



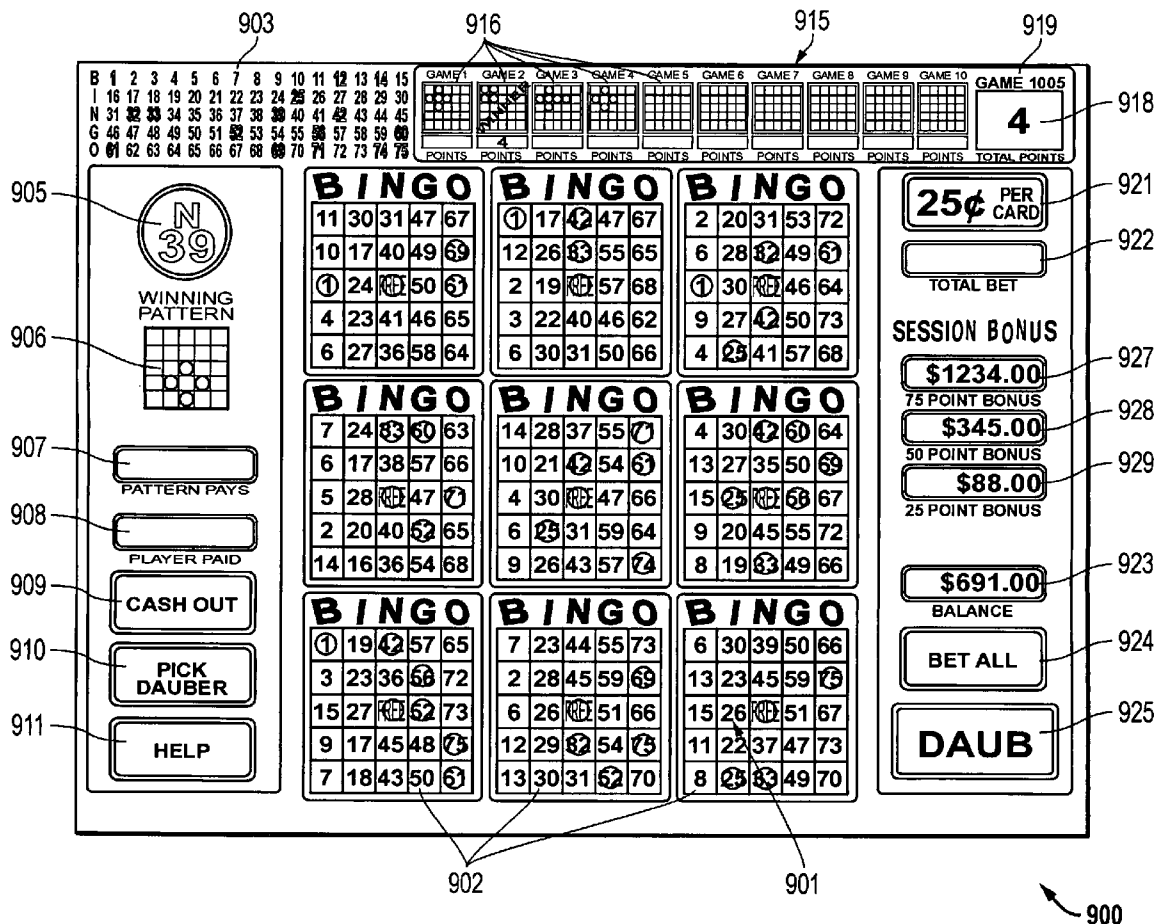
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(19) **United States**(12) **Patent Application Publication**
Willyard et al.(10) **Pub. No.: US 2007/0060288 A1**(43) **Pub. Date: Mar. 15, 2007**(54) **DYNAMIC SESSION BINGO GAMING
SYSTEM****Publication Classification**(75) Inventors: **Rodney L. Willyard**, Flower Mound,
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OK (US)(51) **Int. Cl.****A63F 9/24** (2006.01)(52) **U.S. Cl.** **463/19**

(57)

ABSTRACTCorrespondence Address:
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AUSTIN, TX 78746 (US)(73) Assignee: **Multimedia Games, Inc.**(21) Appl. No.: **11/396,768**(22) Filed: **Apr. 3, 2006****Related U.S. Application Data**(60) Provisional application No. 60/716,797, filed on Sep.
13, 2005.

A number of bingo games are conducted serially one after the other, and each of a number of players across a network are enabled to initiate a respective bingo game session by entering a respective bingo game in the ongoing series of bingo games. Each bingo game session is associated with a respective player, a number of respective bingo games entered by the respective player, and an outcome for the respective player for each such bingo game. A session score is maintained for each respective bingo game session based upon the outcomes associated with the respective player's bingo games in the bingo game session. A session prize is awarded for each bingo game session having a session score that meets or exceeds a predetermined prize winning session score. This session prize is awarded to the player associated with the respective bingo game session.



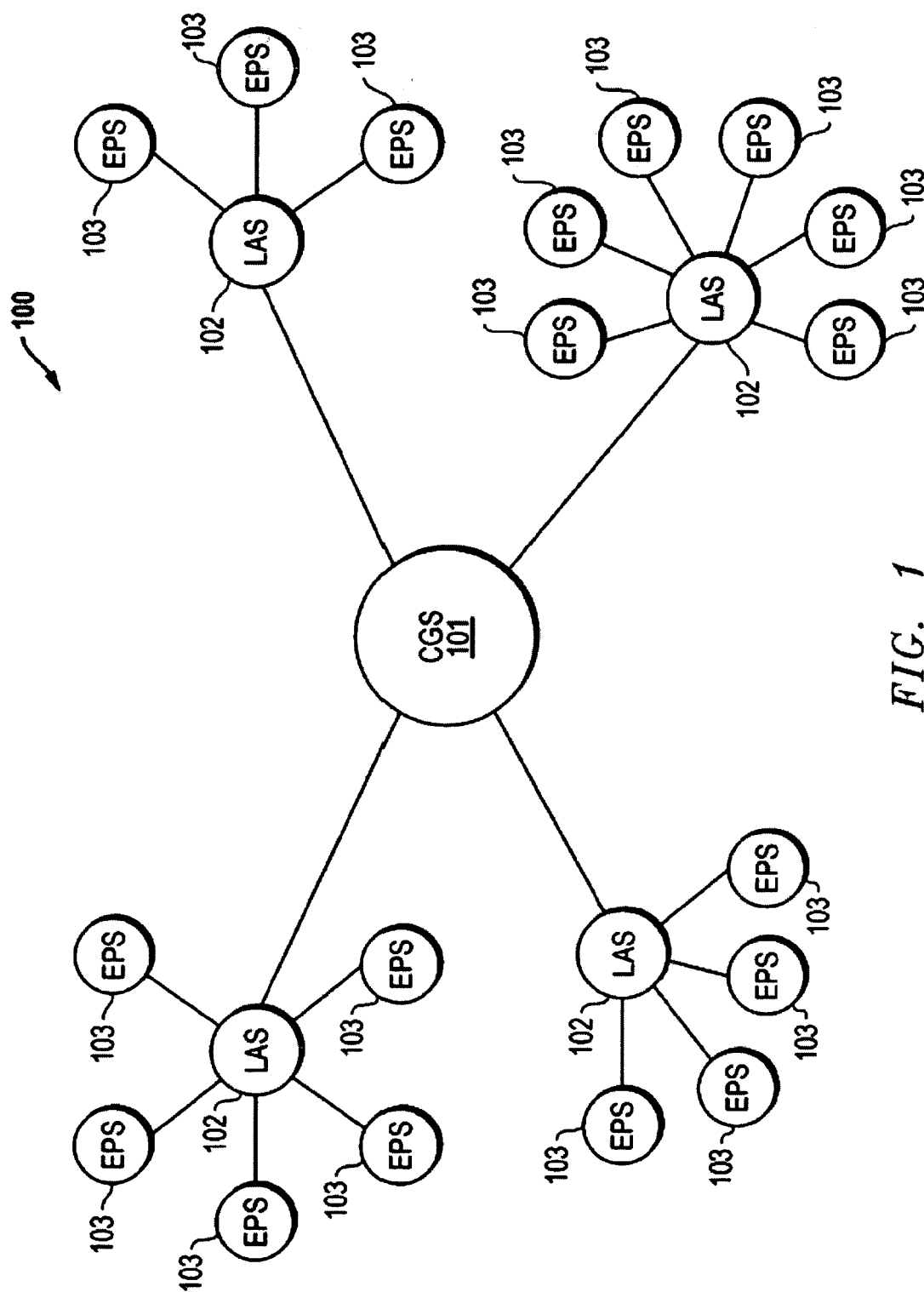


FIG. 1

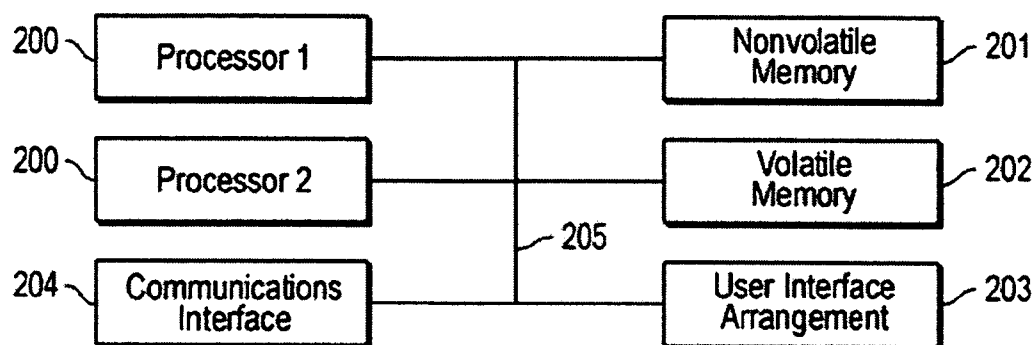


FIG. 2

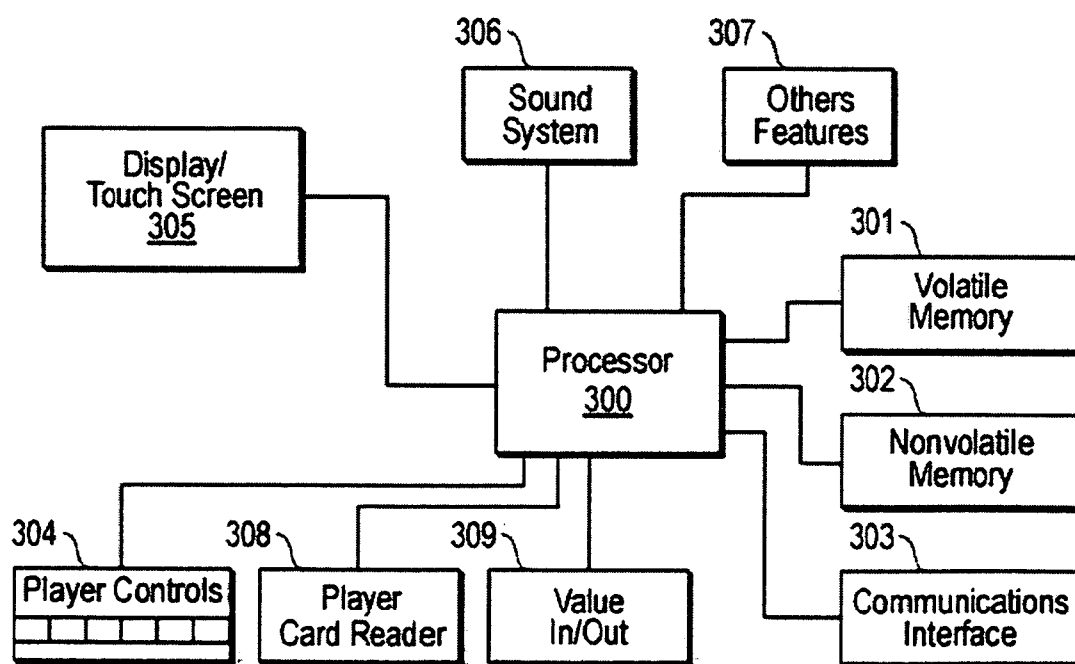


FIG. 3

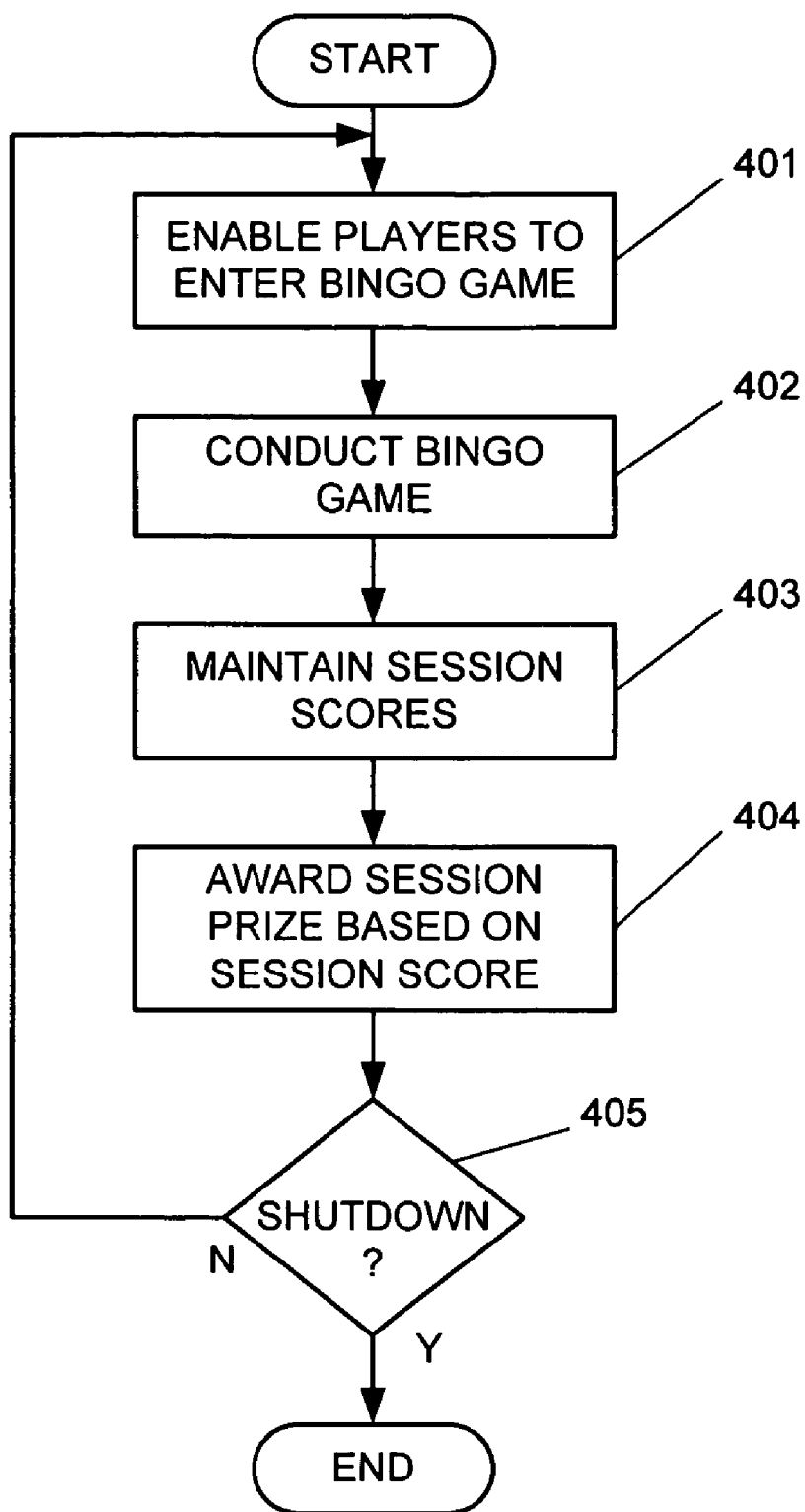


Fig. 4

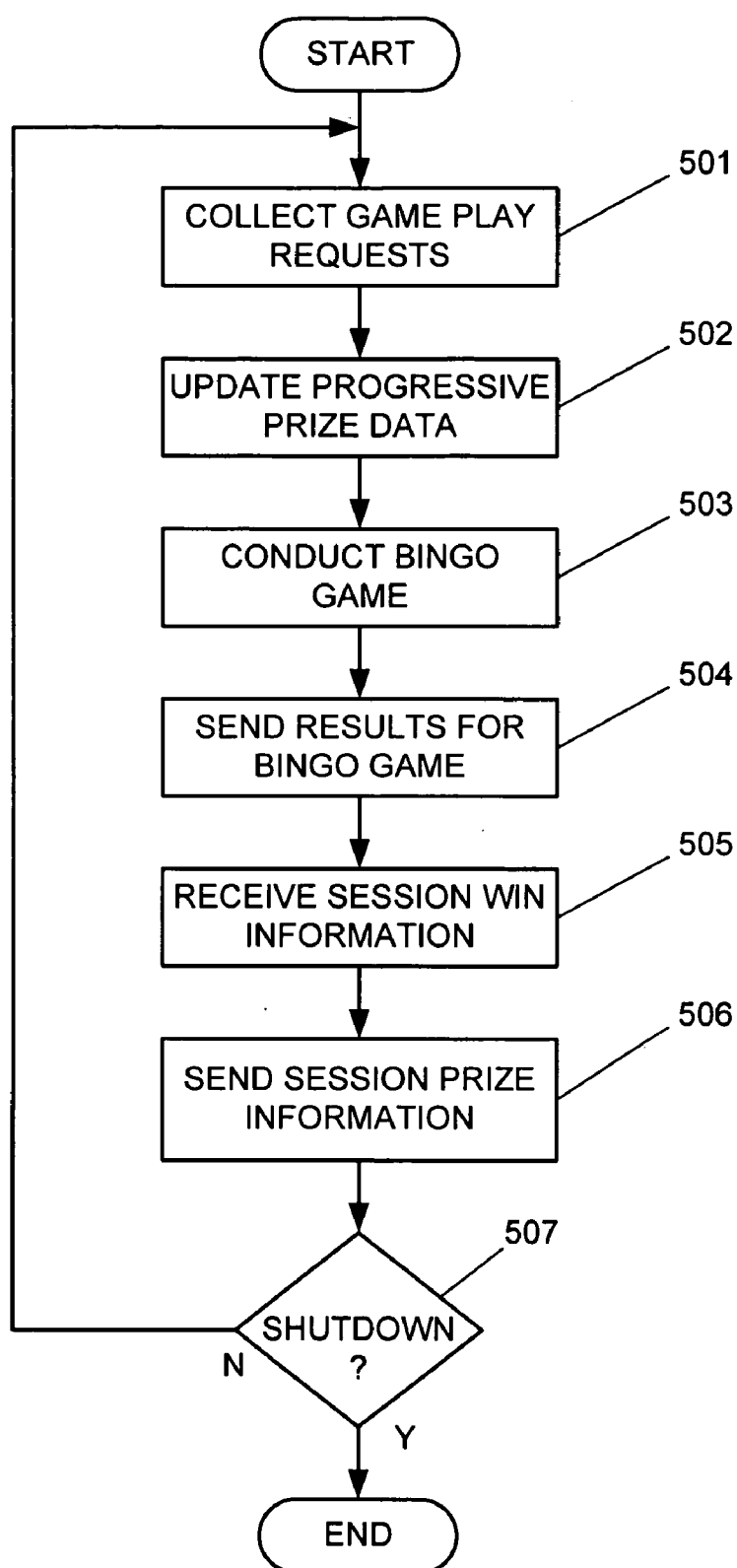


Fig. 5

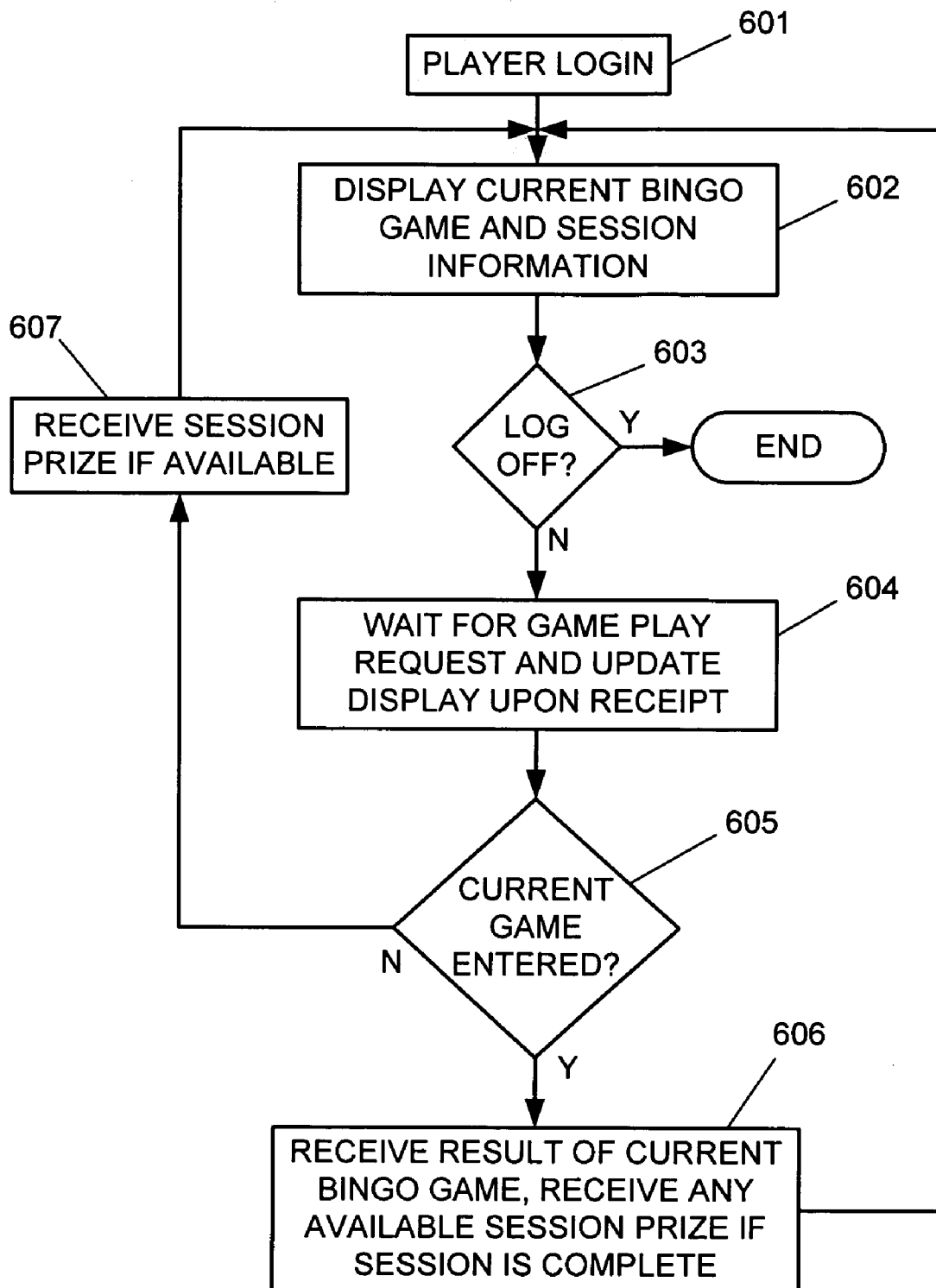


Fig. 6

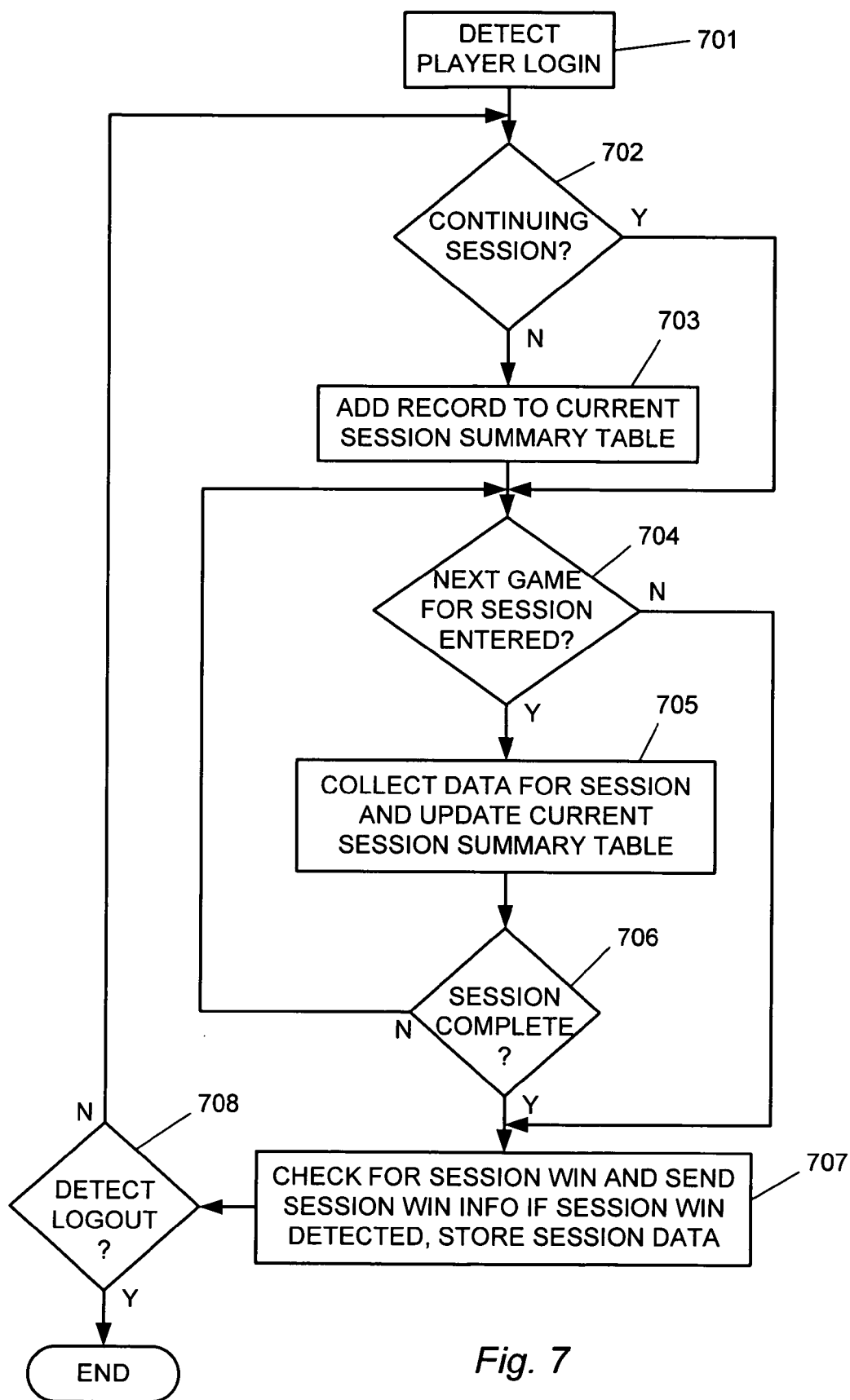
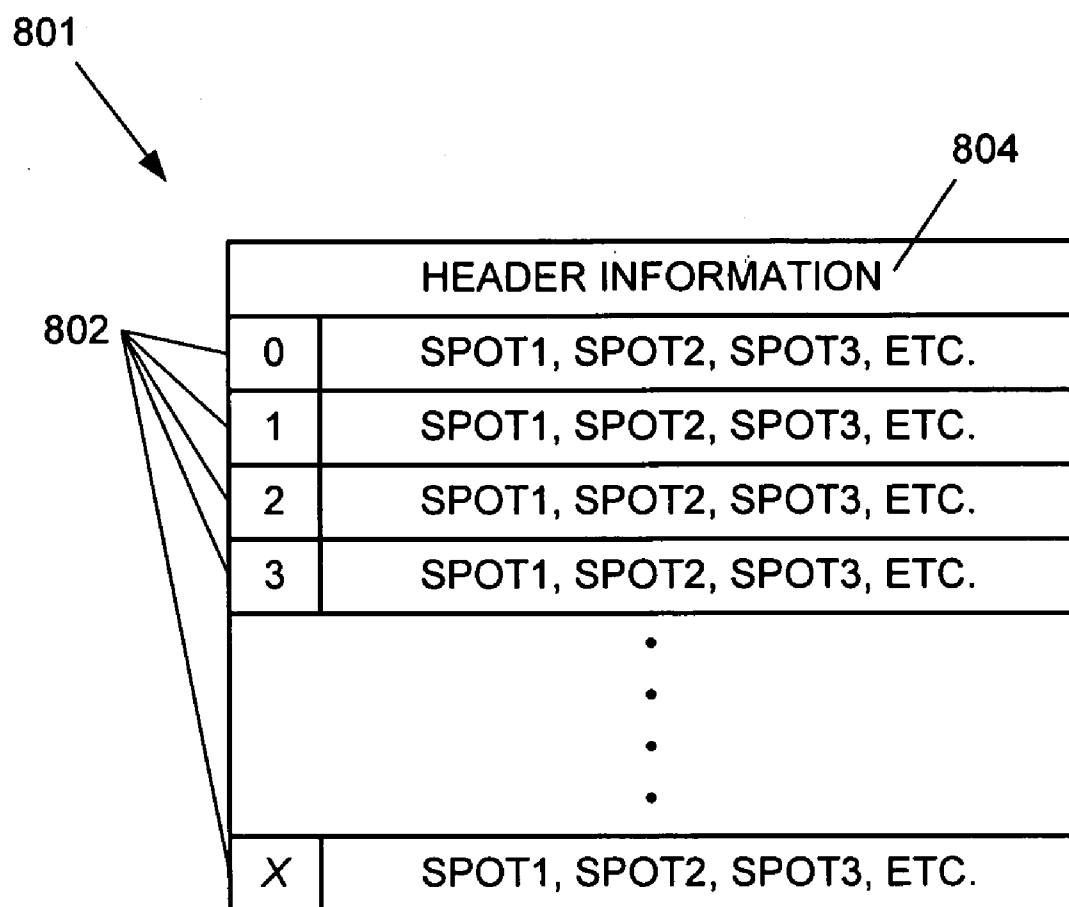
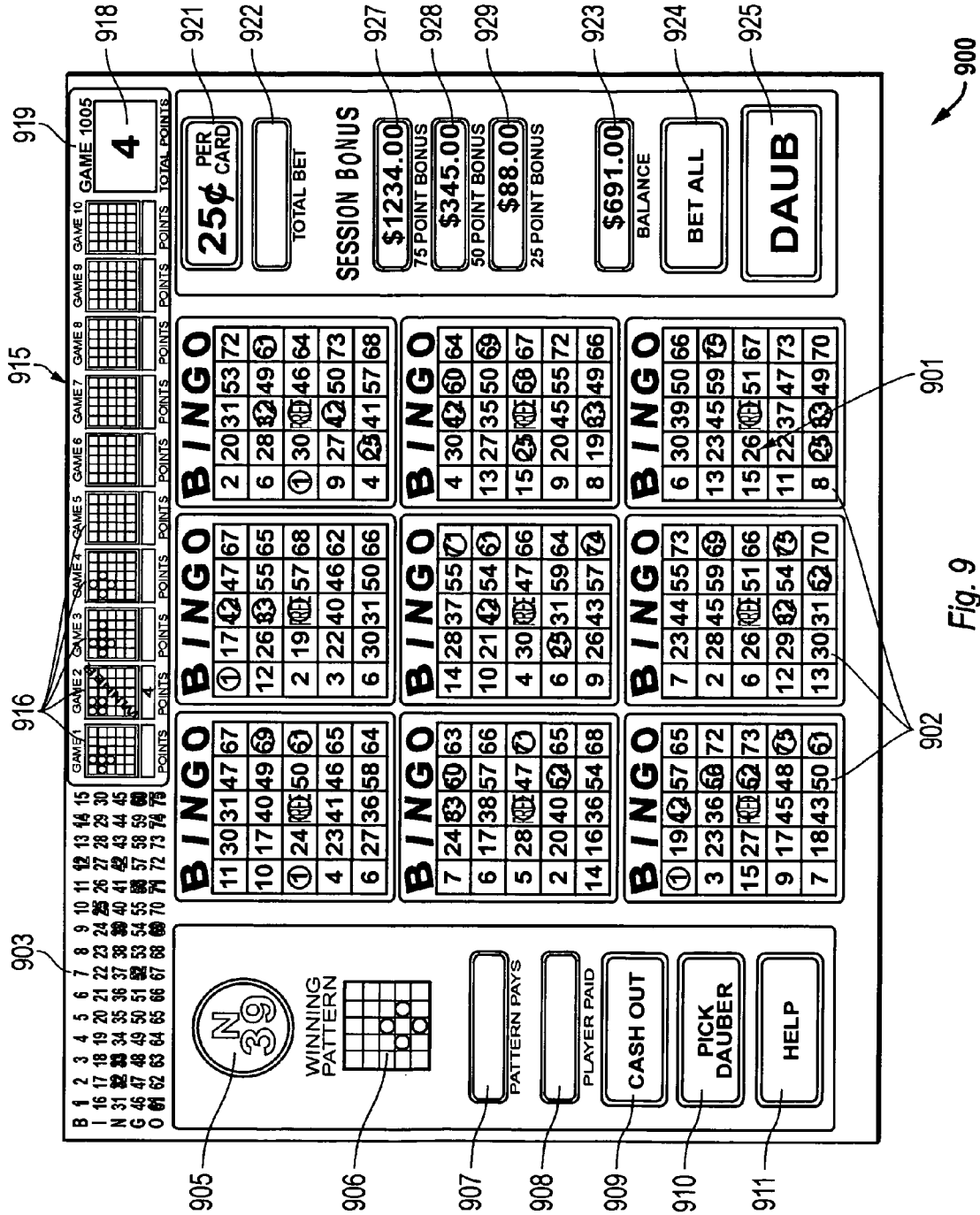


Fig. 7

*Fig. 8*



DYNAMIC SESSION BINGO GAMING SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

[0001] The Applicant claims the benefit, under 35 U.S.C. § 119(e), of U.S. Provisional Patent Application No. 60/716,797 filed Sep. 13, 2005, and entitled "DYNAMIC SESSION BINGO GAMING SYSTEM." The entire content of this provisional application is incorporated herein by this reference.

TECHNICAL FIELD OF THE INVENTION

[0002] This invention relates to electronic gaming systems enabling players from many different gaming locations to participate in bingo game sessions. More particularly, the invention is directed to apparatus, methods, and program products for aiding players in bingo gaming sessions and for enhancing player participation in bingo gaming sessions.

BACKGROUND OF THE INVENTION

[0003] The game referred to generally as "Bingo" is played with predetermined bingo cards that include a number of designations randomly arranged in a grid or other layout of spots or locations. The bingo cards may be physically printed on paper or another suitable material, or may be represented by a data structure which defines the various card locations and designations associated with the locations. In the traditional bingo game sequence, a number of the predetermined bingo cards are put in play for a particular game. After the sale of bingo cards is closed for a given game, designations are randomly selected from a pool of available designations and matched to the designations on each bingo card that is in play in the game. This matching of bingo designations randomly selected for a game and bingo designations associated with a card in play in the game is commonly referred to as daubing the card and results in a pattern or arrangement of matched spots or card locations. Daubing was done manually by the player holding the bingo card in traditional bingo games, and then by a game administrator to verify a win in the game. More recent bingo gaming systems automatically check for winning patterns on a bingo card as designations are randomly selected for a game. Regardless of how the bingo cards in play in a game are daubed, the first card which is daubed in some predefined way is considered a winning card for the game. The predefined way in which a card must be matched or daubed to produce a win in the game is commonly defined in terms of some identifiable pattern of matched or daubed locations on the card. In some cases, prizes are awarded for bingo cards achieving some predefined pattern other than the pattern that ends the bingo game.

[0004] Although traditional paper bingo games remain popular, networked electronic bingo gaming systems have been developed to facilitate more rapid play than is possible in traditional paper bingo operations. In these electronic bingo gaming systems, players participate in bingo games through electronic player stations which allow a player to purchase a bingo card and place it in play in a bingo game conducted between various players at other electronic player stations.

[0005] Bingo is commonly played in sessions made up of a number of bingo games. Bingo played in sessions is

commonly referred to as "session bingo." Session bingo typically offers various session prizes in addition to the regular prizes offered in the individual bingo games which make up a session. Although the additional session prizes that may be available in session bingo may increase player interest in participating in the various sessions, there have been problems in implementing session bingo in an electronic, wide-area format. Amongst the greatest problems associated with session bingo arises from having to coordinate play in the various bingo game sessions. A player wishing to participate in a bingo game session may be forced to wait an unacceptably long time before a new session starts. Yet starting play in an ongoing bingo game session typically reduces the player's chances winning a session prize. Thus, the player has a choice of waiting an unacceptably long time for the next bingo game session to start, or starting play in the middle of an ongoing bingo game session.

SUMMARY OF THE INVENTION

[0006] The present invention provides a session bingo gaming system in which different bingo game sessions are dynamically defined for each respective player in the system. According to the invention, a player may start their respective bingo game session with any bingo game conducted by the system. The invention eliminates the problem of requiring that a player either wait for a new bingo game session or enter in the middle of an ongoing session.

[0007] One preferred method according to the invention includes conducting a number of bingo games, preferably serially one after the other. Each of a number of players across a network are enabled to initiate a respective bingo game session by entering a respective bingo game in the ongoing series of bingo games. Each bingo game session is associated with a respective player, a number of respective bingo games entered by the respective player, and an outcome for the respective player for each such bingo game. This preferred method further includes maintaining a session score for each bingo game session. The session score for a respective bingo game session is based upon the outcomes associated with the respective bingo game session. One score keeping arrangement awards a predefined number of points for a win in a bingo game included in the player's session and perhaps a predefined number of points for certain non-winning outcomes in a bingo game included in the player's session. Regardless of how the score is defined and maintained, this preferred method includes awarding a session prize for each bingo game session having a session score that meets a predetermined prize winning session score. This session prize is awarded to the player associated with the respective bingo game session.

[0008] One preferred apparatus according to the invention includes a number of player stations, a bingo game controller, a session tracking controller, and a session award controller. Each player station includes player controls that are operable to enable a player to enter a bingo game play request. The bingo game controller is operatively connected for communications with each of the number of player stations, either directly or indirectly, and conducts a number of bingo games based upon game play requests entered through the player stations. The session tracking controller maintains the session score for each of the different bingo game sessions initiated by players from the various player

stations. As indicated above with respect to methods according to the invention, each bingo game session scored by the session tracking controller is associated with a number of respective bingo games entered by the respective player, and is also associated with an outcome for the respective player for each such bingo game associated with the bingo game session. The session award controller awards the session prize to the appropriate player for each bingo game session having a session score that meets a predetermined prize winning session score.

[0009] The invention also encompasses a program product for directing various processing devices to implement session bingo methods. The program products and numerous variations on the above described preferred methods and apparatus will be described below in connection with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a high level diagrammatic representation of a session bingo gaming system embodying the principles of the present invention.

[0011] FIG. 2 is a diagrammatic representation of a computer system arrangement that may be used for the central game server and local area servers included in the system shown in FIG. 1.

[0012] FIG. 3 is a diagrammatic representation of an electronic player station that may be used in the system shown in FIG. 1.

[0013] FIG. 4 is a flowchart providing a high level description of the overall process performed in the session bingo gaming system shown in FIG. 1.

[0014] FIG. 5 is a flowchart providing a high level description of a process executed at the bingo game controller according to the present invention.

[0015] FIG. 6 is a flowchart providing a high level description of the process executed at the player stations according to one form of the present invention.

[0016] FIG. 7 is a flowchart providing a high level description of a process executed by a session tracking controller according to the present invention.

[0017] FIG. 8 is a diagrammatic representation of a bingo card definition file that may be used in a bingo gaming system according to the present invention.

[0018] FIG. 9 is a representation of a graphic display that may be presented to a session bingo player at a player station according to one form the invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0019] FIG. 1 shows a gaming system 100 including a game server (CGS) 101 that cooperates with a number of other components to enable bingo players, preferably at many different remote gaming sites, to participate in bingo games and bingo game sessions. Each gaming site includes a local server (LAS) 102 and a number of player stations (EPSs) 103. As will be discussed in detail below, a player at any player station 103 in gaming system 100 may participate in a given bingo game with players at any other player stations 103 in the system. Thus, players at different gaming

sites may be grouped together for a given bingo game administered through gaming system 100.

[0020] Although gaming system 100 facilitates playing bingo games very rapidly, the underlying game remains a standard bingo game played in the traditional sequence of play for bingo games. That is, each player obtains or is assigned a bingo card representation, all bingo card representations in play in the game are daubed (that is, checked for matches with a randomly generated sequence of designations), and the first bingo card representation in the bingo game o of designations to produce a predefined game winning pattern wins the bingo game.

[0021] Central server 101 may comprise a computer system such as the basic system shown in FIG. 2. The basic system may include one or more processors 200, nonvolatile memory 201, volatile memory 202, a user interface arrangement 203, and a communications interface 204, all connected to a system bus 205. It will be appreciated that user interface arrangement 203 may include a number of different devices such as a keyboard, a display, and a pointing device such as a mouse or trackball for example, although not shown in FIG. 2. Alternatively to the integrated user interface arrangement 203 shown in FIG. 2, a user interface for central server 101 may be provided through a separate computer (not shown) in communication with the central server. In either case, user interface arrangement 203 provides an interface for use by system operators. Regardless of the particular configuration for central server 101, the central server performs the functions of the bingo game controller according to one preferred form of the invention. That is, central server 101 groups players for participation in bingo games offered through the system, produces or obtains sequences of designations (ball draws, for example) for the play of the bingo games, checks for the results in the bingo games, and communicates the results to local servers 102. Central server 101 may also implement the session award controller according to the invention. Specific processes performed by central server 101 to provide these functions will be described below with reference to FIG. 5.

[0022] As used in this disclosure any sequence of designations that may be matched against bingo card representations in the present gaming system will be referred to as a "ball draw" regardless of how the sequence is actually generated. Under this definition, it will be appreciated that a ball draw may be produced by a random number generator, a pseudo random number generator, or any other suitable device or system, and not necessarily a physical ball draw device.

[0023] Each local server 102 included in gaming system 100 as shown in FIG. 1 may comprise a computer system having the same basic structure as shown in FIG. 2. That is, each local server 102 may include one or more processors 200, nonvolatile memory 201, volatile memory 202, user interface arrangement 203, and communications interface 204 all connected to system bus 205. As with central server 101, the user interface for the respective local server 102 provides an operator interface and may be provided through a separate computer in communication with the local server rather than the integrated user interface arrangement 203 shown in FIG. 2. Regardless of the specific configuration of a local server 102, each local server relays information from its respective player stations 103 to central server 101 and

relays information from the central server to the local server's respective player stations. Each local server **102** also preferably performs the functions of the session tracking controller for the various player stations **103** with which it is in communication. Specific processes that may be performed by local servers **102** according to the invention will be described below with reference to FIG. 6.

[0024] FIG. 3 shows an example of a player station **103** that may be used in a gaming system embodying the principles of the present invention. The illustrated player station **103** includes a processor **300**, volatile memory **301**, nonvolatile memory **302**, and a communications interface **303**. The volatile and nonvolatile memory stores player station program code that may be executed by processor **300** to cause the processor to perform or direct the various functions provided by player station **103**. Communications interface **303** allows communications between the respective player station **103** and its respective local server **102** and/or central server **101**. Player station **103** also includes a special user interface arrangement to facilitate player participation in the bingo games and bingo game sessions offered through gaming system **100** shown in FIG. 1. This interface includes player controls **304**, a display or touch screen display **305**, a sound system **306**, and perhaps other features **307** such as alarms or special displays or alerting devices. Each player station **103** also preferably includes a convenient system for allowing the player to input player-specific information and for receiving wagers and dispensing winnings. For example, the player station **103** shown in FIG. 3 includes a player card reader **308** that is adapted to read player-specific information from a player account card inserted into the reader. A player account card may, for example, include player information or simply a player identifier encoded on a magnetic medium (mag stripe) associated with the card, or encoded in a bar code, or a memory device associated with the player card. The illustrated player station **103** also includes a device **309** for receiving value and issuing value in the course of play. This device may accept currency, vouchers, or tokens, for example, and also output currency, vouchers, or tokens. Of course a separate device may be used to receive and issue value for games played according to the present invention. Alternatively or in addition to value in/out device **309**, player stations **103** may read player account information from the player card or player information otherwise input at the player station, and account for wagers and winnings in the manner set out in U.S. patent application publication No. 2002-0132666-A1, entitled "Distributed Account Based Gaming System," the entire content of which is hereby incorporated herein by this reference.

[0025] It will be appreciated that the particular configuration of devices shown in FIG. 1 is shown only for purposes of example. A bingo gaming system according to the present invention may omit some or all of the separate local servers **102** at the various gaming sites so that the player stations **103** communicate directly with central server **101**. Also, various regions or different gaming sites may be divided up into separate systems each having a respective central server such as central server **101**. Furthermore, a gaming system embodying the principles of the invention may include multiple central servers rather than a single central server **101** as shown in FIG. 1.

[0026] In the following description of FIG. 4 and the other process flow charts in this disclosure, it will be appreciated that the references to the physical components are references to the diagrams in FIGS. 1, 2, and 3 that show those components. The components, such as player stations **103**, local servers **102**, and central server **101** discussed with reference to the flow charts are not shown in the flow charts themselves but are shown particularly in FIG. 1.

[0027] FIG. 4 shows the overall process performed by the dynamic session bingo gaming system **100** according to the invention. After start up and initiation of the session bingo gaming system, the process includes enabling players to enter a bingo game as indicated at process block **401**. Once conditions are satisfied for conducting a bingo game, the process includes conducting the bingo game as indicated at process block **402**. Session scores are maintained as indicated at process block **403**, and session prizes are awarded based on the session scores as indicated at process block **404**. The series of process steps shown at process blocks **401**, **402**, **403**, and **404** represent one cycle for a given bingo game conducted through session bingo gaming system **100**. This sequence of process steps is performed for each bingo game conducted in the system. Thus, as indicated at decision block **405** unless session bingo gaming system **100** is being shut down, the process loops back to start another cycle through the process steps shown at process blocks **401** through **404**.

[0028] The step shown at process block **401** of enabling players to enter bingo games is performed partially through player stations such as player stations **103** shown in FIG. 1. A player enters a game play request at their respective player station and this game play request or information relating to the game play request is ultimately communicated to the session tracking controller preferably implemented at the local server (**102** in FIG. 1) for the respective player station, and to the bingo game controller which is implemented at central server **101** in the session bingo gaming system shown in FIG. 1. Further information on the manner in which players are enabled to enter a bingo game will be described below particularly in connection with FIG. 6.

[0029] The process of conducting a bingo game as indicated at process block **402** in FIG. 4 may be performed in the number of ways within the scope of the present invention. In the preferred form of the invention illustrated in FIG. 1, the bingo game controller implemented at central server **101** is responsible for collecting information related to a number of game play requests and then conducting a bingo game for the collected game play requests. Further details regarding the step of conducting the bingo game will be discussed below in connection with FIG. 5.

[0030] The step of maintaining session scores as indicated at process block **403** in FIG. 4 is preferably performed by a number of session tracking controllers. A respective session tracking controller may be implemented in the system shown in FIG. 1 at each respective local server **102**. In this configuration, the session tracking controller at a respective local server **102** maintains the session scores for all players participating in the gaming system at a player station **103** located at the site of the respective local server. Further information regarding maintaining session scores will be described below in connection with FIG. 7.

[0031] The step of awarding a session prize based on a session score as shown at process block **404** in FIG. 4 may

include a combination of operations performed both at the session award controller preferably implemented at central server **101** in FIG. **1**, and at the respective local server **102**. As will be described further below with reference to FIGS. **5** and **7**, the session award controller implemented at central server **101** may maintain session prize information where the session prizes are progressive prizes. Thus, the session award controller is involved in communicating the progressive prize value to the appropriate player station **103** for a player entitled to a session prize. However, in the implementation shown in FIG. **1** in which the session tracking controller is implemented at the various local servers **102**, the session award controller implemented at central server **101** relies on the session scores maintained at various local servers in order to determine when a session prize is to be awarded.

[0032] The process steps conducted for each bingo game conducted in a session bingo gaming system according to the present invention are preferably performed to produce four distinct segments for each bingo game. First, there is a sales period that roughly corresponds to the process shown at process block **401** in which players are enabled to enter the current bingo game. The second segment of a bingo game preferably comprises a ball display period in which the various designations from a ball draw are sequentially displayed to each player in the game. This segment comprises part of the process indicated at process block **402** in FIG. **4**. The third segment comprises a potential winner period/daub period in which a winning player in the bingo game must daub their card by making a daub input at their player station (**103** in FIG. **1**) in order to claim the win. This segment corresponds to a portion of the process performed as indicated at process block **402** in FIG. **4**. This segment may be repeated in a given bingo game in the event the first winning player fails to take the required daub action to claim their prize. The fourth and final segment for each bingo game in a preferred implementation according to the invention comprises a game over period in which the individual bingo game results are displayed to each player that entered the game. The effect of the individual bingo game on the respective player's bingo game session is also displayed to each player in this final segment for an individual bingo game. This final segment involves the winner identifying portions of the game conducting process indicated at process block **402**, and also involves the session scoring and session prize awarding process indicated at process blocks **403** and **404**.

[0033] FIG. **5** shows a process conducted at the central server **101** shown in FIG. **1** for each game cycle in the session bingo gaming system **100**. The step shown at process block **501** and **503** in FIG. **5** are steps that are performed by the bingo game controller preferably implemented at central server **101**. The remaining steps shown at process blocks **502**, **504**, **505**, and **506** in FIG. **5** are performed by the session award controller implemented at central server **101**. As indicated at process block **501**, the bingo game controller implemented at central server **101** collects game play requests and holds the game play requests until conditions are satisfied for conducting a bingo game. In some preferred implementations, each bingo game cycle is associated with a predefined buy in period in which players at the various

player stations (**103** in FIG. **1**) may enter any game play requests for the particular bingo game. Some forms of the invention may place conditions on the number of players required in order to conduct a bingo game. For example, some implementations of the invention may require some minimum number of game play requests in order to conduct a bingo game. In these implementations, if the conditions are not met at the end of the predetermined buy in period, the buy in period may be extended.

[0034] The step of updating progressive prize data as indicated at process block **502** in FIG. **5** is preferably performed at central server **101** since it is a central device that may readily receive all of the individual wager information from the various local servers **102** in FIG. **1** to maintain the proper progressive prize values. Some forms of the invention may include a separate processing device for maintaining the progressive prizes representing the session prizes. Also, where the session prizes are not progressive prizes based on the wagers that had been placed in the bingo gaming system, it may not be necessary to update prized data as indicated at process block **502**. Thus, the process indicated at process block **502** in FIG. **5** may not be necessary where the session prizes are not progressive prizes.

[0035] Conducting the bingo game as indicated at process block **503** in FIG. **5** involves matching a ball draw with each respective bingo card representation entered in the bingo game. In preferred forms of the invention, designations from the ball draw are considered sequentially until one of the bingo card representations entered in the respective bingo game produces the game ending pattern that has been predefined for the bingo game (also referred to as a must-go pattern). In some forms of the invention the winning player is notified of the win in the bingo game and is given a period of time to take some action at their respective player station (**103** in FIG. **1**) to claim the win. Some implementations of the invention may require the player to make a daub input at the player station to obtain a first portion of the ball draw necessary to produce a winning pattern, and then make a second daub input to obtain the remaining portion of the ball draw necessary to produce the winning bingo pattern. If any player does take the action or actions necessary to claim their bingo win as required by the particular game rules, additional designations may be considered by the bingo game controller until the game-winning pattern is achieved on another bingo card representation in play for the bingo game. This process may be conducted several times until a player takes the appropriate actions to claim the bingo win and end the game. The present invention encompasses any manner in which the bingo game may be conducted and bingo win determined.

[0036] The step of sending results for the bingo game indicated at process block **504** in FIG. **5** may be implemented in several different ways within the scope of the present invention. In one preferred form of the invention, all bingo card representations in play in the game are shown daubed at the respective player stations assuming the players each take the required daub action or actions. A win indicator is also preferably communicated to the player station or stations producing the winning bingo pattern so that the win may be highlighted at the respective player stations. In

any event, the preferred form of the invention illustrated as an example in FIG. 1 relays win information from central system 101 through the local servers 102. The session tracking controllers implemented at the various local servers 102 also use this bingo game result information to maintain the session scores as will be described further below in connection with FIG. 7.

[0037] The session win information received as indicated at process block 505 in FIG. 5, is received from the session tracking controllers implemented at the local servers 102 in FIG. 1. This session win information may comprise simply some indication that a session prize has been won. The session award controller preferably implemented that central server 101 responds to this session win information by sending the appropriate prize information back to the local server as indicated at process block 506. The session prize information communicated at process block 506 may comprise simply the appropriate prize value for the session win. It may also be necessary for the session award controller to update the session prize values in response to the session win information received as indicated at process block 505. In any event, unless the system is being shut down as indicated at process block 507, the process loops back to collect game play requests for the next bingo game at block 501.

[0038] FIG. 6 shows one preferred process performed at player stations 103 in session bingo gaming system 100 shown in FIG. 1. After a player login as indicated at process block 601, the illustrated method includes displaying the current bingo game and session information at the player station as indicated at process block 602. Numerous variations are possible as to the manner in which current bingo game and current bingo game session information is displayed. An example display will be described below with reference to FIG. 9. Assuming the player does not log off as indicated by the outcome at decision block 603 in FIG. 6, the method proceeds to wait for a game play request to be entered at the player station as indicated at process block 604. Once a game play request is entered, the process includes updating the display at player station. In particular, the display will be updated to show the player's bingo cards placed in play according to the game play request and perhaps a wager level and other information associated with the game play request. In the process illustrated in FIG. 6, the failure of the player to enter the next bingo game available for the player's bingo game session will operate to terminate the player's bingo game session. Thus, if the player fails to enter the current game available in the session bingo gaming system as indicated by a negative outcome at decision block 605, the illustrated process branches to process block 607. As indicated at process block 607, the process includes receiving any session prize to which the player is then entitled according to their session score. The process then continues with another bingo game cycle beginning at process block 602. If the player has entered the current game as indicated by a positive outcome at decision block 605, the process proceeds to receive the result of the current bingo game as indicated at process block 606. The process shown at process block 606 also includes receiving any session prize to which the player is entitled based on their session score in the case that the current game is the final game of their then current bingo game session. After receiving the results of the current bingo game and any session prize for a session completed by the current bingo

game, the process loops back from process block 606 to begin another bingo game cycle at the player station beginning at process block 602.

[0039] As will be discussed below with reference to FIG. 7, preferred forms of the invention reset a player's bingo game session if they fail to enter the next available game offered in the session bingo gaming system. Also, once a session is complete in view of the player participating in some maximum number of bingo games for a given bingo game session, the player begins a new bingo game session. Thus, displaying the current bingo game session information as indicated at process block 602 in FIG. 6 may include showing a new session in which no session score is available and in which no bingo game results for the session are available. However where the player has already completed one or more bingo games for their bingo game session, displaying the current bingo game and bingo game session information in cases preferably includes displaying the outcome for each bingo game in the player's session, including an indication of any bingo game outcome that increases the player's session score.

[0040] Each game play request entered as indicated at process block 604 in FIG. 6 is associated with at least one bingo card representation that defines a bingo card having some arrangement of symbols or designations. The session bingo system shown in FIG. 1 may be played with standard 5-by-5 grid bingo cards, 3-by-3 grid bingo cards, cards comprising a single straight line of spots or card locations, or cards having some other arrangement of spots. Regardless of the nature of the bingo card played in the particular game, the card is represented by a data structure, and thus is described as a bingo card representation in the present disclosure. An example of the structure will be described below with reference to FIG. 8.

[0041] In the example session bingo gaming system 100 shown in FIG. 1, central server 101 may maintain a large set of bingo card representations available for use in the various bingo games conducted through the system. Subsets of these bingo card representations are preferably delivered periodically to the various local servers 102 and then the local servers 102 assign individual bingo card representations to each game play request entered through one of the local player stations 103. In any case, the bingo card representations assigned to the various game play requests are ultimately communicated to the bingo game controller implemented at central server 101 so that the central server may conduct the bingo game and identify the bingo winner or winners.

[0042] Making the card definition for a particular bingo card available to the component in the system that determines the results of play for the particular bingo card may be handled in a variety and different ways within the scope of the present invention. In one preferred form of the invention, each player station 103, each local server 102, and the central server 101 stores or has ready access to a bingo card definition file containing a large number of records each representing a particular bingo card and including a unique card identifier or index value. In this arrangement for storing card definitions, only the card identifier need be communicated between the system components in order for the

system components to have a definition for the respective card. A system component having the card identifier for a particular card may simply look up the identifier in the card definition file and read the card definition associated with the identifier.

[0043] Alternatively to including a card definition file at each player station **103**, each local server **102**, and central server **101**, the various components may communicate the actual card definitions. Communicating the actual card definitions obviates a requirement for storing card definition files at the various system components but requires that more data be communicated between the various system components.

[0044] FIG. 7 shows one preferred process performed by a session tracking controller according to the invention. In the illustrated process, once a player login is detected as indicated at process block **701** the method includes checking to see if there is any continuing session as indicated at decision block **702**. If there is no continuing session for the player having logged in as detected at process block **701**, the illustrated process includes adding a record to a current session summary table as indicated at process block **703**. As will be discussed below, this record in the current session summary table will be used to maintain the session score and other data regarding the respective session. For a positive outcome at decision block **702**, the process skips the step of adding a record to the current session summary table. If the next game for the given session has been entered as indicated by a positive outcome at process block **704**, process

above decision block **702** to begin the session tracking controller process for the next bingo game available to the player in the session bingo gaming system. In the event that the next game for the particular session being tracked by the process shown in FIG. 7 has not been entered as indicated by a negative outcome at decision block **704**, the process skips to process block **707** since the fact that the next game available for the session was not entered effectively completes the players current session in this preferred form of the invention. In the event, the player logs out as indicated by a positive result at decision in block **708**, the player station may simply go to an attract mode awaiting the next log in.

[0045] It should be noted that the process conducted as indicated in FIG. 7 is performed for every player logged in to the session bingo gaming system such as system **100** shown in FIG. 1 for each bingo game available to players in the session bingo gaming system. Thus, the process shown in FIG. 7 continuously maintains the session score for each bingo game session initiated in the session bingo gaming system and clears any completed or terminated sessions to make ready for the next current bingo game session initiated by the respective player.

[0046] In one preferred implementation of the invention, the current session summary table includes a record for each currently ongoing bingo gaming session being tracked by the session tracking controller. The following table shows one preferred content of each record in the current session summary table for one form of the invention.

Current Session Summary Table

Session Summary ID = a unique identifier for this respective session
 Session ID = a unique identifier for the player associated with this session
 Game Numbers Played = bingo game numbers played in this session
 Game Numbers Won = bingo game numbers won in this session
 Game Numbers Near Miss = bingo game numbers having a near miss in this session
 Number of Games Played = total number of bingo games played in this session
 Number of Games Won = total number of bingo games won in this session
 Number of Near Miss Games = total number of near miss bingo games in this session
 Session Score = current session score in this session
 Session Start Time = start time for this session

continues to collect data for the session and update the current session summary table as indicated at process block **705**. This data collected for the current session comprises data for a current bingo game the player has entered. If the session tracking controller determines the session is complete as indicated by a positive outcome at decision block **706**, the process continues on to check for a session win based on the current session score and predefined standards for session wins. This process of checking for any session win is indicated at process block **707**. The process at process block **707** also includes sending session win information to the session award controller (preferably at central server **101** in FIG. 1) in the event a session win is detected. Some preferred forms of the invention also include storing any completed session data in an appropriate archive and then clearing the record for that session from the current session summary table. After process block **707**, if the player has not logged out as indicated by a negative outcome at decision block **708**, the process loops back to the point immediately

[0047] This current session summary table is maintained together with a card game information table and a game summary identification table.

Card Game Information Table

Sales Transaction ID = unique identifier for purchase of bingo cards for a bingo game
 Card ID = unique identifier for the purchased card
 Session Summary ID = unique identifier for respective session for which the cards sold
 Game Summary ID = unique identifier for the bingo game for which the cards were sold

[0048]

Game Summary Identification Table

Game Summary ID = unique identifier for this respective table record
 Game Number = unique identifier for this respective bingo game
 Game Start Time = start time for this bingo game
 Quorum Start Time = start time for collecting game play requests for this bingo game
 End Game Time = end time for this bingo game
 Cards in Play = total number of bingo cards in play for this game
 Ball Draw Seed = value of ball draw seed for producing ball draw for this bingo game
 Number of Balls = total number of bingo designations used in game
 Number of Rounds = total number of winning card daub rounds required
 Remote Game Flag =

[0049] FIG. 8 shows an example data structure for defining bingo cards for use in the gaming system shown in FIG. 1. The data structure represents a file or card definition file 801 that includes a number of records 802, labeled record 0 through record X in the figure. The file may contain a very large number of card definitions, for example, three thousand or more records 802. Card definition file 801 will generally also include header information 804 that may include identifying information for the file and other data related to the card definition file. The first designation in each record (the designation in the leftmost column in FIG. 8) represents a card identifier or index that identifies the card face defined by the remainder of the record. The remainder of the record includes a list of designations representing the designations at the various spots on the card face.

[0050] It will be appreciated that the invention may use card definition data structures different from that shown for purposes of example in FIG. 8. For example, the identifier may be located at any location within the data structure and the spots may not be in the order indicated in FIG. 8, and may not be comma delimited.

[0051] FIG. 9 shows an example graphic display 900 that may be presented at a player station such as a station 103 shown in FIG. 1. This display is presented on a video display device such as video display device 305 shown in FIG. 3 in accordance with the step at process block 602 in FIG. 6. This example display 900 is divided into several distinct sections providing different information for the player. A central portion 901 of display 900 is reserved for displaying the bingo card or cards 902 the player has placed in play for the current bingo game conducted in the session bingo gaming system 100 shown in FIG. 1. This particular display assumes that the player may place a maximum of nine bingo cards 902 in play for a given bingo game, and that the player has entered the maximum number of bingo card representations. The appearance of the bingo cards 902 shown in display area 901 of FIG. 9 assumes that the current game is ongoing and thus some of the locations on the bingo cards are shown as being daubed or marked to indicate a match between the respective bingo card designation and a designation that has been called in the game.

[0052] It should be noted that the same display area 901 may be used for enabling a player to select bingo cards to place in play for the current bingo game during the current bingo game buy in period. For example, at the start of the buy in period nine new bingo card faces may be displayed in display area 901. These bingo cards are preferably dis-

played in some graphically muted fashion of some other fashion to indicate that the cards are not yet in play for the current bingo game. From this initial display, the player may touch the representation of the card on the touchscreen video display device once to purchase the respective card representation and put it in play, that is, enter it in the current bingo game. Touching the respective bingo card representation a second time may cause a new bingo card representation to appear in that place and this new card may either be placed in play with one touch or swapped out again with two touches. When a displayed bingo card face is placed in play in the current bingo game, it is preferably highlighted graphically to indicate to the player that it has been purchased and entered in the current bingo game.

[0053] The upper left corner of example display 900 shows a flash board 903 which indicates all of the bingo designations that are available to be called for the respective bingo game and all of the bingo designations that have been called for the current bingo game. The called designations are highlighted in this example. The area at the far left of display 900 includes additional information relating to the current game. In particular, the most recent number or designation called in the bingo game is displayed at 905 and a winning pattern for the current game is shown at 906. In one preferred form of the invention the area at 905 may also be controlled to show a countdown timer during the sales or buy in period for a given bingo game. Such a countdown timer lets the player know how long they have left to make a game play request for the current game, this is, enter at least one bingo card representation in the current bingo game. Other areas of example display 900 may alternatively be used for such a countdown timer for the sales/buy in period. "Pattern pays" window 907 will show the winning amount for the current bingo game when that amount becomes known to the system. In preferred forms of the invention, the amount paid for a given bingo game win is based on some percentage of the wagers made for the bingo game, and thus the amount is available only after sales are closed for the bingo game (since the buy in period is over for the state of example display 900, there should be a value in the "pattern pays" window, although this example does not show such a value). A "player paid" window 908 shows the amount the player is paid for a given bingo game, including any session prize that may be awarded after the current bingo game. The left-hand side of example display 900 also includes several touchscreen implemented virtual buttons which may be activated by player by touching the video screen on which display 900 is produced. In this particular

example, display **900** includes a “cash out” button **909** that allows the player to cash out from the player station, a “pick dauber” button **910** that invokes a customization interface to enable the player to customize certain aspects of display **900**, and “help” button **911** which may be invoked to show various help messages.

[0054] Areas along the top and right side of example display **900** show information relevant to the player’s current bingo game session in addition to other information. In particular, a session tracking display **915** shows a separate display **916** for each bingo game in the player’s current bingo game session. This example display is appropriate for situations in which the maximum number of games in a given bingo game session is 10. Each single game display **916** includes the game-winning pattern together with the number of points that have been awarded for the player’s session score as a result of the player participating in that particular game. In preferred forms of the invention any game in which the player is awarded points toward their session score is marked with an appropriate marking. For example, example display **900** shows that the player won the second bingo game in their bingo game session and was awarded four points toward their session score. The fact that the single game displays four bingo games completed indicates that the current bingo game for this particular player represents the fifth game in their current bingo game session. The total score for the player’s current bingo game session is shown at display area **918** together with an indication of the game number for the current game shown at **919**.

[0055] The right side of sample display **900** includes a window indicating the amount charged per bingo card entered in a bingo game conducted through the system. This amount is shown in the window **921** and comprises 25 cents per card in this example. A “total debt” window **922** shows the player’s total debt for the current bingo game (this window should show \$2.25 for the current game in which nine cards have been placed in play). “Balance” window **923** shows the player’s current balance in the gaming system. The “bet all” touchscreen implemented button **924** allows a player to enter the maximum bet for a given bingo game, entering all nine card faces displayed when the button is invoked. This bet all feature provides an alternative to the individual card picking arrangement described above. The virtual “Daub” button **925** enables the player to daub their bingo cards in the current bingo game to claim a win. As discussed above, one or more, inputs may be required under the applicable bingo game rules of play.

[0056] Example display **900** shows three different session bonus prize levels that are available to the player. These three session prize levels are preferably progressive prizes that are updated periodically based on some percentage of the total wagers placed in the gaming system since the last session win at that level. Typically such a progressive prize will start out with some seed value. Example display **900** shows a highest session prize level in window **927**. This bonus prize is awarded when the player achieves a total session score of 75 or more points for the given bingo game session. A second session prize level is shown in window **928**. This session prize level is awarded when a player achieves a total session score of between 50 points and 74 points in a given bingo game session. The lowest session prize level is shown in window **929**. This session prize level

is awarded to any player achieving a session score of between 25 points and 49 points for a given bingo game session.

[0057] It will be appreciated that systems using general purpose processing devices to implement and control the functions of the player stations, session tracking controller, bingo game controller, and other controllers included in the session bingo gaming system will include operational program code to direct the general purpose processors to perform the required functions. Thus, the invention encompasses program products. In particular, the invention includes session tracking program code and session award program code. The session tracking program code is executable for maintaining the session score for each of a number of bingo game sessions. As discussed above each bingo game session is uniquely associated with a respective player, with a number of respective bingo games entered by the respective player, and also with an outcome for the respective player for each bingo game associated with the bingo game session. The session tracking program code is also preferably executable for resetting the bingo game session for a player in the event the player fails to enter one of a number of consecutive bingo games. The session award program code is executable for awarding a session prize for each bingo game session having a session score that meets a predetermined prize winning session score. This session prize is awarded to the player uniquely associated with the respective bingo game session.

[0058] It should be noted that the invention is not limited to any particular scoring scheme for producing session scores or to any scheme for identifying the prize level session scores. In one preferred form of the invention, points are awarded to a player for winning a bingo game, a lesser number of points are awarded to players achieving a near miss for a bingo game. A near miss may be defined as the winning pattern less one spot achieved on the first fifteen bingo designations called for the given game. However, the invention is by no means limited to this scoring arrangement.

[0059] A program product according to the invention may also include bingo engine program code which is executable to conduct the bingo games in the system. Player station program code executable at a player station to enable a respective player to enter a game play request for a respective bingo game. This player station program code is also preferably executable for directing a display device to display a respective session display at the player station. Similarly to example display **900**, this display preferably shows the respective player’s session score for the player’s current bingo game session.

[0060] As used herein, whether in the above description or the following claims, the terms “comprising,” “including,” “carrying,” “having,” “containing,” “involving,” and the like are to be understood to be open-ended, that is, to mean including but not limited to. Only the transitional phrases “consisting of” and “consisting essentially of,” respectively, shall be closed or semi-closed transitional phrases, as set forth, with respect to claims, in the United States Patent Office Manual of Patent Examining Procedures (Eighth Edition, August 2001 as revised May 2004), Section 2111.03.

[0061] Use of ordinal terms such as “first,” “second,” “third,” etc., in the claims to modify a claim element does

not by itself connote any priority, precedence, or order of one claim element over another or the temporal order in which acts of a method are performed. Rather, unless otherwise stated, ordinal terms are merely as labels to distinguish one claim element having a certain name from another element having a same name (but for use of the ordinal term).

[0062] The above described preferred embodiments are intended to illustrate the principles of the invention, but not to limit the scope of the invention. Various other embodiments and modifications to these preferred embodiments may be made by those skilled in the art without departing from the scope of the present invention.

1. A method including:

- (a) conducting a number of bingo games;
- (b) enabling each of a number of players across a network to initiate a respective bingo game session by entering respective bingo games in the number of bingo games, each bingo game session being associated with a respective player, a number of respective bingo games entered by the respective player, and an outcome for the respective player for each bingo game entered by the respective player;
- (c) maintaining a session score for each bingo game session, the session score for the respective bingo game session being based upon the outcomes associated with the respective bingo game session; and
- (d) awarding a session prize for each bingo game session in which the respective session score meets a predetermined prize winning session score, the session prize being awarded to the respective player associated with the respective bingo game session.

2. The method of claim 1 wherein each respective bingo game session includes two or more consecutive bingo games in the number of bingo games.

3. The method of claim 1 including assigning a respective numerical value to each bingo game outcome for the respective player and wherein the session score for the respective bingo game session comprises a total of the respective numerical values.

4. The method of claim 1 further including defining two or more different session prize levels, each respective session prize level being associated with a respective predetermined session prize level score and wherein awarding the session prize includes awarding the session prize at one of the session prize levels.

5. The method of claim 1 further including displaying to each respective player a respective session display, the respective session display showing the respective player's session score for the player's current bingo game session.

6. The method of claim 5 wherein the respective session display also shows each bingo game outcome for the respective player's current bingo game session.

7. The method of claim 1 further including awarding a must go prize to a winning player for each respective bingo game.

8. The method of claim 1 further including resetting the bingo game session for a player in the event the player fails to enter one of a number of consecutive bingo games included in the number of bingo games.

9. An apparatus including:

- (a) a number of player stations, each player station including player controls that are operable to enable a player to enter a bingo game play request;
- (b) a bingo game controller operatively connected for communications with each of the number of player stations, the bingo game controller for conducting a number of bingo games based upon game play requests entered through the player stations;
- (c) a session tracking controller for maintaining a session score for each of a number of bingo game sessions, each bingo game session being initiated by a respective player through one of the player stations, each bingo game session being associated with a number of respective bingo games for which the respective player entered respective game play requests, and also being associated with an outcome for the respective player for each bingo game associated with the respective bingo game session; and
- (d) a session award controller for awarding a session prize for each bingo game session in which the respective session score meets a predetermined prize winning session score, the session prize being awarded to the player initiating the respective bingo game session.

10. The apparatus of claim 9 wherein each respective bingo game session includes two or more consecutive bingo games in the number of bingo games.

11. The apparatus of claim 9 wherein the session tracking controller is also for assigning a respective numerical value to each bingo game outcome for the respective player and wherein the session score for a respective bingo game session comprises a total of the respective numerical values.

12. The apparatus of claim 9 wherein the session prize controller maintains two or more different session prize levels, each respective session prize level being associated with a respective predetermined session prize level score, and wherein the session prize controller awards the session prize at one of the session prize levels.

13. The apparatus of claim 9 wherein each player station includes a display device for displaying a respective session display to a respective player at the player station, the respective session display showing the respective player's session score for the player's current bingo game session.

14. The apparatus of claim 13 wherein the respective session display also shows each bingo game outcome for the respective player's current bingo game session.

15. The apparatus of claim 9 wherein the session tracking controller is also for resetting the bingo game session for a player in the event the player fails to enter one of a number of consecutive bingo games included in the number of bingo games.

16. A program product stored on one or more computer readable devices, the program product including:

- (a) session tracking program code being executable for maintaining a session score for each of a number of bingo game sessions, each bingo game session being uniquely associated with a respective player, each bingo game session being associated with a number of respective bingo games for which the respective player

entered respective game play requests, and also being associated with an outcome for the respective player for each bingo game associated with the respective bingo game session; and

- (b) session award program code being executable for awarding a session prize for each bingo game session having a respective session score that meets a predetermined prize winning session score, the session prize being awarded to the player uniquely associated with the respective bingo game session.

17. The program product of claim 16 further including player station program code executable at a player station to enable a respective player to enter a game play request for a respective bingo game.

18. The program product of claim 17 further including bingo engine program code executable to conduct a number of bingo games.

19. The program product of claim 17 wherein the player station program code is also executable for directing a display device to display a respective session display to a respective player at the player station, the respective session display showing the respective player's session score for the player's current bingo game session.

20. The program product of claim 16 wherein the session tracking program code is also executable for resetting the bingo game session for a player in the event the player fails to enter one of a number of consecutive bingo games.

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