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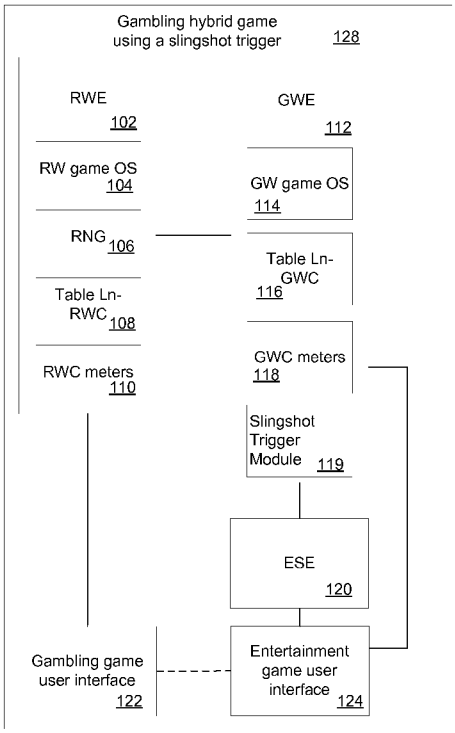

Figure 1

(57) Abstract: Systems and methods for a gambling hybrid game that provides an object launching game in which a player uses a launching device to select a trajectory and speed at which to launch a game object at a target as an entertainment game are disclosed. The entertainment engine provides the game in which a player users a launching device to launch a game object at a selected speed and trajectory towards a target and determines the results of the launch. The status of the game play are provided a game world engine that determines when gambling events should be provided based on the status of game play and a real world engine resolves the gambling event and associated wagers.

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SYSTEMS AND METHODS FOR A HYBRID ENTERTAINMENT AND GAMBLING GAME USING A SLINGSHOT TRIGGER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The current application claims priority to US Provisional Application No. 61/749,480, filed January 7, 2013, the disclosure of which is incorporated herein by reference as if set forth herewith.

FIELD OF THE INVENTION

[0002] Embodiments of the present invention are generally related to gaming and more specifically to systems and processes that provide a gambling hybrid game in which an object launching game is provided as an entertainment game and gambling events are triggered by game events during play of the object launching game.

BACKGROUND

[0003] The gaming machine manufacturing industry provides a variety of gaming machines to enable wagering for interested parties whilst providing an entertainment experience. An exemplary gaming machine is a slot machine. As the demographic of eligible players has shifted with time to newer generations who have grown accustomed to highly sophisticated graphics and interactive video games, a need has arisen to increase the entertainment content present on a gaming machine to keep it relevant, at least to a growing portion of a casino's patronage. The subject design is a form of gaming machine, designed for use in a physical or virtual casino environment, which provides players an environment in which to play for cash, prizes and points, either against the casino or in head to head modes in a controlled and regulated manner while being allowed to use their skills and adeptness at a particular type of game. An example of such a game would be a challenging word spelling game, or an interactive action game such as is found on video game consoles popular today, such as a PlayStation®, an Xbox®, a Wii® or a PC based.

SUMMARY OF THE INVENTION

[0004] Systems and methods in accordance with embodiments of the invention provide a gambling hybrid game on a computing device with an object launching game as the entertainment game. In an object launching game, a player uses an object launching device, such slingshot like device, to launch game objects at a selected trajectory and speed toward game targets and receives points based upon the results of the impact of the game object with the targets. In accordance with embodiments of the invention, the gambling hybrid game includes an entertainment engine, a game world engine, and a real world engine. The entertainment engine is constructed to execute an entertainment game. The game world engine is constructed to manage the entertainment game and the real world engine is constructed to resolve gambling events in the gambling hybrid game. In accordance with some of these embodiments, a gambling hybrid game having an object launching game as the entertainment game is provided in the following manner. The entertainment engine receives an input from the player indicating a launch of a game object at a particular speed and trajectory from the launching device in the entertainment game. The entertainment engine determines a result of the launch of the game object in the entertainment game and generates status updates regarding play of the object launching game.

[0005] The status updates of the play of the object launching game are provided by the entertainment engine to the game world engine. The game world engine determines whether a gambling event is to occur based upon the status update from the entertainment engine and requests the gambling event be resolved by the real world engine when the gambling event occurs. The real world engine determines a result of the gambling event and a wager associated with the gambling event.

[0006] In accordance with some embodiments of the invention, the game world engine receives the result of the gambling event from the real world engine and determines an amount of an intermediate value item to award the player based on the result of the gambling event using the game world engine. In accordance with some of these embodiments, the game world engine uses the status update along with the result of the gambling event to determine the amount of an intermediate value item to award. In accordance with still further of these embodiments, the game world engine provides an indeterminate game resource that a player may acquire with the intermediate value

item using the game world engine. The game world engine also receives a request from the player to acquire the indeterminate game resource in the game world engine. In response to the request, the game world engine deducts the amount of the intermediate value item from an intermediate value item account of the player and provides an update of the indeterminate game resource from the game world engine to the entertainment engine for use in the game.

[0007] In accordance with some embodiments of the invention, the game world engine receives the result of the gambling event from the real world engine and determines an amount of game world currency to provide to the player based on the result of gambling event. In accordance with some of these embodiments, the game world engine provides an indeterminate game resource that a player may acquire with the intermediate value item from the game world engine. The game world engine receives a request from the player to acquire the indeterminate game resource. In response to the request, the game world engine deducts the amount of the intermediate value item from an intermediate value item account of the player and provides an update of the indeterminate game resource to the entertainment engine for use in the object launching game.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 illustrates a conceptual diagram of components of a gambling hybrid game in accordance with an embodiment of the invention.

[0009] FIG. 2 illustrates a conceptual diagram of aspects of a Real World Engine (RWE) of a gambling hybrid game in accordance with some embodiments of the invention.

[0010] FIG. 3 illustrates a conceptual diagram of aspects of a Real World Engine of a gambling hybrid game in accordance with some other embodiments of the invention.

[0011] FIG. 4 illustrates a signaling diagram of communications between a Real World Engine (RWE) and an external system to provide various functions in accordance with embodiments of the invention.

[0012] FIG. 5 illustrates a conceptual diagram of a process flow and signaling in a RWE to provide various functions in accordance with embodiments of the invention.

[0013] FIG. 6 illustrates a conceptual diagram of aspects of an Entertainment System Engine in accordance with embodiments of the invention.

[0014] FIG. 7 illustrates a conceptual diagram of interactions between a user and a gambling hybrid game in accordance with embodiments of the invention.

[0015] FIG. 8 illustrates a conceptual diagram that illustrates the interplay between aspects of a gambling hybrid game in accordance with some embodiments of the invention using Real World Currency (RC).

[0016] FIG. 9 illustrates a conceptual diagram that illustrates the interplay between aspects of a gambling hybrid game in accordance with other embodiments of the invention using Virtual Real World Currency (VRC).

[0017] FIG. 10 illustrates a system diagram of an implementation of a network based gambling hybrid game in accordance with another embodiment of the invention.

[0018] FIG. 11 illustrates a system diagram of an implementation of an Internet based gambling hybrid game in accordance with an embodiment of the invention.

[0019] FIG. 12 illustrates a system diagram of an implementation of a cloud based gambling hybrid game in accordance with embodiments of the invention.

[0020] FIG. 13 illustrates a block diagram of components of a device implementing a gambling hybrid game in accordance with an embodiment of the invention.

[0022] FIG. 14 illustrates a flow diagram of a process performed by a gambling hybrid game to provide an object launching game as an entertainment game in accordance with embodiments of the invention.

[0023] FIG. 15 illustrates a flow diagram of a process performed by a gambling hybrid game to provide an object launching game in which an intermediate value item is awarded from the results of game play and gambling events in the game in accordance with embodiments of the invention.

[0024] FIG. 16 illustrates a front view of a mobile device providing a gambling hybrid game with an object launching game as an entertainment game in accordance with embodiments of the invention.

[0025] FIG. 17 illustrates a conceptual diagram of actions that occur in a gambling hybrid game that has an object launching game as an entertainment game in accordance with embodiments of the invention.

[0026] FIG. 18 illustrates a conceptual diagram of a process for awarding a player for based on a gambling event and game play in a gambling hybrid game having an object launching game as an entertainment game in accordance with embodiments of the invention.

DETAILED DISCLOSURE OF THE INVENTION

[0027] Turning now to the drawings, systems and methods for providing an object launching game as an entertainment game of a gambling hybrid game in accordance with some embodiments of the invention are illustrated. In accordance with many embodiments of the invention, a gambling hybrid game (HyG) provides an object launching game as an entertainment game that allows players the opportunity to play the object launching game, with the addition of a gambling element based on game play. For purposes of this discussion, an object launching game is a game in which a player uses an object launcher to select the speed and trajectory at which to launch an object towards a target. One example of an object launching game is slingshot trigger game. A slingshot trigger game is a puzzle game in which a player uses a slingshot like device to launch a game object at a target or set of targets and receives points for the damage inflicted to the targets. A sling shot like device includes but is not limited to a slingshot, a catapult, or a bow. A popular example of a slingshot trigger game is the Angry Birds® game. The outcome of the gambling element may be based solely on the outcome of an RNG based gaming module. In accordance with many of these embodiments, the gambling hybrid game offers an enriched gaming experience, based on game play of the object launching game which through the game world engine (GWE) of the gambling hybrid game triggers real world gambling events via the real world engine (RWE).

HYBRID GAMING SYSTEMS

[0028] In accordance with many embodiments of the invention, a gambling hybrid game integrates high-levels of entertainment content with a game of skill (entertainment game) and a gambling experience with a game of chance (gambling game). A gambling hybrid game provides for random outcomes independent of player skill while

providing that the user's gaming experience (as measured by obstacles/challenges encountered, time of play and other factors) is shaped by the player's skill. The outcome of a gambling proposition that is determined by a Random Number Generator (RNG) or other such device that provides a random outcome in response to a request. In accordance with some embodiments, the wager game may be initiated in response to a game object related player action. A gambling hybrid game in accordance with an embodiment of the invention is illustrated in FIG. 1. The gambling hybrid game 128 includes a Real World Engine (RWE) 102, a Game World Engine (GWE) 112, an Entertainment System Engine (ESE) 120, a gambling game user interface 122 and an entertainment game user interface 124. The two user interfaces can be part of the same user interface but are separate in the illustrated embodiment. The RWE 102 is connected with the GWE 112 and the gambling game user interface 122. The ESE 120 is connected with the GWE 112 and the entertainment game user interface 124. The GWE 112 is connected also with the entertainment game user interface 124.

[0029] In accordance with several embodiments, the RWE 102 is the operating system for the gambling game of the gambling hybrid game128 and controls and operates the gambling game. The operation of a gambling game is enabled by Real World Currency (RC), such as money or other real world funds. A gambling game can increase or decrease an amount of RC based on random gambling outcomes, where the gambling proposition of a gambling game is typically regulated by gaming control bodies. In many embodiments, the RWE includes a Real World (RW) operating system (OS) 104, RNG 106, level n real-world credit pay tables (table Ln-RC) 108, RC meters 110 and other software constructs that enable a game of chance to offer a fair and transparent gambling proposition, and to contain the auditable systems and functions that can enable the game to obtain gaming regulatory body approval.

[0030] A random number generator (RNG) 106 includes software and/or hardware algorithms and/or processes, which are used to generate random outcomes. A level n real-world credit pay table (table Ln-RC) 108 is a table that can be used in conjunction with a random number generator (RNG) 106 to dictate the RC earned as a function of sponsored gameplay and is analogous to the pay tables used in a conventional slot machine. Table Ln-RC payouts are independent of player skill. There can be one table

or multiple tables included in Ln-RC pay tables 108 contained in a gambling game, the selection of which can be determined by factors including (but not limited to) game progress that a player has earned, and/or bonus rounds for which a player can be eligible. RCs are credits analogous to slot machine game credits, which are entered into a gambling game by the user, either in the form of money such as hard currency or electronic funds. RCs can be decremented or augmented based on the outcome of a random number generator according to the table Ln-RC real world credits pay table 108, independent of player skill. In certain embodiments, an amount of RC can be used as criteria in order to enter higher ESE game levels. RC can be carried forward to higher game levels or paid out if a cash out is opted for by a player. The amount of RC used to enter a specific level of the game level n need not be the same for each level.

[0031] In accordance with some embodiments of the invention, the GWE 112 manages the overall gambling hybrid game operation, with the RWE 102 and the ESE 120 effectively being support units to the GWE 112. In accordance with some of these embodiments, the GWE 112 contains mechanical, electronic, and software systems for an entertainment game. The GWE 112 includes an operating system (OS) 114 that provides control of the entertainment game. The GWE additionally contains a level n game world credit pay table (table Ln-GWC) 116 from where to take input from this table to affect the play of the entertainment game. The GWE 112 can further couple to the RWE 102 to determine the amount of RC available on the game and other metrics of wagering on the gambling game (and potentially affect the amount of RC in play on the RWE). The GWE additionally contains various audit logs and activity meters (such as the GWC meter) 118. The slingshot trigger module 119 also resides within the GWE 112 The GWE 112 can also couple to a centralized server for exchanging various data related to the player and their activities on the game. The GWE 112 furthermore couples to the ESE 120.

[0032] In accordance with some embodiments, a level n game world credit pay table (Table Ln-GWC) 116 dictates the Game World Credit (GWC) earned as a function of player skill in the nth level of the game. The payouts governed by this table are dependent upon player skill and sponsored gameplay at large and can or cannot be coupled to a RNG. In accordance with some embodiments, GWCs are player points

earned or depleted as a function of player skill, specifically as a function of player performance in the context of the game. GWC is analogous to the score in a typical video game. Each entertainment game has one or more scoring criterion, embedded within the table Ln-GWC 116 that reflects player performance against the goal(s) of the game. GWCs can be carried forward from one level of sponsored gameplay to another, and ultimately paid out in various manners such as directly in cash, or indirectly such as by earning entrance into a sweepstakes drawing, or earning participation in, or victory in, a tournament with prizes. GWCs can be stored on a player tracking card or in a network-based player tracking system, where the GWCs are attributed to a specific player.

[0033] In accordance with certain embodiments, the operation of the GWE does not affect the RWE's gambling operation except for player choice parameters that are allowable in slot machines, including but not limited to, wager terms such as, but not limited to, a wager amount, how fast the player wants to play (by pressing a button or pulling the handle of a slot machine), and/or agreement to wager into a bonus round. In this sense, the RWE 102 provides a fair and transparent, non-skill based gambling proposition co-processor to the GWE 112. In the illustrated embodiment, the communication link shown between the GWE 112 and the RWE 102 allows the GWE 112 to obtain information from the RWE 102 as to the amount of RC available in the gambling game. The communication link can also convey a status operation of the RWE (such as on-line or tilt). The communication link can further communicate the various gambling control factors which the RWE 102 uses as input, such as the number of RC consumed per game or the player's election to enter a jackpot round. In FIG. 1, the GWE 112 is also shown as connecting to the player's user interface directly, as this can be utilized to communicate certain entertainment game club points, player status, control the selection of choices and messages which a player can find useful in order to adjust the entertainment game experience or understand their gambling status in the RWE 102.

[0034] In accordance with various embodiments of the invention, the ESE 120 manages and controls the visual, audio, and player control for the entertainment game. In accordance with certain embodiments, the ESE 120 accepts input from a player

through a set of hand controls, and/or head, gesture, and/or eye tracking systems and outputs video, audio and/or other sensory output to a user interface. In accordance with many embodiments, the ESE 120 can exchange data with and accept control information from the GWE 112. In accordance with some of these embodiments, an ESE 120 can be implemented using a personal computer (PC), a Sony PlayStation® (a video game console developed by Sony Computer Entertainment of Tokyo Japan), or Microsoft Xbox® (a video game console developed by Microsoft Corporation of Redmond, Washington) running a specific entertainment game software program. In accordance with some of these embodiments, ESE 120 can be an electromechanical game system of a draw certificate based gambling hybrid game that is an electromechanical hybrid game. An electromechanical hybrid game executes an electromechanical game for player entertainment. The electromechanical game can be any game that utilizes both mechanical and electrical components, where the game operates as a combination of mechanical motions performed by at least one player or the electromechanical game itself. Various electromechanical hybrid games are discussed in Patent Cooperation Treaty Application No. PCT/US12/58156, filed September 29, 2012, the contents of which are hereby incorporated by reference in their entirety.

[0035] The ESE 120 operates mostly independently from the GWE 112, except that via the interface, the GWE 112 can send certain entertainment game control parameters and elements to the ESE 120 to affect its play, such as (but not limited to) what level of character to be using, changing the difficulty level of the game, changing the type of gun or car in use, and/or requesting potions to become available or to be found by the character. These game control parameters and elements can be based on a gambling outcome of a gambling game that was triggered by an element in the entertainment game being acted upon by the player. The ESE 120 can accept this input from the GWE 112, make adjustments, and continue entertainment game gameplay all the while running seamlessly from the player's perspective. The ESE's operation is mostly skill based, except for where the ESE's processes can inject complexities into the game by chance in its normal operation to create unpredictability in the entertainment game. Utilizing this interface, the ESE 120 can also communicate

player choices made in the game to the GWE 112, such as but not limited to selection of a different gun, and/or the player picking up a special potion in the GW environment. The GWE's function in this architecture, being interfaced with the ESE 120, is to allow the transparent coupling of entertainment software to a fair and transparent random chance gambling game, providing a seamless perspective to the player that they are playing a typical popular entertainment game (which is skill based). In accordance with certain embodiments, the ESE 120 can be used to enable a wide range of entertainment games including but not limited to popular titles from arcade and home video games, such as but not limited to Gears of War (a third person shooter game developed by Epic Games of Cary, North Carolina), Time Crisis (a shooter arcade game developed by Namco Ltd of Tokyo, Japan), or Madden Football (an American football video game developed by EA Tiburon of Maitland, Florida). Providers of such software can provide the previously described interface by which the GWE 120 can request amendments to the operation of the ESE software in order to provide seamless and sensible operation as both a gambling game and an entertainment game.

[0036] In accordance with some embodiments, the RWE 102 can accept a trigger to run a gambling game in response to actions taken by the player in the entertainment game as conveyed by the ESE 120 to the GWE 112, or as triggered by the GWE 112 based on its algorithms, background to the overall game from the player's perspective, but can provide information to the GWE 112 to expose the player to certain aspects of the gambling game, such as (but not limited to) odds, amount of RC in play, and amount of RC available. The RWE 102 can accept modifications in the amount of RC wagered on each individual gambling try, or the number of gambling games per minute the RWE 102 can execute, entrance into a bonus round, and other factors, all the while these factors can take a different form than that of a typical slot machine. An example of a varying wager amount that the player can choose can include, but is not limited to, gameplay with a more powerful character, a more powerful gun, or a better car. These choices can increase or decrease the amount wagered per individual gambling game, in the same manner that a standard slot machine player can decide to wager more or less credits for each pull of the handle. In accordance with some of these embodiments, the RWE 102 can communicate a number of factors back and forth to the GWE 112, via an

interface, such increase/decrease in wager being a function of the player's decision making as to their operational profile in the entertainment game (such as but not limited to the power of the character, gun selection or car choice). In this manner, the player is always in control of the per game wager amount, with the choice mapping to some parameter or component that is applicable to the entertainment game experience of the hybrid game. In accordance with a particular embodiment, the RWE 102 operation can be a game of chance as a gambling game running every 10 seconds where the amount wagered is communicated from the GWE 112 as a function of choices the player makes in the operation profile in the entertainment game.

[0037] In many embodiments, a gambling hybrid game integrates a video game style gambling machine, where the gambling game (including an RWE 102 and RC) is not player skill based, while at the same time allows players to use their skills to earn club points which a casino operator can translate to rewards, tournament opportunities and prizes for the players. The actual exchange of monetary funds earned or lost directly from gambling against a game of chance in a gambling game, such as a slot machine, is preserved. At the same time, a rich environment of rewards to stimulate gamers can be established with the entertainment game. In accordance with some of these embodiments, the gambling hybrid game can leverage very popular titles with gamers and provides a sea change environment for casinos to attract players with games that are more akin to the type of entertainment that a younger generation desires. In accordance with various embodiments, players can use their skill towards building and banking GWC that in turn can be used to win tournaments and various prizes as a function of their gamer prowess. Numerous embodiments minimize the underlying changes needed to the aforementioned entertainment software for the hybrid game to operate within an entertainment game construct, thus making a plethora of complex game titles and environments, rapid and inexpensive to deploy in a gambling environment.

[0038] In accordance with some embodiments, gambling hybrid games also allow players to gain entry into subsequent competitions through the accumulation of game world credits (GWC) as a function of the user's demonstrated skill at the game. These competitions can pit individual players or groups of players against one another and/or

against the casino to win prizes based upon a combination of chance and skill. These competitions can be either asynchronous events, whereby players participate at a time and/or place of their choosing, or they can be synchronized events, whereby players participate at a specific time and/or venue.

[0039] In accordance with some embodiments, one or more players engage in playing an entertainment game, resident in the ESE, the outcomes of which are dependent at least in part on skill. The gambling hybrid game can include an entertainment game that includes head to head play between a single player and the computer, between two or more players against one another, or multiple players playing against the computer and/or each other, as well as the process by which players bet on the outcome of the entertainment game. The entertainment game can also be a game where the player is not playing against the computer or any other player, such as in games where the player is effectively playing against himself or herself (such as but not limited to Solitaire and Babette).

[0040] The components provided by the RWE for a gambling hybrid game in accordance with embodiments of the invention are shown in FIG. 2. In accordance with embodiments of the invention, the RWE includes an internal bus 225 that connects an operating system OS 221, a Random Number Generator ("RNG") 220, one or more pay tables (Table Ln-RC) 223 which would control the functions of the RWE, a Random Number Generator ("RNG") 220 to produce random numbers, one or more pay tables (Table Ln-RC) 223, a wagering control module 222, an authorization access module 224, and a RC credit meter 226 that are included in the RWE 204. The RW OS 221 controls the functions of the RWE. The RNG 220 includes one or more RNGs that are used to produce random numbers for use in resolving gambling events and other process requiring a random number to determine an outcome. The one or more pay tables (Table Ln-RC) 223 contain a plurality of factors indexed by the random number to be multiplied with the RC wagered to determine the payout on a successful wager. A wagering control module 222 performs the processes to resolve a wager on a proposition of a gambling event. The resolution process includes, but is not limited to, pulling random numbers, looking up factors in Pay Tables, multiplying the factors by the amount of RC wagered, and administering a RC credit meter 226. A repository (a credit

meter) 926 maintains a record of the amount of RC which player has deposited in the game and has been accumulated by the player.

[0041] An external connection allows the RWE 204 to interface to another system or device, which is shown in FIG. 2 as the internet 205 but may be any other network and/or device. The authorization access module 224 of RWE 204 is connected to the external connection and provides a method to permit access and command exchange between an external system and the RWE 904. The RWE 904 also contains storage for statuses, wagers, wager outcomes, meters and other historical events in a storage device 116.

[0042] In some embodiments, the RWE communicates with external systems to provide various functions of a gambling hybrid game in accordance with embodiments of the invention. The components of an RWE that communicate with an external system to provide a component of the RWE in accordance with embodiments of the invention are shown in FIG 3. The RWE 204 shown in FIG.3 is similar to the RWE shown in FIG. 2. However, the RNG 220 which is an external system connected to the RWE 204 by the internet 905 in accordance with embodiments of the invention. The RNG 220 could be a central deterministic system, such as a regulated and controlled random numbered ball selection device, or some other system which provides random or pseudo random numbers to one or a plurality of connected RWEs 204. One skilled in the art will recognize that only RNG 220 is an external system in the shown embodiments. However, any of the components could be external systems without departing from the invention and RNG 220 is shown as an example only.

[0043] In FIGS. 2 and 3, the RWE 204 interfaces with other systems/devices or to an external RNG 220 using the Internet 205. However, one skilled in the art will note that nothing would preclude using a different interface than the internet 205 in other embodiments of the invention. Other examples of interfaces include, but are not limited to, a LAN, a USB interface, or some other method by which two electronic and software constructs could communicate with each other.

[0044] The RWE and an external system typically communicate to provide the resolution of gambling events to resolve wagers on the events. The signals between the RWE and an external system to provide some process related to resolving gambling

events in accordance with embodiments of the invention are shown in FIG. 4. In accordance with embodiments of the invention, the primary function of the RWE 204 is to manage wagering events and to provide random (or pseudo random) numbers from an RNG. At the top of the figure, a 6 component communication exchange grouped by the "1" box is shown for a wager on a proposition in a gambling event during a gambling hybrid game in accordance with embodiments of the invention. An external system 450 that is requesting wagering support from the RWE 204 instructs the RWE 204 as to the pay table (Table Ln-RC) to use (410), followed by the amount of RC to wager on the proposition of the gambling event (412). Next, the external system 450 signals the RWE to trigger a wager or perform the gambling event (414). The RWE 204 resolves the gambling event. The RWE 204 then informs external system 450 as to the outcome of the wager (416), the amount of RC won (418), and the amount of RC in the player's account (in the credit repository) (420).

[0045] A second communication exchange between the RWE 204 and an external system 450 in accordance with embodiments of the invention that is shown in FIG. 4 is grouped by the "2" box in FIG. 4 and relates to the external system 450 needing an RNG result support from the RWE 204. In this exchange, the external system 450 requests an RNG result from the RWE 204 (430). The RWE 204 returns an RNG result to the external 450 in response to the request (432). The result may be generated as a function of the internal RNG in the RWE 204, or from an RNG external to the RWE 204 to which the RWE 204 is connected.

[0046] A third communication exchange between the RWE 204 and the external system 405 in accordance with embodiments of the invention that is shown in FIG. 4 is grouped by the "3" box in the figure and relates to the external system 450 wanting support on coupling an RNG result to a particular Pay Table contained in the RWE 204. In this exchange, the external system 450 instructs the RWE as to the pay table (Table Ln-RC) to use 450. The external system then requests a result whereby the RNG result is coupled to the requested Pay Table (442). The result is returned to the external system 405 by RWE 204 (444). Such an aspect is different from the first exchange shown by the box"1" sequence in that no actual RC wager is conducted. However, such a process t might be useful in coupling certain non-RC wagering entertainment

game behaviors and propositions to the same final resultant wagering return which is understood for the gambling hybrid game to conduct wagering.

[0047] In regards to FIG. 4, one skilled in the art will note that the thrust of the FIG. 4 is to convey overall functional exchanges between an RWE 204 and an external system 450. As such, various protocol layers necessary for error free and secure communication, and other status, setup, and configuration commands which one might expect in any protocol between two connected systems have been omitted for clarity. Furthermore, some or all of the various commands and responses illustrated could be combined into one or more communication packets without departing from the invention.

[0048] The process flow for functional communication exchanges, such as communication exchanges described above with reference to FIG. 4, between a RWE and an external system in accordance with embodiments of the invention are shown in FIG. 5. The process begins by a RWE 204 receiving signals from an external system requesting a connection to RWE 204. The Access Authorization Module determines that the external system authorized to connect to RWE 204 (504) and transmits an authorization response to the external system. The external systems that provide requests a request for a gambling event is to be performed to RWE 294 (506). The request may include an indication of a wager amount on a proposition in the gambling event, and a proper pay table to use to resolve the wager. The external system then sends a signal to trigger the gambling event (508).

[0049] The OS 221 instructs the Wager Control Module 222 as to the RC wager and the Pay Table to select as well as to resolve the wager execute (510). In response to the request to execute the gambling event, the wager control module 222 requests an RNG result from the RNG 220 (512); retrieves a proper pay table or tables from the pay tables 223 (514); adjusts the RC of the player in the RC repository 926 as instructed (516; applies the RNG result to the particular pay table or tables (518); and multiplies the resultant factor from the Pay Table by the amount of RC to determine the result of the wager (518). Wager Control Module 222 then adds the amount of RC won by the wager to the RC repository 426 (520); and provides he outcome of the wager, and the amount of RC in the RWE and the RC won (522). One skilled in the art will recognize

that there may be many embodiments of an RWE 204 which could be possible, including forms where many modules and components of the RWE are located in various servers and locations, so the foregoing is not meant to be exhaustive or all inclusive, but rather provide information about an RWE 204 in accordance with some embodiments of the invention.

[0050] A block diagram of components an ESE being provided by an ESE host for a gambling hybrid game in accordance with embodiments of the invention are shown in FIG. 6. An ESE 610 may be part of the entertainment game itself, may be a software module that is executed by the entertainment game, or may provide an execution environment for the entertainment game for a particular host. The ESE 610 and associated entertainment game are hosted by an ESE host 600. The ESE host 600 is a computing device that is capable of hosting the ESE 610 and the entertainment game. Exemplary hosts include video game consoles, smart phones, personal computers, tablet computers, or the like. The entertainment game includes a game engine 612 that generates a player interface 605 for interaction with by a player. The player interface includes a player presentation 635 that is presented to a player through the player interface. The player presentation 635 may be audio, visual or tactile, or any combination of such. The player interface 635 further includes one or more Human Input Devices (HIDs) 630 that the player uses to interact with the entertainment game. Various components or sub-engines of the game engine read data from a game state in order to implement the features of the game. Components of the game engine include a physics engine 640 used to simulate physical interactions between virtual objects in the game state, a rules engine 645 for implementing the rules of the game, an RNG that may be used for influencing or determining certain variables and/or outcomes to provide a randomizing influence on game play, a graphics engine 650 used to generate a visual representation of the game state to the player, an audio engine to generate audio outputs for the player interface, and any other engine needed to provide the entertainment game. The game engine 612 reads and writes game resources 615 stored on a data store of the ESE host. The game resources 615 include game objects 655 having graphics and/or control logic used to implement game world objects of the game engine. The game resources 615 also include video files 675 that are used to

generate cut-scenes for the entertainment game. The game resources 615 may also include audio files 660 used to generate music, sound effects, etc. within the entertainment game. The game resources 615 may also include configuration files 670 used to configure the features of the entertainment game. The game resources 615 may also include scripts 665 or other types of control code used to implement various game play features of the entertainment game. The game resources 615 may also include graphics resources 680 including, but not limited to, textures, and objects that are used by the game engine to render objects displayed in the entertainment game.

[0051] In operation, components of the game engine 612 read portions of the game state 625 and generate the player presentation for the player which is presented to the player using the player interface 605. The player perceives the presentation 635 and provides player inputs using the HIDs 630. The corresponding player inputs are received as player actions or inputs by various components of the game engine 612. The game engine translates the player actions into interactions with the virtual objects of the game world stored in the game state 625. Components of the game engine 612 use the player interactions with the virtual objects of the game and the game state 625 to update the game state 625 and update the presentation 635 presented to the user. The process loops in a game loop continuously while the player plays the game.

[0052] The ESE 610 provides one or more interfaces between an entertainment game and other components 620 of a gambling hybrid game, such as a GWE. The ESE 610 and the other gambling hybrid game component 620 communicate with each other using the interfaces, such as by passing various types of data and sending and receiving messages, status information, commands and the like. Examples of communications include, but are not limited to, requesting by the gambling hybrid game component 620 that the ESE 610 update the game state using information provided by the other component; requesting, by the gambling hybrid game component 620, that the ESE 610 update one or more game resources using information provided by the gambling hybrid game component 620; the ESE 610 providing all or a portion of the game state; the ESE 610 providing one or more of the game resources to the gambling hybrid game component 620; and the ESE 610 communicating player actions to the other gambling hybrid game component 620. The player actions may be low level

player interactions with the player interface, such as manipulation of an HID, or may be high level interactions with objects as determined by the entertainment game. The player actions may also include resultant actions such as modifications to the game state or game resources resulting from the player's actions taken in the game. Other examples of player actions include actions taken by entities, such as Non-Player Characters (NPC) of the entertainment game, that act on behalf of, or under the control of, the player.

[0053] Elements are a limited resource consumed within an entertainment game to advance entertainment game gameplay. In playing the entertainment game using the elements, a player can (optionally) consume and accrue game world credits (GWC) within the entertainment game. These credits can be in the form of (but are not limited to) game world credits, experience points, or points generally. Wagers can be made in the gambling game as triggered by the player's use of one or more elements of the entertainment game. The wagers are made using real world credits (RC). The real world credits can be credits in an actual currency, or can be credits in a virtual currency which may have a real world value. Gambling outcomes from the gambling game can cause consumption, loss or accrual of RC. In addition, gambling outcomes in the gambling game can influence elements in the entertainment game such as (but not limited to) by restoring a consumed element, causing the loss of an element, restoration or placement of a fixed element. In certain embodiments, gambling games can facilitate the wager of GWC for a randomly generated payout of GWC or a wager of elements for a randomly generated payout of elements. In particular embodiments, an amount of GWC and/or elements used as part of a wager can have a RC value if cashed out of a gameplay session.

[0054] Example elements include enabling elements (EE) which are elements that enable a player's play of the entertainment game and whose consumption by the player while playing the entertainment game can trigger a wager in a gambling game. Another non limiting example of an element is a reserve enabling element (REE), which is an element that converts into one or more enabling elements upon occurrence of a release event in skill wagering interleaved game gameplay. Other types of elements include actionable elements (AE) which are elements that are acted upon to trigger a wager in

the gambling game and may or may not be restorable during normal play of the entertainment game. Another type of element is a common enabling element (CEE) which as an element that may be shared by two or more players and the use of which by any of the players causes a wager to be triggered.

[0055] In progressing through entertainment game gameplay, elements can be utilized by a player during interactions with a controlled entity (CE) which is a character, entity, inanimate object, device or other object under control of a player.

[0056] Also, entertainment game gameplay progress and wager triggers can be dependent upon a game world variable such as, but not limited to: a required game object (RGO) which is a specific game object in an entertainment game acted upon for an AE to be completed (such as but not limited to a specific key needed to open a door); a required environmental condition (REC) which is a game state present within an entertainment game for an AE to be completed (such as but not limited to daylight whose presence enables a character to walk through woods); or a controlled entity characteristic (CEC) which is a status of the CE within an entertainment game for an AE to be completed (such as but not limited to a CE to have full health points before entering battle). Although various gameplay resources, such as but not limited to GWC, RC and elements as discussed above, any gameplay resource can be utilized to advance gameplay as well as form the basis for a trigger of a wager as appropriate to the specification of a specific application in accordance with various embodiments of the invention. Various hybrid games are discussed in PCT Application Nos. PCT/US11/26768, filed March 1, 2011, PCT/US11/63587, filed December 6, 2011, and PCT/US12/50204 filed August 9, 2012, each disclosure of which is hereby incorporated by reference in its entirety.

[0057] In accordance with some embodiments, a player can interact with a gambling hybrid game by using RC in interactions with a gambling game along with GWC and elements in interactions with an entertainment game. The gambling game can be executed by a RWE while an entertainment game can be executed with an ESE and managed with a GWE. A conceptual diagram that illustrates how resources such as GWC, RC and elements, such as but not limited to enabling elements (EE), are utilized in a gambling hybrid game in accordance with an embodiment of the invention is

illustrated in FIG. 7. The conceptual diagram illustrates that RC 704, EE 708 and GWC 706 can be utilized by a player 702 in interactions with the RWE 710, GWE 712 and ESE 714 of a based gambling hybrid game 716. The contribution of elements, such as EE 708, can be linked to a player's access to credits, such as RC 704 or GWC 706. Electronic receipt of these credits can come via a smart card, voucher or other portable media, or as received over a network from a server. In accordance with certain embodiments, these credits can be drawn on demand from a player profile located in a database locally on a gambling hybrid game or in a remote server.

[0058] A conceptual diagram that illustrates the interplay between aspects of a gambling hybrid game in accordance with an embodiment of the invention using real world credit (RC) is illustrated in FIG. 8. Similar to FIG. 7, a player's actions and/or decisions can affect functions 806 that consume and/or accumulate GWC 802 and/or EE 804 in an entertainment game executed by an ESE 810. A GWE 812 can monitor the activities taking place within an entertainment game executed by an ESE 810 for gameplay gambling event occurrences. The GWE 812 can also communicate the gameplay gambling event occurrences to an RWE 814 that triggers a wager of RC 816 in a gambling game executed by the RWE 814.

[0059] In accordance with some embodiments of the invention, the following may occur during use of the gambling hybrid game. The user enters an input that represents an action or decision (850). The ESE 810 signals the GWE 812 with the input decision or action (852). The GWE 812 responds by signaling to ESE 810 with the amount of EE that is consumed by the player action or decision (854). The signaling from the GWE 812 configures a function 806 to control the EE consumption, decay, and/or accumulation.

[0060] The ESE 810 then adjusts the EE 804 accordingly (856). The GWE 812 signals the RWE 814 as to the profile of the wager proposition associated with the action or decision and triggers the wager (858). The RWE 814 consumes the appropriate amount of RC 816 and executes the wager (860). The RWE 814 then adjusts the RC 816 based upon the outcome of the wager (862) and informs the GWE 812 as to the outcome of the wager (864).

[0061] The GWE 812 signals the ESE 810 to adjust EE to one or more of the EEs of the ESE entertainment game (866). Function 806 of the ESE 810 performs the adjustment of EE 804 (868). The ESE 810 signals the GWE 812 as to the updated status (870). In response, the GWE 812 signals the ESE 810 to update GWC of the entertainment game. The ESE updates the GWC 802 using a function 806 (872).

[0062] The following is an example of the above flow in a first person shooter game, such a Call of Duty ®, using a gambling hybrid game sequence in accordance with embodiments of the invention.

[0063] The process begins by a player selecting a machine gun to use in the game and then fires a burst of bullets at an opponent (850). The ESE 810 signals the GWE 812 of the player's choice of weapon, that a burst of bullets was fired, and the outcome of the burst (852). GWE 812 processes the information received and signals ESE 810 to consume 3 bullets (EE) with each pull of the trigger (854). The ESE 810 consumes 3 bullets for the burst using function 806 (856).

[0064] The GWE 812 signals the RWE 814 that 3 credits (RC) are to be wagered to match the three bullets consumed. The RWE 814 then determines the result of the wager and may determine the winnings from a pay table. On a particular pay table (Table Ln-RC), a determination is made by RWE 814 as to the amount of damage that the opponent has sustained. The RWE 814 consumes 3 credits of RC 816 for the wager and executes the specified wager (860). The RWE 814 determines that the player hit a jackpot of 6 credits and returns the 6 credits to the RC 816 (862) and signals the GWE 812 that 3 net credits were won by the player (864).

[0065] The GWE 812 signals ESE 810 to add 3 bullets to an ammunition clip (866). ESE 810 adds 3 bullets back to the ammo clip (EE 804) using a function 806 (868). The ammunition may be added by directly adding the ammunition to the clip or by allowing the user to find extra ammunition during game play. The GWE 812 logs the new player score (GWC 802) in the game (as a function of the successful hit on the opponent) based on the ESE 810 signaling, and the signals the ESE 810 to add 2 extra points to the player score since a jackpot has been won (870). The ESE 810 then adds 10 points to the player score (GWC 802) given the success of the hit which in this example is worth 8 points, plus the 2 extra points requested by GWE 812 (872). Note

that the foregoing example is only intended to provide an illustration of how credits flow in a gambling hybrid game, but is not intended to be exhaustive and only lists only one of numerous possibilities of how a gambling hybrid game may be configured to manage its fundamental credits.

[0066] A conceptual diagram that illustrates the interplay between aspects of a gambling hybrid game in accordance with an embodiment of the invention using virtual real world credit (VRC) is illustrated in FIG. 9. As seen in the FIG. 9, substituting VRC in place of RC is effected without impact to the architecture or operation of the gambling hybrid game. The implementation of FIG. 9 is not the only embodiment using virtual currency within a gambling hybrid game, but shows only one permutation of which many could exist.

[0067] Similar to FIG. 8, a player's actions and/or decisions can affect functions 906 that consume and/or accumulate GWC 902 and/or EE 904 in an entertainment game executed by an ESE 910 in the process shown in Fig. 9. A GWE 912 can monitor the activities taking place within an entertainment game executed by an ESE 910 for gameplay gambling event occurrences. The GWE 912 can also communicate the gameplay gambling event occurrences to a RWE 914. Unlike the process shown in FIG. 8, RWE 914 triggers a wager of virtual real world credit (VRC) 916 in a gambling game executed by the RWE 914.

[0068] For purposes of this discussion, VRC can be thought of as a form of alternate currency, which can be acquired, purchased or transferred, in unit or in bulk, by/to a player, but does not necessarily directly correlate to RC or real currency. As an example, there is a virtual currency called "Triax Jacks", 1000 units of which are given to a player by an operator of a gambling hybrid game, with additional blocks of 1000 units being available for purchase for $5 USD each block. Triax Jacks could be redeemed for various prizes, or could never be redeemed but simply used and traded purely for entertainment value by players. It would be completely consistent with the architecture of the gambling hybrid game that Triax Jacks would be wagered in place of RC, such that the gambling hybrid game could be played for free, or with played with operator sponsored Triax Jacks.

[0069] Returning to the process in FIG. 9, the following may occur during use of the gambling hybrid game in accordance with embodiments of the invention. The user enters an input that represents an action or decision (950). The ESE 910 signals the GWE 912 with the input decision or action (952). The GWE 912 responds by signaling to ESE 910 with the amount of EE that is consumed by the player action or decision (954). The signaling from the GWE 912 configures a function 906 to control the EE consumption, decay, and/or accumulation.

[0070] The ESE 910 then adjusts the EE 904 accordingly (956). The GWE 912 signals the RWE 914 as to the profile of the wager proposition associated with the action or decision and triggers the wager (958). The RWE 914 consumes the appropriate amount of RC 916 and executes the wager (960). The RWE 914 then adjusts the RC 916 based upon the outcome of the wager (962) and informs the GWE 912 as to the outcome of the wager (964).

[0071] The GWE 912 signals the ESE 910 to adjust EE to one or more of the EEs of the ESE entertainment game (966). Function 906 of the ESE 910 performs the adjustment of EE 904 (968). The ESE 910 signals the GWE 912 as to the updated status (970). In response, the GWE 912 signals the ESE 910 to update GWC 902 of the entertainment game. The ESE updates the GWC 902 using a function 906 (972).

NETWORK BASED GAMBLING HYBRID GAME

[0072] A system diagram that illustrates an implementation of a network distributed gambling hybrid game with a GWE local server in accordance with embodiments of the invention is illustrated in FIG. 10. In the figure, the gambling hybrid game 1000 includes components, RWE 1002 embedded in a device used as the user interface for player 1003. The device provides both a RWE/GWE user interface 1005 and an ESE user interface 1007 for the player. The ESE is provisioned by an ESE hosting server 1004 via ESE interface 1009, and the GWE is provisioned by GWE server 1006 as indicated by the dashed line. Also pictured in the diagram are a number of other peripheral systems, such as player management 1008, casino management 1010, regulatory 1012, hybrid game player account management 1014, and taxation authority 1016 hosting servers that may be present in such an implementation. Fig. 10 also illustrates

various other systems, which may reside outside the bounds of the casino and are connected to the framework via communications network, such as the Internet 1020, depicted by the connection lines past the casino firewall 1022. The end devices utilized for user interfaces for a gambling hybrid game include, but are not limited to, casino electronic game machines 1030 and wireless or portable devices, such as smart phone 1032, personal digital assistants, tablet computers, video gaming consoles or the like. These disparate devices are connected within and without the casino through the casino's information technology structure as illustrated by routers 1040a, 1040b and 1040c. It should be understood that Fig. 10 does not attempt to illustrate all servers and systems to which a gambling hybrid game 1000 might be inevitably be connected, and indeed one might expect there would be others, but rather provides an example of a set of a sub-set of systems which would be present in an exemplary embodiment of an installation.

[0073] Fig. 11 is a diagram showing another implementation of a gambling hybrid game in accordance with an exemplary embodiment. In the figure, the gambling hybrid game 1101 includes components, RWE 1104 embedded in a device used as the user interface for player 1103. The device provides both a RWE/GWE user interface 1105 and an ESE user interface 1007 for the player. The ESE is provisioned by an ESE hosting server 1104 via ESE interface 1109. Also pictured in the diagram are a number of other peripheral systems, such as player management 1108, casino management 1110, regulatory 1112, hybrid game player account management 1114, and taxation authority 1116 hosting servers that may be present in such an implementation. In the figure, note that the GWE is composed of two sub-components, a local GWE server 1120, and a cloud server 1122. (components within the dash line area 1124). In the figure, certain of the components are located within the bounds of the casino, namely the RWE, the ESE and a portion of the GWE, namely the local GWE server 1120. The Cloud Server GWE 1122 is located in the cloud connected to the casino bounded gambling hybrid game components via communications network such as the Internet 1130 through a firewall 1132. Fig. 11 also illustrates various other systems, which may reside outside the bounds of the casino and are connected to the framework via communications network. The end devices utilized for user interfaces for a gambling

hybrid game include, but are not limited to, casino electronic game machines, 1134a and 1134b, and wireless or portable devices, such as smart phone 1136, personal digital assistants, tablet computers, video gaming consoles or the like. These disparate devices are connected within and without the casino through the casino's information technology structure as illustrated by routers 1140a, 1140b and 1140c. It should be understood that Fig. 11 does not attempt to illustrate all servers and systems to which a gambling gambling hybrid game might be inevitably be connected, and indeed one might expect there would be others, but rather provides an example of a set of a sub-set of systems which would be present in an exemplary embodiment of an installation.

[0074] A system diagram that illustrates an implementation of network a cloud based gambling hybrid game over the Internet in accordance with an embodiment of the invention is illustrated in FIG. 12. The system includes an ESE server 1202, GWE server 1204 and RWE server 1206 that each connect to a user interface, 1210a or 1210b, (such as, but not limited to, a television screen, computer terminal, tablet, touchscreen or PDA) of gambling hybrid games over the Internet 1208. Each gambling hybrid game includes a local ESE 1212a or 1212b (such as, but not limited to, a video game console or a gaming computer system) that interfaces with a remote ESE server 1002. Processes performed by an ESE 1212a services can be performed in multiple locations, such as, but not limited to, remotely on an ESE server 1202 and locally on a local ESE 1212a. In addition, a gambling hybrid game may include a Personal Digital Assistant (PDA) 1214 or other type of mobile computing device game coupled to the ESE hosting server 1202, thus providing the opportunity for a player to play a gambling hybrid game on the PDA through a mobile phone or data network.

[0075] There are many possible permutations of how a gambling hybrid game could be constructed, with Figs. 10, 11 and 12 showing only three possible permutations and provided as examples, which are not intended to suggest limitations to the forms of the architecture. Other embodiments include a version where the entire gambling hybrid game is in the cloud with only a client running on player terminal within the bounds of the casino, or a version where the RWE and GWE are casino bound and the ESE exists in the cloud, accessed by a client running on a terminal in the casino.

PROCESSING APPARATUSES

[0076] Any of a variety of processing apparatuses can host various components of a gambling hybrid game in accordance with embodiments of the invention. In accordance with embodiments of the invention, these processing apparatuses can include, but are not limited to, mobile device such as a smartphone, personal digital assistant or the like, a wireless device such as a tablet computer or the like, an electronic gaming machine, a general purpose computer, a computing device and/or a controller. A processing apparatus that is constructed to implement a gambling hybrid game in accordance with embodiments of the invention is illustrated in FIG. 13. In the processing apparatus 1300, a processor 1304 is coupled to a memory 1306 by a bus 1328. The processor 1304 is also coupled to non-transitory processor-readable storage media, such as a storage device 1308 that stores processor-executable instructions 1312 and data 1310 through the system bus 1328 to an I/O bus 1326 through a storage controller 1318. The processor 1304 is also coupled to one or more interfaces that can be used to connect the processor to other processing apparatuses as well as networks as described herein. The processor 1304 is also coupled via the bus to user input devices 1314, such as tactile devices including, but not limited to, keyboards, keypads, foot pads, touch screens, and/or trackballs; as well as non-contact devices such as audio input devices, motion sensors and motion capture devices that the processing apparatus can use to receive inputs from a user when the user interacts with the processing apparatus. The processor 1304 is connected to these user input devices 1314 through the system bus 1328, to the I/O bus 1326 and through the input controller 1320. The processor 1304 is also coupled via the bus to user output devices 1316 such as (but not limited to) visual output devices, audio output devices, and/or tactile output devices that the processing apparatus uses to generate outputs perceivable by the user when the user interacts with the processing apparatus. In accordance with some embodiments, the processor is coupled to visual output devices such as (but not limited to) display screens, light panels, and/or lighted displays. In accordance with particular embodiments, the processor is coupled to audio output devices such as (but not limited to) speakers, and/or sound amplifiers. In accordance with many of these embodiments, the processor 1304 is coupled to tactile output devices like vibrators, and/or manipulators.

The processor 1304 is connected to output devices from the system bus 1328 to the I/O bus 1326 and through the output controller 1322. The processor 1304 can also be connected to a communications interface 1302 from the system bus 1328 to the I/O bus 1326 through a communications controller 1324.

[0077] In accordance with various embodiments, a processor 1304 can load instructions and data from the storage device into the memory 1306. The processor 1304 can also execute instructions that operate on the data to implement various aspects and features of the components of a gambling hybrid game. The processor 1304 can utilize various input and output devices in accordance with the instructions and the data in order to create and operate user interfaces for players or operators of a gambling hybrid game(such as but not limited to a casino that hosts the gambling hybrid game).

[0078] Although the processing apparatus 1300 is described herein as being constructed from a processor and instructions stored and executed by hardware components, the processing apparatus can be composed of only hardware components in accordance with other embodiments. In addition, although the storage device is described as being coupled to the processor through a bus, those skilled in the art of processing apparatuses will understand that the storage device can include removable media such as, but not limited to, a USB memory device, an optical CD ROM, magnetic media such as tape and disks. Also, the storage device can be accessed by processor 1304 through one of the interfaces or over a network. Furthermore, any of the user input devices or user output devices can be coupled to the processor 1304 via one of the interfaces or over a network. In addition, although a single processor 1304 is described, those skilled in the art will understand that the processor 1304 can be a controller or other computing device or a separate computer as well as be composed of multiple processors or computing devices including one or more processors.

PROVISION OF A SLINGSHOT TRIGGER ENTERTAINMENT GAME BY A GAMBLING HYBRID GAME

[0075] In accordance with embodiments of the invention, the entertainment game provided by a gambling hybrid game is a slingshot trigger game. A slingshot trigger

game is a puzzle game in which a player uses a slingshot to determine the trajectory and speed of the flight of an object by aiming and triggering a slingshot or other similar device. The object of the slingshot trigger game is to use the object shot from the slingshot device to hit and/or cause damage to target structures and/or objects. Slingshot trigger games may more generally be referred to as object launching games. While embodiments of gambling hybrid games with slingshot trigger games are provided, one skilled in the art will recognize that the same processes apply to the more general object launching games without departing from the invention.

[0076] The entertainment engine of the gambling hybrid game provides the entertainment game in particular a slingshot trigger game in accordance with embodiments of the invention. The game world engine of the gambling hybrid game monitors the play of the slingshot trigger game by the entertainment engine and determines when gambling events occur based on the play of the slingshot trigger game. The real world engine then resolves the gambling event by determining the result of the gambling and any wagers associated with gambling event. A process performed by a gambling hybrid game to provide a slingshot trigger entertainment game in accordance with embodiments of the invention is shown in FIG. 14.

[0077] In process 1400, the player begins play the gambling hybrid game (1405). Upon starting the game, the player selects (1410) between using either a player account to provide Real World Credits (RC) and/or game world credits (GWC) for play (1425) or may play a stand-alone or host version (1415) of the game in which RC and/or GWC is entered on a per-play basis. Regardless of the type of game play selected, the player then choses the denominations or wagering amount to use during game play (1430). The gambling hybrid game then displays the wagering amounts and the relative value of the object (shown as birds) (1435). The entertainment engine then provides the game play of the slingshot trigger game (1440). During game play, the player launches an object, such as a bird, from the slingshot device (1445). The entertainment engine determines the result of the launch as part of game play (1450) and displays the result as part of the game play (1455).

[0078] The game world engine detects the launch of the object and triggers a gambling event. To resolve the gambling event, the game world engine requests that the real world engine determine the result of the gambling event and associated wagers (1460). The real world engine determines the results of the gambling event and any associated wagers by the player (1465). The results of the gambling event are then provided by the real world engine to the game world engine (1470) and the results of any wagers are displayed to the player (1475). The game play of the slingshot trigger game then continues (1480).

[0079] In accordance with some embodiments, the result of a gambling event and/or a combination of the results of the gambling event and game play of the slingshot trigger game are used to determine an intermediate value item to award a player, sometimes referred to herein as quanta. The quanta can then be used to purchase game items or change the value of game parameters. A process performed by a gambling hybrid game providing a slingshot trigger game to award quanta based on the result of a gambling event and the results of game play of the slingshot trigger game in accordance with embodiments of the invention is show in FIG. 15.

[0080] In process 1500, the player sets the trajectory and speed of an object to launch and launches the object (1505). The entertainment engine then determines the results of the launch and updates the game parameters including, but not limited to, the score. The game world engine detects the launch of the object and determines a gambling event is to occur. To resolve the gambling event, the game world engine requests that the real world engine determine the result of the gambling event and associated wagers (1512). The real world engine determines the results of the gambling event and any associated wagers by the player (1515). The results of the gambling event are then provided by the real world engine to the game world engine (1520) and the results of any wagers are displayed to the player.

[0081] The game world engine obtains the results of the gambling event and associated wagers from the real world engine; and the results of the launch from the entertainment engine. From the results of the gambling event and the game play, the game world engine then determines an amount of quanta to award the player (1525). If

quanta is awarded (1530), the amount of quanta awarded, and/or the total amount of quanta possessed by the player are displayed (1535). Regardless of the award of quanta, game play of the slingshot trigger game is continued by the entertainment engine (1540). During game play, quanta options may be available (1545). For purposes of this discussion, quanta options are options for a player to use an amount of quanta to change a game parameter. For example, a certain amount of quanta may be used to buy an extra object to launch or effect the speed of the object launched, or the amount of damage the object inflicts. One skilled in the art will recognize that these are only examples and other changes to the game parameters of the slingshot trigger game may be offered without departing from embodiments of the invention.

[0082] If the player selects a quanta option (1550), the amount of the option is deducted from the quanta total of the player. The game parameters are changed according to the option selected and the updated quanta total is displayed for the player (1535). The game play of the slingshot trigger game continues (1540) with the changed parameters.

[0083] A gambling hybrid game having a slingshot trigger entertainment game provided by a mobile electronic device in accordance with embodiments of the invention is shown in FIG. 16. As illustrated in FIG 16, mobile device 1600 has a display of a slingshot trigger entertainment game including a slingshot device 1605 and an object 1610, such as a bird. In accordance with embodiments of the invention, the gambling hybrid gaming system may be deployed as an electronic game on a variety of hosts. For example, the gambling hybrid gaming system may be deployed on a gaming cabinet as used in a traditional land-based casino. The gambling hybrid gaming system may be deployed on a mobile computing device such as, but not limited to, a Personal Digital Assistant (PDA), smartphone, tablet computer, laptop computer, etc. The gambling hybrid gaming system may also be deployed on a game console, such as, but not limited to, an XBoxTM, PlaystationTM, etc. The gambling hybrid gaming system may also be deployed on a Personal Computer (PC) or other computing system. Each of the hosts may be operatively connected to other hosts via a network. Furthermore, each of the hosts may also be further operatively connected to other types of systems and hosts as previously described herein.

[0084] A conceptual view of the provision of a gambling hybrid game having a slingshot trigger game as an entertainment game in accordance with embodiments of the invention is shown in FIG. 17. During gameplay of the slingshot game, a player is presented with a structure containing stylized pigs 1710 and a slingshot 1605 that uses birds 1610 as ammunition. As illustrated in FIG. 17, the ultimate goal is for the player to destroy all of the pigs 1710 on the playing field using the birds 1605. Bonus points are awarded for damage dealt to the construct 1705 housing the pigs 1710 and for unused birds.

[0085] In accordance with numerous embodiments, the player competes in a single-player format against a computer. For each level, the player is assigned one or more birds 1610 of one or more types (i.e. red, blue, white, black, yellow, etc.) that have different abilities and characteristics. Birds 1610 are entertainment game resources in the form of enabling elements (EE) that, when consumed by the player, trigger a wager or bet to be made in a gambling game of the hybrid gaming system. As seen in FIG. 17, the function 1710 is performed by the entertainment engine to consume the birds and determine the results of a launch of a bird 1610 during game play. Each bird 1610 has a specific amount of Real world Credit (RC) associated with the bird 1610 that forms a wager on a proposition on the outcome of a gambling event performed by function 1715. To slingshot a bird (consume the EE), the player uses a specified amount of RC already credited to the player in gambling hybrid gaming system to cover a wager for that specific bird (except in cases, see below, where a bird may have been obtained by a player via the allocation of an amount of an indeterminate entertainment game resource that is awarded to the player for a successful outcome of a wager made on the outcome of a gambling event that was triggered by the user's utilization of the bird by function 1715).

[0086] To place a wager on the gambling event of a gambling game provided by function 1715, a player enters RC into the machine in accordance with some embodiments of the invention. A minimum amount of RC may be required by the casino to enable play. In accordance with some of these embodiments, the player sets a denomination by selecting how much RC to allocate to each type of bird. In accordance with many of these embodiments, relative values of the birds may be set as

a function of the game. In accordance with a particular embodiment, the relative value of each bird is as follows:

Bird Type	Relative Value
Red	1
Blue	2
Yellow	4
White	2
Black	3

[0087] In accordance with many of these embodiments, the player sets an amount of credits to assign to the birds by setting a base denomination. In accordance with a particular embodiment, if the player set a base denomination of $0.25, then the value of each bird type as relates to initiating gambling games is as follows:

Bird Type	Relative Value	Bird Value (RC)
Red	1	$0.25
Blue	2	$0.50
Yellow	4	$1.00
White	2	$0.50
Black	3	$0.75

[0088] In accordance with numerous embodiments, each bird has an associated pay table that may be different than pay tables as associated with other birds, and the pay table information is described to the player in general or specific terms as part of a set up process or introductory screens. In accordance with many of these embodiments, the pay table information may also be available at all times through a drop-down or pull-up display of “info”, a separate physical display, a graphical overlay or other user interface.

[0089] Once denominations are set for the birds, the player commences play. In many embodiments, if the player has previously played the gambling hybrid gaming system, the player may have the ability to select one of a multitude of levels to play as a function of information stored in a player account associated with the player. In accordance with some of these embodiments, the player commences play at a prescribed level. In accordance with numerous of these embodiments, players that demonstrate exceptional skill are also exposed to specific "bonus" (i.e. golden egg) levels with enhanced game play (in terms of the ESE and/or gambling game play).

[0090] During game play, the player plays the entertainment game portion of the gambling hybrid gaming system by using a catapult or other launching device (slingshot 1605) to launch objects (birds 1610) toward one or more structures (construct 1705) containing, among other things, pigs 1710. In accordance with many embodiments, the initial order in which the objects (birds 1610) are available to be launched by the player is fixed by the gambling hybrid gaming system. Each time the player launches an object (bird 1610) toward the one or more structures 1705, the bird as an EE is consumed as determined by function 1712, and a bet corresponding to the Bird Value is initiated for a gambling event in the gambling game by function 1715, and the player's RC is reduced accordingly. The outcome of the bet may cause RC to increase and may cause an accumulation of indeterminate entertainment game resource (quanta) as well.

[0091] During game play, a player screen displays a measure of quanta which is an intermediate value item that may be used to obtain an amount of one or more of indeterminate entertainment game resources available to the player. A library of entertainment game elements to which the indeterminate entertainment game resource may be allocated by purchasing the indeterminate entertainment game resource using quanta may also be displayed. The amount of quanta available corresponds to the success in the gambling game and may be modified by other entertainment game factors. Game world credit (GWC) 1725 is awarded as a function of the player's performance relative to a set of pre-established performance bands by function 1715 in accordance with some embodiments. In a particular one of these embodiments, the bands are $5000 < x < 10000$ points, $10000 < x < 15000$ points, and the like. In accordance with other embodiments, GWC 1725 is awarded by function 1715 as a

function of the player's performance in the slingshot trigger game against a historical database of points awarded for players of approximately equivalent skill. In accordance with various embodiments, GWC 1725 is further augmented or reduced as a function of things such as (a) the number of attempts at a given level, (b) the number of pigs destroyed in a single shot, or other similar slingshot trigger game play results.

[0092] In accordance with a particular embodiment, players convert the indeterminate entertainment game resources and/or quanta into one of the entertainment game elements such as a particular type of bird. Each of the elements below has a set "price" in terms of the indeterminate entertainment game resources or quanta. In many embodiments, each element may or may not have a specific limit as to the number of times the element may be purchased per game and/or period of game time or elapsed time or other limiter, and there may also be one or more limits as to the frequency with which a specific element may be purchased In accordance with this particular embodiment, these limits include, but are not limited to, no more than once per level; no more than once per 30 "ticks" of game time; and/or no more than once per 20 minutes of real time.

[0093] A conceptual diagram of the results of a game play of a slingshot trigger game in a gambling hybrid game in accordance with embodiments of the invention is shown by FIG. 18. In FIG. 18, bird 1610 has been launched by a player. The launch results in bird 1610 hitting structure 1705 causing damage to structure 1705 and destroying pig 1710 to win the game (1805). Based on the launch of bird 1610, a gambling event is triggered and the player wins a certain amount of RC (1810). The RC available to the player for future play or winnings is displayed in interface 1825. The result of the bird 1610 damaging the structure 1705 and destroying pig 1710 is also a win in the slingshot trigger game. Based on the winning of the gambling event and the game play, 50 quanta are awarded to the player. The amount of quanta available and a list of game resources the quanta may be used to purchase are provided to the player in interface 1830.

[0094] The game resources available to the player includes, but is not limited to an extra bird, an eagle eye, a hint, a shuffle, a best odd bird, a non-gambling event bird, a

specialized background, and a megabird. An extra bird is an additional bird that may be used to increase the likelihood of clearing a level. Use of the bird will require a gambling game and the consumption of the relevant amount of RC. Other "color" birds may also available at various junctures in the game (i.e. when they have been introduced generally). In accordance with some embodiments, if the bird is unused, these birds are factored into the overall GWC score. The eagle eye is an element that gives a pass to the next level. However, the player does not accumulate GWC for gaining the next level with an eagle eye.

[0095] A hint shows the player the best trajectory for the next bird up in the slingshot queue. A shuffle allows the player to shuffle the order of the birds in the slingshot queue to suit the preference of the player. The bet odds bird is a bird with a pay table that provides the potential for a massive jackpot (e.g. hundreds of thousands or even millions of dollars) in lieu of the traditional pay table associated with the "red" bird. Other color birds are available with this feature as well, and a specialized colored bird can also be used to represent this value proposition, rather than, or in addition to, using the base bird color set.

[0096] A non-gambling bird is a red or other type of bird that may be used by the player without the bird acting as an EE (i.e. it does not cause RC to be committed to a gambling game). A specialized background is a display background that includes "thematic" elements to alter the look and feel of the game. These can persist beyond the current session, and may be attached to a player's account. A mega bird is a massive bird that has extraordinary destructive powers.

[0097] In accordance with many embodiments, more credits, RC, must be entered into the machine before additional birds can be launched via the launching device of the player does not have sufficient RC to cover a wager on a gambling event triggered by game play. In accordance with some embodiments, one or more of the above quanta purchasable elements may also be able to be purchased outright using RC during or before game play.

[0098] In accordance with numerous embodiments, the amount of RC that will be committed to a wager on an associated gambling event is shown when a bird is loaded

into the launching device. In some embodiments, players may opt-out of a wager on a gambling event (during a set up process, or through a control element available at all times on the screen or through a pop-up dashboard) for each and every bet before the wager is processed, or for a blanket acceptance of RC committed until one or more conditions are met (i.e. total RC committed, total RC lost, etc.). In accordance with some of these embodiments, the player may select to have a blanket acceptance in place without any conditions.

[0099] In accordance with many of these embodiments, when the player pulls back the launching device, such as by moving his or her finger on a touch screen, the amount of money committed to gambling upon release of the bird can be shown in close proximity to the bird itself or in a pre-defined display area on the screen (or an auxiliary screen). The gambling game of the hybrid gaming system is executed in the RWE as the bird is launched (and the RC committed is decremented from the player's RC account as displayed in the game) and the results of the gambling game are communicated to the player when the bird's flight path is completed in the form of a change in RC (if there is a win or draw) and/or the indeterminate game resource (quanta).

[00100] In accordance with some embodiments, the slingshot trigger entertainment game of the gambling hybrid gaming system is constructed so that there are pure skill-based levels and hybrid game levels interspersed, i.e. players change from one type of level to another based on various occurrences in the base skill game, the gambling game, or a combination of the skill and gambling games.

[00101] In accordance with some embodiments, the indeterminate entertainment game resource obtained using quanta or the like persists from one level of play to the next. However, the indeterminate entertainment game resource does not persist beyond a single game session. In accordance with other embodiments, the amount of the indeterminate entertainment game resource is reset for each level of play of the slingshot trigger game. In accordance with still other embodiments, the indeterminate entertainment game resource persists across multiple levels and/or multiple game play sessions.

[00102] In accordance with many embodiments, a player accumulates GWC to be used to determine if a player is eligible to enter a tournament. In accordance with particular embodiments, entry into a tournament can be based upon GWC accumulated independently or dependently upon RC committed/won/lost. In some with some of these embodiments, entry into a tournament may or may not take into account player skill as determined in a single game session or across multiple game sessions, and the like.

[00103] In accordance with many of these embodiments, a player is exposed to special bonus features (i.e. in game objects or variables) and awards (i.e. RC based or real goods and/or services) that may be gained through "skill" but are made available as a function of either skill performance and/or gambling game performance. In accordance with particular embodiments, a player wins a "mega jackpot" based on the pay table of the bird that the player most recently launched (or as a function of a series of birds launched). The "mega jackpot" is a "golden pig" that replaces one of the standard pigs in the game. If and when this pig is "killed" by the player (a skill event) the player gains $1000 worth of RC. The "killing" of this pig may be advanced by the conversion of indeterminate entertainment game resources into enhancements that the player can use.

[00104] Although certain specific features and aspects of a gaming system have been described herein, many additional modifications and variations would be apparent to those skilled in the art. For example, the features and aspects described herein may be implemented independently, cooperatively or alternatively without deviating from the spirit of the disclosure. It is therefore to be understood that gaming system may be practiced otherwise than as specifically described. Thus, the foregoing description of the gaming system should be considered in all respects as illustrative and not restrictive, the scope of the claims to be determined as supported by this disclosure and the claims' equivalents, rather than the foregoing description.

WHAT IS CLAIMED IS:

1. A gambling hybrid game provided by a computing system that provides an object launching game as an entertainment game, comprising:

an entertainment engine constructed to execute an entertainment game and present the entertainment game to a player wherein the entertainment game is an object launching game in which a player uses a launching device to select a trajectory and speed at which to launch a game object at a target and the entertainment engine is constructed to:

receive an input from the player indicating a launch of a game object at a particular speed and trajectory from the launching device in the entertainment game,

determine a result of the launch of the game object in the entertainment game, and

generate status updates regarding play of the object launching game;

a real world engine constructed to determine a result of the gambling event and to resolve a wager on a proposition about the result of the gambling event; and

a game world engine constructed to manage the entertainment game executed by the entertainment engine and determine when a gambling event occurs during play of the entertainment game and request a resolution to the gambling event by the real world engine, wherein the game world engine is further constructed to:

receive a status update about the object launching game from the entertainment engine,

determine a gambling event is to occur based upon the status update from the entertainment engine, and

request the gambling event be resolved by the real world engine.

2. The gambling hybrid game of claim 1 wherein the game world engine is constructed further to:

receive the result of the gambling event from the real world engine; and

determine an amount of an intermediate value item to award the player based on the result of the gambling event.

3. The gambling hybrid game of claim 2 wherein the game world engine is constructed to use the status update along with the result of the gambling event to determine the amount of an intermediate value item to award.

4. The gambling hybrid game of claim 2 wherein the game world engine is further constructed to:

provide an indeterminate game resource that a player may acquire with the intermediate value item;

receive a request from the player to acquire the indeterminate game resource;

deduct the amount of the intermediate value item from an intermediate value item account of the player; and

provide an update of the indeterminate game resource to the entertainment engine for use in the game.

5. The gambling hybrid game of claim 1 wherein the game world engine further is constructed to:

receive the result of the gambling event from the real world engine; and

determine an amount of game world currency to provide to the player based on the result of gambling event.

6. The gambling hybrid game of claim 4 wherein the game world engine is further constructed to:

provide an indeterminate game resource that a player may acquire with the intermediate value item;

receive a request from the player to acquire the indeterminate game resource;

deduct the amount of the intermediate value item from an intermediate value item account of the player; and

provide an update of the indeterminate game resource to the entertainment engine for use in the object launching game.

7. A method for providing a gambling hybrid game using a computing system that provides an object launching game in which a player uses a launching device to select a trajectory and speed at which to launch a game object at a target as an entertainment game, wherein the gambling hybrid game includes an entertainment engine constructed to execute an entertainment game, a real world engine constructed to determine a result of the gambling event, and a game world engine constructed to manage the entertainment game, determine an occurrence of a gambling event based on play of the entertainment game executed by the entertainment engine and request a resolution to the gambling event by the real world engine, the method comprising:

receiving an input from the player in the entertainment engine indicating a launch of a game object at a particular speed and trajectory from the launching device in the entertainment game;

determining a result of the launch of the game object in the entertainment game using the entertainment engine;

generating status updates regarding play of the object launching game using the entertainment engine;

providing the status update of the play of the object launching game from the entertainment engine to the game world engine;

determining a gambling event is to occur based upon the status update from the entertainment engine in the game world engine;

requesting the gambling event be resolved by the real world engine; and

determining a result of the gambling event and a wager associated with the gambling event in the real world engine.

8. The method of claim 7 further comprising:

receiving the result of the gambling event from the real world engine in the game world engine; and

determining an amount of an intermediate value item to award the player based on the result of the gambling event using the game world engine.

9. The method of claim 8 further comprising using the status update along with the result of the gambling event to determine the amount of an intermediate value item to award.

10. The method of claim 8 further comprising:

providing an indeterminate game resource that a player may acquire with the intermediate value item using the game world engine;

receiving a request from the player to acquire the indeterminate game resource in the game world engine;

deducting the amount of the intermediate value item from an intermediate value item account of the player using the game world engine; and

providing an update of the indeterminate game resource from the game world engine to the entertainment engine for use in the game.

11. The method of claim 7 further comprising:

receiving the result of the gambling event from the real world engine in the game world engine; and

determining an amount of game world currency to provide to the player based on the result of gambling event using the game world engine.

12. The method of claim 11 further comprising:

providing an indeterminate game resource that a player may acquire with the intermediate value item from the game world engine;

receiving a request from the player to acquire the indeterminate game resource in the game world engine;

deducting the amount of the intermediate value item from an intermediate value item account of the player using the game world engine; and

providing an update of the indeterminate game resource from the game world engine to the entertainment engine for use in the game.

13. A machine readable medium containing processor instructions, where execution of the instructions by a processor causes the processor to perform a process for providing a gambling hybrid game having an object launching game entertainment game in which a player uses a launching device to select a trajectory and speed at which to launch a game object at a target wherein the gambling hybrid game includes an entertainment engine constructed to execute an entertainment game, a real world engine constructed to determine a result of a gambling event and a wager on a proposition on the result of the gambling event, and a game world engine constructed to manage the entertainment game executed by the entertainment engine, determine when a gambling event occurs during play of the entertainment game and request a resolution to the gambling event by the real world engine, the process comprising:

receiving an input from the player in the entertainment engine indicating a launch of a game object at a particular speed and trajectory from the launching device in the entertainment game;

determining a result of the launch of the game object in the entertainment game using the entertainment engine;

generating status updates regarding play of the object launching game using the entertainment engine;

providing the status update of the play of the object launching game from the entertainment engine to the game world engine;

determining a gambling event is to occur based upon the status update from the entertainment engine in the game world engine;

requesting the gambling event be resolved by the real world engine; and

determining a result of the gambling event and a wager associated with the gambling event in the real world engine.

14. The machine readable medium of claim 13 wherein the process further comprises:

receiving the result of the gambling event from the real world engine in the game world engine; and

determining an amount of an intermediate value item to award the player based on the result of the gambling event using the game world engine.

15. The machine readable medium of claim 14 wherein the process further comprises further comprising using the status update along with the result of the gambling event to determine the amount of an intermediate value item to award.

16. The machine readable medium of claim 14 wherein the process further comprises:

providing an indeterminate game resource that a player may acquire with the intermediate value item using the game world engine;

receiving a request from the player to acquire the indeterminate game resource in the game world engine;

deducting the amount of the intermediate value item from an intermediate value item account of the player using the game world engine; and

providing an update of the indeterminate game resource from the game world engine to the entertainment engine for use in the game.

17. The machine readable medium of claim 13 wherein the process further comprises:

receiving the result of the gambling event from the real world engine in the game world engine; and

determining an amount of game world currency to provide to the player based on the result of gambling event using the game world engine.

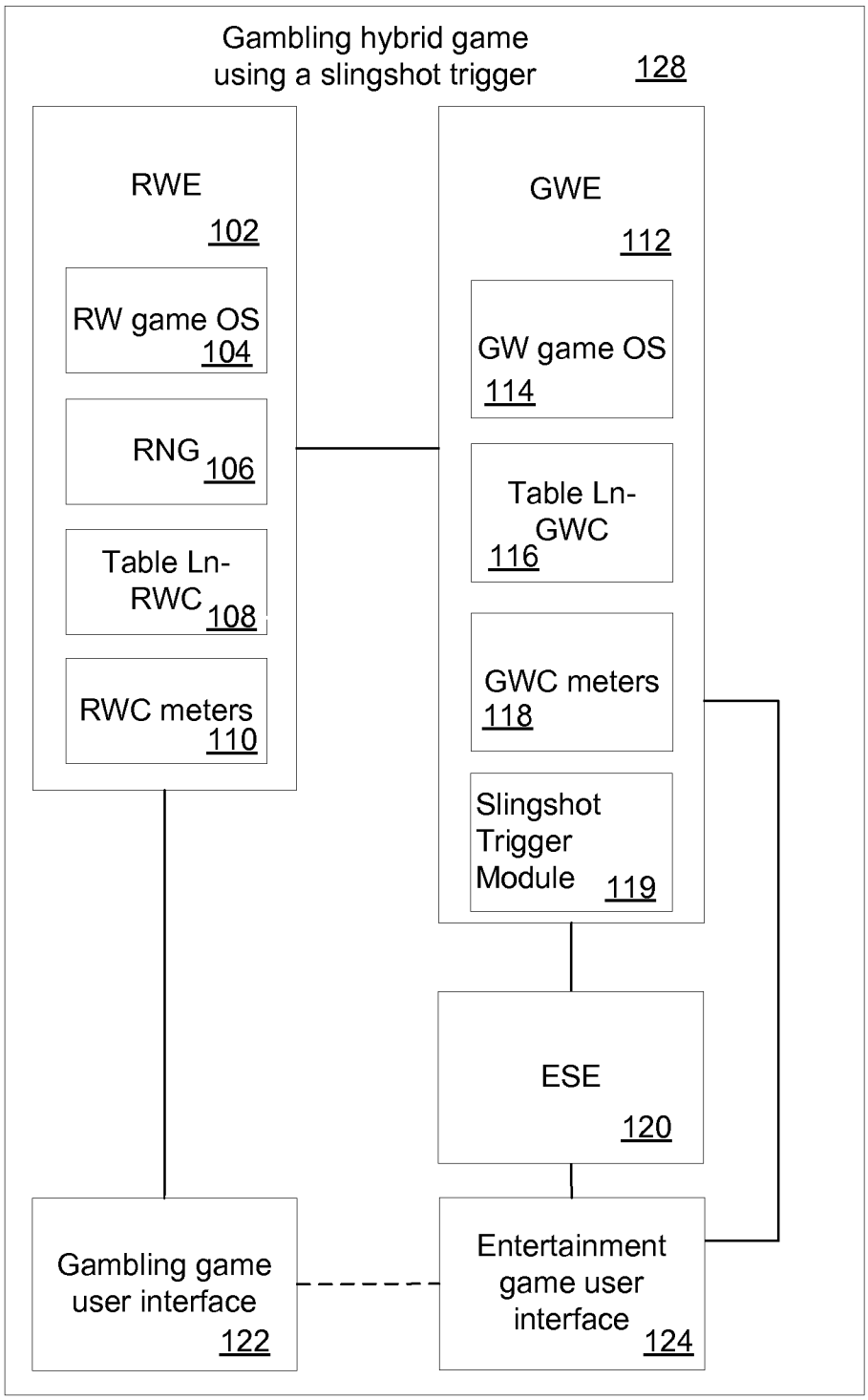
18. The machine readable medium of claim 13 wherein the process further comprises:

providing an indeterminate game resource that a player may acquire with the intermediate value item from the game world engine;

receiving a request from the player to acquire the indeterminate game resource in the game world engine;

deducting the amount of the intermediate value item from an intermediate value item account of the player using the game world engine; and

providing an update of the indeterminate game resource from the game world engine to the entertainment engine for use in the game.


Gambling hybrid game using a slingshot trigger
128
RWE
102
RW game OS
104
RNG
106
Table Ln-RWC
108
RWC meters
110
GWE
112
GW game OS
114
Table Ln-GWC
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GWC meters
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Slingshot Trigger Module
119
ESE
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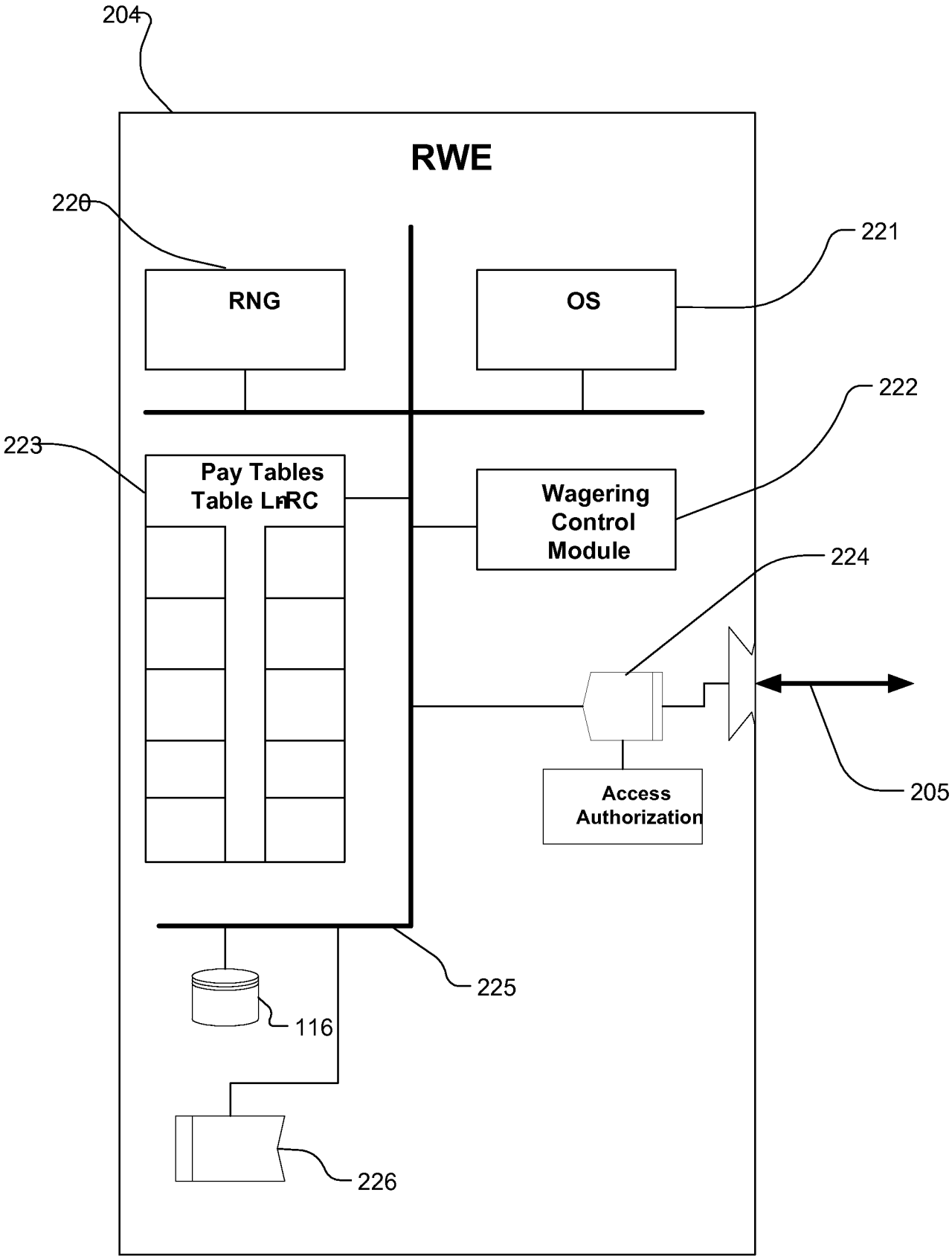
Gambling game user interface
122
Entertainment game user interface
124

Figure 1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RWE
220
RNG
OS
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Pay Tables
Table LnRC
Wagering
Control
Module
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Access
Authorization
205
225
116
226

Figure 2

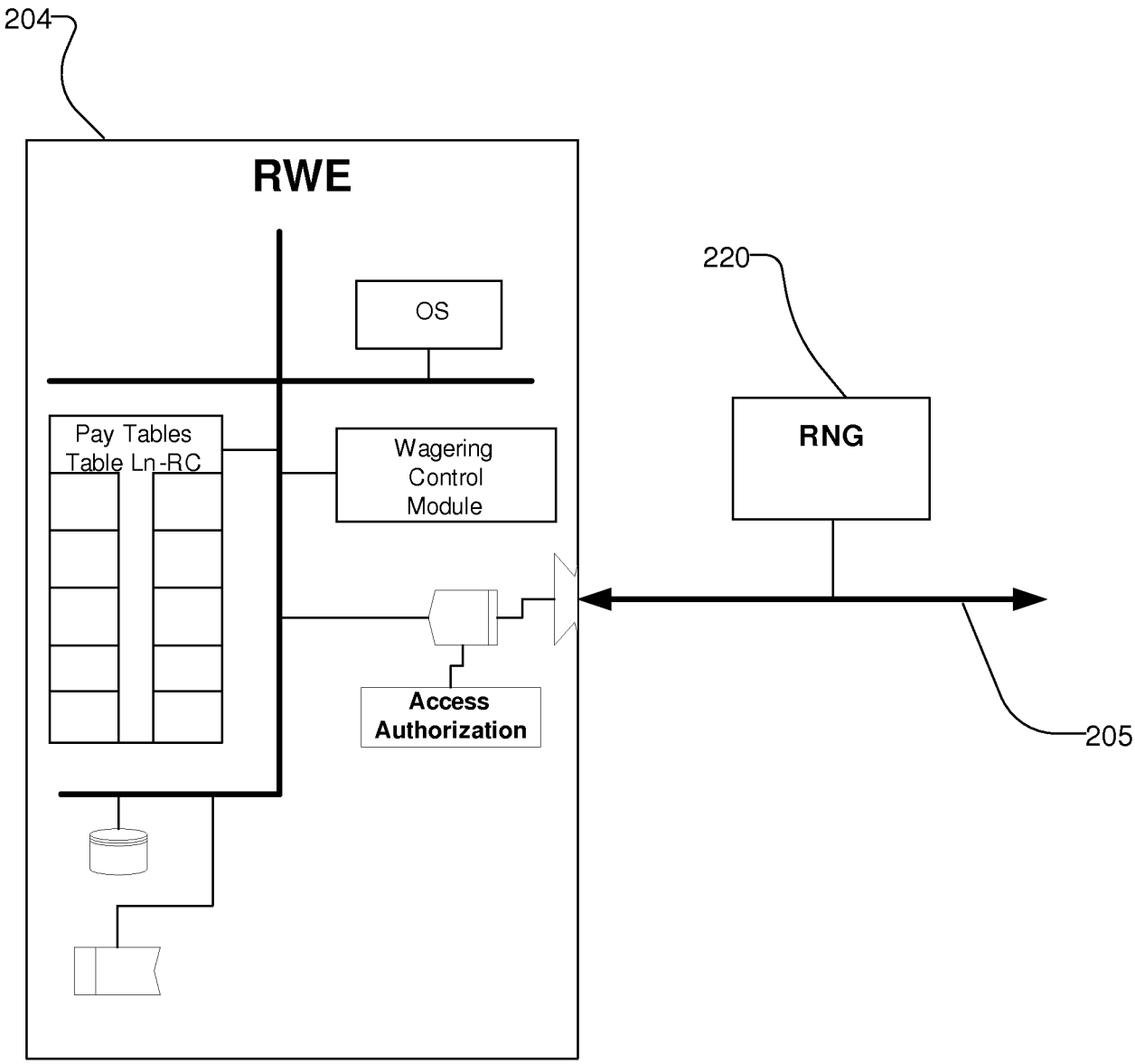
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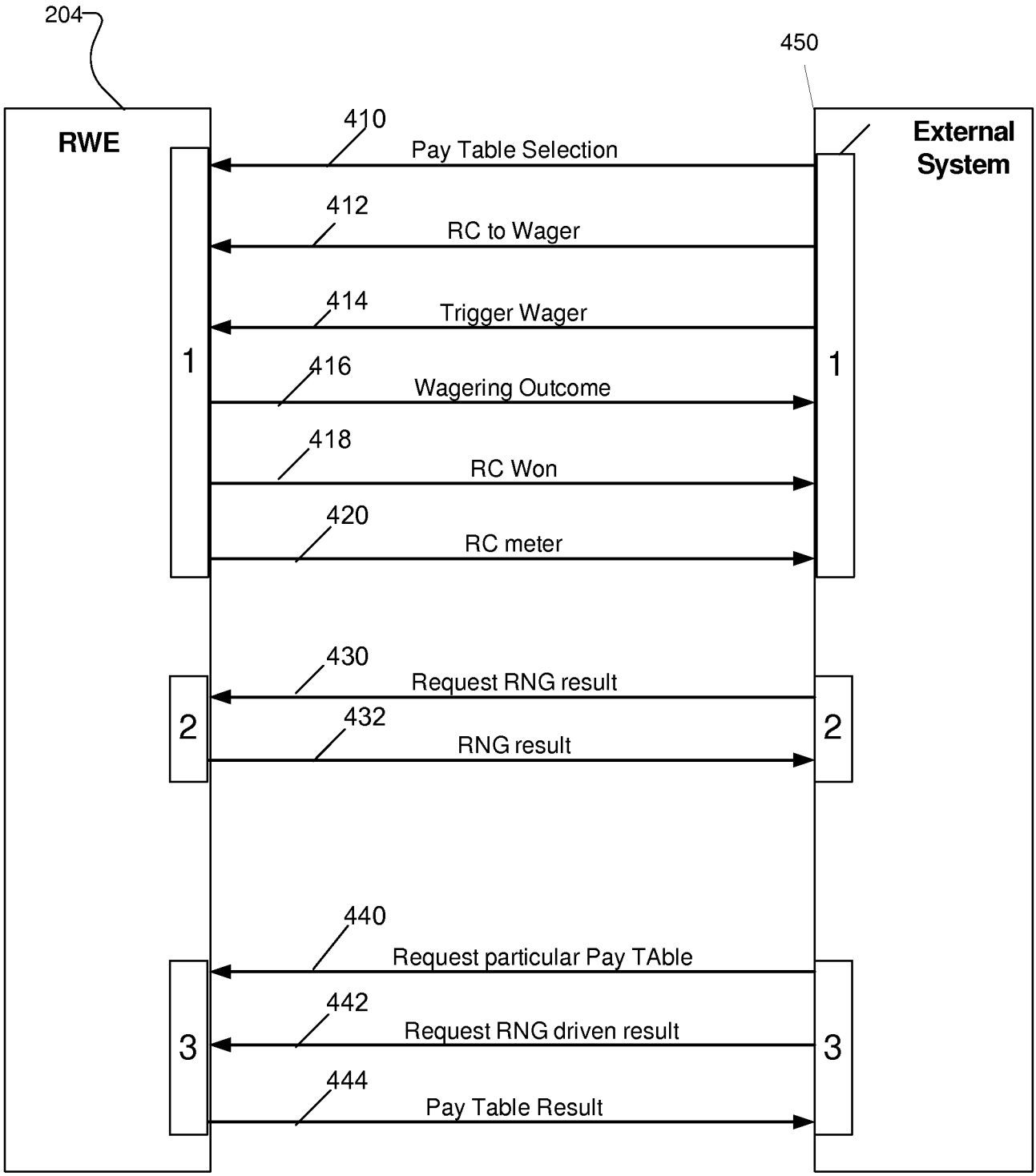
Figure 3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RC to Wager
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Trigger Wager
1
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Wagering Outcome
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RC Won
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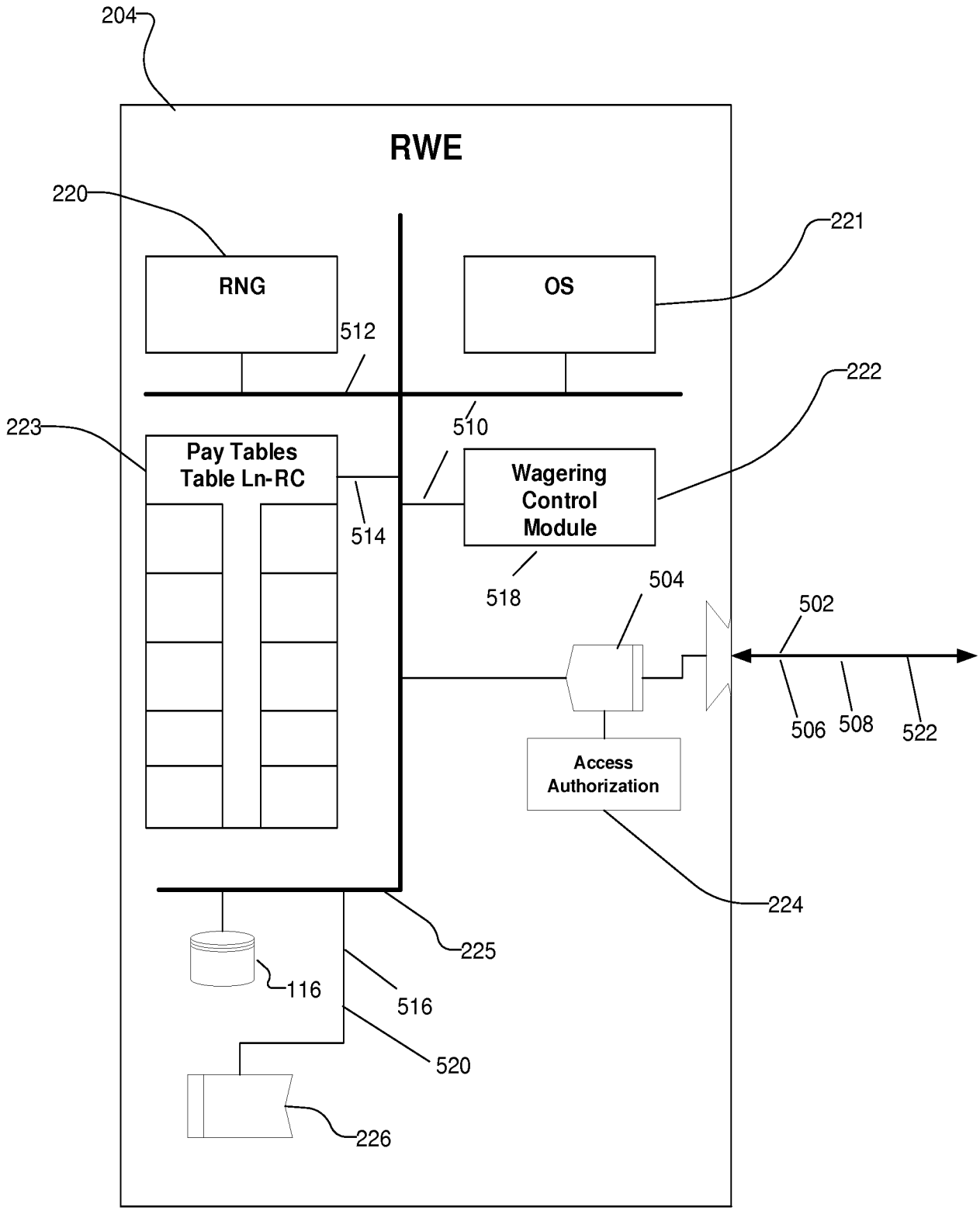
RC meter
1
430
Request RNG result
2
432
RNG result
2
440
Request particular Pay TAble
442
Request RNG driven result
3
444
Pay Table Result
3

Figure 4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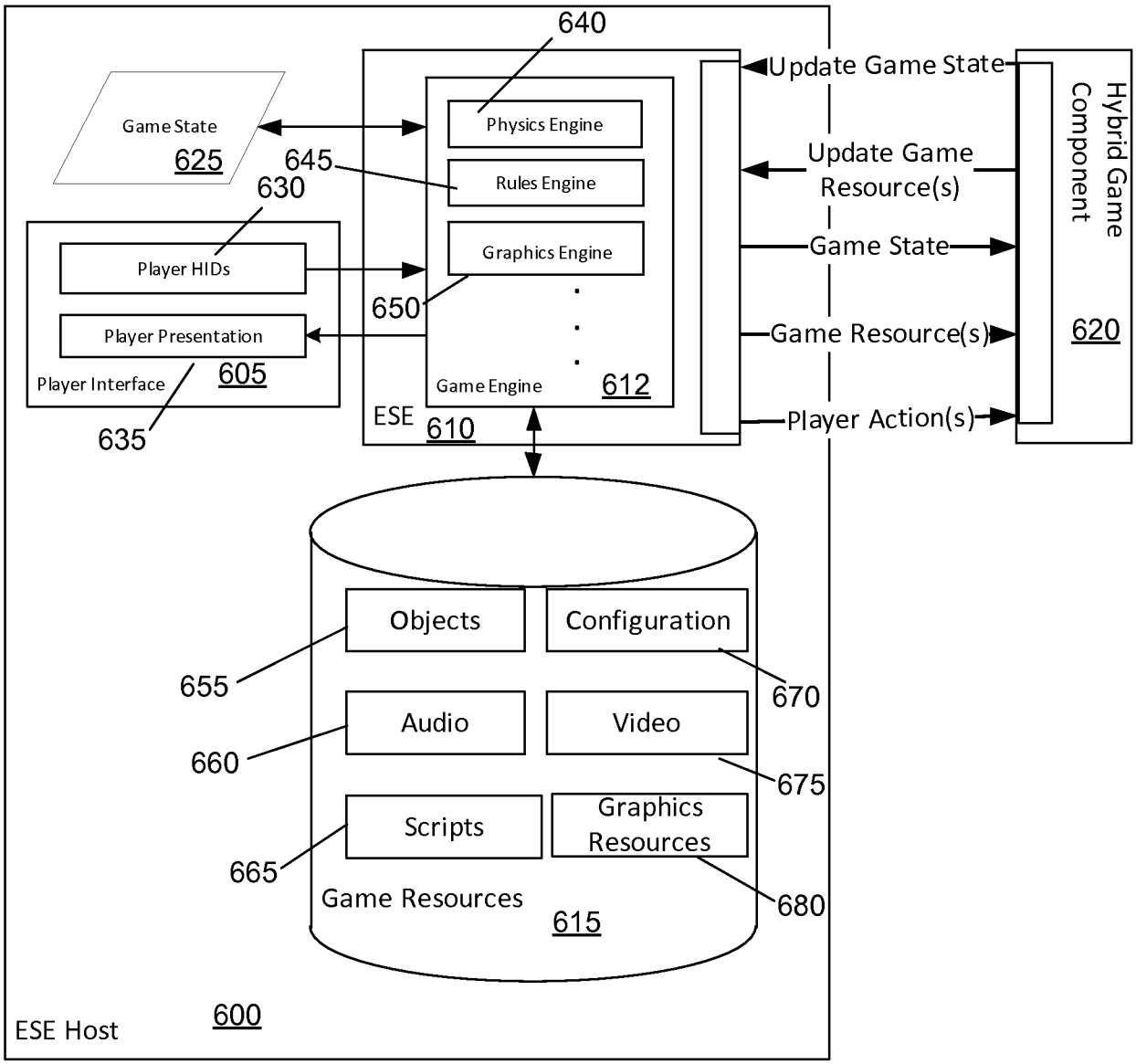
520
226

Figure 5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Update Game State
Hybrid Game Component
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Game State
625
645
Physics Engine
Rules Engine
Update Game Resource(s)
630
Player HIDs
Graphics Engine
Game State
650
Player Presentation
Game Resource(s)
Player Interface
605
Game Engine
612
ESE
610
Player Action(s)
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Objects
Configuration
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670
Audio
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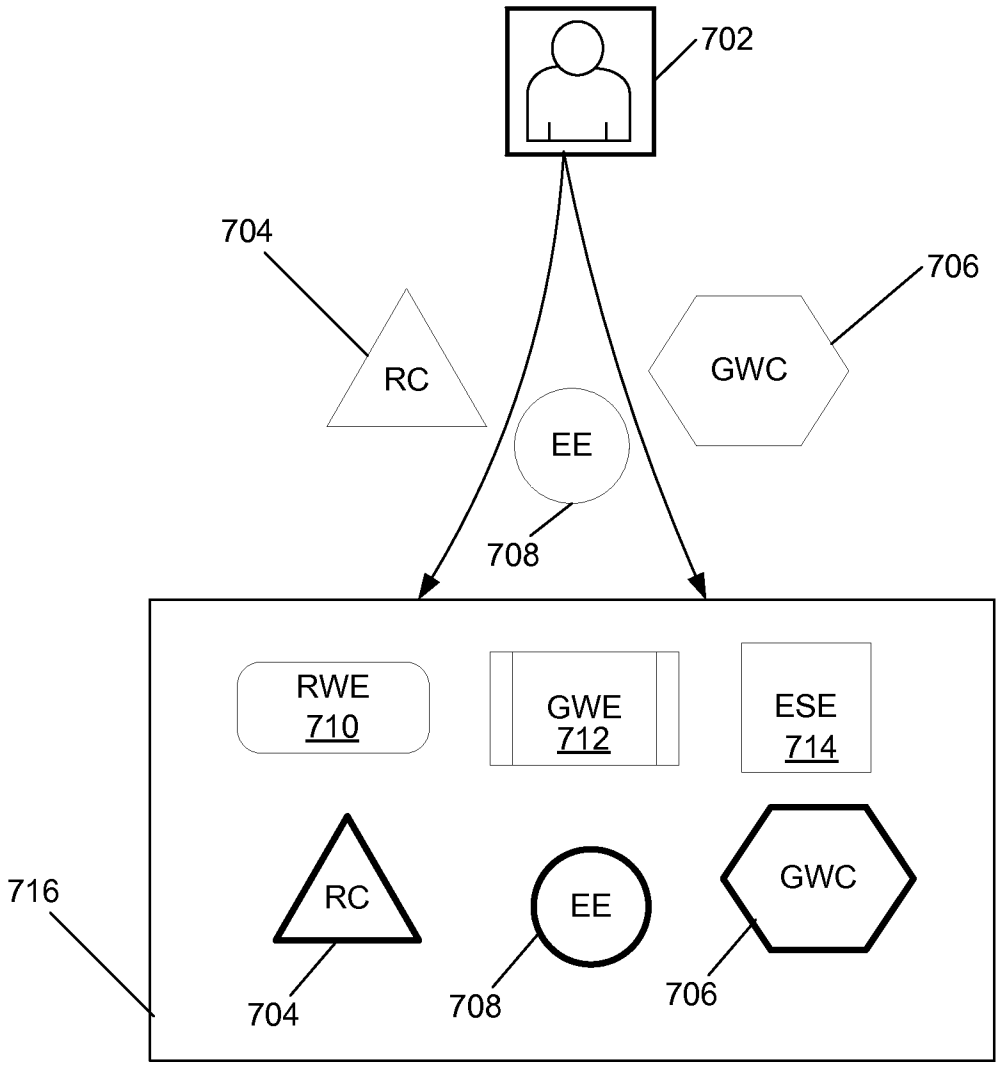
ESE Host
600

Figure 6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RC
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GWC
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RWE
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GWE
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RC
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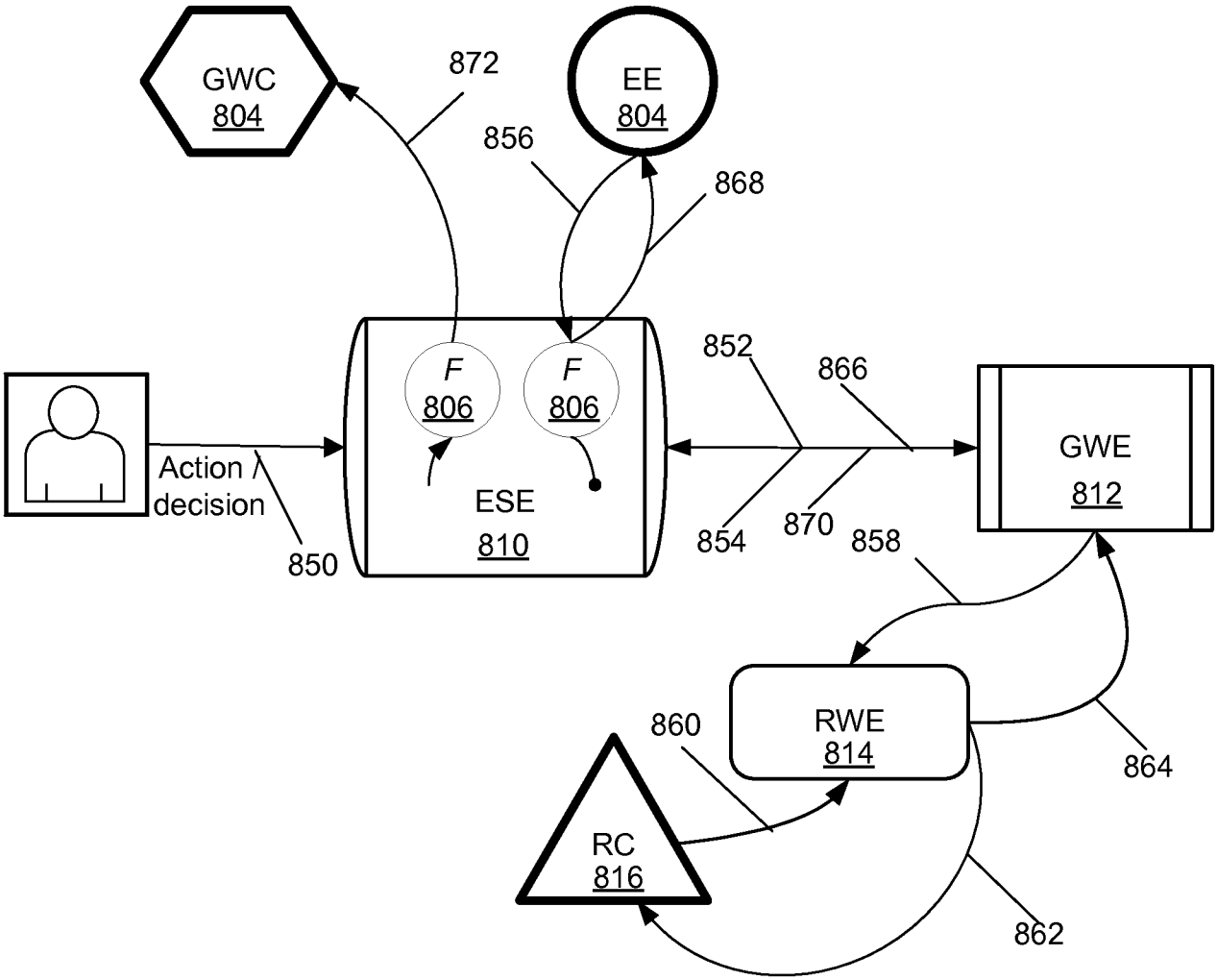
GWC
706

Figure 7


GWC
804
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EE
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F
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866
GWE
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Action /
decision
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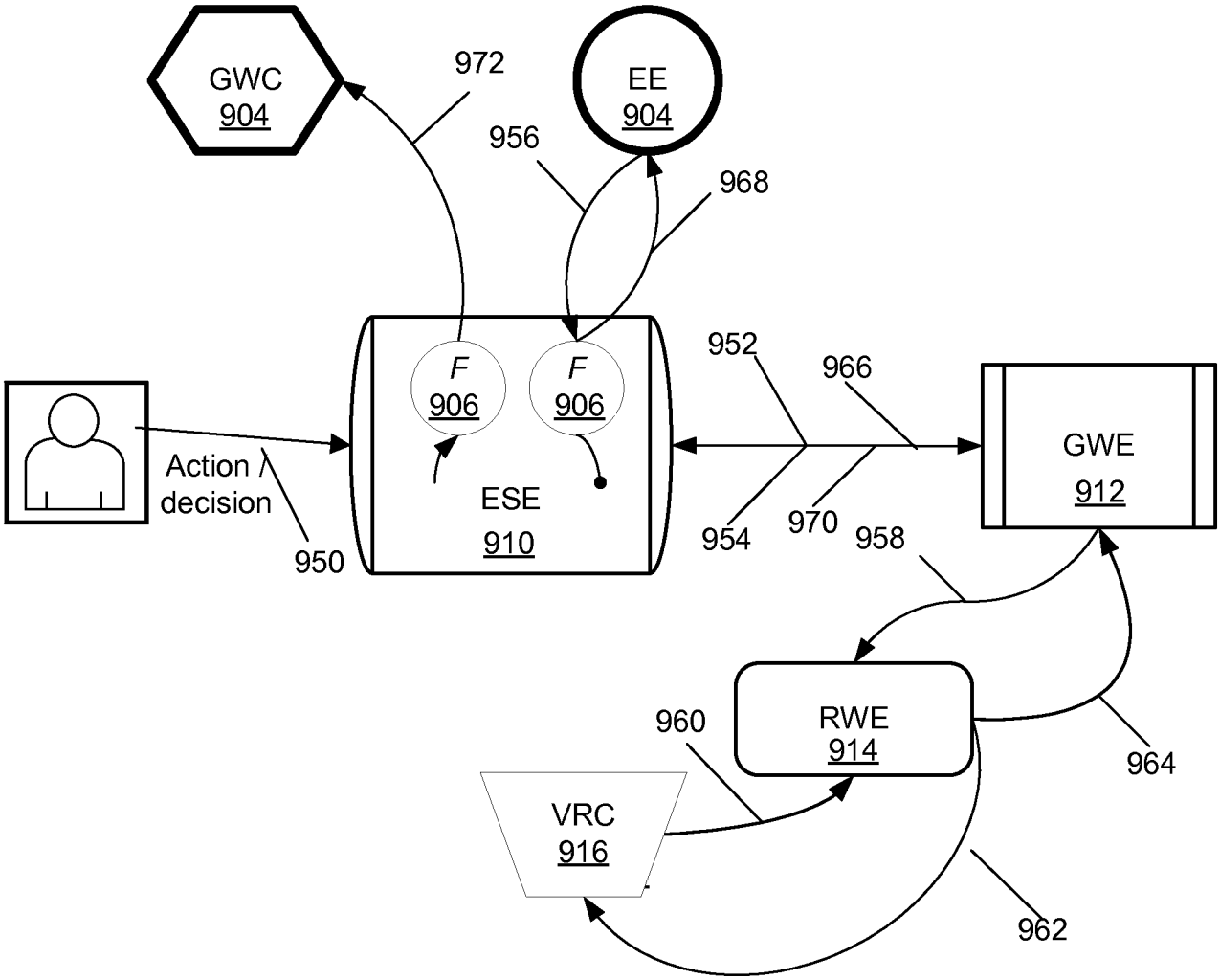
858
RWE
814
860
864
RC
816
862

Figure 8


GWC
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EE
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952
966
GWE
912
Action /
decision
950
ESE
910
954
970
958
RWE
914
960
964
VRC
916
962

Figure 9

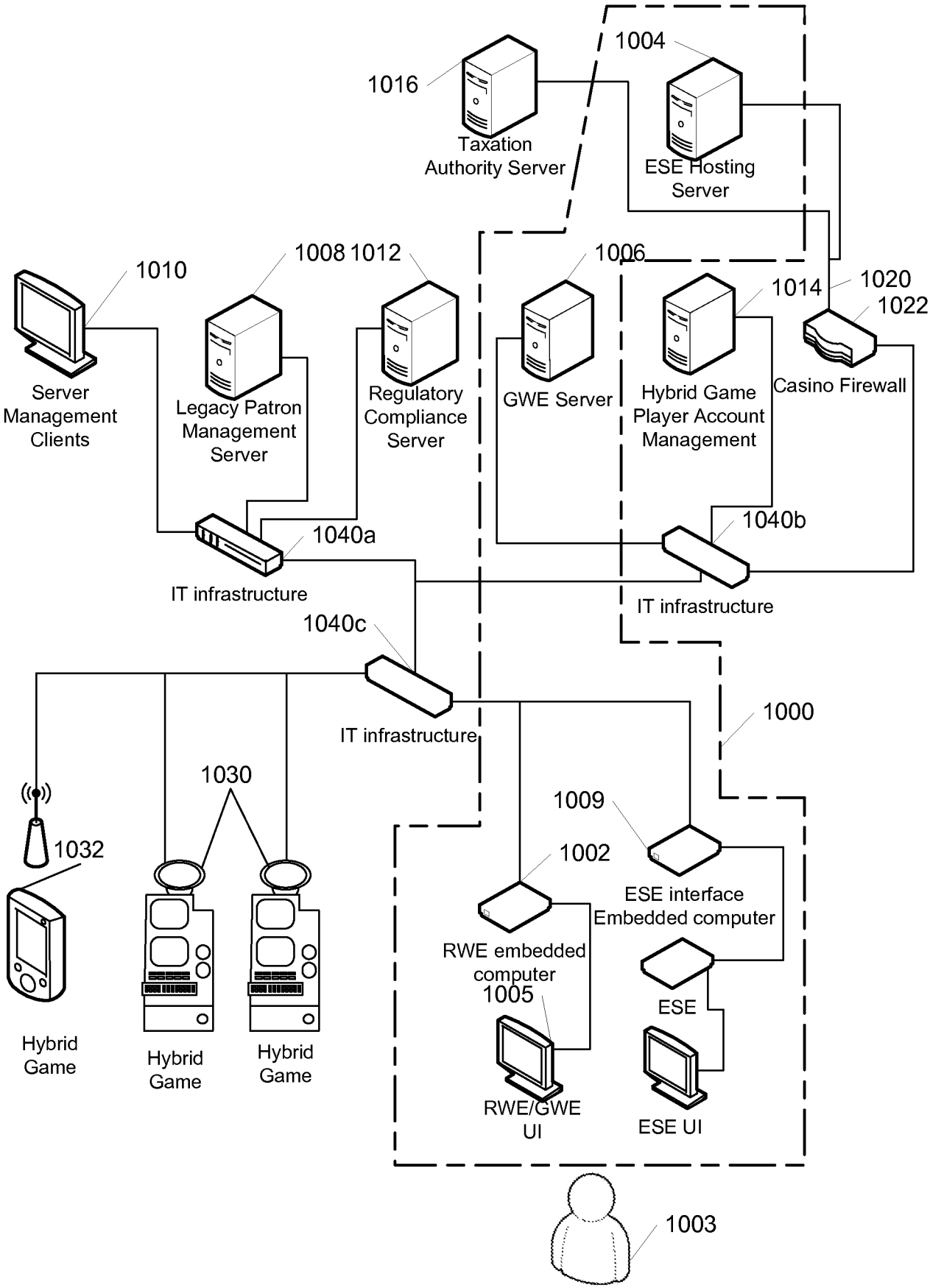
1016
Taxation Authority Server
1004
ESE Hosting Server
1010
Server Management Clients
1008
Legacy Patron Management Server
1012
Regulatory Compliance Server
1006
GWE Server
1014
Hybrid Game Player Account Management
1020
1022
Casino Firewall
1040a
IT infrastructure
1040b
IT infrastructure
1040c
IT infrastructure
1000
1030
1032
1009
1002
ESE interface Embedded computer
RWE embedded computer
ESE
1005
RWE/GWE UI
ESE UI
Hybrid Game
Hybrid Game
Hybrid Game
1003

Figure 10

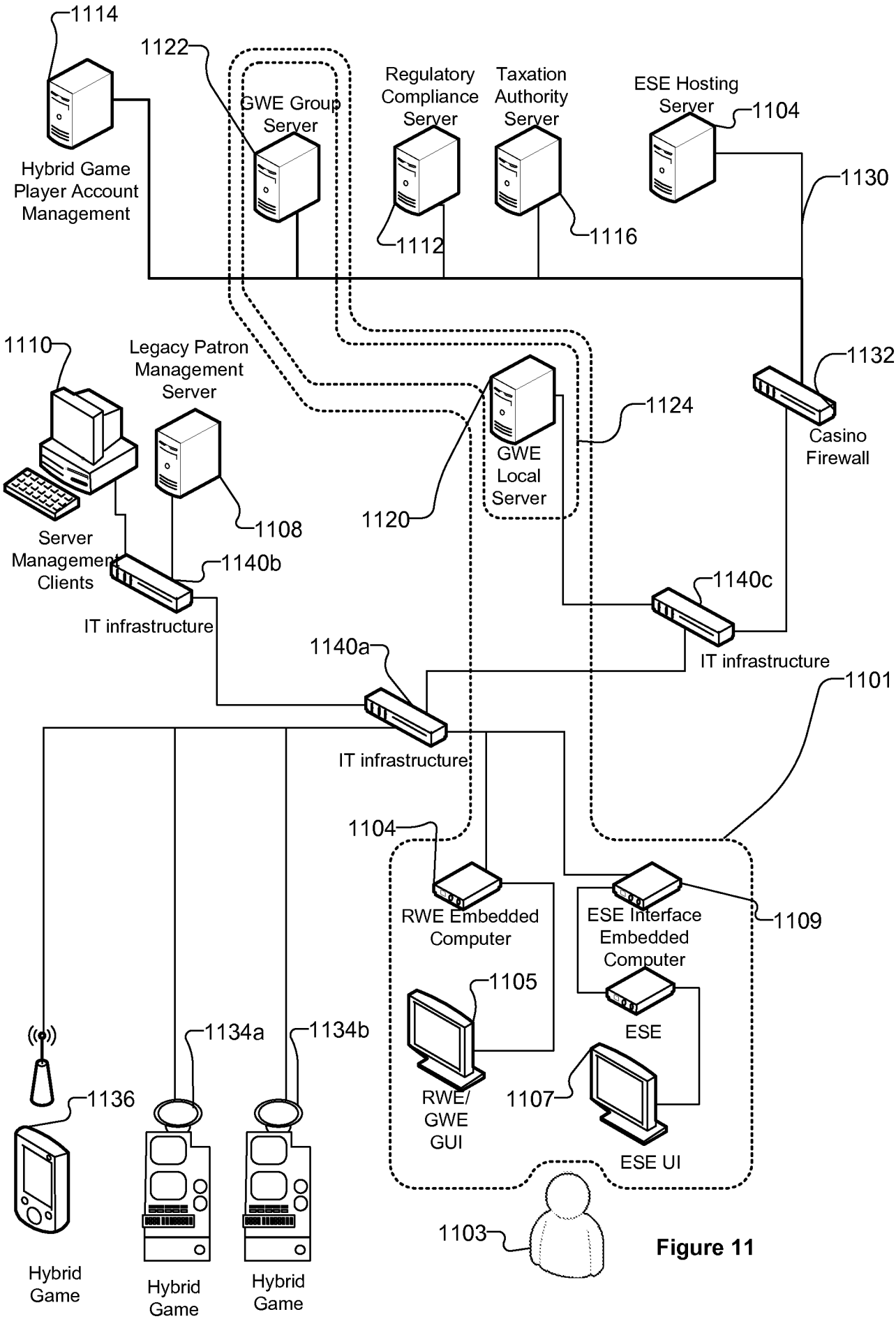
1114
1122
GWE Group Server
Regulatory Compliance Server
Taxation Authority Server
ESE Hosting Server
1104
1130
Hybrid Game Player Account Management
1112
1116
1110
Legacy Patron Management Server
1124
1132
Casino Firewall
GWE Local Server
1120
1108
Server Management Clients
1140b
IT infrastructure
1140c
IT infrastructure
1140a
1101
IT infrastructure
1104
RWE Embedded Computer
ESE Interface Embedded Computer
1109
1105
ESE
RWE/ GWE GUI
1107
ESE UI
1134a
1134b
1136
1103
Hybrid Game
Hybrid Game
Hybrid Game

Figure 11

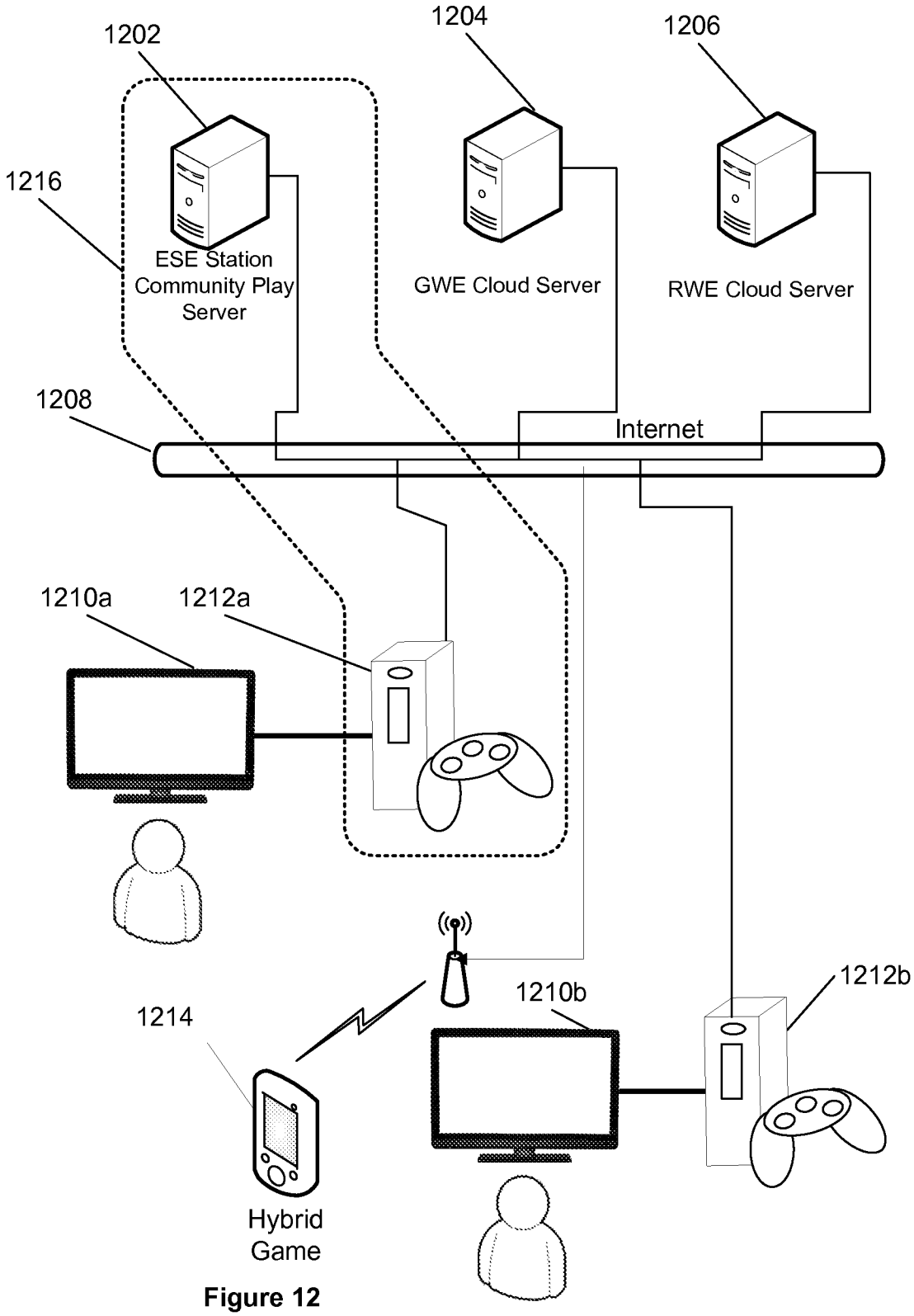
1202
1204
1206
1216
ESE Station
Community Play
Server
GWE Cloud Server
RWE Cloud Server
1208
Internet
1210a
1212a
1214
1210b
1212b
Hybrid
Game

Figure 12

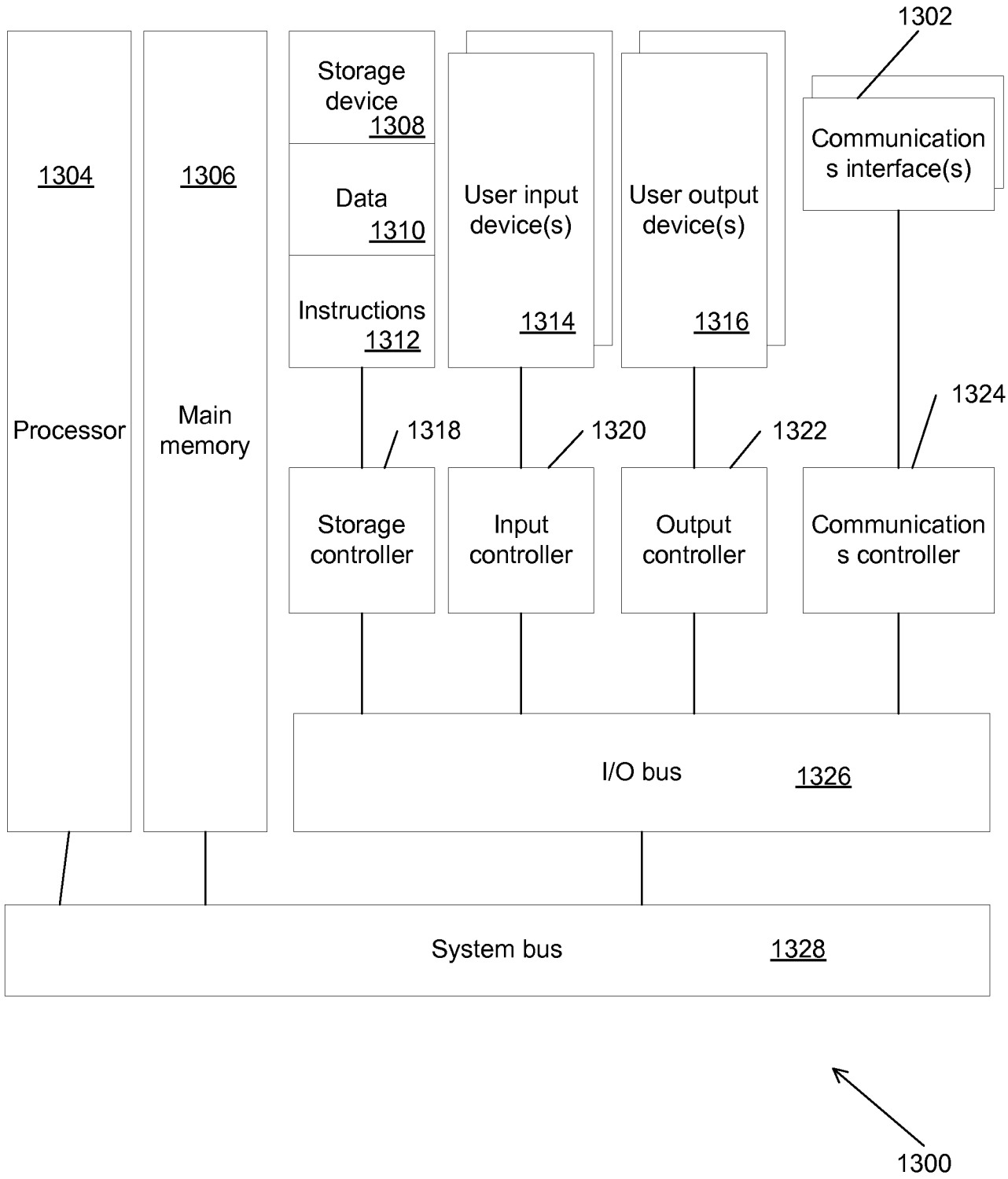
1302
Storage device 1308
Data 1310
Instructions 1312
User input device(s) 1314
User output device(s) 1316
Communication s interface(s)
1304
Processor
1306
Main memory
1318
1320
1322
1324
Storage controller
Input controller
Output controller
Communication s controller
I/O bus 1326
System bus 1328
1300

Figure 13

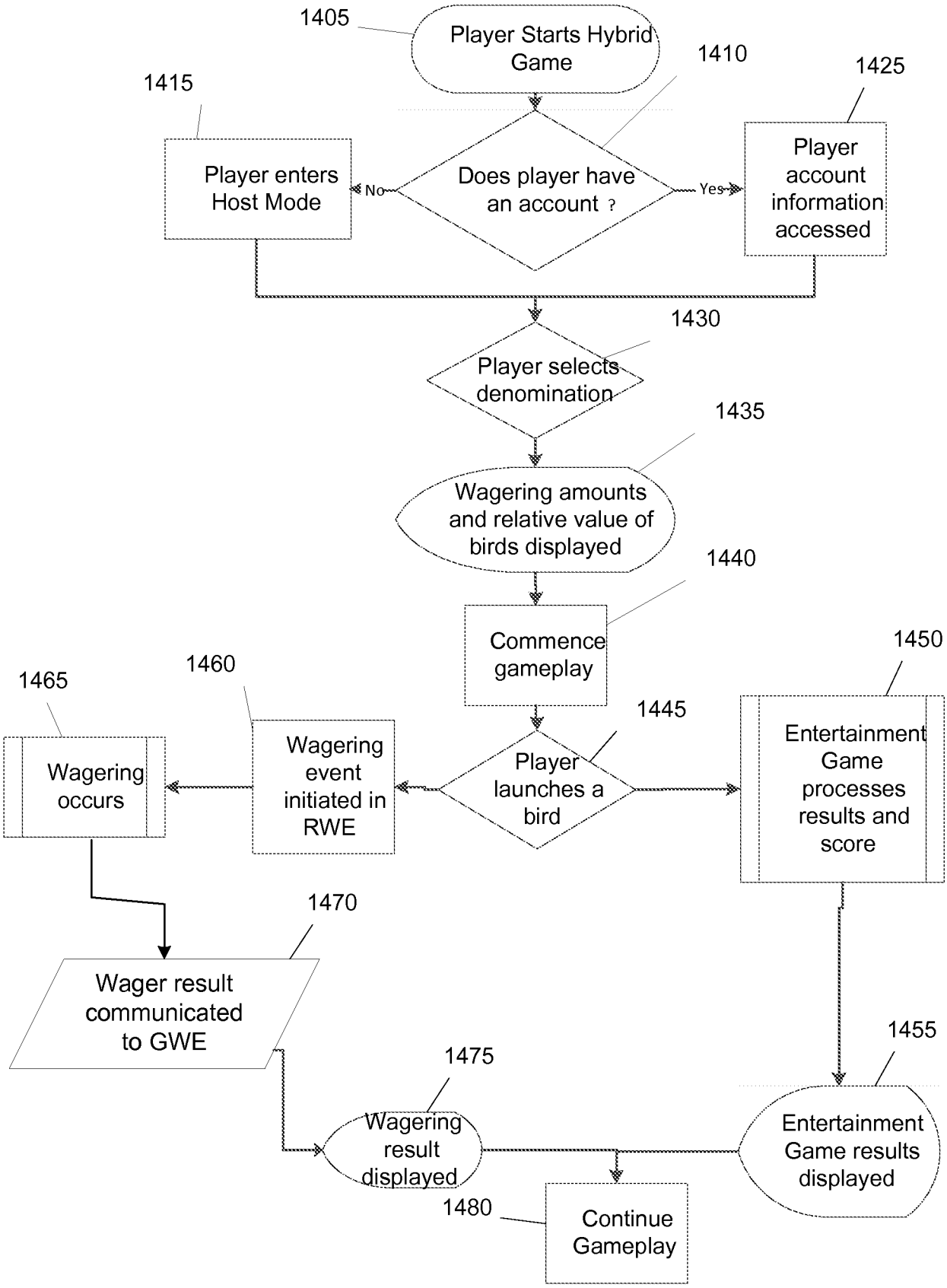
1405
Player Starts Hybrid Game
1410
1415
1425
Player enters Host Mode
No
Does player have an account ?
Yes
Player account information accessed
1430
Player selects denomination
1435
Wagering amounts and relative value of birds displayed
1440
Commence gameplay
1450
1460
1465
1445
Wagering occurs
Wagering event initiated in RWE
Player launches a bird
Entertainment Game processes results and score
1470
Wager result communicated to GWE
1455
1475
Wagering result displayed
Entertainment Game results displayed
1480
Continue Gameplay

Figure 14

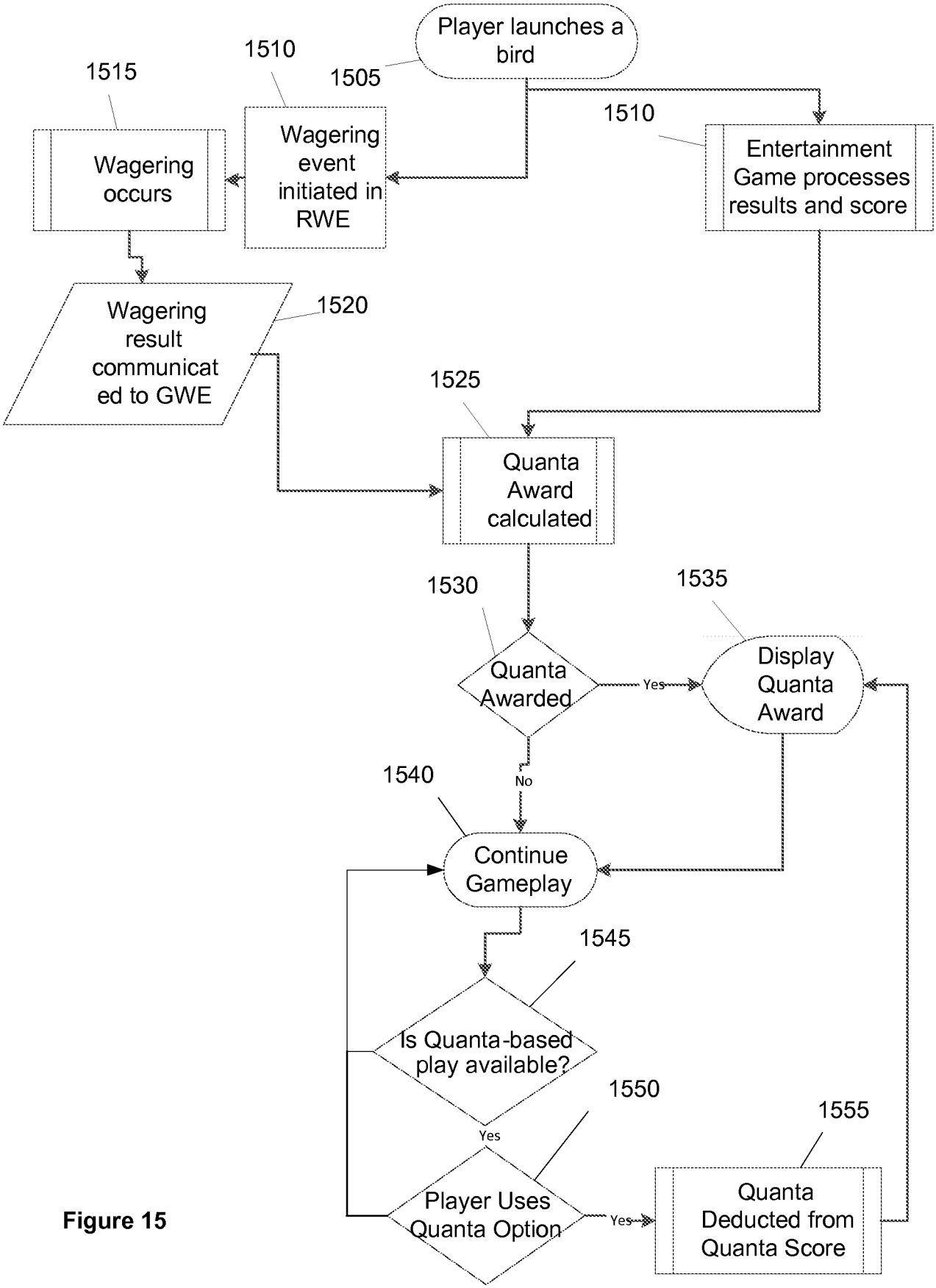
Player launches a bird
1505
1510
Wagering event initiated in RWE
1515
Wagering occurs
1510
Entertainment Game processes results and score
Wagering result communicated to GWE
1520
1525
Quanta Award calculated
1530
Quanta Awarded
Yes
1535
Display Quanta Award
No
1540
Continue Gameplay
1545
Is Quanta-based play available?
Yes
1550
Player Uses Quanta Option
Yes
1555
Quanta Deducted from Quanta Score

Figure 15

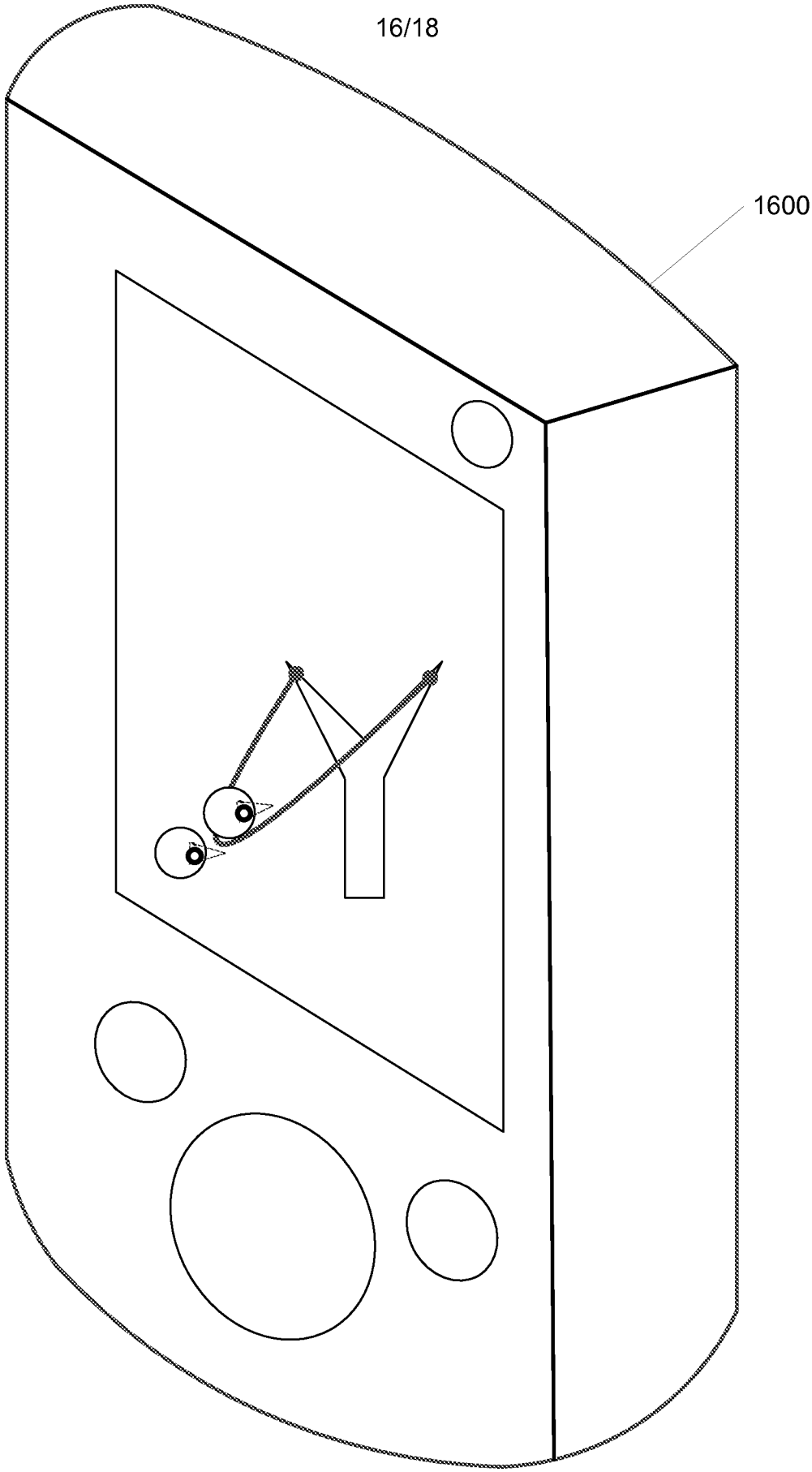

Figure 16

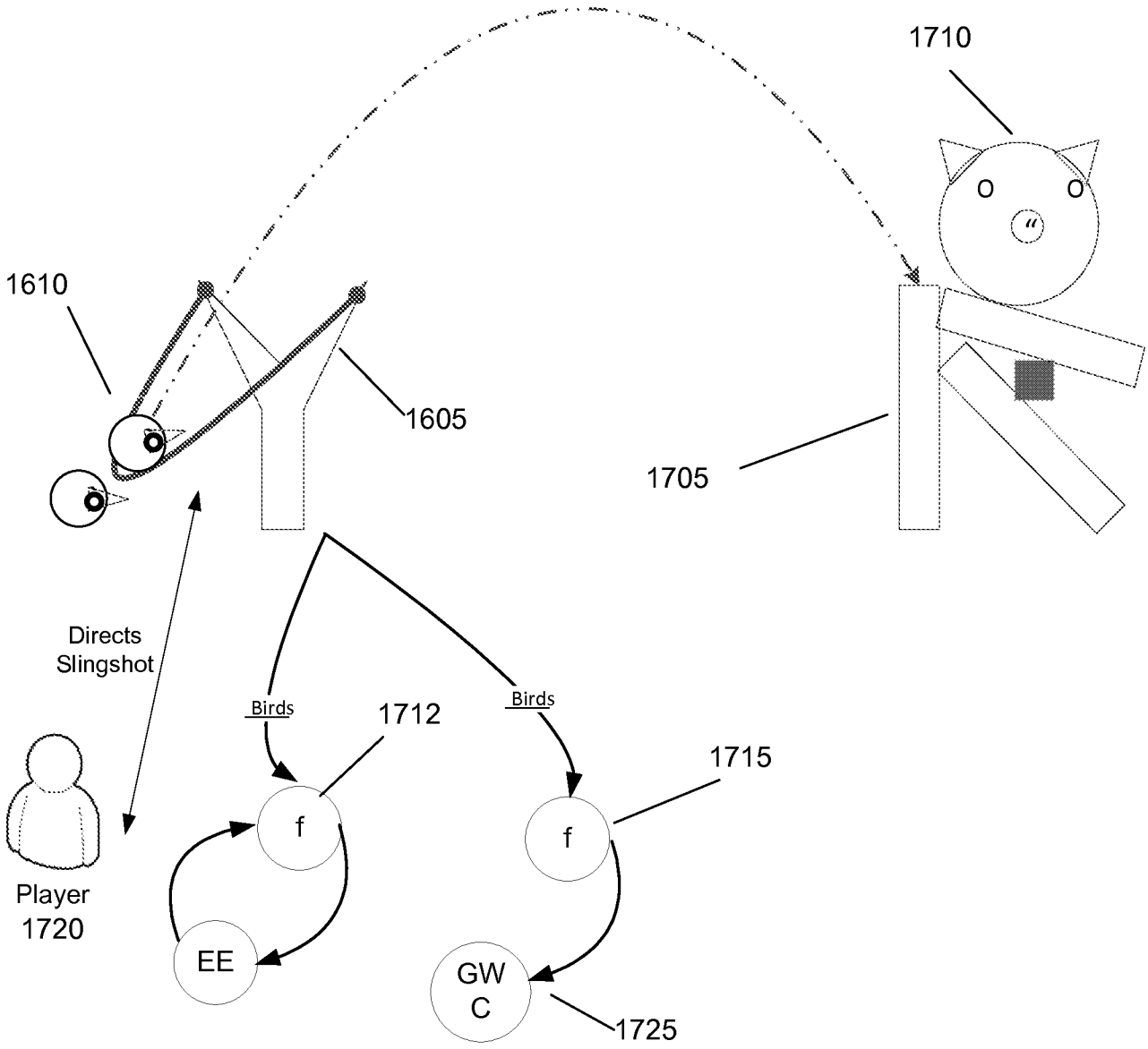
1710
1610
1605
1705
Directs
Slingshot
Birds
1712
Birds
1715
f
f
Player
1720
EE
GW
C
1725

Figure 17

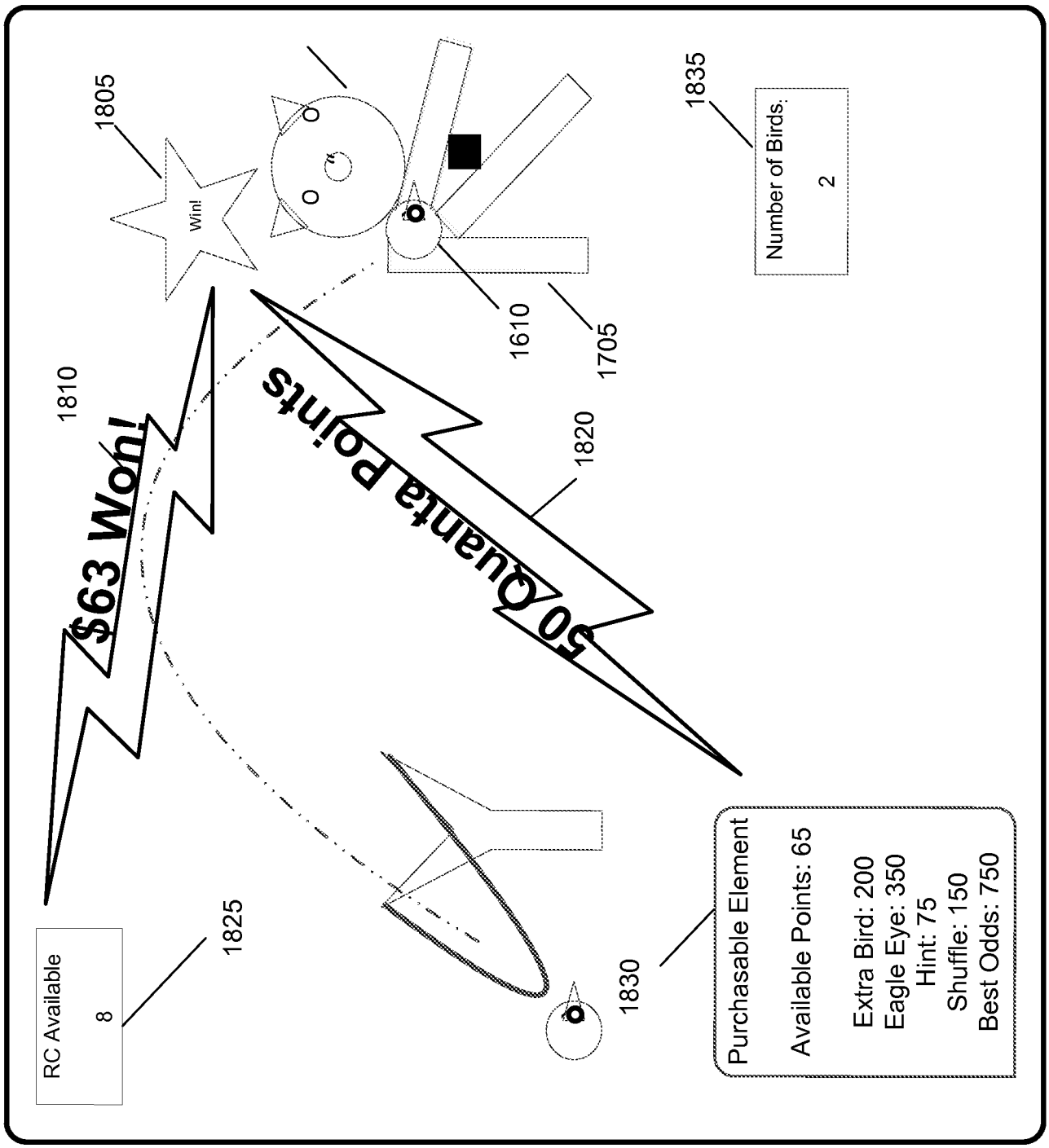
1805
Win!
1610
1705
1810
$63 Won!
50 Quanta points
1820
1835
Number of Birds:
2
RC Available
8
1825
1830
Purchasable Element
Available Points: 65
Extra Bird: 200
Eagle Eye: 350
Hint: 75
Shuffle: 150
Best Odds: 750

Figure 18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/069007

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A63 F 9/24 (2014.01)
USPC - 463/25
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - A63 F 9/24, 13/00, 17/00, 19/00 (2014.01)
USPC - 463/1, 16, 23, 25

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - A63F 13/10; G07F 17/32, 17/3244, 17/3267 (2014.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Orbit, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2011/109454 A1 (ARNONE et al) 09 September 2011 (09.09.2011) entire document	1-18
Y	VSSEGN | Time Crisis 3 Weapons. 17 March 2007 [retrieved on 2014-03-15]. Retrieved from the internet: <URL: https://web.archive.org/web/20070317154918/http://vssegn.angelcities.com/TC3/TC3_Weapons.html>	1-18
A	US 6,050,895 A (LUCIANO JR. et al) 18 April 2000 (18.04.2000) entire document	1-18
A	US 2012/0322545 A1 (ARNONE et al) 20 December 2012 (20.12.2012) entire document	1-18
A	US 2006/0189371 A1 (WALKER et al) 24 August 2006 (24.08.2006) entire document	1-18

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* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 March 2014	14 APR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774