (140) itself or an inability to handle the volume of new credits requested.

[0030] If the electronic game machine (140) accepts the new credits then as shown in step S260 the electronic game machine (140) adds the new credits to its game credit meter and the player can then continue to play those credits in step S270 as he continues his current gaming session.

[0031] In S264 the electronic game machine (140) also acknowledges acceptance to the system and the system sends a stack message back to the Bill Validator (150) at step S266 which, if the payment was a currency note or ticket, then stacks the note or ticket in the security cash box in step S268. Such security cash boxes are standard on most gaming bill validators currently used in US casinos.

[0032] It should be noted that some modifications and/or additions could be made to the system and method shown without significantly changing the major advantages of the invention's intent.

#### INDUSTRIAL APPLICABILITY

[0033] Additional industrial applicability and advantages will now be discussed. A major advantage has been explained

previously for providing a convenient system and method for adding credits to a game in progress without leaving the electronic game machine.

[0034] In areas where it is legal systems currently exist with bill validators directly connected to electronic game machine and each electronic game machine must be able to communicate with its bill validator and provide operative direction to the bill validator. The flow diagram for such prior art systems is shown in FIG. 3 and will be briefly described hereafter. The discussion will be focused on those comparisons that differentiate the advantages of the inventive system over this prior art.

[0035] The prior art depicted includes step S310 of FIG. 3 which is similar to S210 of FIG. 2 of the inventive method which provides that the processing of the new system is essentially transparent to the typical player.

[0036] However in step S320 of FIG. 3 the bill validators' determination of the payment being from a ticket or other monetary source causes a significant difference in the process flow. If the payment is in the form of a ticket the bill validator must send the ticket number to the central computer system (S325) in order to get a validation (S330) from the system. With that validation the bill validator can then send the monetary value to the electronic game machine (S340) as it would for any other monetary payment without such system validation. While a bill validator in the inventive system would also internally determine if the payment was in the form of a ticket, the processing there after would be the same as for any other form of payment with the bill validator merely sending all required information to the central computer system (S220) in all cases.

[0037] It is important to note that in these current systems not only the system but all the electronic game machines must be programmed with the proprietary protocol software or firmware required for recognizing the communications from the bill validator. In some cases a given casino may have a mixture of different brand bill validators and electronic game machines throughout the gaming floor and then would require licenses and installations of multiple types of such software throughout the casino. In comparison since the inventive system and method described earlier such license and software installation need only be maintained in the central computer system.

[0038] In the gaming industry the costs relative to licensing proprietary software and other intellectual properties are significant. Additionally, due to the substantial volumes of revenues collected from the play of each electronic game machine on a gaming floor, there is a significant down time cost associated with the installation and maintenance of different software or firmware in each electronic game machine. Since a large casino can have hundreds of electronic game machines on its gaming floor the labor costs associated with such maintenance are also substantial. The installation and maintenance of all required protocols and software in one central computer can result therefore in a great benefit to a large casino.

[0039] In steps S334, S336, S354 of FIG. 3 it shows that both the electronic game machine and the central computer system sends instructions to the bill validator to return or reject a note or ticket respectively. This then requires that the bill validators also be licensed and provided with the proprietary software and/or firmware to recognize instructions from different electronic game machines. A casino can therefore advantageously purchase all electronic game machines and

bill validators with the ability to only communicate with the central computer system in the new proposed method and system.

**[0040]** The above comparison of the inventive method to the prior art method demonstrates the industrial applicability and advantage of such a method where all electronic game machines and bill validators exclusively communicate with the central computer system.

What is claimed is:

**1.** A method for obtaining credits to play a gaming machine in a multi game establishment comprising the steps of:

- (A) providing a central computer system within the multi game establishment;
- (B) providing a plurality of electronic gaming machines where each of said plurality of electronic gaming machines is in exclusive communicative connection with said central computer system;
- (C) providing a plurality of payment accepting devices where each of said plurality of payment accepting devices is in exclusive communicative connection with said central computer system;
- (D) locating each of said plurality of payment accepting devices operatively close to at least one corresponding electronic game machine of said plurality of electronic gaming machines;
- (E) accepting a payment for credits at one of said plurality of payment accepting devices;
- (F) said one of said plurality of payment accepting devices exclusively communicating a payment acceptance message for credits to said central computer system and an identification of a designated electronic game machine to which a credit is requested;
- (G) said central computer system exclusively communicating a credit message to said electronic game machine designated by said payment accepting device, said electronic gaming machine operatively close to said payment accepting device; and
- (H) registering the additional credits corresponding to the credit message on the game credit meter of the designated electronic game machine operatively close to said payment accepting device at which the payment for credits was accepted.

**2.** The method of claim **1** with a further step of validating said payment acceptance message for credits at said central computer system.

**3.** The method of claim **1** wherein said payment acceptance message includes payment acceptance device asset identification information.

**4.** The method of claim **3** wherein said central computer system is preprogrammed to identify the at least one corresponding electronic game machine which is operatively close to said one of said plurality of payment accepting devices at which the payment for credits was accepted based on said payment acceptance device asset identification information.

**5.** The method of claim **1** wherein said payment acceptance message includes an optional designation of the selection between multiple electronic game machines to which the central computer system should direct said credit message.

**6.** The method of claim **1** wherein the payment acceptance message includes an optional designation that the central computer system credit the validated payment to a designated player account on the central computer system for later use.

**7.** The method of claim **6** wherein a player provides a funds request from a specific electronic game machine to the central

computer system to initiate exclusively communicating a credit message from said central computer system to the at least one corresponding electronic game machine.

**8.** The method of claim **1** with a further step of designating that said at least one corresponding electronic game machine transmit a credit return message to the central computer which initiates the transfer of remaining game credit value back to a designated player account.

**9.** A System for obtaining credits to play an electronic gaming machine in a multi game establishment comprising:

- (A) a central computer system;
- (B) multiple electronic gaming machines, each of said multiple electronic gaming machines in exclusive communicative connection with said central computer system;
- (C) multiple payment accepting devices, each of said multiple payment accepting devices in exclusive communicative connection with said central computer system, each of said multiple payment accepting devices is operatively close to at least one corresponding electronic game machine of said multiple electronic gaming machines; and
- (D) control programming in said central computer system to receive valid payment communications from said payment accepting devices designating one of said multiple electronic game machines for which credits are issued by said central computer system.

**10.** The System of claim **9**, said central computer system further comprising a memory means for storing information regarding player accounts, asset identification, and ticket validation information.

**11.** The System of claim **10** wherein one or more of said multiple payment accepting devices can optionally designate to said central computer system a selection between one or more of said multiple electronic gaming machines to which the central computer system should issue purchased credits.

**12.** The System of claim **10** where the plurality of payment accepting devices include bill validators.

**13.** The System of claim **10** where the plurality of payment accepting devices include devices equipped to accept bills, tickets, and credit card payments.

**14.** The System of claim **10** where the plurality of payment accepting devices include at least one device equipped to accept payments from mobile wireless means.

**15.** A method for obtaining credits to play a gaming machine in a multi game establishment comprising the steps of:

- (A) providing a central computer system within the multi game establishment;
- (B) providing electronic gaming machines each in exclusive communicative connection with said central computer system;
- (C) providing payment accepting devices each in exclusive communicative connection with said central computer system, said payment accepting devices operatively close to at least one corresponding electronic game machine;
- (D) accepting a payment for credits at one of said payment accepting devices and exclusively communicating a payment acceptance message for credits to said central

computer system, the payment acceptance message including a designation to cause the central computer system to credit the validated payment to a designated player account on the central computer system for later use.

**16.** The method of claim **15** wherein a funds request from a specific electronic game machine to the central computer system initiates a credit message from a designated account maintained on said central computer system to the specific

electronic game machine issuing the funds request, the amount of which is deducted from the designated player account.

**17.** The method of claim **15** with a further step of designating that said at least one corresponding electronic game machine transmit a credit return message to the central computer which initiates the transfer of remaining game credit value back to said designated player account.

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