FLEXIBLE ONLINE INSTANT LOTTERY GAME

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[002] BACKGROUND INFORMATION

[003] Future draw lottery tickets involve purchasing a chance, usually in the form of a ticket, to match a result in a drawing to be held after the chance is purchased. Lotto and keno are two examples of future draw lottery games. In an instant-win or instant lottery game, whether a ticket or chance is a winner is determined before or at the time of purchase. Thus, a winning instant win lottery ticket may typically be redeemed for a prize immediately. Common types of instant win lottery games include pre-printed tickets such as pull-tab tickets, peel-off tickets, or scratch-off tickets. Instant win lottery games may also be provided electronically, e.g., as described in U.S. Patent 6,241,606 to Riendeau.

[004] Pre-printed lottery tickets used for instant lottery games may be cumbersome and expensive. Security requirements necessitate the use of secure printing and distribution of pre-printed instant lottery tickets. In addition, instant lottery tickets are traditionally printed in packs or books before the tickets are distributed to lottery retailers and lottery retail machines. This requires the lottery operator to determine the number of tickets to be printed for a particular instant lottery game before the instant lottery tickets are sold. Also, printing the tickets before distribution and sale limits the speed and ease with which a lottery operator can change the instant lottery ticket games.

[005] In future draw lottery systems, customers can typically purchase tickets at a dedicated lottery terminal in a convenience store or similar establishment, where the tickets are printed to order. Each dedicated lottery terminal communicates with a central lottery server to exchange information and instructions associated with a given lottery transaction. U.S. Patent 5,772,510 to Roberts allows the printing of instant lottery tickets at a lottery terminal selling future draw lottery tickets, but still requires a special ticket stock with pre-printed information.

[006] Example embodiments of the present invention allow flexible and convenient generation of instant lottery game tickets which may be printed at the point of sale. New games and

new prize structures may be deployed conveniently without the need to provision special pre-printed ticket stocks.

[007] **BRIEF DESCRIPTION OF THE DRAWINGS**

[008] Figure 1 illustrates an example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention.

[009] Figure 2 illustrates an example lottery terminal in the example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention.

[010] Figure 2a illustrates an example game selection screen for the example lottery terminal, according to an example embodiment of the present invention.

[011] Figure 2b illustrates a second example game selection screen, according to an example embodiment of the present invention.

[012] Figure 3 illustrates several example instant lottery tickets for the lottery game BINGO, according to an example embodiment of the present invention

[013] Figure 3R illustrates the reverse of one of the example instant lottery tickets for the lottery game BINGO, according to an example embodiment of the present invention.

[014] Figure 4 illustrates an example lottery ticket for the lottery game CROSSWORD, according to an example embodiment of the present invention.

[015] Figure 5 illustrates the architecture of an example host or central system for the example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention.

[016] Figure 6 illustrates an example prize pool for the example instant lottery game, according to an example embodiment of the present invention.

[017] Figure 6a illustrates an example entry in the example prize pool, according to an example embodiment of the present invention.

[018] Figure 7 illustrates an example data structure diagram for the example instant games, according to an example embodiment of the present invention.

[019] Figure 8 illustrates an example procedure for playing and facilitating the play of an instant lottery game, according to an example embodiment of the present invention.

[020] Figure 9 illustrates an example procedure of deploying a new lottery game, according to an example embodiment of the present invention.

[021] Figure 10 illustrates an example auditing procedure for an instant lottery game, according to an example embodiment of the present invention.

[022] DETAILED DESCRIPTION OF EXAMPLE EMBODIMENTS

[023] Some example embodiments according to the present invention may include both systems and procedures. Procedures according to example embodiments of the present invention may include procedures for purchasing instant lottery tickets, procedures for facilitating the purchase of instant lottery tickets, procedures for implementing, deploying, or developing new instant win lottery games, and procedures for auditing instant win lottery games. Example systems according to example embodiments of the present invention may include both attended and unattended terminals for the sale of instant lottery tickets, lottery terminal functionality combined with other types of terminals, client-server systems for the sale of instant lottery terminals, and central host or management systems for controlling the procedures used in the operation of instant lottery ticket games.

[024] Some example embodiments of the present invention may allow the sale of instant win lottery tickets from non-traditional locations, e.g., from conventional future draw lottery terminals, from video kiosks, or video lottery terminals. These sales may be accomplished without the use of special pre-printed lottery tickets as are used in conventional scratch-off, peel-off, or pull tab instant lottery ticket games. This may avoid the tremendous inventory, distribution, and tracking expenditures associated with games using such conventional instant tickets.

[025] Some example embodiments of the present invention may also allow the rapid deployment and modification of new instant games. Because new games and new prize structures may be input, modified, and audited electronically, and then distributed via a network to various terminals, the time needed to launch a new game may be greatly reduced.

[026] Example embodiments of the present invention may include a method facilitating the play of instant lottery games. The method may include receiving a set of presentations for an instant lottery game. The method may further include associating the set of presentations with a prize pool. The method may further include associating each entry in the prize pool with a single respective outcome. The method may further include associating each presentation in the set of presentations with a respective outcome by associating the presentation with a respective entry in the prize pool associated with the respective outcome. The method may further include receiving a second set of presentations for a second instant lottery game. The method may further include associating the second set of presentations with a second prize pool. The method may further include associating each entry in the second prize pool with a single respective outcome. The method may further include associating each presentation in

the second set of presentations with a respective outcome by associating the presentation with a respective entry in the second prize pool associated with the respective outcome. The method may further include receiving at a terminal a request to play the instant lottery game, the instant lottery game being chosen from among a plurality of available instant lottery games. The method may further include determining an outcome for the instant lottery game by randomly selecting a first entry in the prize pool, the first entry associated with a first presentation from the set of presentations. The method may further include transmitting information from the first presentation from the set of presentations to the terminal. The method may further include using information from the first presentation to issue a game ticket for the instant lottery game. The method may further include awarding a prize based on the outcome associated with the first entry in the prize pool. The method may further include receiving at the terminal a request to play the second instant lottery game, the second instant lottery game being chosen from among the plurality of available instant lottery games. The method may further include randomly determining a second outcome for the second instant lottery game by randomly selecting a second entry in the second prize pool, the second entry associated with a second presentation from the second set of presentations. The method may further include transmitting information from the second presentation from the second set of presentations to the terminal. The method may further include using information from the second presentation to issue a second game ticket for the second instant lottery game. The method may further include awarding a second prize based on the second outcome associated with the second entry in the second prize pool. It will be appreciated that the example method may also be performed for a third, fourth, or additional plurality of instant lottery games.

[027] Example embodiments of the present invention may also include a method of facilitating the play of instant lottery games. The method may include receiving a set of presentations for an instant lottery game. The method may further include associating the set of presentations with a prize pool. The method may further include associating each presentation in the set of presentations with a respective outcome. The method may further include transmitting a first presentation from the set of presentations to a terminal.

[028] Example methods according to example embodiments of the present invention may further include associating each entry in the prize pool with a single respective outcome, wherein each presentation in the set of presentations for the instant lottery game is associated with the respective outcome by associating the presentation with a respective entry in the prize pool associated with the respective outcome.

[029] Example methods according to example embodiments of the present invention using information from the first presentation to issue a game ticket for the instant lottery game. The methods may further include awarding a prize based on the outcome associated with the prize pool entry associated with the first presentation.

[030] Example methods according to example embodiments of the present invention may further include receiving at a terminal a request to play the instant lottery game, the instant lottery game being chosen from among a plurality of available instant lottery games. The methods may further include randomly determining an outcome for the instant lottery game, choosing a presentation associated with the outcome from the set of presentations for the instant lottery game, communicating information from the presentation to the terminal, and displaying information from the presentation at the terminal.

[031] In some example methods according to example embodiments of the present invention, the outcome for the instant lottery game may be determined by randomly selecting an entry from the prize pool. In some example embodiments, the entry may be selected without replacement. In some of these example embodiments, the prize pool may be structured to provide a predetermined guaranteed minimum payout over a predetermined interval. In other example embodiments, the entry may be selected with replacement.

[032] In some example methods according to example embodiments of the present invention, the information from the presentation may be communicated to the terminal in response to the request to play the lottery game. In some example methods according to example embodiments of the present invention, the information from the presentation may communicated to the terminal prior to the request to play the lottery game. In some example methods according to example embodiments of the present invention, the presentation may include a partial lottery ticket image. In some example methods according to example embodiments of the present invention, the presentation may include a lottery ticket image.

[033] In some example methods according to example embodiments of the present invention, the presentation may include a set of encoded symbols and location information for each of the encoded symbols. These symbols may be in a unicode format.

[034] Some example methods according to example embodiments of the present invention, may further include printing an instant win lottery ticket as part of the display of presentation information. Some example methods according to example embodiments of the present invention, may further include electronically displaying the information, for example on a screen, as part of the display of presentation information.

[035] Some example embodiments of the present invention may include auditability features. Some example methods according to example embodiments of the present invention, may further include outputting every presentation of the set of presentation information and the outcome associated with each presentation. Some example methods according to example embodiments of the present invention, may further include certifying, by an entity other than the operator of the lottery, that every presentation is associated with the correct outcome.

[036] Some example methods according to example embodiments of the present invention, may further include associating a plurality of price points with the instant lottery game, and for each price point, associating a different prize pool with the instant lottery game.

[037] Some example embodiments of the present invention may also include a multi-game instant lottery game system. The example game system may include a plurality of prize pools, each prize pool having a plurality of prize tiers, each prize tier associated with a respective outcome, a plurality of lottery games, each lottery game associated with a respective one of the prize pools, a plurality of sets of presentations, each set of presentations being associated with a respective one of the plurality of lottery games, each presentation in a set of presentations associated with a lottery game being associated with a respective one of the prize tiers in the prize pool associated with lottery game.

[038] Example multi-game instant lottery game systems according to some example embodiments of the present invention may further include a terminal configured to receive a request to play a selected instant lottery game in a first instant lottery game in the plurality of instant lottery games, the first lottery instant game associated with the first prize pool and the first set of presentations, and a server in communication with the terminal, the server configured to randomly select an entry from the first prize pool, the entry being associated with a first prize tier from the first prize pool, and to communicate to the terminal that presentation information from a first presentation from the first set of presentations and associated with the first prize tier of the first prize pool should be displayed. In some of these systems the terminal may configured to sell future draw lottery tickets. In some of these systems, the terminal may also be configured as a cash register for the sale of non-gaming services or merchandise. In some of these systems, the terminal may be a video lottery game terminal. In some of these systems, the display includes printing a lottery game ticket. the display may include electronically displaying a lottery game ticket. In some of these systems the terminal may be further configured to receive a request to play a selected instant lottery game in a second instant lottery game in the plurality of lottery games, the second lottery game associated

with the second prize pool and the second set of presentations, and the server may be further configured further configured to randomly select an entry from a second prize pool, the entry being associated with a second prize tier from the second prize pool, and to communicate to the lottery game terminal that presentation information from a second presentation from the second set of presentations and associated with the second prize tier of the second prize pool should be displayed. In some of these systems, at least one of the plurality of lottery games has multiple prize points, the at least one lottery being associated with a different one of the plurality of prize pools for each prize point. In some of these systems the information from the first set of presentations may be transmitted to the terminal in response to the request to purchase the first lottery ticket. In some of these systems the information from the first set of presentations is transmitted to the terminal prior to the request to the purchase of the first lottery ticket. In some of these systems, the server may be configured to receive a new set of presentations associated with a new lottery game, to associate the new presentations and the new lottery game with a prize pool from the plurality of prize pools, and to transmit presentation information from the new set of presentations to the lottery game terminal.

[039] In some of these example systems, the presentation information may include a ticket image.

[040] In some of theses example systems, the presentation information may includes a set of symbols.

[041] In some of these example systems, the presentation information may include positioning information for the set of symbols. In some of these systems the presentation information includes ordering information for the set of symbols. In some of these systems the presentation information includes unicodes for the symbols.

[042] Some example systems according to example embodiments of the present invention may also include an audit report generator configured to display all the presentations in a set of presentations and their associated prize tier.

[043] Figure 1 illustrates an example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention. Although the example system is illustrated as a client-server system, it will be appreciated that example embodiments of the present invention may be implemented in other forms, e.g., in a purely stand-alone gaming environment, in an asynchronous batch mode (e.g., via an e-mail type system), over the Internet with customer's personal computer's as clients (in jurisdictions permitting Internet gaming), or in other forms.

[044] The example system may also include a host 110 that may be used to operate and control lottery games. The host 110 may be dedicated to the sale of instant lottery games as described herein, or may also provide other services, such as administering conventional future draw or scratch-off instant win games, or providing other types of transaction processing services. Although the exemplary host 110 is a large mainframe computer, host functionality may also be distributed over smaller machines in a distributed system or provided locally.

[045] In communication with the host 110 may be a management client 112. The management client 112 may be co-located with the host 110 or may be provided at some remote location. The management client 112 may be used to control the operation of instant lottery games by the host 110, e.g., providing commands to implement, start, stop, and change games, and to providing reporting, oversight, and auditing functionality.

[046] The example system may also include various types of devices for the dispensing and redemption of instant lottery tickets. These devices may be in network communication with the host 110 through various types of network connections, e.g., direct dial-up, secure Internet, via other intermediate host machines, through proprietary networks, etc. It will be appreciated that the host and remote devices may communicate in a secure, verifiable, and auditable fashion using conventional techniques such as public key encryption, digital signatures, transaction logging to archival media, etc.

[047] The example system may include a local management server or hub 114 supporting a campus or multiple campuses. These campuses may include various sorts of gaming devices 116, e.g., video lottery or video poker machines 116 which may be modified to dispense instant lottery tickets in the manner described in the present application. The local management server 114 may serve to consolidate communication between the gaming device 116 and the host through a single network connection, and also may operate a local area network connecting the gaming devices 116 with the local management server 114.

[048] The example system may also include unattended lottery ticket dispensing machines or kiosks 118. These kiosks 118 may be in network connection with the host 110, or alternatively may be connected to intermediate or local hosts controlling a plurality of kiosks 118. The kiosks may also provide other services, e.g., conventional lottery ticket dispensing, event ticket dispensing, ATM functionality, etc.

[049] The example system may also include conventional lottery ticket terminals 120. These attended lottery ticket terminals 120 maybe configured to dispense conventional future draw lottery tickets, and maybe modified to also dispense the instant lottery tickets of the pre-

sent invention. The conventional lottery ticket terminals may be in network communication with the host 110, for both the dispensing of conventional future draw lottery tickets and for the dispensing of instant lottery tickets according to example embodiments of the present invention. The lottery ticket terminals 120 may also be used for dispensing instant lottery tickets of the scratch-off or peel-off type, which generally require special books or packs of preprinted tickets.

[050] The example system may also include a related host 122. The related host 122 may provide separate and independent operation of unrelated lottery games. For example, the related host may be the operations computer for a single state lottery or jurisdiction, whereas the host 110 operates the present instant lottery ticket game for multiple jurisdictions.

[051] The example system may also include other forms of terminals for dispensing instant lottery tickets. For example the system may include conventional cash registers 126 which are modified to dispense instant lottery tickets. Because such cash registers in a multi-lane cash register environment may be controlled by a single local administrative server 124, it may be more convenient for the cash registers 126 to communicate via the administrative server 124 with the host 110. The administrative server or premise hose 124 may also control the cash registers 126 for non-gaming applications, e.g., conventional point-of-sale cash register operations.

[052] Figure 2 illustrates an example lottery terminal in the example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention. A standard attended terminal for the sale of future-draw lottery tickets, such as the Altura terminal, available from GTECH Corporation of Greenwich, RI, may be modified to facilitate the sale of instant-online lottery tickets. It will be appreciated that other conventional lottery ticket terminals may be similarly modified. Alternatively custom terminals selling only instant lottery tickets may be deployed, or instant lottery tickets may be vended from other types of terminals, e.g., video kiosks, gaming, machine, or conventional point-of-dale terminals

[053] The example terminal may include a processor 211. The processor may control the operation of the various components of the example terminal. Although in the example terminal illustrated here the terminal and other components are co-located in a single chassis, other configurations, e.g., the use of slaved components at a remote location may be used.

[054] The example terminal may include storage 213. The storage may be part of the processor, 211, or may be separate components. Various types of storage may be employed in-

cluding RAM memory, ROMs, flash memory, disks, optical storage, or any other types of storage media suitable for storing data and programs used in the operations of the example terminal.

[055] The storage 213 may be used to store control programs to control the operation of the terminal in vending instant game chances or tickets. Also the storage may include either encoded screens for user control of the terminal, or code or commands used for creating the user interface operated by the example terminal. For example, the storage 213 may store various game type selection screens 215. These screens may enable a user, e.g., a customer or an agent acting at the instruction of a customer, to select a type of game to play, e.g., a future draw lottery game, a conventional scratch-off instant lottery game, or one of the instant online games disclosed in the present application. The storage 213 may also store one or more instant game selection screens 217, or instructions and data used to create such screens. The instant game selection 217 screens may be used to allow a player, or an agent acting under the player's instructions, to select a particular type of instant lottery game to play, and optionally, the price point at which the selected instant lottery game is to be played.

[056] The storage 213 may also include presentation information 219. For example, the presentations may be pre-loaded ticket images or partial ticket images used to create instant lottery tickets with the example lottery ticket terminal. The presentation information may also include information used in all tickets of a particular game, e.g., background printing patterns, frames, etc. Alternatively, in some embodiments, the presentation storage 219 may include coded symbols for use in printing instant lottery tickets. The coded symbols may be used in combination with information or instructions received by the terminal, e.g., from a central lottery server, to produce an instant lottery ticket. For example, in a BINGO game, these codes may be the symbols that are used on a BINGO card and algorithms used for determining their positions on the card given position codes. For example, the symbols may be unicodes, and the position information may be an encoded physical position on an instant lottery ticket. Alternatively the position information may be an encoded position related to the instant game, for example an (x, y) position in a BINGO grid. The terminal would then receive from the central lottery host a list of symbols and coded positions; the terminal may then retrieve the symbol information and decode the position information to produce an instant lottery ticket.

[057] The example lottery terminal may also include a customer input device 221. The customer input device 221 may be used to allow the customer to select a type of game to be

played, a price point, etc. For some games, the customer input device 221 may also be used to input game information, e.g., customer number selections for a number matching type games. The customer input device 221 may be a custom keyboard, a conventional computer keypad, touch screen, or other type of user-input devices.

[058] The example lottery terminal may also include a customer display device 223. The customer display device 223 may be combined, e.g., as in a touch screen, or separate from the user input device 221. Any conventional display device may be used, e.g., a CRT display, an LED display, a printed display, an LCD screen, etc.

[059] The example lottery terminal may also include an agent display device 225. It will be appreciated that the agent display 225 need not be separate from the customer display device 223, but, in many situations, e.g., when the agent or cashier is behind a counter, separate displays for the customer and agent, facing in opposite directions, a separate display may be needed.

[060] The example lottery terminal may include an agent input device 227. The agent input device 227 may be used to allow an agent or cashier to select a type of game to be played, a price point, etc. For some games, the agent input device 227 may also be used to input game information, e.g., user number selections for a number matching type games. The agent input device 221 may be a custom keyboard, a conventional computer keypad, touch screen, or other type of user input devices. The agent input device may also be used for other terminal purposes, for example as a conventional cash register input device when the terminal is also used as a conventional cash register.

[061] The example lottery terminal may include a ticket printer 229. The ticket printer 229 may be used to print instant lottery tickets. If the terminal is used for other purposes, the ticket printer 229 may also be used for other purposes, e.g., printing receipts for future draw lottery tickets, printing lottery ticket pick slips, printing conventional cash register receipts. Alternatively, separate printers may be provided for different purposes. In some applications, special secure paper and inks may be desirable for security purposes. In other applications, security may be supplied entirely by the use of numerical security codes.

[062] The example lottery terminal may also include a ticket reading device 231. The ticket reading device 231 may be used to read information from tickets presented for redemption. The scanner 231 may be a conventional bar code scanner if bar coded tickets are used. Alternatively, a flat bad scanner may be used to scan the entire ticket. In some embodiments, the ticket reading device 231 may also be used for other purposes, e.g., reading lottery pick slips.

[063] The example lottery terminal may also include a network interface 233. The network interface may be used to enable communications between the lottery ticket terminal and other systems and locations, e.g., directly or indirectly with a lottery host or central server. Communications may be direct dialup, via the internet, through dedicated lines, through a local area network and local server, or any other conventional client-server communication technique.

[064] Figure 2a illustrates an example game selection screen for the example lottery terminal, according to an example embodiment of the present invention. The example game selection screen may be displayed on an agent output device in an attended lottery terminal, or on a customer screen in an unattended lottery terminal. Various selections may be provided, e.g., as buttons on a touch screen. Button 241 may indicate that, such as the one described in the present application, an instant lottery game is to be purchased. Button 243 may indicate than an instant lottery game, such as the one sold by pressing 241, is to be redeemed. Button 245 may indicate a conventional future draw lottery ticket is to be purchased. Button 247 may indicate a conventional future draw lottery ticket is to be redeemed. Button 249 may indicate a hybrid ticket, incorporating both the instant game and a future draw game, is to be dispensed. It will be appreciated that an enormous variety of interfaces for selecting what action is to be taken or game to be purchased or redeemed may be provided using many possible human-computer interfaces. For example, instead of a touch screen input, mark sense pick slips or other machine readable pick slips may be used, or selections may be made using keypad or a pointing device such as a mouse.

[065] Figure 2b illustrates a second example game selection screen, according to an example embodiment of the present invention. The illustrated screen allows the customer (or the agent at the customer's instruction) to select from a variety of instant games and instant game pricepoints. For example, BINGO, crossword, and number match games, may be provided at 2$, 5$, and 10$ pricepoints. Example buttons 251, 253, and 255 are for BINGO games at 2$, 5$, and 10$ pricepoints, respectively. Example buttons 257, 259, and 261 may be used for selecting a crossword game at the 2$, 5$, and 10$ pricepoints, respectively.

[066] It will be appreciated that a large variety of possible alternative interfaces for the selection and purchase of an instant ticket are possible, using any conventional computer input-output techniques.

[067] Figure 3 illustrates example instant lottery tickets, according to an example embodiment of the present invention. The example lottery tickets illustrated in Figure 3 are for a

"BINGO" type instant lottery game that simulates an actual BINGO game. It will be appreciated that the tickets may be printed and dispensed, e.g., on special ticket stock or conventional paper, or the tickets may be, in some alternative embodiments, be displayed electronically, e.g., on a game terminal screen. Each ticket has two types of presentation data. The presentation data may be used to play an optional game which may be used to determine the value or outcome of the instant lottery game. For example, each ticket illustrated in Figure 3 has a set of BINGO card numbers 301a. Each ticket also has set of draw numbers 301b. The outcome of the optional game may be determined by comparing the draw numbers with the card numbers in a manner similar to a conventional BINGO game.

[068] Figure 3R illustrates the reverse side of one of the tickets from Figure 3. In an embodiment where the presentation information is displayed on a video screen, the reverse side information may be recorded electronically or printed on a receipt or credit slip for a winning ticket.

[069] The example instant lottery ticket reverse may include a game title or identifier 311. The identifier 311 may be textual and or graphical. It will be appreciated that information that is particular to the type of game, but not to the individual ticket may be reproduced from a common program or shared data that is used for all possible tickets in a particular instant games. This information may include common graphics, instructions, marketing information, as well as other types of information.

[070] The example instant lottery ticket reverse may include instructions 315. The instructions 315 may indicate how the game is played. For example, here the instructions 315 may indicate how to determine using the optional game what the value of the ticket is, e.g., the prize that is won is based on the pattern that is obtained when the BINGO call numbers are matched with the BINGO card displayed on the front side of the ticket.

[071] The example instant lottery ticket reverse may include a ticket purchase price 317. Different price points may be associated with different prizes, and have different payout schemes.

[072] The example instant lottery ticket reverse side may include a ticket identifier 319. This ticket identifier319 may include security information that can be used to validate the ticket when the ticket is presented for redemption. The ticket identifier 319 may also be coded on the ticket in a machine readable form 321, e.g., a bar code.

[073] It will be appreciated that other information may also be included on the ticket, e.g., marketing messages, the date and time of purchase, expiration dates, etc. It will also be appreciated that many different formats may be used to display the information on the ticket.

[074] Figure 4 illustrates alternative example instant lottery ticket, according to an example embodiment of the present invention. The alternative example instant lottery ticket 400 may be for the instant lottery game CROSSWORD.

[075] The example instant lottery ticket 400 may include a game title or identifier 411. The identifier 41 may be textual and/or graphical. It will be appreciated that information that is particular to the type of game, but not to the individual ticket may be reproduced from a common program or shared data that is used for all possible tickets in a particular instant games. This information may include common graphics, instructions, marketing information, as well as other types of information.

[076] The example instant lottery ticket 400 may include presentation data 4a and 413b. The presentation data 413 may be used to play an optional game for enjoyment or entertainment. The results of the optional game may indicate the outcome of the instant lottery game. For example, the presentation data 413a on the illustrated ticket includes a crossword puzzle frame with various words. The presentation 413b includes a set of call letters. The outcome of the example game may be determined by matching the call letters with the words on the crossword to determine how many words are completed by the set of call letters.

[077] The example instant lottery ticket 400 may include instructions 415. The instructions 415 may indicate how the game is played. For example, here the instructions 415 may indicate how to determine using the optional game what the value of the ticket is, e.g., the prize that is won based on the number of words which are matched.

[078] The example instant lottery ticket 400 may include a ticket purchase price 417.

[079] The example instant lottery ticket 400 may include a ticket identifier 419. This ticket identifier 419 may include security information that can be used to validate the ticket when the ticket is presented for redemption. The ticket identifier 419 may also be coded on the ticket in a machine readable form 421, e.g., a bar code.

[080] It will be appreciated that other information may also be included on the ticket, e.g., marketing messages, the date and time of purchase, expiration dates, etc. It will also be appreciated that many different formats may be used to display the information on the ticket.

[081] Figure 5 illustrates the architecture of an example host or central system for the example client-server system architecture for providing an instant lottery game, according to an example embodiment of the present invention.

[082] The example host may include a processor 510. The processor 510 may be a main frame computer, or for smaller games a smaller host computer. It will appreciated that the processor 510 as shown here is abstracted, and may, for example, actually be multiple processors or computers operating various games in a distributed fashion. The processor 510 may also be providing operations for other types of lottery games or other transaction processing services.

[083] The processor 510 may be coupled with a network interface 512. The network interface 512 may be network processors, web servers, or other computers which provide an interface between the transaction processing services provided by the processor 510 and the network which connects the processor to various clients, such as the game terminals described previously. The network interface may provide various services that facilitate communication between host 510 and the game terminals, e.g., flow and congestion control, security, etc.

[084] The processor 510 may be accessible to one or more administrative terminals 514. These terminals provide access to the processor 510 to administer the system. For example, the administrative terminal 514 may be used for controlling the processor, providing maintenance, provisioning new games, modifying existing games, auditing the operations of games, and performing other administrative and maintenance operations.

[085] The processor 510 may also be provided with or have access to various types of storage 516. The storage 516 may be integrated with or separate from the processor 510.

[086] The storage may also be distributed, and shared with other processors. The storage 516 may include RAM memory, flash memory, magnetic disks, optical disks, as well as other types of storage media, including read only, read/write, and write-only types. The storage may be used to provide various types of databases and transaction processing, both for the instant games of the example embodiments of the present invention, other gaming applications, and other non-gaming transaction processing services.

[087] Stored in the storage 516 may be various types of information used in providing the instant games of the example embodiments of the present invention. The information may be stored in a range of formats, e.g., in relational databases, in hierarchical databases, as C++ or Java objects, or in any manner that provides access to the data to the processor 510. The information may be stored as separate tables or sets of tables in a relational database. The in-

formation may include a game index 518, a location properties index 520, game presentations 522, game prize pools 524, ticket sales logs 526, and some rules and programs 528.

[088] The example game index 518 may be configured as a database table with entries for each game. Each entry may include a game code or identifier, a game name, and other information associated with the game. A list of price points for the game may be included, together with identifiers, pointers, or other information identifying which prize pools are associated with the game for different prize points. A list of information identifying the presentation sets for the games may be included, for example, as a pointer or identifier of presentation set for the game for a particular price point. Also included may be other information needed to operate a particular game, e.g., links to rules or programs used in operating the game.

[089] The example location properties 520 index may be configured as a database table with entries for each location. The location properties may identify, for each location,

[090] what games the location, e.g., a terminal, is allowed to sell and redeem. Other information, e.g., security information, encrypted passwords for a location, or a link to a location sales log, may also be included in the entries for each location.

[091] The example game presentations 522 may be configured as a database table with an entry for each set of presentation information. Each entry may include a complete set of presentation information for a particular game at a particular price point, or may include a link or identifier that allows that set of presentation information to be located. Other information associated with a particular set of game presentations may also be included, e.g., a standard background used for each presentation in the set of presentations, standard instructions, etc.

[092] The example game prize pool table 524 may be configured as a database table with entries for each prize pool. Each entry may be an entire prize pool, or alternatively may be a link, identifier, or other information that can be used to locate and/or access a particular prize pool.

[093] Other information may be associated with a particular prize pool, e.g., attributes of the prize pool such when it is reset, whether the prize pool is sampled with or without replacement, etc.

[094] The example game ticket sales log 526 may track when, where, and for how much various tickets in the example game have been sold and redeemed. This information may be used for auditing, marketing, control, and other management purposes.

[095] The example game rules and programs 528 may be used to store rules and or programs for the operation of games, prize pools, and presentations. For example, encoded rules

that indicate the rules for re-populating prize tables for a particular game may be encoded. Similarly, rules for how various presentations are constructed using presentation information may be stored.

[096] It will be appreciated that the information described above can be arranged in many different formats and ways, using a variety of data structures as long the information can be conveniently accessed for use operating the example instant lottery games, e.g., for use in the example procedures described later in the application. Some tables and/or fields may be omitted, and other tables and/or fields may be added using conventional techniques for data structures, and database and data management.

[097] Figure 6 illustrates an example prize pool for the example instant lottery game, according to an example embodiment of the present invention. In the example system described above, the prize pool may be stored on or otherwise accessible too the central host system. However, it will be appreciated that the example prize pool may be stored in different locations and in different manners as long as it is available for use in the procedures used for facilitating the play of a lottery game. It will also be appreciated that a single prize pool may be used for a single game, multiple games may share a single pool, or a single game may have multiple prize pools, e.g., for different price points.

[098] For the purposes of illustration, the prize pool 611 is illustrated as a square grid. The example prize pool 611 includes multiple entries 613. It will be appreciated that the prize pool may be stored in different manners and/or using many different data structures, e.g., arrays, linked lists, an object in C++ or Java, as single or multiple relational database tables, or in any other fashion that facilitates the use of the information contained in the prize pools in the procedures used for facilitating the play of a lottery game. Although not so illustrated, it may be advantageous for each row in the prize pool 611 to correspond to a particular tier of the prize pool. Each of the rows need not be of the same length.

[099] The prize pool 611 may contain entries 613. In this example, an entry is represented by a grid location. In this example, the prize pool contains 100 grid locations, and therefore contains 100 entries. The entry may be randomly populated or may be populated based on other decision criteria, e.g., to achieve a desired expected payout. The entry may also be replaced or removed from the prize pool. The entry may also be identified by a number. An entry may be randomly selected from a prize pool. An entry may be randomly selected from a prize pool by randomly selecting a prize pool index number. The host may randomly generate a number and the entry in the prize pool identified by that number may be selected.

[0100] Figure 6a illustrates an example entry 613' from the example prize pool, according to an example embodiment of the present invention. The example entry may include an example entry identifier 615a. The entry may be identified by a specific symbol or number, or alternatively by a link or pointer.

[0101] The example entry may also include an example prize award 617a. This prize award 617a may give a value of a monetary prize associated with the entry. In this example, the prize award is $10. Alternatively, the prize award 617a may an identifier or pointer which allows the entry to be associated with a particular prize tier or entry in a separate prize table. The prize award may also be credit for merchandise, or may be an award of an additional lottery ticket. The award of such "in kind prizes" may be facilitated by using links or identifiers in the entry, rather than just numerical values.

[0102] The example entry 611 may also include an example prize tier identifier 619a. It will be appreciated that, depending on the desired game mechanics, some or even many of the entries may be associated with a zero prize value. In the illustrated example entry, the prize tier may be designated as Division 4, and all entries in the prize tier may be designated as a $10 prize award. There may also be a number of other prize pool entries designated as Division 4. The other prize tier entries designated as Division 4 would also be designated with a $10 prize award. The prize tier identifier may be used to facilitate the management of the prize pool, even where the prize value is also included in the entry. For example, it may be desirable to track or manage the number of prizes that have been awarded from a particular prize tier, or to change all the prize values for the entries in a particular tier. It will be appreciated that the prize value and prize tier information may be tracked in a separate data structure for which a link may be included in the entry. It may be advantageous to organize the prize pool by tiers, e.g., each row in a multiple row data structure corresponding to a different prize tier.

[0103] Other fields may also be included in the prize table entry 613. For example fields may be included to track whether the entry has already been awarded; this feature is particularly useful in games that award prizes from a fixed pool without replacement. Fields may also track the time the prize was last awarded, where the prize has been awarded from, or other information that is useful for tracking, auditing, or marketing analysis. The entry 613 may also include a link to associated presentation information. Alternatively, the prize table entry may include associated presentation information as a field. For example, in a BINGO game, a separate table of cards and draw numbers may be included as a separate presentation data structure. Each entry may then be associated with a BINGO card and draw set by includ-

ing a reference or identifier for a particular presentation in the prize table entry. Alternatively, an encoding of the card and draw information might be incorporated directly into the prize table entry, e.g., as a list of card entries and draw numbers.

[0104] A sample data structure diagram for the example instant games is illustrated in Figure 7, according to an example embodiment of the present invention. The example data structures may include a game data structure 710, a presentation set data structure 720, a presentation set entry data structure 730, a prize table data structure 740, a prize tier data structure 750, and a prize entry data structure 760. Although the data is describe here as relational database tables, it will be appreciated that other data structures may be used, e.g., arrays, linked lists, objects, etc. and additional data fields may be added, and alternative arrangements may be used.

[0105] The game data structure 710 may include entries for each game provided by the example system. Here, separate entries are listed for each game type and prize point; separate prize points for the same game have separate entries. Each entry in the game data structure may include an identifier, a game price point, a prize table identifier which associates the game with a prize table data structure 740, a presentation set identifier, and a game status flag. The identifiers may be pointers, name identifiers, links, or any other element that can be used to identify the related data structures that are associated with the game data structure. The game status flag may indicate whether the game is fully operational, unavailable, or in limited availability.

[0106] The presentation set data structure 720 may include a presentation set identifier, standard information shared by all presentations in the presentation set, such as instructions or background images, and associations, such as links, indices, or pointers, to each presentation in the presentation data set 720. The presentations may be stored in a variety of fashions, e.g., as a linked list, as an object array, etc, as long as they can be conveniently accessed when needed. Here, they are stored in separate presentation entry data structures 730.

[0107] Each presentation entry data structure 730 may include an identifier which may be used to access, index, or identify the presentation entry data structure. In the example illustrated, here the presentation data structure 730 may include a list of coded symbols and a list of positions for the symbols. The presentation data structure 730 may also include an association, e.g., a pointer or link or index to an associated prize table entry 760 in the prize table 740 which is associated with the game 710 which includes the presentation 720 containing the presentation entry 730.

[0108] Each prize table in the example instant games may have an associated prize table data structure 740. The prize table data structure 740 may include a prize table id or other structure used to access, index, or identify the prize table. Coded in the prize table data structure may be flags which indicate the way the prize table should be managed, e.g., when or how often the prize table should be reset, whether the prize table should be sampled with or without replacement, etc. Also included in the prize table data structure 740 may be a set of associations with prize tier data structure 750, such as links, indices, or pointers. Also included in the prize table data structure 740 may be a set of associates with the prize table entries, e.g., links, indices, or pointers.

[0109] Each tier in a prize table may have a separate data structure 750. The prize table tier data structure 750 may include a tier id, a value of prizes associated with the tier, and a way of identifying the prize table entries associated with the prize tier, e.g., pointers, links, or indices.

[0110] Each entry in a prize table may have a prize table entry data structure 760. Each prize table entry data structure 760 may include a prize table entry identifier, e.g., a numerical index indicating the element's position in the prize pool. The prize table data structure 760 may also have an identifier which associates the prize table entry with the prize tier in which it is contained, e.g., a pointer or index to prize tier data structure 750. Each prize table entry 760 may also include a value, if the prize is a cash prize, or some other indication of the prize that should be awarded when the entry in the prize table is selected. Each prize table entry data structure 760 may also include information about the status of the prize table entry, for example, a flag indicating whether the entry has been used or awarded since the last time the prize table was reset.

[0111] Figure 8 illustrates an example procedure for facilitating the play of an instant lottery games. The instant lottery game may be a lottery game where a customer may choose a type of lottery game to play and the amount to wager on the chosen lottery game and an instant lottery ticket corresponding to the player's chosen lottery game and wager is generated on a central lottery system. For example, the player may not need to wait for a future drawing in order to determine whether the lottery ticket has a winning award.

[0112] Figure 8 illustrates the example procedure as three concurrent procedural flows: 9 first flow may be carried out by a customer or game player, either directly or through an agent at an attended lottery terminal. A second parallel flow which may be carried out by a lottery terminal, kiosk, game terminal, or other transactional device, such as the example lot-

tery terminal described previously. A third parallel flow may be carried out by a host or management system, such as the host in the system architecture described previously. It will be appreciated that the host or management system may be local, incorporated in the kiosk, or remote from the terminal. It will be appreciated that the example systems are adapted to perform these example procedures, but the example systems may perform other procedures and other example procedures may be performed on completely differed architectures. In Figure 8, small arrows indicate the flow of control of the example procedure, while large arrows indicate information transfers between the different procedures and/or actors carrying out the procedures.

[0113] The example procedure may begin when a user or customer attempts to purchase a chance in an instant lottery game, either by purchasing a printed instant lottery ticket or by having an electronic lottery ticket displayed. This purchase may occur at a conventional attended lottery terminal, an unattended or automated lottery terminal, or some other sort of terminal or video kiosk, or even, in jurisdictions which permit it, on the user or customers own computer using a secure transaction system.

[0114] The first flow in the example procedure illustrates an example purchase, play, and redemption of an instant lottery ticket by a lottery customer.

[0115] In 811, a request to purchase the ticket may be made. This request may be made, for example by having a customer enter information in a video kiosk. Alternatively, it could be made by the customer telling an agent, who then enters information in an attended lottery terminal. It will be appreciated that the example procedure need not be isolated or stand-alone. For example, the procedure may be part of other transactions such as other lottery ticket purchases, gaming, or conventional non-gaming store purchases.

[0116] In 813, an indication of available lottery games and price points may be received. This may include the display of graphics representing the instant lottery games that are available to play and the amounts that may be wagered on each lottery game. It will be appreciated that the indication may be in the form of textual explanation, a menu, or a graphical representations of different instant lottery tickets. It will also be appreciated that all information need not be received simultaneously; for example, price points might be displayed after a particular type of game is selected.

[0117] In 815, a selection of a type of instant lottery game and price point is may be made by the customer. This selection may include choosing which instant lottery game to play and the amount of money the player will wager on the chosen lottery game. The customer may

choose the lottery game based on his or her playing preference. The selection may be made in different ways, e.g., by the customer by instructing a lottery agent or cashier who then enters the information on an attended lottery terminal, or by the customer using a video kiosk to purchase a lottery ticket with a certain wager amount.

[0118] In 817, a purchase price may be tendered by the customer. This tender may be done by the customer by paying a monetary amount for the ticket or by the procedure may be part of other transactions such as future draw lottery ticket purchases, gaming, or conventional store purchases. In jurisdictions that permit such tenders, credit or debit card transactions may be used, or money may be debited from a players pre-paid lottery account.

[0119] In 819, an instant lottery ticket may received by a customer. The providing of the instant lottery ticket may include printing of a physical paper lottery ticket or may simply be a graphical representation of the ticket on the terminal display. The lottery ticket may also be printed as part of some other item, e.g., a cash register receipt or future draw lottery ticket. The instant lottery ticket may include various information, such as a ticket number and/or security code, a visual indication of whether the ticket is a winner, information for use in an optional presentation game, and various marketing information from the lottery provider or ticket seller.

[0120] In 821, an optional game may be played on a ticket. For example, the example ticket may include a BINGO card and simulated BINGO drawing numbers. The play may include matching the simulated BINGO drawing numbers with the simulated BINGO card. If the outcome generated for the ticket included a $5 award, the selected BINGO numbers and their placement on the BINGO card would yield a $5 award based on the rules of the associated BINGO lottery game. An almost infinite range of optional games may be included. Play of the optional game may also include a bonus game, an additional game that is the same as the lottery game initially selected, another lottery game containing a different rules or objectives, or a lottery game with a different price point.

[0121] In 823, whether the ticket is a winner may be determined. This determination may be made by the customer following the guidelines or rules for play of the lottery game or by reading a winning status described with text or symbols. For example, winning status may be determined in a BINGO lottery game by following the rules of BINGO and having the selected numbers creating a row, column or diagonal on the BINGO card displayed on the lottery ticket. Another example includes matching the numbers selected by the player with those numbers generated by the lottery central system. Alternatively, special machines may be pro-

vided to indicate to the user the ticket is a winner without redeeming the ticket, e.g., the Express Point Plus system available from GTECH Corporation, in West Greenwich, Rhode Island.

[0122] In 825, the instant lottery ticket may be tendered for collection of a prize. This tender may include showing the winning ticket to a lottery agent who then scans the ticket on an attended lottery terminal. The tender may also include the player inserting the ticket in an unattended machine capable of redeeming winning tickets, or by transmitting the winning ticket serial number or other identifier by using a video kiosk or personal computer.

[0123] In 827, a prize may be awarded to the customer. This award may include a player receiving cash, credit, merchandise or additional lottery tickets from the lottery agent or a video kiosk, credit to a customers account, or other approaches for providing awards. It will be appreciated that large prize awards may be diverted for alternate redemption where extra scrutiny can be applied to insure the tickets are genuine, e.g., with a lottery authority redemption authority.

[0124] The second flow in Figure 8 illustrates an example procedure for facilitating the purchase and redemption of an instant lottery ticket. The second flow focuses on the procedure as carried out by a terminal, such as a modified conventional lottery terminal, lottery kiosk, gaming machine, or other point where instant lottery ticket may be sold.

[0125] In 831, a request for ticket purchase may be received by the terminal. This request may be received in various ways, e.g., a request for the purchase of a lottery ticket from a lottery agent at an attended lottery ticket terminal, or directly from a customer using a video kiosk.

[0126] It will be appreciated that other ways of receiving the purchase request are also contemplated, e.g., the use of pick or play slips, online requests via the internet, and asynchronous requests via email or other asynchronous communications approach.

[0127] In 833, available lottery games and price points may be displayed on the terminal. This display may include graphical representations of the different lottery tickets for different games, logos for different lottery games, or various game titles. The display may also include the different wager amounts that are available for each lottery game. For example, the lottery games BINGO, BINGO3 and Crosswords may all be displayed. Each game may have a different set of rules and objectives. Different wager amounts may be available for each game. For example, the wager amounts of $1, $5 and $10 may be displayed on the terminal. The

display may be on a lottery terminal viewed by a lottery agent or customer, or the display may be on a video kiosk and is viewed by the customer.

[0128] In 835, the selection of game and price point may be received at the terminal from the customer. The selection may include the lottery game chosen by the customer based on the customer's playing preference. The selection may also include the amount the customer is wagering on the selected lottery game.

[0129] In 837, the ticket purchase information may be transmitted to the host. The transmission may include sending information describing the selected lottery game and the selected wager amount to the lottery central system.

[0130] In 839, the information needed to generate a lottery ticket may be received by the terminal from the lottery central system. The information needed to generate the ticket may include a security or validation code to be printed on the ticket that may be used to validate and identify the ticket when it is presented for redemption. The information needed to generate a ticket a lottery ticket may include the information provided by a presentation. For example, such information may include the graphical representation of the lottery ticket such that the lottery ticket game when played according to the lottery game rules' displays the correct win award. Alternatively, the presentation information may include the indication of a set of symbols which are pre-stored on the terminal, and information indicating the relative positions, e.g., a set of numbers or playing cards or shapes and their grid positions for a BINGO game.

[0131] In 841, an instant win lottery ticket may be generated at the terminal. The generation my include creating an image of a lottery ticket according to the information received from the lottery central system. The image may be printed on regular paper, or on secure or special paper. Special ticket stock may be used, or tickets preprinted with special backgrounds. However, no special pre-printed tickets such as those used in conventional scratch-off games are required. For example, the generated output ticket may include a printed lottery ticket for a BINGO lottery game. The ticket may include a BINGO card and selected BINGO numbers. If the outcome generated for the ticket included a $5 award, the selected BINGO numbers and their placement on the BINGO card would yield a $5 award based on the rules of the BINGO lottery game. The generated output ticket may also include a security or validation number that was included in the information from the lottery central system. The serial number may be used to determine whether a lottery ticket is a winning ticket and the award for the lottery ticket.

[0132] In 843, a ticket for redemption from the customer may be received at the terminal. The redemption may include a customer playing the instant lottery game and determining based on the game rules that the lottery ticket is a winner and scanning or inputting the lottery ticket into a video kiosk. This redemption may further include a lottery agent scanning or inputting the lottery ticket into a lottery terminal.

[0133] In 845, the ticket information may be transmitted to the host. The transmission may include sending the information regarding the lottery game played and the win award for the lottery game played, e.g. the security code or validation code printed on the ticket.

[0134] In 847, the validation may be received from the host. The receipt may include an instruction from the lottery central system that a certain award amount should be paid. Instructions not to pay the ticket may be sent if the ticket is not a winner, is a not a valid ticket, or if the ticket has been redeemed previously. It will be appreciated that large prize redemptions may be diverted for an alternative redemption where greater security against fraud is provided, e.g., at a central lottery ticket redemption center.

[0135] In 849, the instruction to pay a prize may be generated at the terminal. The instruction may include the amount of the prize to be paid. The instruction may also include the type of prize to be paid. For example, the prize may be of monetary value, merchandise, credit for merchandise, a game or figure of entertainment value, an additional lottery ticket or lottery credit, or any other prize that may be of value to a customer. The instruction may be sent as a visual indication to the agent in an attended terminal. In an unattended terminal, the instructions to pay the prize may sent to trigger the automatic payment, e.g, by using a cash dispenser, or by providing a credit.

[0136] A third parallel procedure for facilitating the play of the instant lottery game, may be carried out by the host.

[0137] In 851, the ticket purchase information from the terminal may be received. The ticket purchase information may include the lottery game selected by the customer and the amount of money to be wagered on the lottery game.

[0138] In 853, the ticket purchase information may be validated. The validation of the ticket purchase information may include passwords or other information that shows that show the ticket is being made from an authorized location. If the ticket purchase information is validated, the ticket may be generated. The prize pool for the game and price point may be identified. The prize pool may include a numerical database containing different data entries, and for each data entry there is a prize award. It is understood that a prize award may also include

there being no prize awarded. A prize pool from a plurality of prize pools associated with a lottery game may be identified. For example, different prize pools may be used for the same game at different price points, at different times, or in different jurisdictions.

[0139] In 855, an entry may be randomly selected from a prize pool. For example the prize pool may be a grid and each grid location may be an entry in the prize pool that contains data. The entry may also be identified by a number. The host may randomly generate a number and the entry in the prize pool identified by that number may be selected.

[0140] In 857, the presentation information associated with an outcome from the prize pool may be chosen. Each entry in the prize pool may contain an outcome describing the prize award. Each presentation in a set of presentations for a lottery game may contain information associated with a specific outcome. For example, in the set of presentations for the lottery game BINGO there may be ten different presentations associated with the $10 prize award. Each presentation associated with the $10 prize award may have different BINGO cards and numbers, but when played according to the game rules, each of those games yield a $10 prize award.

[0141] In 859, information indicating the chosen presentation may be communicated to the terminal. The indication of the presentation may include the information associated with a specific presentation for the generated prize award. It will be appreciated that the presentation information may be communicated to the terminal in different way. For example, all the possible tickets for a game may be pre-loaded in the terminal in image format. In this case, the host need only communicate an identifier for the selected ticket to the terminal, which then prints the pre-loaded ticket image. This approach has the advantage of minimizing communication bandwidth required, but requires the most storage at the terminal. Alternatively, a ticket image may be constructed at the host and transmitted to the terminal on demand. This approach requires the most processing at the host and most bandwidth, but minimizes what is stored at the terminal. Alternatively, coded symbols may be stored at the terminal, along with a standard background image for the game. The host may then transmit a selection of the pre-coded symbols and position information to the terminal, which places the selected symbols at the indicated positions on the pre-stored background to construct a ticket image which may then be output electronically or printed.

[0142] For example, for the BINGO game described previously, ticket images with BINGO cards and sets of call numbers may be stored at the terminal, constructed at the host and transmitted at the terminal, or alternatively the host can transmit the card numbers and their

positions and the call numbers to the terminal which then constructs and displays the card with the transmitted numbers.

[0143] In 861, the prize pool and ticket sale log may be updated. For the prize pool, if the prize pool is sampled without replacement, the selected prize pool entry may be marked to indicate that it has been awarded. After marking the entry, the existence of pre-defined conditions which result in the prize pool being reset or refilled may be checked for. For example, the prize pool may be reset when all prizes have been awarded, when the top prize has been awarded, when a certain fraction of the entries or prizes in a particular tier have been awarded, etc. Also, a ticket log may be updated. The ticket log may include information about each ticket that is sold. The ticket information may include: an identifier of the game for which the ticket was issued, a ticket identifier, the time and place of sale, the prize value of the ticket, the presentation associated with the ticket, and information indicating whether the ticket has been redeemed, and if so, when and where. In addition to tracking individual tickets, information may also be tracked and/or reported by sales location, by game, etc. This tracking information may be used for marketing, management, and auditing purposes.

[0144] In 863, redemption information for a ticket may be received. The redemption information may a unique ticket identifier, as well as an identifier or security code of the location where the ticket is being redeemed.

[0145] In 865, the ticket information may be validated. The validation of the ticket information may include analyzing the serial number associated with the lottery ticket to determine that the ticket is a valid ticket which should be redeemed. For example, a ticket that has been previously redeemed should not be redeemed a second time.

[0146] In 869, an instruction to pay a prize may be transmitted, e.g., by sending a secure signal to the lottery terminal. The instruction to pay a prize may be generated on the host after the ticket information has been validated by the host. For example, if the ticket information matches the information for the ticket on the host system the ticket may be validated and an instruction to pay the ticket may be generated by the host. Alternatively, for large prizes, the ticket may be diverted to an alternative place of redemption where more security against fraud is available, for example, a lottery authority redemption ticket redemption center.

[0147] Figure 9 illustrates an example procedure for creating a new or modified game, according to an example embodiment of the present invention. Creating a game may be accomplished using a set of presentation data and a prize pool, each of which may be either new or re-used.

[0148] The example procedure includes associating the presentation set with the prize pool and associating each presentation in the presentation set with an entry in the prize pool. The example procedure may be conducted on the host of the client-server system described previously, e.g., using a terminal in communication with a management client connected to the host. It will be appreciated that the management system may be local, co-located with the host, or remote from the host. In Figure 9, small arrows indicate the flow of control of the procedure between the different procedures and/or actors carrying out the procedures. The rectangles indicate procedures and diamond shapes indicate decisions made in the procedure.

[0149] In 911, a presentation set may be received, e.g., by the host via the management client. The presentation set may include a set of ticket images, a set of partial ticket images, or a set of data which may be used to instant win tickets for an instant lottery game. Alternatively, a program executed on the host, or remotely, may be used to generate the presentation set. For example, the lottery operator may choose a new lottery game to offer, like the BINGO game described previously. The lottery operator may generate a set of BINGO cards and sets of call numbers for inclusion on the tickets. These may be created manually and input to the host, generated by a program on the host, or generated by a program remotely and transmitted to the host. The presentations for the game tickets may be stored as complete ticket images, as grids of numbers with call sets attached, or as a convenient data structure which indicates the card numbers and their positions and the list of associated call numbers for each ticket.

[0150] In 913, price points may be received by the host. The price points indicate the amount of money which may be selected by the customer to wager on the instant lottery game and/or the sale price of the instant lottery ticket. The price point of a game and of a ticket may be different if a ticket includes multiple games. Games of a particular type may have a single price point or multiple price points.

[0151] In 915, a presentation set may be associated with a prize pool for the chosen price point. The association may include determining a prize pool which identifies the potential game outcomes for the amount wagered by the customer and further associating the determined prize pool with the presentation set. This may be repeated if the game has multiple price points.

[0152] In 917, whether to use a new or existing prize pool for a given game and price point may be determined. If a new prize pool is desired, it may be input or created in 919. If not, an existing prize pool may be selected in 921. Whether a new or existing prize pool is selected, once the prize pool is selected, in 923, each entry in the presentation set may be asso-

ciated with a corresponding entry in the selected prize pool. For example, a presentation set for BINGO lottery game may exist with different presentations containing information for different BINGO cards, e.g., different card entries and sets of call numbers. The entry in the prize pool associated with a presentation should then correspond to the result that should be obtained with the particular set of BINGO card entries and set of call numbers for the presentation. For example, a card with no BINGO or other type of matching may be associated with a prize pool entry where a prize is not awarded. A card where all the numbers on the BINGO card are matched may be associated with the largest prize in the prize pool.

[0153] In 925, if all presentation entries have been associated with prize pool entries for all the game price points the example procedure may continue to 925. If not, the example procedure may return to 915 to associate a presentation set with a prize pool for another pricepoint for the instant game.

[0154] In 927, game information may be transmitted to the terminal. Depending on how the game is implemented, this may include transmission of an entire set of ticket images, transmission of partial ticket images, or transmission of background information common to all tickets and information used to interpret the presentation information that will be transmitted by the host when a ticket is authorized. Other information that may be transmitted to game terminals may include information necessary to modify game and pricepoint selection to allow the sale of the newly created game to begin.

[0155] In 929, the ticket sales log may be initialized for the newly created game. This may also include setting the prize pools to their initial state and choosing the prize pool reset parameters that control how a prize pool is sampled and when the prize pool is reset.

[0156] In 931, the game may be activated. Once the game is activated, terminals may be allowed to sell chances in the game to customers.

[0157] Figure 10 illustrates an example procedure for auditing the sale of instant lottery tickets. The example procedure may be conducted on a host or management system. And it may be performed by the developer or operator of a lottery game, e.g., as part of the debugging/verification process. And it may also be performed by separate entities, e.g., to satisfy regulatory requirements. It will be appreciated that the host or management system may be local, incorporated in the kiosk, or remote from the terminal. In Figure 10, small arrows indicate the flow of control of the procedure between the different procedures and/or actors carrying out the procedures. The rectangles indicate procedures and all diamond shapes indicate decisions made in the procedure.

[0158] In 1011, a request to audit a lottery game may be received on the host. The audit may include evaluation of prize awards to determine that the instant lottery game provides proper prize payout to customers.

[0159] In 1013, all presentations for a lottery game's presentation set may be outputted. For example, in the case of a BINGO game, the BINGO presentation set may include information for generation of all of the BINGO cards in a particular game, and their associated sets of card numbers. The presentations in the BINGO presentation set may include different BINGO cards that, when played according to the rules of BINGO, give a winning result for each of the different prize awards.

[0160] In 1015, prize information associated with each presentation may be output, e.g., the prize pool entry associated with each presentation. This may include prize pool entries associated with each presentation, the prize tier of the prize pool entry associated with each presentation, or other similar information indicating the prize the same awards when a ticket with the presentation is sold.

[0161] In 1017, presentation information is evaluated to determine the proper prize level for each presentation according to the rules of the game being audited.

[0162] In 1019, the proper prize level may be compared to the prize actually associated with the entry associated the presentation. The comparison may be performed for each presentation.

[0163] In 1021, a decision may be made whether all prizes are correct. The decision may be yes, in which case the audit may be determined a success. If it is determined that not all prizes are correct, a problem may be determined and the audit may be determined unsuccessful, and corrective action may need to be taken.

[0164] Although the invention has been described in detail including the preferred embodiments thereof, such description is for illustrative purposes only, and it is to be understood that changes and variations including improvements may be made by those skilled in the art without departing from the spirit or scope of the following claims.

WHAT IS CLAIMED IS:

1. A method of facilitating the play of instant lottery games, comprising:

receiving a set of presentations for an instant lottery game;

associating the set of presentations with a prize pool;

associating each entry in the prize pool with a single respective outcome;

associating each presentation in the set of presentations with a respective outcome by associating the presentation with a respective entry in the prize pool associated with the respective outcome;

receiving a second set of presentations for a second instant lottery game;

associating the second set of presentations with a second prize pool;

associating each entry in the second prize pool with a single respective outcome;

associating each presentation in the second set of presentations with a respective outcome by associating the presentation with a respective entry in the second prize pool associated with the respective outcome;

receiving at a terminal a request to play the instant lottery game, the instant lottery game being chosen from among a plurality of available instant lottery games;

determining an outcome for the instant lottery game by randomly selecting a first entry in the prize pool, the first entry associated with a first presentation from the set of presentations;

transmitting information from the first presentation from the set of presentations to the terminal;

using information from the first presentation to issue a game ticket for the instant lottery game;

awarding a prize based on the outcome associated with the first entry in the prize pool;

receiving at the terminal a request to play the second instant lottery game, the second instant lottery game being chosen from among the plurality of available instant lottery games; randomly

determining a second outcome for the second instant lottery game by randomly selecting a second entry in the second prize pool, the second entry associated with a second presentation from the second set of presentations;

transmitting information from the second presentation from the second set of presentations to the terminal;

using information from the second presentation to issue a second game ticket for the second instant lottery game; and

awarding a second prize based on the second outcome associated with the second entry in the second prize pool.

2. A method of facilitating the play of instant lottery games, comprising:

receiving a set of presentations for an instant lottery game;

associating the set of presentations with a prize pool;

associating each presentation in the set of presentations with a respective outcome; and

transmitting a first presentation from the set of presentations to a terminal.

3. The method of claim 2, further comprising:

associating each entry in the prize pool with a single respective outcome; and

wherein each presentation in the set of presentations for the instant lottery game is associated with the respective outcome by associating the presentation with a respective entry in the prize pool associated with the respective outcome.

4. The method of claim 3, further comprising:

using information from the first presentation to issue a game ticket for the instant lottery game; and

awarding a prize based on the outcome associated with the prize pool entry associated with the first presentation.

5. The method of claim 2, further comprising:

receiving at a terminal a request to play the instant lottery game, the instant lottery game being chosen from among a plurality of available instant lottery games;

randomly determining an outcome for the instant lottery game;

choosing a presentation associated with the outcome from the set of presentations for the instant lottery game;

communicating information from the presentation to the terminal;

displaying information from the presentation at the terminal.

6. The method of claim 5, wherein

the outcome for the instant lottery game is determined by randomly selecting an entry from the prize pool.

7. The method of claim 6, wherein

the entry is selected without replacement.

8. The method of claim 7, wherein

the prize pool is structured to provide a predetermined guaranteed minimum payout over a predetermined interval.

9. The method of claim 6, wherein

the entry is selected with replacement.

10. The method of claim 5, wherein

the information from the presentation is communicated to the terminal in response to the request to play the lottery game.

11. The method of claim 5, wherein the information from the presentation is communicated to the terminal prior to the request to play the lottery game.

12. The method of claim 2, wherein

the presentation comprises a partial lottery ticket image.

13. The method of claim 2, wherein

the presentation comprises a lottery ticket image.

14. The method of claim 2, wherein

the presentation comprises a set of encoded symbols.

15. The method of claim 2, wherein

the presentation further comprises location information for each encoded symbol in the set of encoded symbols.

16. The method of claim 14, wherein

the symbols are encoded in a unicode format.

17. The method of claim 2, wherein

displaying information from the presentation at the terminal further comprises printing an instant win lottery ticket.

18. The method of claim 5, wherein

displaying information from the presentation at the terminal further comprises electronically displaying the information on the terminal.

19. The method of claim 2, further comprising:

outputting every presentation of the set of presentation information and the outcome associated with each presentation.

20. The method of claim 19, further comprising

certifying, by an entity other than the operator of the lottery, that every presentation is associated with the correct outcome.

21. The method of claim 1, further comprising:

associating a plurality of price points with the instant lottery game;

for each price point, associating a different prize pool with the instant lottery game.

22. The method of claim 2, further comprising:

receiving a second set of presentations for a second instant lottery game;

associating the second set of presentations with a second prize pool;

associating each presentation in the second set of presentations with a respective outcome from the second prize pool;

transmitting a second presentation from the second set of presentations to the terminal.

23. The method of claim 22, further comprising;

receiving at a terminal a request to play the instant lottery game, the instant lottery game being chosen from among a plurality of available instant lottery games;

randomly determining an outcome for the instant lottery game;

choosing a presentation associated with the outcome from the set of presentations for the instant lottery game;

communicating information from the presentation to the terminal;

displaying information from the presentation at the terminal;

receiving at the terminal a second request to play the second instant lottery game;

randomly determining a second outcome for the second instant lottery game;

choosing a second presentation associated with the second outcome from the second set of presentations for the second instant lottery game;

communicating information from the second presentation to the terminal; and

displaying information from the second presentation at the terminal.

24. The method of claim 5, further comprising:

transmitting from the terminal ticket request information for the instant lottery game.

25. The method of claim 24, wherein

the ticket request information includes at least one of a game identifier, a price point, a number of tickets to be purchased, and customer-selected information to be used in determining an outcome of for the instant lottery game.

26. A multi-game instant lottery game system, comprising:

a plurality of prize pools, each prize pool having a plurality of prize tiers, each prize tier associated with a respective outcome;

a plurality of lottery games, each lottery game associated with a respective one of the prize pools;

a plurality of sets of presentations, each set of presentations being associated with a respective one of the plurality of lottery games, each presentation in a set of presentations associated with a lottery game being associated with a respective one of the prize tiers in the prize pool associated with lottery game.

27. The system of claim 26, further comprising:

a terminal configured to receive a request to play a selected instant lottery game in a first instant lottery game in the plurality of instant lottery games, the first lottery instant game associated with the first prize pool and the first set of presentations;

a server in communication with the terminal, the server configured to randomly select an entry from the first prize pool, the entry being associated with a first prize tier from the first prize pool, and to communicate to the terminal that presentation information from a first presentation from the first set of presentations and associated with the first prize tier of the first prize pool should be displayed.

28. The system of claim 27, wherein the terminal is configured to sell future draw lottery tickets.

29. The system of claim 27, wherein the terminal is also configured as a cash register for the sale of non-gaming services or merchandise.

30. The system of claim 27, wherein the terminal a video lottery game terminal.

31. The system of claim 27, wherein the display includes printing a lottery game ticket.

32. The system of claim 27, wherein the display includes electronically displaying a lottery game ticket.

33. The system of claim 27, wherein the terminal is further configured to receive a request to play a selected instant lottery game in a second instant lottery game in the plurality of lottery games, the second lottery game associated with the second prize pool and the second set of presentations;

the server is further configured to randomly select an entry from a second prize pool, the entry being associated with a second prize tier from the second prize pool, and to communicate to the lottery game terminal that presentation information from a second presentation from the second set of presentations and associated with the second prize tier of the second prize pool should be displayed.

34. The system of claim 33, wherein

at least one of the plurality of lottery games has multiple prize points, the at least one lottery being associated with a different one of the plurality of prize pools for each prize point.

38. The system of claim 27, wherein the information from the first set of presentations is transmitted to the terminal in response to the request to purchase the first lottery ticket.

36. The system of claim 27, wherein the information from the first set of presentations is transmitted to the terminal prior to the request to the purchase of the first lottery ticket.

37. The system of claim 27, wherein

the server is configured to receive a new set of presentations associated with a new lottery game, to associate the new presentations and the new lottery game with a prize pool from the plurality of prize pools, and to transmit presentation information from the new set of presentations to the lottery game terminal.

38. The system of claim 27, wherein the presentation information includes a ticket image.

39. The system of claim 27. wherein the presentation information includes a set of symbols.

40. The system of claim 39, wherein the presentation information includes positioning information for the set of symbols.

41. The system of claim 39, wherein the presentation information includes ordering information for the set of symbols.

42. The system of claim 391, wherein the presentation information includes unicodes for the symbols.

43. The system of claim 26, further comprising:

an audit report generator configured to display all the presentations in a set of presentations and their associated prize tier.