

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ACTIVISION BLIZZARD, INC.,  
Petitioner

v.

MILESTONE ENTERTAINMENT, LLC,  
Patent Owner

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Case No. IPR2025-00711  
U.S. Patent No. 11,335,164

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**DECLARATION OF DWIGHT CREVELT IN SUPPORT OF  
PETITION FOR *INTER PARTES* REVIEW OF  
U.S. PATENT NO. 11,335,164**

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## I. INTRODUCTION

1. I, Dwight Crevelt, have been retained by Activision Blizzard, Inc. (“Activision”) to provide an analysis of the scope and content of U.S. Patent No. 11,335,164 relative to the state of the art at the time of the earliest application to which the ’164 patent claims priority. My analysis relates to claims 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29. I have also been retained to provide analysis regarding what a person of ordinary skill in the art (“POSITA”) would have understood at the time of the earliest application underlying the ’164 patent.

2. This declaration summarizes the opinions I have formed to date. I reserve the right to modify or amend my opinions, if necessary, based on further review and analysis of information that I receive subsequent to the filing of this declaration, including in response to positions taken by Milestone Entertainment, LLC (“Milestone”) or its experts that I have not yet seen, including any secondary considerations evidence that Milestone or its expert may consider and present.

3. It is my opinion that claims 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29 of the ’164 patent are invalid based on the following grounds.

Ground 1	Kelly683 (Ex. 1005) Render obvious Claims 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29.
Ground 2	Kelly638 (Ex. 1005) In View of Paulsen (Ex. 1007) Renders obvious Claims 2 and 4.

Ground 3	Walker (Ex. 1006) Walker In View Of Schneier143 (Ex. 1008) renders obvious claims 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29.
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## **II. EXPERIENCE, QUALIFICATIONS, AND STATUS AS AN INDEPENDENT EXPERT**

4. I am an expert in the field of design and operation of gaming machines and systems for the casino industry.

5. I am the founder and presently president of Crevelt Computer System, Inc., a gaming business consulting and engineering development company that is located and incorporated in Las Vegas, Nevada. I founded Crevelt Computer in 1977. Although I discuss my expert qualifications in more detail below, I also attach as Ex. 1004 a recent and complete curriculum vitae, which details my educational and professional background.

6. My formal, post-high school education started at the University of Las Vegas in 1973. I continued my education at the U.S. Naval Academy from 1975 to 1977. I then attended Iowa State University, where I received my Bachelor of Science degree in Computer Engineering in 1979.

7. My professional experience in the casino gaming industry started in 1974, when I joined Gamex Industries as a software engineer. As a software engineer, I designed and developed casino game management systems, including an

on-line slot accounting and monitoring system, and I also maintained Gamex's online casino table game accounting system. I was also responsible for maintaining the system that monitored the play of table games and slot machines as installed in Caesar's Palace, Las Vegas.

8. In 1977, I started my own consulting company, Crevelt Computer System, Inc., and near the end of 1977 I worked at United Audio Visual as a software engineer developing audio/video controllers for multimedia shows.

9. From 1979 to 1980, I continued to work in the gaming industry as a computer engineer for Sircoma (later becoming IGT). At Sircoma, I developed various gaming machines, including video Poker, video Blackjack, video Red Dog and Whirlwin. I also had responsibility for maintaining the software for the video slot machines. I also acted as a technical gaming control liaison, which involved providing the Nevada Gaming Control Board staff with technical information regarding the company's gaming devices. The Nevada Gaming Control Board regulates the gaming industry in Nevada, overseeing the licensing and compliance of casinos as well as manufacturers and the equipment used in gaming.

10. In 1981, I worked for Mills-Jennings as a Director of Corporate Research. In this role, I assembled and supervised a research and development team that designed a complete line of video casino gaming machines and an on-line casino

accounting system. From 1984 to 1986, as a consultant with Crevelt Computer System Inc., I worked with Electronic Data Technologies, where I designed and developed the first complete on-line Player Tracking System.

11. From 1988 to 1996, I worked for Electronic Data Technologies (EDT) and International Game Technologies (IGT). I was responsible for design, development and implementation of player tracking and accounting systems for casino games. Specifically, I was responsible for the development, deployment and support for over 150 installations of the SMART system and the first cashless system utilized by Caesar's Palace, Las Vegas. In 1995, I was promoted to Product Manager for Cashless Applications. In this role, I prepared business plans and strategies for implementing cashless gaming products, including IGT's first SMART card-based cashless gaming system installed at SBM in Monte Carlo. I also spent time evaluating casino-related intellectual property, particularly patents, especially those pertaining to cashless gaming and progressive systems.

12. As a consultant with Crevelt Computer Systems, I have worked with many gaming equipment manufacturers on the design and development of casino gaming devices, including slots, video games, Keno and Bingo systems. I also have provided independent laboratory analysis of games for regulators in New South

Wales, Australia and the state of Mississippi. Additionally, I have conducted mathematical analyses for casino gaming devices.

13. From 1998-2013, Crevelt Computer System was a Partner in FootTraffic Promotional Gaming LLC. As a Partner with FootTraffic Promotional Gaming LLC, I have designed, developed, managed and marketed a series of promotional games for casinos, retailers and trade shows. These are free-play games that are designed to bring or attract patrons to the casino with an opportunity to win cash and prizes. These games have been very successful and several have been incorporated into permanent promotions at several casinos, including Peppermill Casino (Reno), Casino Fandango (Carson City), and Silver Legacy (Reno).

14. In sum, I have over forty years of engineering and management experience in the gaming industry, both as a consultant and an employee. During this time, I have worked extensively with OEMs, casinos, casino gaming regulators and agencies worldwide, including the Nevada Gaming Control Board. I am also the co-author of two books that relate to the casino gaming industry – Slot Machine Mania and Video Poker Mania – which are still in publication twenty years after they were first published. Additionally, I have been interviewed for numerous magazines, radio programs and television shows regarding gaming machines and the casino industry, including appearances on Secrets Revealed (a documentary on The

Learning Channel) and High Rollers (a documentary on the Discovery Channel). Throughout my career, I have kept up to date with the latest developments in the casino industry by subscribing to casino-related trade publications and attending casino gaming shows. In addition, I am a named inventor on six United States patents related to casino gaming systems (i.e., cashless and progressive gaming systems).

15. I am being compensated at the rate of \$400 per hour for my work on this declaration. My fee is not contingent on the outcome of any matter or on any of the technical positions I explain in this declaration.

16. I have no financial interest in Activision. I have been informed that Milestone claims ownership of the '164 patent. I have no financial interest in Milestone.

### **III. MATERIALS REVIEWED AND CONSIDERED**

17. My opinions in this declaration are based on working in the field of computer and software engineering and the casino gaming industry, including my research and consulting. I have an established understanding of the relevant field at the relevant timeframe and I have an understanding of the skill set, capabilities, and knowledge of a POSITA as of September 1, 2004.

18. My opinions are also based on investigation and study of the patent at issue, its file history, and the prior art. In the course of forming my opinions, I have

reviewed the exhibits submitted with the Petition, which are specifically identified in Appendix A.

19. I may rely upon these materials and/or additional materials to rebut arguments raised by Milestone. Further, I may also consider additional documents and information in formatting any necessary opinions including documents that may not yet have been provided to me.

#### **IV. UNDERSTANDING OF RELEVANT LEGAL PRINCIPLES**

20. I understand that statutory and judicially created standards must be considered to determine the validity of a patent claim. I am not an attorney and, consequently, will offer no opinion on the law itself. My understanding of the pertinent law is described in this section and is the result of explanations provided by counsel. I have applied this understanding in my analysis.

21. I understand that a patent claim is unpatentable if it is obvious in view of the prior art. I further understand that the frame of reference for determining whether a claim is obvious is from the perspective of a POSITA at the time of invention. I have been asked to assume that the effective priority date is September 1, 2004. I have not been asked to determine whether this date is appropriate.

**A. Anticipation**

22. I have been informed that for a patent claim to be anticipated by the prior art, each and every limitation of the claim must be found, expressly or inherently, in a single prior art references as recited in the claim. I have been informed that a claim limitation not expressly found in a prior art references is inherent if the prior art necessarily functions in accordance with, or includes, the claim limitation. Mere probability that a limitation is included is not sufficient to establish inherency.

**B. Obviousness**

23. In analyzing obviousness in light of the prior art I have been informed that it is important to understand the scope of the claims, the level of skill in the relevant art, the scope and content of the prior art, the differences between the prior art and the claims, and any objective indicia of non-obviousness (also called secondary considerations).

24. I have been informed that a patent claim is unpatentable for obviousness if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a POSITA to which said subject matter pertains. I have been informed that obviousness may be based on one reference or a combination of

references. I have been informed that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.

25. I have been informed that when a patented invention is a combination of known elements, the Board must determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue by considering the teachings of prior art references, the effects of demands known to people working in a field or present in the marketplace, and the background knowledge possessed by a POSITA.

26. I have been informed that the Supreme Court has recognized several rationales for combining references or modifying a reference to show obviousness of the claimed subject matter. I understand that several of these rationales are: (1) combining prior art elements according to known methods to yield predictable results; (2) simple substitution of one known element for another to obtain predictable results; (3) use of a known technique to improve a similar device (method or product) in the same way; (4) applying a known technique to a known device (method or product) ready for improvement to yield predictable results; (5) choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (6) and some teaching, suggestion, or motivation in the prior

art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

27. I have been informed that in order to prove that a claimed invention is not patentable for obviousness, a petitioner must (1) identify the differences between the claim and particular disclosures in the prior art references, singly or in combination, (2) specifically explain how the prior art references could have been combined in order to arrive at the subject matter of the claimed invention, and (3) specifically explain why a POSITA would have had reasons to so combine the prior art references.

## **V. TECHNOLOGY OVERVIEW**

### **A. Online Gaming**

28. Wide area networked gaming systems have been around as late as the 1980s. One of the first networked gaming machines was IGT's Megabucks. A central server system was connected via phone lines to a controller in each system. By the mid-1990s, cashless gaming, Internet gaming, and downloadable gaming functions were well on its way. Initially, Internet gaming used software clients downloaded to a player's personal computer to access the network and provide rich graphics. Many companies like Boss Media produced and ran these sites as early as 1996. As Internet technology advanced with javascript and Flash, these Internet sites

were able to operate without a downloaded client, and instead allowed users to play through an Internet browser.

**1. Player Tracking / Loyalty And Slot Accounting Systems**

29. Gaming machines were first connected online to a central computer system in January 1975, when Gamex Industries revealed its online Slot Accounting and Security System at the London AMOA show. The system was subsequently installed in Caesars Palace, Las Vegas. (Gamex1-5). In response to Gamex's development, Bally Mfg. developed its first Slot Data System (SDS) and installed it in the Las Vegas Hilton in the late 1970's. This system had a central computer system monitoring individual signals from the gaming machines on the casino floor.

30. In the early 1980's, I worked on designing and developing online slot accounting and security systems for various companies, including Mills-Jennings, a company that had contracts to develop systems for Steve Wynn/Golden Nugget and Harrah's Casino. The Golden Nugget system was to provide a complete accounting system that would eliminate the need to count the coins collected from the gaming machines. The Harrah's contract was to complete development on their in-house developed slot machine and to provide an online slot accounting system to go along with them. Both of these casinos ultimately canceled development of these projects

in light of economic conditions. Additionally, similar systems had limited success in the market because they did not directly produce revenue for the casino and the revenue savings provided by those systems – primarily resulting from minimizing or eliminating accounting and security losses – were not seen to be sufficient to justify the cost of the systems.

31. In 1984, Electronic Data Technologies (EDT), a subsidiary of IGT, developed and installed the first casino-wide online Player Tracking and Slot Accounting System. By 1996, that EDT system, which was originally called the EDT Action System and was later renamed the SMART System, was installed in over 150 locations worldwide. This represented a larger installation base than that of all competing systems combined. The EDT system became the model for most subsequent systems, including those from Bally, Casino Data Systems (CDS) and Grips.

32. The Player Tracking concept is simply to award bonuses to players for their play. Typically, a player would enroll in a Player's Club at a casino-run booth. Upon enrolling, the player typically would receive a player identification card. Then, whenever the player inserted his card into a card reader attached to the gaming machine, they would be greeted with a message and an updated player account balance reflecting the bonus points in the player's account. During gaming machine

play, the player might receive 'y' bonus points for every 'x' coins played. These bonus points are tracked by the system, and the player could redeem them for merchandise, cash, comps (complementary meals, room, shows, etc.) or other items the casino desires to make available. Ex. 1020 at 186-188; Ex. 1021 at 120-121.

33. The basic flow of information from a player tracking unit in a gaming machine to a player tracking system is as follows: Upon insertion of the player identification card into the card reader of a player tracking unit installed in a gaming machine, a message is sent to the host system to retrieve the player's account information. The account information is looked up in the system's database using the account number from the card. The player's account balance, name, and any other necessary data is then sent back from the host computer/server to the player tracking unit in the gaming machine. While the player's card remains inserted, all of the player's play activity is tracked by the system. While the player is playing, periodic play activity messages are sent to the host to update real-time displays and to provide a backup in case of equipment failures. When the player removes his card, his play activity information is sent to the host, where the system updates the player's account balance.

34. Every gaming machine in a player tracking or slot accounting system has a unique address associated with it. That unique address code enables the host

computer or server in the system to transmit information to and receive information from the gaming machine and to track gaming machine accounting information. The system also included an additional table for comps. The value in this field was frequently used by casinos to determine if a player had played enough to earn certain comps or even to provide a cash award back to the player.

35. The EDT system described above included various hardware components, including Slot Machine Interface Boards (SMIBs), Data Collection Units (DCUs), a Front End Controller (FEC), a File Server/Transaction Processor, and a series of computer workstations on a token-ring network. Those computer workstations were designed to handle various tasks, such as administration, accounting, player enrollment, player redemptions, jackpots/hopper fills, slot maintenance, marketing and promotions, coin scale interface, and security.

36. The SMIB is a microprocessor-based device including erasable programmable read-only memory (EPROM) and random access memory (RAM), along with an alpha-numeric display for messages, a card reader for reading a player identification card, several lights and buttons to facilitate player interaction with the system, an interface board to provide signal conditioning for the connections to the gaming machine, and a serial interface to the DCU. The SMIB monitors the gaming machine and report accounting and security information to the central system.

Additionally, the SMIB provided the system interface to the player via the card reader and display.

37. The DCU is a microprocessor-based store and forward device. Each DCU continuously polls the SMIBs to which it is connected for accounting, security, and player tracking transaction information, and forwards that information to the FEC of the host computer system. Additionally, the DCU sends player tracking transaction response information from the host computer system to the SMIBs.

The FEC is a computer workstation on the host system network. The FEC's primary function is to handle communications with the DCUs and SMIBs and the Host System. This included downloading configuration data, polling the DCUs, and responding to the messages received from the floor.

38. The Host System consists of several file servers and workstations on a token-ring network. All workstations were configured to operate and download their programs over the network, and the host system transactions were client/server based.

39. The host workstations are user input devices that allow casino personnel to access, configure, and monitor the data in the system.

Other features of player tracking systems included real time monitoring displays for Hot Players, Active Players, Jackpots and Fills.

## 2. Bonusing, Promotions, And Cashless Gaming

40. By 1990, most major casinos had player tracking systems. Every system provider and casino was looking for ways to differentiate itself from the competition. Automating existing promotions provided one way to do so, and some casinos (e.g., Sands Atlantic City, Hilton Hotels Nevada, MGM Las Vegas, Harrahs Entertainment) developed their own system for this purpose. Among the promotions known at that time were bus promotions, double jackpot time, double bonus point time, cash back, and cashless gaming. “One casino even modified its system to give players of regular slot machines extra payouts if they are using their club card.” Ex. 1021 at 122.

41. A cashback promotion permitted the player to convert bonus points into credits to be wagered on a gaming machine. Cashless gaming systems permitted players to transfer credits between a gaming machine and an account on a host computer system so that the player could play gaming machines in a casino without carrying currency and coins from game to game.

42. Cashback and Cashless systems were a challenge to implement in the early 1990’s because gaming machines were not configured with serial communication ports. As a result, the only method to get credits on and off a gaming machine without actually inserting coins or cashing coins out of the machine was to

effectively “trick” the machine using the coin in and coin out signals. Ex. 1020 at 225-226. One problem with online systems in the early 1990’s resulted from the variety of different meters involved. These meters had to be physically read, recorded, and reconciled for accounting purposes. The development and use of a serial number chip in the gaming machine harness allowed data from the various meters to be read and sent to the host along with the gaming machine accounting data. Once the unique serial number for each gaming machine was added to the system database, the system could track if a particular gaming machine was moved and associate and reconcile the accounting data related to that machine. This greatly simplified the process and eliminated the problems discussed above related to multiple meters. *See also* Ex. 1012 (describing cashless system); Ex. 1013 (same).

43. In approximately 1993, the Sands Casino in Atlantic City developed its own player tracking system that included a feature called Action Cash. The Sands Action Cash system allowed a patron to put money on account in the system and then transfer the funds from the account to the gaming machine for play. After playing a gaming machine, the player could transfer any funds left on the credit meter, along with any winnings from game play, back to his player account. *See also* Ex. 1014 (describing promotion account associated with the player).

44. Further still, the system included “Action Cash” — promotional funds from the casino that the casino could deposit into the players account. These promotional funds were “non-cashable,” because they could be transferred to and from the gaming machine using the system, but they could not be cashed out at the machine. In addition, this system provided casinos with opportunities to craft new promotions with the assurance that the promotional credits given to players would be wagered on that casino’s machines.

45. When the MGM casino opened in Las Vegas in 1993, it used a player tracking system developed in-house. Its casino floor also included approximately 400 coinless gaming machines. Instead, they relied upon bill acceptors to put money on the machine and printed bar coded tickets to cash out any credits left on the machine. These tickets could be taken to a cashier to be redeemed for cash, or they could be inserted into another gaming machine to play.

46. In 1994, Caesars Palace Las Vegas and IGT jointly developed and installed an online cashless system called “Request.” The Request system allowed a player to open an account at the cage, where he would receive an ATM-style card. The player was then able to go to a gaming machine transfer funds from his account to the gaming machine using his Request card. Once the funds were transferred to the gaming machine, the player could then wager those funds and play. Upon

completion of play, the player could then transfer the credits on the gaming machine back to his player account. The Request system therefore enabled players, especially in the high limit area, to move between gaming machines without having to worry about exchanging tokens. (Ex. 1017; Ex. 1018; Ex. 1019) (Ex. 1011)

47. The Request system at Caesars Palace communicated with the gaming machine using the IGT SAS 3.x protocol. The system was designed to enable a player to use his bank ATM card to transfer funds to the gaming machine. Because those funds belonged to the player from the outset (as compared to promotional funds given to the player by the casino), the player was permitted to cash them out at will from the gaming machine hopper. Funds of this type that can be cashed out at the player's election are known as "cashable credits." The Request system also used non-cashable credits – credits that could only be transferred to and from the players' account on the system.

### **3. The Sas Protocol And Cashless Standards**

48. With the proliferation of player tracking and slot monitoring systems, the casinos desired the ability to extract more information from the gaming machine. Additionally, they desired the ability to add and remove credits from the gaming machines to provide additional promotions and game play flexibility.

Around 1990 gaming device manufacturers started adding serial communication capability to their machines and in order to utilize the feature manufacturers developed their own protocols to communicate with the machines. Bally's protocol was called SDS and IGT's protocol was DLI (Direct Link Interface), which was later renamed to SAS (Slot Accounting System). Other gaming device and system manufacturers developed their own protocols.

49. The early 2000's saw dramatic changes in the gaming industry. Computer technology had advanced to the point where processor speed, memory size and video graphic capabilities were no longer limitations to the game design. Interoperability of gaming machines and online casino management systems were being minimized by the use of the SAS protocol (a machine to system protocol developed by IGT that had become the de facto standard in the industry) and the cooperative efforts of the gaming device manufacturer in creating the Gaming Standards Association (GSA).

50. Additionally ticket-in ticket out (TITO) became a widely accepted technology for casino play. This technology first introduced in the early 1990s removed coins from the machines. Players would insert currency into an acceptor on the gaming machine and received credits on the machines to play. When finished the player would press a 'cashout' button and the gaming machine would print a ticket

representing the remaining credits. The player could cash this ticket in at the casino cage or insert it into another gaming machine to continue playing.

#### **4. Wide Area Network Gaming Systems**

51. Wide area networked gaming systems have been around since the late 1980's. IGT's Megabucks was the first system that networked gaming machines in multiple casinos around the state of Nevada together to create a large progressive jackpot. A central server system was connected via phone lines to a controller in each casino. The casino controller was connected to the gaming machines as well as signs and displays. IGT is the primary supplier of these wide area progressive systems and they are operating in most gaming jurisdictions around the world. (Ex. 1015; Ex. 1016)

52. By the mid 1990's cashless gaming, internet gaming and downloadable gaming functions were developing. Initially internet gaming used downloaded clients to a person's personal computer to access the network and provide the rich graphics desired. All decisions and actual gaming functions were carried out by the host to prevent cheating the PC was merely a display. Many companies like Boss Media produced and ran these sites as early as 1996. As the browser technology advanced with javascript, java, flash etc. these internet sites were able to operate

without the downloaded client for graphics and everything would be sent to the browser on demand.

53. The Gaming industry was very active in creating downloadable systems. The first of these included the ability to download new firmware to the machines bill validator and player tracking systems.

## **5. Basic Electronic Gaming**

54. It was well-known to have gaming systems that included a processor coupled to memory. Electronic gaming systems, such as slot machines, arcade games, and home video consoles, have been known for decades. These systems would necessarily need memory to store the code for the game program and a processor to execute that code.

55. For example, home video game consoles in the 1980s and 1990s had a processor coupled to memory as did personal computers during that era on which users could play games. Early generations of gaming consoles used 8-bit processors, but later generations used 16-bit processors. These early generations of gaming systems had processors coupled with memory that was measured in kilobytes and later in megabytes. Both video games and personal computers had a variety of ways to receive input from a user, which included keyboards and mice, joysticks, and gaming pads, as well as other forms of input. It was also well-known for such gaming

devices to output information to the player on a display, such as a computer monitor for personal computers or a household television for home video game consoles. Images would need to be created to output this information to the display and communicate this information to the player.

56. It was also well-known to have games with multiple levels where players could advance from one level to the next. For example, side scroller games in the 1980s involved worlds with different themes that players could advance through. Other well-known games were role-playing games, in which players could control a character, such as a sprite or avatar, navigating through virtual worlds. In such games, dungeons often had multiple levels that players could advance through. Similarly, users could control these sprites or avatars and have them gain experience points in order to advance levels in a multi-level game.

**B. Virtual Money**

57. Virtual money has been a mainstay in electronic gaming for decades. One of the benefits of virtual money is enhanced player engagement through player tracking and the perception of bigger wins. By 1990, most major casinos had player tracking systems with virtual money. Virtual money could take the form of promotions, points, and cashless gaming. Such features often permitted players to transfer credits between a gaming machine and an account on a host computer

system so that the player could play gaming machines in a casino without carrying currency and coins from game to game. The player could receive virtual currency as part of a promotion or increase the payouts if the player meets certain game play goals. The objective of such systems was to encourage the players to play more due to the perception of big wins, or wager the virtual money and ultimately real money as well.

58. For decades, games have used different forms of virtual money. For example, games had gold coins, rings, or platinum pieces that players could collect. In role-playing games, users could obtain that virtual money through gameplay, such as by completing quests, defeating enemies, or opening treasure chests. In these games, it was well-known for users to buy special in-game items, such as weapons, armor, tools, keys, power-ups, potions, and elixirs. *See, e.g.*, Ex. 1022 at 25; Ex. 1025 at 1. These special items, in turn, allowed users to access new areas, complete new challenging quests, and obtain even greater rewards. It was well-known for these special items to be depicted through an image on screen.

59. This virtual money in games could be obtained through cash purchase. *See, e.g.*, Ex. 1022 at 30-31; Ex. 1023 at 33-34; Ex. 1024 at 2. For example, it was well-known in arcade games to insert coins into arcade machines to purchase “lives” which represented the ability to play the arcade game for a limited period. In the

early 1990s, there were arcade games where users could use additional credits to purchase in-game items.

60. By 2003, there were multiple well-known massive multiplayer online role-playing games (MMORPGs), in which a large number of players would control avatars or sprites in a persistent online world. In these MMORPGs, there were common themes such as obtaining special items and virtual money, such as gold or platinum pieces, through gameplay, such as by killing monsters, completing quests, or defeating bosses. Additionally, since these MMORPGs involved multiple users playing in a common, persistent world, it was a well-known functionality for users to be able to trade special items and/or virtual money with each other.

61. This in turn led to “foreign trade” by which users could enter into a transaction in the real world with a corresponding transaction in the virtual world. Specifically, there were a number of well-known MMORPGs before 2003, in which there were well-known public web auction sites where users could purchase virtual money, such as virtual gold or virtual platinum pieces, in game. The buyer would pay real money (*i.e.*, U.S. dollars) to the seller through a third party, and then the buyer and seller would meet in the virtual world too, and an avatar controlled seller would transfer a virtual money or a special item to the buyer. In these auctions, the purchase price of the virtual money was subject to a multiplier. For example, a user

might purchase 9,328 platinum pieces for \$100 for an exchange rate of 93.28 platinum pieces per dollar, or conversely, \$0.01072 per platinum piece.

**1. Online Gaming Using A Gaming Server And Gaming Clients**

62. There is a long history of using virtual money in the context of electronic game environments. *See, e.g.*, Ex. 1022 at 8 (discussing the use of virtual money in Virtual World in the late 1990s); Ex. 1023 at 1 (discussing virtual economies in the late 1990s).

63. Online gaming in virtual worlds trace their history back to on-line games on the ARPAnet, a precursor of the modern internet, in the 1980s. Ex. 1021 at 6. Thus, online gaming that involved a centralized gaming server and one or more gaming clients was also well-known by 2004.

64. For example, one reference from 2003 discussed a “video game system comprises client terminal devices 1 that are each equipped with a monitor and have associated identification information, arcade-based server devices 2 that are connected to the client terminal devices 1 in a data-communicable fashion that manage the game that is played by a plurality of players using the client terminal devices 1, and a management server device 3 that is connected to the plurality of

arcade-based server devices 2 such that data communication can take place therebetween.” Ex. 1009 at ¶ 0044 (emphasis added).

65. Another reference from 2003 similarly discussed “[a] gaming machine of the invention may be connected to an accounting and gaming information system operatively coupled to a central server computer.” Ex. 1022 at ¶ 0023. That same reference later disclosed: “. . . a bank of networked gaming machines and further contemplated that the game may be implemented as a linked progressive game among a plurality of networked gaming machines at a single or plurality of different sites.” Ex. 1026 at ¶ 0023.

## **2. Input Controls and Displays for Gaming Clients**

66. It was also known in the art for gaming clients to receive input from users as well as to use displays to output game information back to the users.

67. For example, one reference from 2003 discussed a variety of input devices for the “client terminal device” including a “touch panel” and “buttons” that could be pressed by a user. Ex. 1009 at ¶ 0051; *see also id.*, ¶ 0018 (discussing touch panel and buttons in depth).

68. That same reference from 2003 also discussed a “monitor” that could be a “liquid crystal display” that “displays images.” Ex. 1009 at ¶ 0052; *see also id.*, ¶ 0049 (discussing the use of a “household television” as the display).

69. Another reference from 2003 disclosed “discrete inputs” such as “coin acceptors, game buttons, mechanical hand levers, key and door switches and other auxiliary inputs.” Ex. 1026 at ¶ 0033. That same reference also disclosed interfaces “for game display device 178,” as well as connecting to “a high-resolution monitor 162” as well as “a touch screen 166 (which may also serve as a game display device) . . . .” Ex. 1026 at ¶ 0034; *see also id.* at ¶ 0040 (“The games support input and output between the player and the game for such devices as heads up display, joystick, keyboard, mouse and data glove via interface modules connected through the expansion bus or buses 182 and SCSI port 188.”).

**3. Gaming Clients Had Processors Coupled To Memory To Process Data For Generating Gameplay Information**

70. It was also known in the art for gaming devices to have processors coupled to memory generating gameplay information.

71. For example, one reference from 2003 discussed saving gameplay data to RAM, and “[p]rocessing is then performed by the CPU 161 based on the control program and various data (image data such as polygons and texture for displayed objects and other character images, as well as sound data) stored on the RAM 162, as well as on detection signals from the detection units. In other words, based on

detection signals and the like, the CPU 161 generates appropriate commands for the tasks of image draw and sound output.” Ex. 1009 at ¶ 0060.

72. Another reference from 2003 discussed how a “gaming machine may include a single processor or group of processors that effect play of the base game and the bonus game . . . .” and how the device also included “memory in the form of ROM, RAM, flash memory and EEPROM (electrically erasable programmable read only memory).” Ex. 1026 at ¶¶ 0022, 0032.

#### **4. Using Real Money To Purchase Virtual Money**

73. It was known in the art for users to acquire virtual money through cash purchase.

74. For example, one reference from 2003 discussed two “conversion means” the first of which was the “conversion between the virtual money and real money using a prescribed conversion rate,” and the second was “conversion between the virtual money and the prescribed pseudo-values using a prescribed conversion rate.” Ex. 1009 at ¶ 0185.

75. That 2003 reference explained that once converted the system tracked the amount of virtual money associated to each user: “The management server device 3 is connected to the plurality of arcade-based server devices 2 in a data communicable fashion. It stores player information including player fingerprint

characteristic data needed for fingerprint verification described below, as well as the amount of virtual money possessed by each player, in association with the player's user ID, and also transmits and receives data to and from each client terminal device 1 via the applicable arcade-based server device 2.” Ex. 1009 at ¶ 0047. The 2003 reference walked through the conversion of real money into virtual money in detail: “Additional coins are then received via the coin receiving unit 15 from the player based on the addition request screen not shown in the drawings (step ST211), the real money conversion unit 161m converts the additional inserted coins into virtual money (step ST213), and data regarding the amount of virtual money obtained after conversion is sent to the management server device 3 via the network, the arcade-based server device 2 and the network communication unit 18.” Ex. 1009 at ¶ 0129 (emphasis added).

76. Another 2003 reference explained that the gaming machine or device included a “card reader 192 (debit/credit, player card, etc.) . . . .” Ex. 1026 at ¶ 0035. That reference explained that: “A player begins play on gaming machine 100 by first placing cash, at reference character 406 of FIG. 4, into the machine via a coin acceptor 152, a dollar bill validator S4 or by credits 102 transferred from a player card 125, which may be a so-called ‘smart card’.” Ex. 1026 at ¶ 0047. The reference explained that players could then wager “credits” so-purchased, and could also

receive credits as payouts from winning a game: “Payouts of any credit winnings, at reference character 506 of FIG. 5, may be roughly proportional to the wagered credits 104 and are incremented to the player’s net credits 102.” Ex. 1026 at ¶ 0047.

### **5. Acquiring Virtual Money Through Gameplay**

77. It was known in the art for users to acquire virtual money through gameplay.

78. For example, one reference from 2003 discussed a “game result integration unit” that “performs addition or subtraction of the amount of increase or decrease in the counters represented by points that occurred during the game played by the player, now represented in the form of virtual money, to or from the amount of the player's current virtual money stored prior to the commencement of the game in the player information storage means 371, and updates the player information stored in the player information storage unit 371 accordingly.” Ex. 1009 at ¶ 0074 (emphasis added).

79. As another example, one reference from 2003 discussed awarding “resources” during gameplay, where such resources include “credits or specific resources that may be used in an attempt to enter bonus event play or for use in the bonus event.” Ex. 1026 at ¶ 0012 (emphasis added); *see also id.* (“A player may collect . . . credits, during play of the base game and/or during play of the bonus

event.”); *id.*, ¶ 0017 (“A player may also receive an award (e.g., game credits, money, other awards) upon receiving certain tools.”) (emphases added); *id.*, ¶ 0055 (“Advancing to the next bonus level may also result in the player being provided with additional credits 102”).

80. That reference goes on to wagering credits in order to gain “credit winnings” as well as incrementing and decrementing credits during gameplay: “Credits 102 and tools 110 are decremented from the players toolbar and net credits 110 as they are wagered during play of the base game and bonus event.” Ex. 1026 at ¶ 0047; *see also id.* at 0059 (discussing how wagering credits during gameplay “may result in the possibility of increased credit winnings, as well as other prizes.”) (emphasis added).

## **6. Purchase Of Virtual Money Subject To A Multiplier**

81. It was known in the art for virtual money acquired by purchase to be subject to a multiplier.

82. For example, one reference from 2003 discussed the conversion of real money to virtual money “using a prescribed exchange rate. The prescribed exchange rate here is a rate used in order to perform conversion between virtual money and real money. In this embodiment, 10,000 virtual money units is equivalent to one coin, but this exchange rate is arbitrary, and the exchange rate may be set such that

10,000 virtual money units is equivalent to two coins.” Ex. 1009 at ¶ 0071 (emphasis added).

## 7. Using Virtual Money To Purchase Special Items

83. It was known in the art to convert virtual money into virtual special items.

84. For example, one reference from 2003 discussed “pseudo-values” that could be for example, “the number of points earned based on the number of enemy characters that have been defeated . . . .” U.S. Patent Pub. 2003/0078102 (“Okita”) at ¶ 0004. These “pseudo-values” or “earned points” that were “earned via a game protagonist” could be used to “buy supplies, equipment, items or the like during the game.” Ex. 1009 at ¶ 0004.

85. As another example, a reference from 2003 discussed how a player uses virtual money in order to purchase “tools”: “Additional tools may be purchased with credits.” Ex. 1026 at ¶ 0017 (emphasis added); *see also id.* at 0051 (“If desired, the player may purchase one or more tools 110 that may be wagered in play of a subsequent, bonus event level, or in seeking to advance to a first level of the bonus event.”) (emphasis added).

86. The “tools” were depicted by an image: “Winning tools 110 are selected from a pool of five different tools 110, herein exemplified as TNT 710, SPADE 712, PICK 714, LASER 716 and PHASER 718.” Ex. 1026 at ¶ 0056.

### **8. Using Special Items To Advance Levels In A Multi-Level Game**

87. It was known in the art to have multi-level games, and to use virtual special items for advancement to another level within the game.

88. For example, one reference from 2003 discussed “computer gaming methods that have discrete levels of play.” Ex. 1026 at ¶ 0011.

89. That reference discussed the awarding of “specific resources that may be used in an attempt to enter bonus event play or for use in the bonus event.” Ex. 1026 at ¶ 0012 (emphasis added). Moreover, those resources may comprise “indicia, representative of corresponding resource items, such as tools, of various types associated with a theme of the bonus event.” Ex. 1026 at ¶ 0012 (emphasis added). Users may then wager the “indicia” in order to be “granted entry into a next level of a plurality of sequential bonus levels of the bonus event.” Ex. 1026 at ¶ 0012 (emphasis added); *see also id.* at ¶ 0016 (“The bonus event may include a plurality of levels.”); *id.* at 0051 (“If desired, the player may purchase one or more tools 110

that may be wagered in play of a subsequent, bonus event level, or in seeking to advance to a first level of the bonus event.”) (emphasis added).

90. That reference also discussed how users could collect a “collect a library of indicia, such as tools” during gameplay. Ex. 1026 at ¶ 0012 (emphasis added).

91. That reference later discussed a particular embodiment called “Tut’s Treasure” where there were multiple levels in “sequentially breaking through walls or sealed doors in tomb passages” in order to gain access to “gain access into Tut’s Tomb.” Ex. 1026 at ¶ 0017. During gameplay, the player would use “tools” in order to advance levels: “During play of the base game, tools may be collected by the player and subsequently used in the bonus event to break down walls and/or doors in the tomb.” Ex. 1026 at ¶ 0017 (emphasis added). That reference went on to explain in detail:

Tut’s Tomb has six bonus levels . . . . In this game, a player’s objective is to obtain tools 110 for breaking down walls or sealed doors within Tut's Tomb and advance sequentially, level by level, toward the final bonus level 706, in which a crypt holding Tut's Treasure is located.

Ex. 1026 at ¶ 0055 (emphasis added).

## VI. THE '164 PATENT

### A. Overview

92. The '164 patent describes well-known systems and methods to enhance player participation. The '164 patent recognized that “various forms of game play, as well as the suggestions for implementing those games on a mass communication network, such as through the telephone or Internet,” exist. *Id.*, 5:8-10. But the '164 patent endeavored to address “a need for improved game of chance, which provide excitement for the player.” *Id.*, 5:12-14. The patent did so using mandated and variable parameters.

93. The '164 patent discloses a networked gaming system with a play server and remote terminals. “The system and method ... permit greatly enhanced flexibility in game play and the prizing experience for a player, while globally achieving the mandated parameters.” *Id.*, 5:53-56. The '164 patent explains “the mandated parameters are generally inputted to the system, and preferably stored in memory.” *Id.*, 5:35-36. “Exemplary mandate parameters may consist of prize pay out and win rates, and may include such factors as the minimum payout amount, the maximum payout amount, a defined percentage payout, the number of prizes, and/or the form of prizes.” *Id.*, 5:30-34.

94. The '164 patent also discloses “variable parameters available for game play ultimately serving to achieve the mandated parameters and/or provide for enhanced or optimized game play and prizing experience.” *Id.*, 6:1-4. “[A] variable parameter may be the game structure itself, such as in the use of decision points, numbers of levels of game play, and/or duration of game play.” *Id.*, 6:6-8. Variable parameters may also be “the prizing structure parameters may include the desired payout amount, GLEPS or other allocation variables, the frequency of wins (1:X), overall number of winners and prizing structure and allocation of prizes.” *Id.*, 6:35-39.

95. Another game enhancement touted by the '164 patent is virtual money. Specifically, the '164 patent also teaches systems that “provide[] for effecting user experience in an electronic game environment through use of virtual currency or vCoins.” *Id.*, Abstract. “vCoins provide the player with the perception of a big win since the numbers are larger than any corresponding monetary amount.” *Id.*, 46:64-66. Further, “being able to track specific coins, the vCoins technique leads to vastly expanded possibilities.” *Id.*, 47:1-2.

96. The '164 patent further teaches that frequent player’s club information may be utilized by the system, “where points are rewarded for game play,” or “to participate in additional features and functionalities.”

**B. The Challenged Claims**

97. I understand that the challenged claims are entitled to an effective filing date of no earlier than September 1, 2004.

98. The '164 patent has 30 claims, 1 independent and 29 dependent claims.

Independent claim 1 includes 6 components:

- (1) server
- (2) communication interface
- (3) game processor
- (4) memory
- (5) decision engine for performing game analytics
- (6) prizing system.

The server processes and stores mandated parameters and variable parameters and the game processor implements and modifies the variable parameters. The server further includes registration and payment information for the users, and the game processor further provides game play information with virtual money that can be purchased utilizing the user's payment information.

**C. The Prosecution History**

99. I understand that the '164 patent issued with limited consideration , with no rejections nor office actions generally. In the Notice of Allowance, the Examiner merely recited the limitations of the independent claim. Ex. 1002 at 13.

**VII. LEVEL OF SKILL IN THE ART AND PERSPECTIVE APPLIED IN THIS DECLARATION**

100. I understand that certain issues relating to validity must be judged from the perspective of a person of ordinary skill in the relevant art, as I discuss below.

101. The purported invention of the '164 patent generally relates to well-known systems and methods of incorporating virtual money in games.

102. In determining the level of ordinary skill, I have been asked to consider, for example, the types of problems encountered in the field, prior solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. In my opinion, it would have taken at least three years of experience in the field for a person to become familiar with the problems encountered in the field and the prior and current solutions to those problems.

103. Taking those factors into consideration, a person of ordinary skill in the art at the time of the claimed priority date of the '164 patent would have had at least

a bachelor's degree in computer science or computer engineering, with at least three years of experience in in game development. Additional experience could substitute for less education, and additional education could likewise substitute for less experience.

104. My opinions do not turn on the precise definition, and the challenged claim would be unpatentable from the perspective of any reasonable POSITA.

105. I believe that I would have qualified as a person of at least ordinary skill in the art as of the earliest claimed September 1, 2004 priority date on the face of the '164 patent. I believe that I have a sufficient level of knowledge, experience, and education to provide an expert opinion in the field of the '164 patent.

## **VIII. OVERVIEW OF THE PRIOR ART**

### **A. U.S. Patent No. 8,172,683 (“Kelly683”) (Ex. 1005)**

106. I understand that U.S. Patent No. 8,172,683 to Kelly (“Kelly683”), was filed on March 23, 2006 and published October 16, 2008. I understand that Kelly683 is related through continuation applications to U.S. Patent Application No. 09/433,523 filed on November 3, 1999. I have reviewed the specification for U.S.

Patent Application No. 09/433,523, and found the disclosures in that specification are substantially the same as the disclosures in the issued Kelly683.<sup>1</sup>

107. In my opinion, Kelly683 discloses each limitation in the independent claim of the '164 patent.

108. Kelly683 discloses a “casino gaming system” that “provides an opportunity to win a prize in response to game play, each game being played in exchange for monetary input.” Ex. 1005 at Abstract. Kelly683’s field of the invention is “games normally played in arcades and other environments,” and more particularly, “network gaming systems with prize redemption capabilities.” Ex. 1005 at 1:31-37. Kelly683 discloses “a prize redemption system and method for use with one or more game apparatuses” and further discloses “a generic game apparatus or ‘game unit’ 10 suitable for use with the prize redemption system . . . .” Ex. 1005 at 4:12-13; 8:49-51. Kelly683 depicts such a game unit in Figure 2:

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<sup>1</sup> Note that the specification for U.S. Patent Application No. 09/433,523 incorporated by reference U.S. Patent Application Nos. 09/040,654 and 08/746,755.

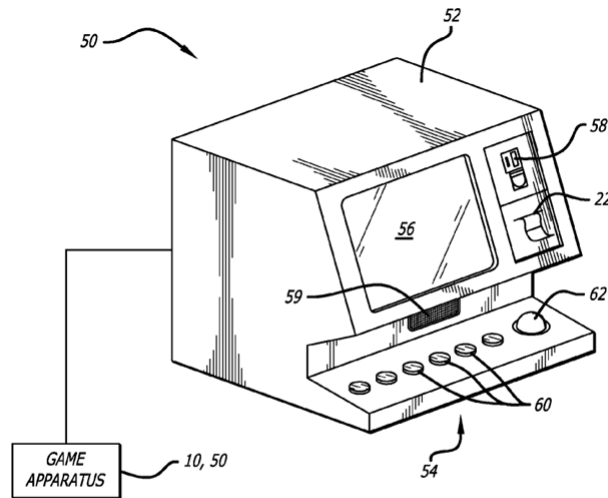


FIG. 2

109. Kelly683 discloses that “[g]ame unit 10 in accordance with the present invention may include a game processor 12, monetary input device 14, player input device(s) 16, game output device(s) 18, a universal ticket dispenser 20, a specific prize ticket dispenser 22, and a communication device 24.” Ex. 1005 at 9:10-14. *See also id.* at Fig. 1. Kelly683 discloses that the communication device 24 allows “game unit 10 to communicate with other game apparatuses or with other computing, storage, and/or processing devices, such as a progressive bonus apparatus or server . . . .” and further discloses that the server can “regulates and coordinates prize distribution” and/or operate as a “tournament server” that assists in “operating the games or tournaments.” Ex. 1005 at 14:28-15:4-17. Kelly683 depicts an “an

embodiment 100 of the present invention for implementing networked game units with the redemption system of the present invention.” Ex. 1005 at 18:14-16.

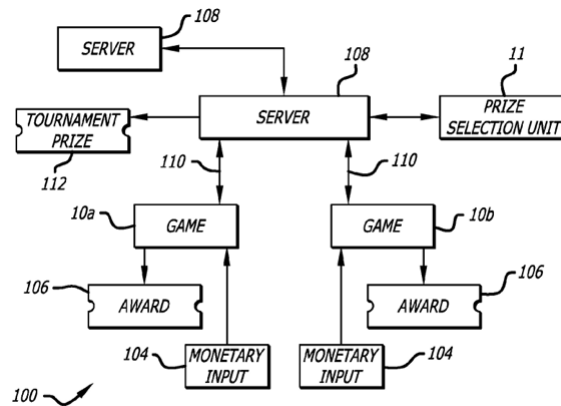


FIG. 3

110. Kelly683 discloses a “server 108” that “can be a separate device or apparatus which includes a controller, such as a microprocessor, and/or a storage device, such as a hard disk drive, memory devices, and the like.” Ex. 1005 at 18:33-36. “Server 108 is used to coordinate games among one or more individual game units and/or provide information to linked game units.” Ex. 1005 at 19:25-27. Such games can include “first person, point-of-view, virtual reality video game” where a first player “on one game unit 10 a can interact in ‘real time’ with a second player of a second game unit 10 b . . . .” Ex. 1005 at 19:29-32. Other games can include “‘non-real-time’ games with players taking turns . . . .” Ex. 1005 at 19:35-36. Kelly683 discloses that “[m]any players can be included in such a networked game, from 2 to hundreds or even thousands of players.” Ex. 1005 at 19:38-39. Kelly683

goes on to explain that “game units 10 or 50 at different sites can be conveniently linked through a private wide area network (WAN) or an existing global network such as the Internet and/or the World Wide Web . . . .” Ex. 1005 at 19:59-62.

111. Kelly683 discloses that an “operator can provide cost and prize data and a desired level of profitability, and prize credit costs for prizes are automatically determined.” Ex. 1005 at 4:17-20. Kelly683 goes on to explain that its system “vastly decreases operator involvement in a prize redemption system” because:

An operator need only input desired prizes and a desired percentage of income that is to be paid back to players, and the system can automatically determine prize credit costs and win ratios for the entered prizes, which achieve the desired profitability of the game apparatus. These entered prizes and prize costs are then automatically provided to players on the game apparatus.

Ex. 1005 at 5:55-64. Kelly683 includes “a prize table 480 for use with the present invention that is displayed to the operator” and allows the operator to “modify the prize characteristics as desired and send any updated characteristics to all linked (or all desired linked) game units over a network or other communication device.” Ex. 1005 at 34:64-35:8.

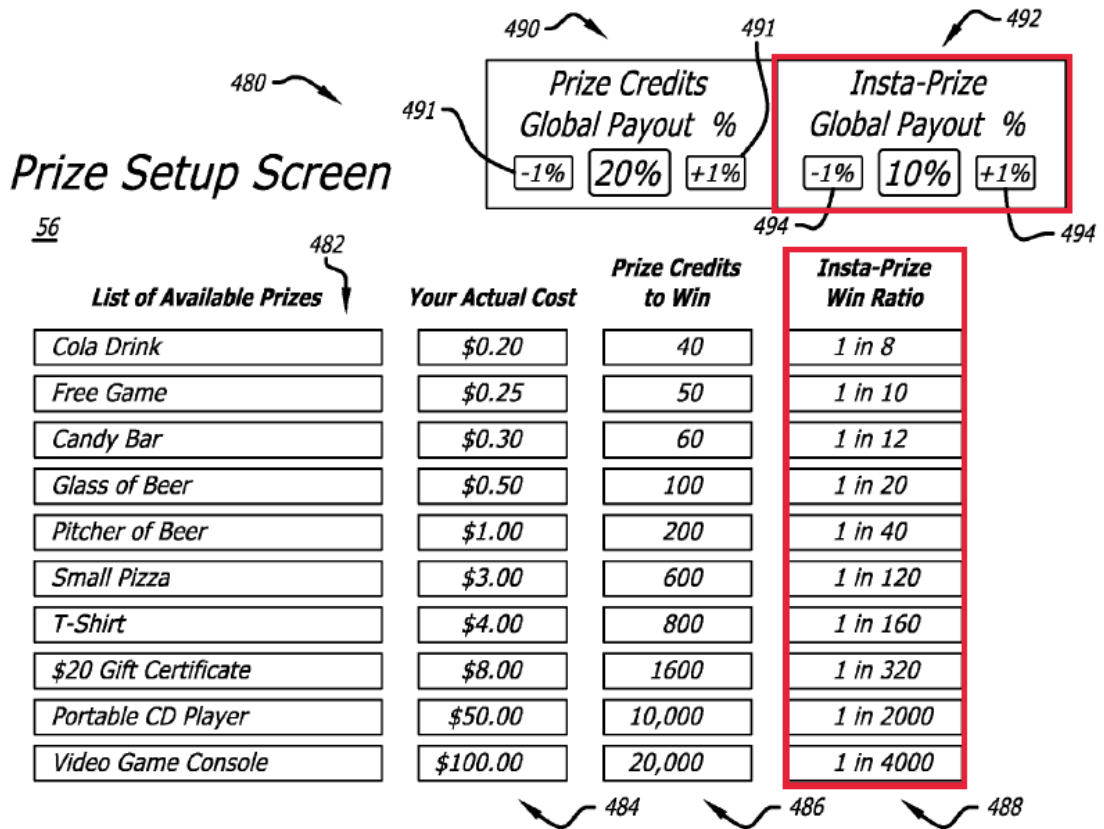


FIG. 9a

Kelly683 discloses that “payout percentage 492 indicates the percentage of an operator’s revenue from the games that the operator will pay back, on average, to players in the form of specific prizes based on the ratios in fields 488.” Ex. 1005 at 37:58-61. Specifically, the “[s]pecific prize win ratio fields 488 list the individual prize ratios of winning the associated prizes as a specific prize or an ‘instant prize’ during a game implemented by the game unit 10.” Ex. 1005 at 36:8-11. The operator enters the percentage number in field 492, and “the redemption system will

automatically adjust the ratios 488 to achieve the percentage value.” Ex. 1005 at 17:61-65.

112. Kelly683 discloses a “player registration operation” by players are provided with “an interface such as a web page which prompts the user to create a personal user name, or user identification code, and a password.” Ex. 1005 at 51:59-63. Kelly683 further discloses a “[m]onetary input device 14” that “is used to receive the monetary input that is inserted by a player into the game apparatus in the gaming environment.” Ex. 1005 at 33-35. Kelly683 explains that “‘E-cash’, ‘cybercash’ or other electronic monetary forms can be used” and that “user verification or validation can be input by the player, such as a player identification and/or password that, for example, allows a monetary value to be billed to a player or deducted from a player’s monetary account at a bank or other institution.” Ex. 1005 at 9:49-55. Kelly683 discloses that “each game offered on game unit 10 requires a predetermined number of game credits to play, and this number can vary depending on the type of game played and the options selected for a game,” and that “[e]ach game credit is equal to a fixed monetary value, such as 25 cents.” Ex. 1005 at 23:46-50. Kelly683 further discloses that players can win “prize credits” or “ticket credits” from games, which can be used to redeem prizes, but also to “‘buy’ additional games on a game unit 10, e.g., convert prize credits to game credits.” Ex. 1005 at 23:59-61;

30:12-16. Both game credits and prize credits can be stored in a “credit account,” by which “the server 108 can store the prize credits won by a player over previous game sessions and can send this information to an individual game unit when requested by the game unit, e.g., when the player associated with a credit account plays a game on the game unit.” Ex. 1005 at 24:8-13. *See also id.* at 23:51-54 (“a player can store game credits and retrieve/use game credits from previous game sessions if a ‘game credit account’ is implemented for the player, similar to the prize credit account described subsequently.”).

**B. U.S. Patent Application Publication No. 2004/0002369  
 (“Walker”) (Ex. 1006)**

113. I understand that U.S. Patent Application Publication No. 2004/0002369 to Walker et al. (“Walker”) was published on January 1, 2004 from an application that was filed on May 1, 2003.

114. In my opinion, Walker discloses each limitation of the independent and dependent claims of the ’164 patent.

115. Walker generally describes “systems and methods [to] facilitate adjustment of a game in order to help ensure that a set of results obtained during a plurality of game plays of a game satisfy one or more predetermined criteria....” Ex. 1006 at ¶[0022]. Walker discloses that its gaming system may include a controller

in communication with a plurality of remote gaming devices via a network such as the Internet. *Id.*, ¶[0051]; *see also id.*, ¶¶[0025], [0055], [0062], [0069], [0091]-[0093].

116. Walker further discloses with respect to Figure 4, shown below, that each gaming device comprises a communications port for enabling communication. *Id.*, ¶¶[0070], [0074]. Each gaming device also comprises an output device and an input device, where the output device may be one of various types of displays, and the input device may be a scanner, keyboard, button, touch screen, microphone, or similar device. *Id.*, ¶¶[0070], [0085], [0087]. Walker further discloses that each device has a memory which stores a program for controlling the processor, and a processor which performs the instructions of the program, where the program may be loaded from a remote computer. *Id.*, ¶¶[0070], [0072], [0074].

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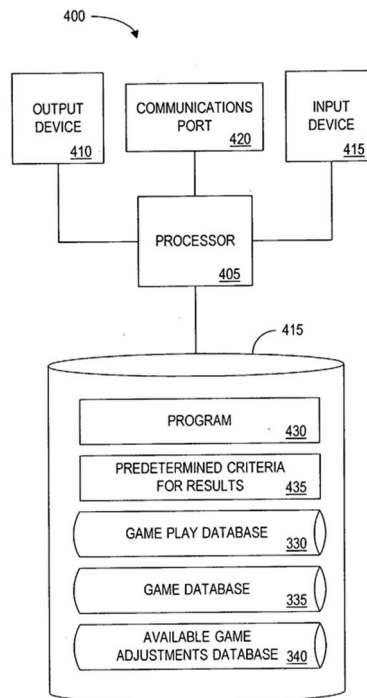


FIG. 4

*Id.*, FIG. 4.

117. Walker explains that the system comprises a controller, shown in Figure 3 below, which may comprise a server computer that manages the system and is in communication with one or more gaming devices. *Id.*, ¶[0062]. Walker discloses that the controller comprises a processor and memory to process and store information, such as the program for controlling the processor. *Id.*, ¶¶[0064]-[0065].

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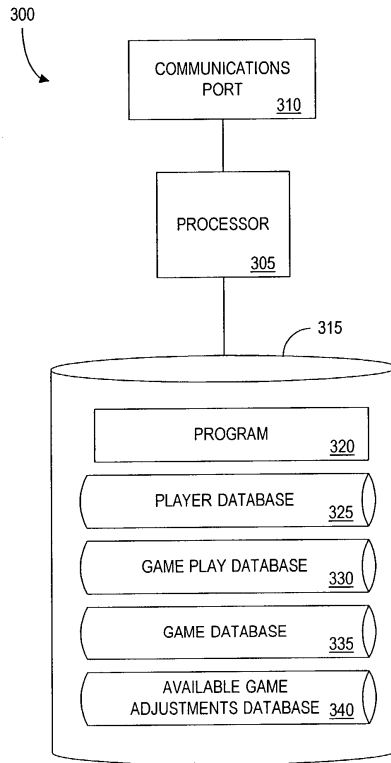


FIG. 3

*Id.*, FIG. 3.

118. Walker discloses that the controller's memory may store a plurality of databases, including a player database which stores player information such as player name/identifiers, financial account information, and skill level. *Id.*, ¶[0067], [0098], [0100], [0103]-[0104]. Walker also discloses a game play database which

may be used to track results and record information on game outcomes for various players, games, etc. *Id.*, ¶¶[0109]-[0110], [0118]-[0119].

119. To initiate game play, Walker discloses that “the controller...may receive a selection of a game that a player would like to play” and that “a player may use a player device or a gaming device to select a game that he would like to play from a list of available games.” *Id.*, ¶[0219]. Walker explains that “the controller may...direct the gaming device to initiate the requested game.” *Id.*, ¶[0220]. Walker discloses that game play may occur using alternate currencies such as electronic credits as an entry fee, e.g., a single game play may cost \$0.25 or ten electronic credits. *Id.*, ¶¶[0196]-[0197]; *see also id.*, ¶[0089]. Walker further discloses that the electronic credits through purchase using money or other form of consideration. *Id.*, ¶[0197].

120. Walker discloses that the controller may award prizes to players to as a result of game play, where a prize may be any form of consideration (e.g. money, products, services). *Id.*, ¶[0223]. Walker explains that whether prizes are awarded may be determined by various game rules. For example, Walker defines a “formula [that] may be used to convert points to credits, money or some other currency used to purchase prizes.” *Id.*, ¶[0229]. Walker also describes prize structures in which “a first prize corresponds to a first range of scores that a player may achieve in one or

more plays of the game (e.g., a score of 500-1000 points) while a second prize corresponds to a second range of scores that a player may achieve in one or more game plays of the game (e.g., 1001-1500 points).” *Id.*, ¶[0265].

121. Walker explains that its system facilitates adjustment of a game to help ensure that a set of results obtained during game play satisfies one or more predetermined criteria which represent statistics or parameters achieved by the system as a whole. *Id.*, ¶¶[0022]-[0023]. For example, the system may determine whether a set of results for a game has a variance or standard deviation that meets a predetermined range. *Id.*, ¶[0024]. Walker discloses that the game may be adjusted to meet the predetermined conditions (e.g., variance, standard deviation) by adjusting one or more parameters, each of which comprises some rule of the game that has an associated value and affects the result (e.g., prize awarded) of a game play of the game. *Id.*, ¶[0028]. For example, such parameters may include factors affecting game difficulty, number of points awarded for particular achievements, factors affecting player’s ability to score appoints, rules of a game, factors affecting duration of a game, etc. *Id.*, ¶¶[0155]-[0166]. Walker discloses that the predetermined criteria and game parameters may be stored in the controller’s memory. *Id.*, ¶[0082]; *see also id.*, ¶¶[0067], [0106].

122. Walker explains that the controller may use the predetermined criteria and game parameters in the course of game play by determining whether a selected set of results meets the predetermined criteria (*id.*, ¶¶[0261]-[0264]), and if necessary, adjusting the game by “(i) determining the at least one goal of the adjustment; (ii) determining the one or more game parameters to be adjusted; (iii) determining a respective new value for each of the one or more game parameters to be adjusted; and (iv) executing the adjustment” (*id.*, ¶[0267]).

**C. U.S. Patent App. Pub. No. 2005/0153768 (“Paulsen”)  
(Ex. 1007)**

123. I understand that U.S. Patent App. Pub. No. 2005/0153768 to Paulsen (“Paulsen”) published on July 14, 2005 from an application filed on January 8, 2004.

124. In my opinion, Paulsen discloses player’s club information required by certain dependent claims. Like the ’164 patent, Paulsen discloses a gaming system designed “to maintain player interest in the games.” EX. 1007 at ¶[0010]. Paulsen does so by offering player tracking cards and player tracking programs. *Id.*, ¶¶[0008]-[0009]. This system provides “rewards, or ‘comps,’ to players in proportion to the player’s level of patronage (e.g., to the player’s playing frequency and/or total amount of game plays at a given casino).” *Id.*, ¶[0008]. “In some instances, a wearable RFID ‘club card’ can automatically provide player tracking

information to a gaming machine.” *Id.*, ¶[0048]. “In other instances, a player can input player tracking identification information into a cell phone to provide player tracking information to a gaming machine.” *Id.*

**D. U.S. Patent No. 5,970,143 (“Schneier143”) (Ex. 1008)**

125. I understand that U.S. Patent No. 5,970,143 to Schneier et al. (“Schneier143”) issued on October 19, 1999 from an application that was filed on August 8, 1996.

126. In my opinion, Schneier143 discloses limitation [1.c.iii] (*the virtual money (vCoins) acquired in response to a purchase being subject to a multiplier*) and claim 4 (*wherein the player's club information includes information on non-cash amounts*) to the extent that these limitations are not expressly disclosed in Walker. In my opinion, it would have been obvious to combine Walker with Schneier143.

127. Schneier143 generally relates to “authentication of computer generated game or test results...and more particularly, to a system by which persons who play games or take tests on a game or testing computer...may submit the outcomes of the games or tests to a central authority having at least one central computer, and have the central computer ‘certify’ those outcomes as being accurately reported and fairly achieved.” Ex. 1008 at 1:14-22.

## **IX. CLAIM CONSTRUCTION**

128. I have applied the plain meaning of the terms and phrases in the claims in my analysis, as a POSITA would have understood those terms and phrases at the relevant time (around 2004). I understand that the Board will construe the claims using the same claim construction standard that would be used in district courts. My declaration will establish that the prior art meets each of the claim limitations under any reasonable construction. I have not been asked to consider any express constructions.

## **X. OPINIONS ON GROUND 1: KELLY683 RENDER OBVIOUS 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, AND 29**

129. The various embodiments of Kelly683 disclose each limitation in the challenged claims of the '164 patent. A POSITA would have combined those embodiments resulting in a system that renders obvious each limitation of the challenged claims.

130. Kelly683 presented these features as options in implementing its system. See, e.g., Ex. 1005 at 5:22-28 (“The payout input for credit prizes may include a global payout percentage value that is the operator's desired percentage of the monetary income earned by the game apparatus that the operator wishes to provide back to players in the form of the prizes won using prize credits.”), 12:21-23 (“In the preferred embodiment of the redemption system, “tickets” or “prize

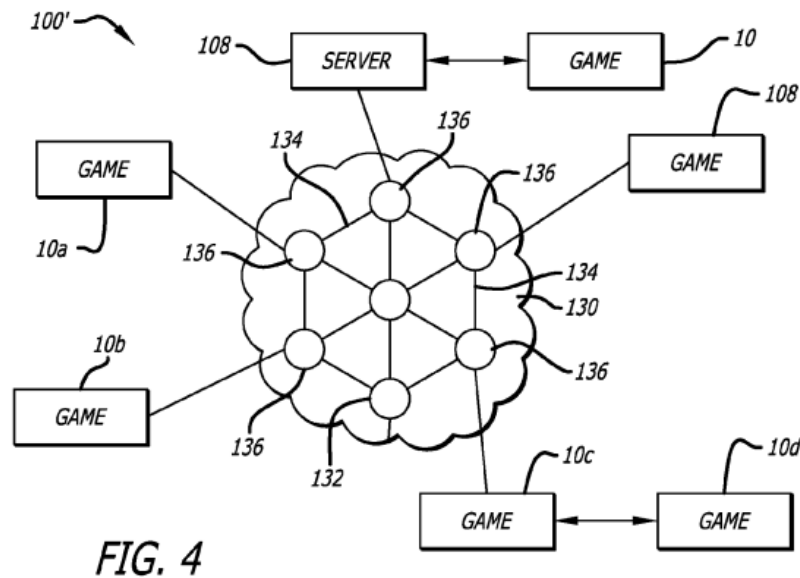
credits” are used as a medium of conversion from game score to prize value.”); 30:34-40 (“In some embodiments, the player can optionally select a “save tickets” option in the prize selection screen (or the prize credits are saved in the player’s account automatically), which will store the amount of prize credits won on a local or a remote storage device as well as identification information to associate the winnings with that player (name, address, and the like).”); 61:11-13 (“While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not limitation.”). Accordingly, a POSITA implementing would have motivated to combine the various features of these embodiments together.

**A. Independent Claim 1**

- 1. Preamble: “A system for electronic game play involving one or more remote users of a system in an electronic environment, the remote users utilizing electronic communication devices having display capabilities, the electronic communication devices having input capability and generate an output corresponding to the input, the electronic communication devices having storage to store information from a remote source, comprising:”**

131. To the extent the preamble is limiting, it is my opinion that Kelly683 discloses the preamble.

132. Kelly683 discloses a “gaming system [that] includes a casino game server and a plurality of casino game units connected via a network” (*system for electronic game play*). Ex. 1005 at Abstract, Fig. 4.



Ex. 1005 at Fig. 4

133. A POSITA would have understood that the server and game units create a *system for electronic game play* because these components are electronic.

134. Kelly683 discloses a *system for electronic game play involving one or more remote users of a system in an electronic environment*. Kelly683 “generally relates to gaming systems and more particularly pertains to network gaming systems with prize redemption capabilities.” Ex. 1005 at 1:31-37. Kelly683 discloses a

system that includes a server 108 as well as one or more game units 10 coupled to that server. Ex. 1005 at 18:32-52.

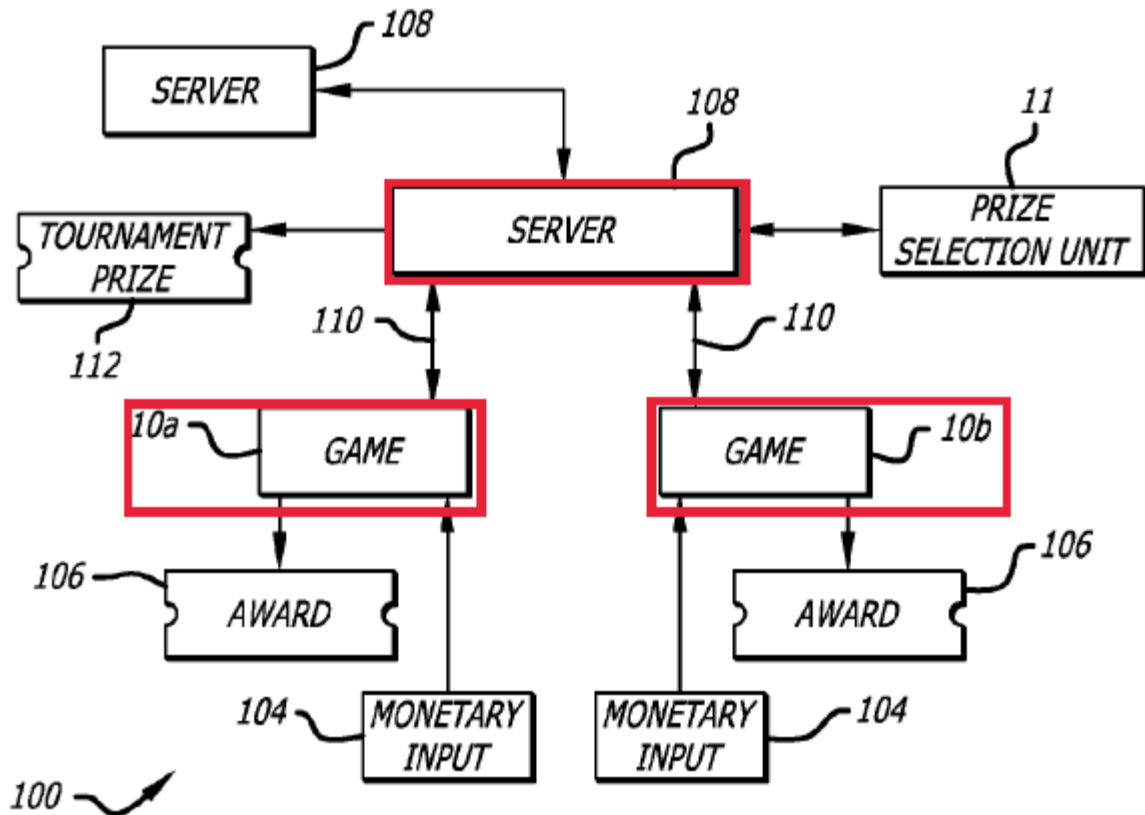


FIG. 3

135. Kelly683 discloses that the game units are “ideally suited for linked or networked game play utilizing a communication device 24 . . . to create a multi-apparatus game system.” Ex. 1005 at 17:61-64. This linking allows “multiple players to participate in a game process. For example, one game unit 10 can allow a player to control one player-controlled object in a video game, while a different game

apparatus linked through communication device 24 can allow a different player to control his or her own object in the same video game.” Ex. 1005 at 14:60-67.

136. Kelly683 discloses that “[p]layers from gaming environments in several different locations can thus interact or compete simultaneously in offered games” (*involving one or more remote users of a system in an electronic environment*) using the game units (*utilizing electronic communication devices*). Ex. 1005 at 31:15-24; *see also* 58:16-18. Specifically, Kelly683 discloses that its game system “can be provided as an ‘inter-site’ system, where one gaming environment or ‘site’ can be linked to game units 10 at other gaming environments or sites (such as a bar down the street, or a bar across the world) to allow additional numbers of players to interact and/or compete in networked games, tournaments, and the like.” Ex. 1005 at 19:51-57. Kelly683 goes on to explain that “game units 10 or 50 at different sites can be conveniently linked through a private wide area network (WAN) or an existing global network such as the Internet and/or the World Wide Web . . . .” Ex. 1005 at 19:59-62. Kelly683 also discloses that players “may be remotely awarded the tournament prize from a prize distributor, e.g., the player can be sent prizes through the mail or delivery service, a player’s bank account can be credited, and the like.” Ex. 1005 at 21:17-20. *See also id.* at 22:20-24 (“Using Internet 130 or a similar WAN, players at home can participate and interact in

network games, prize redemption systems, and tournaments with players that are playing a game unit at a particular gaming environment such as a bar or arcade.”).

137. These game units include display screens and input devices (*electronic communication devices having display capabilities, the electronic communication devices having input capability*). Ex. 1005 at 8:57-63 (“Game unit 10 can take a variety of forms, including a video game apparatus having one or more display screens”), 10:43-45 (“Also, input devices such as buttons, switches, and the like allow the player of the game to make various selections concerning game play.”); *see also* 9:62-10:15. Kelly683 describes that the “[g]ame unit 10 can take a variety of forms, including a video game apparatus having one or more display screens . . . .” Ex. 1005 at 8:57-59. *See also id.* at Fig. 1 (“Display Screen”) and Fig. 2. Kelly683’s game units include “game output device(s) 18” which “provide feedback to the player about the current state of the game process.” Ex. 1005 at 9:10-14; 10:49-51. In Kelly683, one such output device is a “video display screen” which “can provide visual feedback such as images to the player during the game process.” Ex. 1005 at 10:56-58. Indeed, Kelly683 goes on to explain that “[a] preferred output device is a display screen 56. Game processor 12 utilizes appropriate display drivers, graphics chips, and/or other well-known components to display and update images on the display screen for implementing a game and providing information for the

redemption system of the present invention, as described below.” Ex. 1005 at 11:10-15.

138. The game units of Kelly683 include “[g]ame output devices 18 [that] may influence the game and/or provide feedback to the player about the current state of the game process.” Ex. 1005 at 10:49-51; *see also* 11:6-9, 11:10-15. A POSITA would have understood that the output provided to the user is influenced by the input (*the electronic communications devices...generate an output corresponding to the input*). Ex. 1005 at 9:62-66 (“Input devices 16 are used by a player or user to provide input to the game unit 10 to influence game events during a game process and to achieve one or more predetermined goals or tasks for scoring points and winning prizes or other types of awards.”). Kelly683’s game unit included “player input device(s) 16” and “game output device(s) 18.” Ex. 1005 at 9:10-14. *See also id.* at Figs. 1 and 2. Kelly683 discloses that “[input devices 16 are used by a player or user to provide input to the game unit 10 to influence game events during a game process and to achieve one or more predetermined goals or tasks for scoring points and winning prizes or other types of awards.” Ex. 1005 at 15:62-66. Kelly683 goes on to provide examples of input controls including “buttons, a keyboard, dials, joystick controls, a touch screen, a track ball, a mouse, a gun device, a steering wheel, foot pedals, speech input through a microphone . . . .” Ex. 1005 at 10:4-6.

Kelly683 also discloses that “[g]ame output devices 18 may influence the game and/or provide feedback to the player about the current state of the game process.” Ex. 1005 at 10:49-51. Kelly683 discloses one such output device as a “video display screen” that “can provide visual feedback such as images to the player during the game process,” and later explains that “[a] preferred output device is a display screen 56.” Ex. 1005 at 10:56-58; 11:10. Kelly683 also discloses other output devices, such as score displays, lamps, lights, speakers, buzzers, alarms, motors, solenoids, or other actuators. Ex. 1005 at 10:49-11:9.

139. Kelly683 discloses *output corresponding to the input*. For example, Kelly683 discloses that a player “can press a button to tilt a playing surface to guide a playing piece, move a joystick to control a graphical object displayed on a video screen, or toss a playing piece into a target aperture having sensors to detect the present playing piece.” Ex. 1005 at 10:7-12. Kelly683 explains that this user input “can provide a particular game command to the game processor 12, and the game processor interprets the commands and influences game states and game events in the game process accordingly.” Ex. 1005 at 10:12-15. Kelly683 goes on to explain that in a “game of skill,” “a predetermined goal, task, or objective for a game should be accomplished in a skillful manner such that an outcome of the game is determined primarily by the amount of skill of the player.” Ex. 1005 at 10:16-20. An example

of a game of skill is when “a displayed object can be skillfully aimed or directed using input devices 16 such as a joystick, buttons, a steering wheel, and the like, or to avoid other objects using skill or dexterity involving hand-eye coordination.” Ex. 1005 at 10:25-29. Kelly683 explains that “In a typical game process of game unit 10, a series of game states occur until a game conclusion is reached.” Ex. 1005 at 11:16-17. “At the game’s conclusion, the player’s performance and/or skill in the game is preferably related back to the player using one or more output devices 20 in a form such as game score and/or prize credits.” Ex. 1005 at 11:20-24.

140. Kelly683 further discloses the game units have memory to store information from the remote server (*the electronic communication devices having storage to store information from a remote source*). For example, in response to the game units, “[t]he server 108 [can] send[] a web page written in, for example, HTML format back to the requesting game unit or client machine, where it is ‘cached’ in the memory (typically the RAM, hard disk, or a combination of the two) of the game unit or a client machine.” Ex. 1005 at 21:58-62. In Kelly683, the game unit 10 includes a “game processor 12” that “implements (e.g., controls, influences, coordinates, monitors, calculates, and the like) the functions of the game unit 10 during a game process and includes several input and output functions.” Ex. 1005 at 9:10-18. Kelly683’s “[g]ame processor 12” in turn “includes a microprocessor 28,

random access memory (RAM) 30, read-only memory (ROM) 32 . . . .” Ex. 1005 at 15:38-40. *See also id.* at Fig. 1a. Kelly683 discloses that “[m]icroprocessor 28 executes a process, described by software instructions stored in memory, which recognizes a game command from player input devices 16.” Ex. 1005 at 15:48-51. Kelly683’s “software instructions ‘can be stored in a ‘computer readable medium’, which, by way of example, includes memory such as RAM and ROM, magnetic disks . . . .” Ex. 1005 at 15:51-56. Kelly683 goes on to explain that the storage medium may be in the form of “a hard disk drive.” Ex. 1005 at 15:56-59. Kelly683 discloses that *information is from a remote source*. Kelly683 explains that “[a] server 108 is used to coordinate games among one or more individual game units and/or provide information to linked game units.” Ex. 1005 at 19:25-27. *See also id.* at 19:19:57-67 (game units linked to remote server over the internet). Kelly683 further discloses that a server can store games and “download a game to a game unit 10 a or 10 b when that game is selected by a player of the game unit. The game would then typically be executed locally to the game unit 10 a or 10 b by game processor 12.” Ex. 1005 at 19:42-47. Kelly683 goes on to describe how the server 108 can send information, such as HTML web pages, to game units where it is cached in the game unit’s memory. Ex. 1005 at 21:58-62 (“The server 108 then sends a web page written in, for example, HTML format back to the requesting game unit or client machine,

where it is ‘cached’ in the memory (typically the RAM, hard disk, or a combination of the two) of the game unit or a client machine.”).

**2. [1.a]: “a server including memory to process and store:”**

141. In my opinion, Kelly683 discloses this limitation.

142. Kelly683 discloses that the gaming system includes a server 108 (*server*) including a storage device (*memory*). Ex. 1005 at 18:33-36 (“The server 108 can be a separate device or apparatus which includes a controller, such as a microprocessor, and/or a storage device, such as a hard disk drive, memory devices, and the like.”). Kelly683 explains that the server 108’s microprocessor is “similar to” the game unit 10’s microprocessor—examples of which include the “Intel 8031 8-bit microprocessor” as well as “Pentium-class/power PC class microprocessors.” Ex. 1008 at 18:36-38; 15:42-48. Such a microprocessor “executes a process, described by software instructions stored in memory . . . .” Ex. 1008 at 15:48-49.

143. A POSITA would have understood that server 108 (*server*) is used to process and store information used by the gaming system (*to process and store*).

**3. [1.a.i]: “registration user information of the remote users,”**

144. In my opinion, Kelly683 alone or in combination with the knowledge of a POSITA renders obvious this limitation.

145. Kelly683 discloses that a prize database server is used *to process and store* player registration information, such as a personal user name, or user identification code, and a password (*registration user information of the remote users*). Ex. 1005 at 51:59-63 (“When registration is required, unregistered players are provided a registration link in operation 1202. Such link affects the display of an interface such as a web page which prompts the user to create a personal user name, or user identification code, and a password.”); *see also* 3:11-19, 51:49-52:4, 6:11-15.

146. Figure 16 of Kelly683 discloses a functional diagram depicting various “operations” of a server, including “a player registration operation 1102.” Ex. 1005 at 51:16-38.

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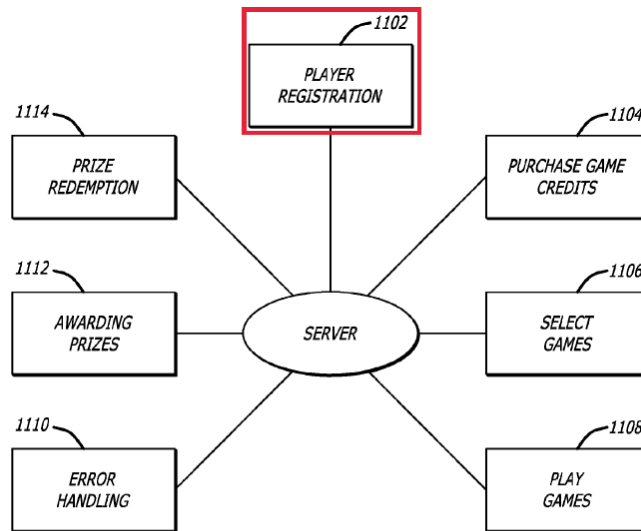
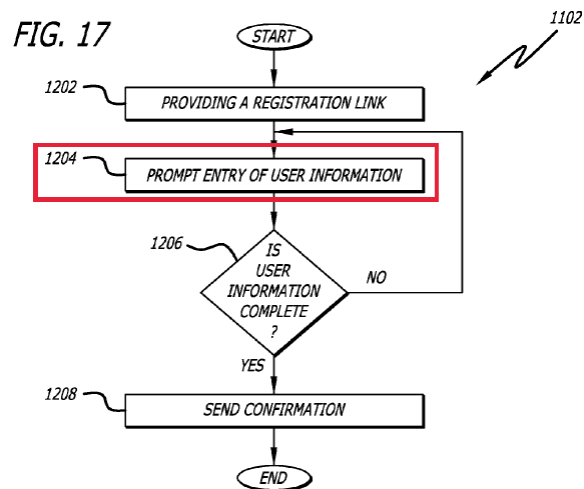


FIG. 16

147. Figure 17 of Kelly683 illustrates the process by which “the player registration operation 1102” is carried out. Ex. 1005 at 51:49-50.



148. Figure 17 includes a step to “prompt entry of user information 1204. Specifically, Kell683 explains that unregistered users and provided a link that

“affects the display of an interface such as a web page which prompts the user to create a personal user name, or user identification code, and a password.” Ex. 1005 at 51:59-63. Kelly683 explains that required user information may include “a name and an e-mail address” and further optional user information may include “demographics, game preferences, and the like . . . .” Ex. 1005 at 51:63-67.

149. Kelly683 discloses that *registration user information of the remote users* is processed and stored. Kelly683 discloses that “[a]t anytime, the user may update any of the foregoing profile information.” Ex. 1005 at 52:5-6. Before updating this profile information, Kelly683 discloses that a user may be required to first enter a “user identification code, and/or the password” indicating that the *registration user information* is processed and stored. Ex. 1005 at 52:8-10.

150. Although Kelly683 does not expressly disclose that server 108 can also serve as the prize database server where the storage device of server 108 processes and stores the player registration information, it would have been obvious. Implementing multiple services on a single server was a known design choice. Kelly683 further encourages this design choice, stating: “While this invention has been described in terms of several embodiments, it is contemplated that alterations, permutations, and equivalents thereof will become apparent to those skilled in the

art upon a reading of the specification and study of the drawings.” Ex. 1005 at 45:21-26.

151. A POSITA would have been motivated to modify server 108 of Kelly683 to further serve as the prize database server to create redundancies in case one server becomes inaccessible or inoperable. A POSITA would have had a reasonable expectation of success because this is a modification suggested by Kelly683 itself. Further, the proposed modification would simply be change in programming, involving a combination of known prior art elements according to known methods and techniques to yield predictable results.

**4. [1.a.ii]: “payment information of the remote users, and”**

152. In my opinion, Kelly683 alone or in combination with the knowledge of a POSITA renders obvious this limitation.

153. The gaming system of Kelly683 allows “a monetary value to be billed to a player or deducted from a player’s monetary account at a bank or other institution” (*payment information of the remote users*). Ex. 1005 at 9:33-41.

154. Although Kelly683 does not expressly disclose that server 108 processes and stores the monetary account of the remote users, it would have been obvious. Kelly683 explains that “player identification and/or password...allows a

monetary value to be billed to a player or deducted from a player's monetary account at a bank or other institution.” Ex. 1005 at 9:33-41.

155. A POSITA would have implemented the gaming system such that server 108 processes and stores the monetary account of the remote users with the player identification, password, and other player registration information.

156. A POSITA would have been motivated to implement server 108 of Kelly683 to process and store the monetary account of the player with the other registration information since such information is associated with each other. A POSITA would have had a reasonable expectation of success because the proposed modification would simply be change in programming, involving a combination of known prior art elements according to known methods and techniques to yield predictable results.

5. **[1.a.iii]: “mandated and variable parameters for use in the course of game play, wherein the mandated parameters represent parameters which must be achieved by the system as a whole, and the variable parameters represent parameters characterizing at least one of: a game structure and a prizing structure,”**

157. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses *mandated parameters that represent parameters which must be achieved by the system as a whole.*

158. The '164 patent discloses that the game play system includes mandated parameters that “may consist of prize pay out and win rates, and may include such factors as the minimum payout amount, the maximum payout amount, a defined percentage payout, the number of prizes, and/or the form of prizes.” Ex. 1001 at 5:30-34. The '164 patent explains that: “Another variable parameter may be the game structure itself, such as in the use of decision points, numbers of levels of game play, and/or duration of game play.” Ex. 1001 at 6:6-9. The '164 patent further explains that: “The game play parameters and prizing structure parameters generally comprise that collection of variables that shape the game experience and define the prizing structure[.]” Ex. 1001 at 6:24-26. The '164 patent explains that: “the prizing structure parameters may include the desired payout amount, GLEPS or other allocation variables, the frequency of wins (1:X), overall number of winners and prizing structure and allocation of prizes.” Ex. 1001 at 6:35-39. The '164 patent goes on to explain: “Parameters may in one context be a ‘mandated’ parameter and yet in another context a ‘variable’ parameter” and that “[w]hat is a ‘mandated’ parameter in one game may be a ‘variable’ parameter in another, and vice versa.” Ex. 1001 at 16:29-41.

159. Like the '164 patent, the gaming system of Kelly683 includes a “global payout percentage” (Ex. 1005 at 5:20-29, 37:27-38:15, 38:58-39:7, Fig. 9a) and “win

ratios” (Ex. 1005 at 5:3-5, 5:30-43, 5:55-6:3). Again, like the ’164 patent, the payout and win ratios may include such facts as a defined percentage payout, the number of prizes and form of prizes, as Kelly683 explains that “[t]he term ‘payout’, as used herein, is intended to refer to any transfer of monetary value given back to the player of the game apparatus or game system. Most commonly for redemption systems, payout is in the form of prizes, but it may also be cash, unredeemed tickets, prize credits, and the like.” Ex. 1005 at 37:23-27. Kelly683 discloses that that “[t]he operator can provide cost and prize data and a desired level of profitability, and prize credit costs for prizes are automatically determined.” Ex. 1005 at 4:17-20. *See also id.* at 5:17-19 (“the prize information is automatically determined for each of the prizes in view of a desired profitability of the game apparatus.”). More specifically, Kelly683 “decreases operator involvement in a prize redemption system and the overhead of maintaining a prize structure for redemption games” because:

An operator need only input desired prizes and a desired percentage of income that is to be paid back to players, and the system can automatically determine prize credit costs and win ratios for the entered prizes, which achieve the desired profitability of the game apparatus. These entered prizes and prize costs are then automatically provided to players on the game apparatus.

Ex. 1005 at 5:55-64. *See also id.* at 27:64-28:1 (“... thus allows the system to automatically and continuously update prize costs and specific prize win ratios according to monitored player performance to maintain a desired profitability of the

game units.”). Kelly683 discloses that “The payout input for credit prizes may include a global payout percentage value that is the operator’s desired percentage of the monetary income earned by the game apparatus that the operator wishes to provide back to players in the form of the prizes won using prize credits.” Ex. 1005 at 5:22-28.

160. Separate from prizes won using prize credits, Kelly683 discloses a “specific prize” or “instant prize” which is “a particular prize or type of prize that a player can be directly and immediately awarded and, in most cases, can immediately receive due to a particular winning result on game unit 10.” Ex. 1005 at 12:41-45. For each such “specific prize,” Kelly683 discloses a frequency of wins: “a win ratio for each of the prizes in terms of how frequently the particular prize is awarded when a specific prize goal is met.” Ex. 1005 at 5:31-33. Kelly683 explains that the specific prize “win ratio is determined in accordance with the operator’s desired amount of payout.” Ex. 1005 at 5:34-36. More specifically, “[t]he payout input for specific prizes includes a global payout percentage that is the operator’s desired percentage of the monetary income earned by the game apparatus that the operator wishes to provide back to players in the form of specific prizes.” Ex. 1005 at 5:35-40. Note that Kelly683 defines “payout” as “intended to refer to any transfer of monetary value given back to the player of the game apparatus or game system.” Ex. 1005 at

37:23-25. Kelly683 goes on to explain that this is most often in the form of prizes, but may be in other forms such as prize credits or cash. Ex. 1005 at 37:25-28.

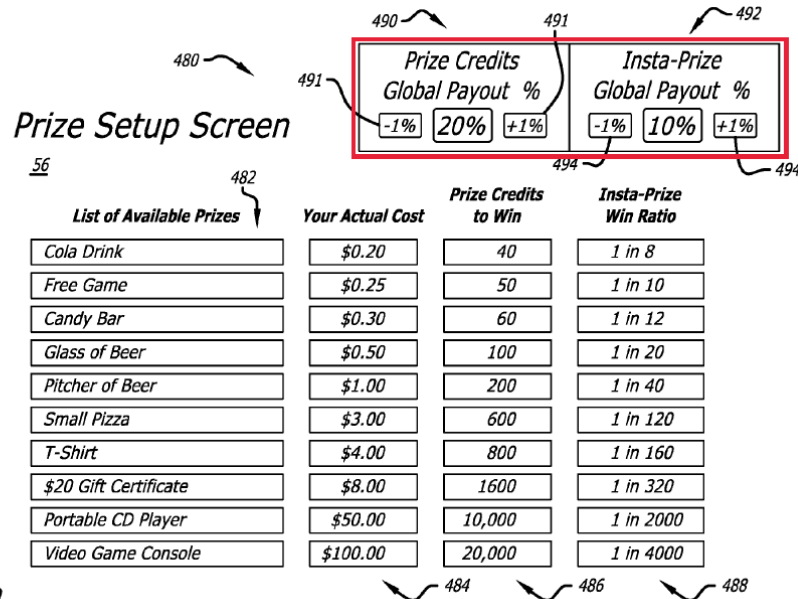


FIG. 9a

**Ex. 1005 at Fig. 9a**

161. Kelly683 discloses that the global payout percentage and win ratios *must be achieved by the system as a whole*. “The prize payout percentage 490 indicates the payout of the game unit 10 as a percentage of an operator’s revenue from the game that the operator will pay back, on average, to players in the form of prize credits or prizes purchased using prize credits.” Ex. 1005 at 37:35-39. Similarly, Kelly683 explains that “the specific prize ratios 488 are automatically determined by the redemption system based on other operator input such as actual cost 484 and the specific prize global win ratio 492.” Ex. 1005 at 37:11-14.

162. Kelly683 discloses *variable parameters that represent parameters characterizing at least one of: a game structure and a prizing structure*. The '164 patent discloses that a “variable parameter may be the game structure itself, such as in the use of decision points, numbers of levels of game play, and/or duration of game play.” Ex. 1001 at 6:6-9. The variable parameters may also be a prizing structure, which “may include the desired payout amount, GLEPS or other allocation variables, the frequency of wins (1:X), overall number of winners and prizing structure and allocation of prizes.” Ex. 1001 at 6:35-39. Specifically, Kelly683 also discloses “adjust[ing] game difficulty so that, on average, a predetermined number of prize credits will be awarded for each game played” or more specifically adjusting the “[d]uration of games” in order “to achieve an average payout level of prize credits.” Ex. 1005 at 38:62-39:7. Kelly683 also discloses “specific prize win ratios 488” that are “adjusted to achieve the desired global percentage 492 input by the operator.” Ex. 1005 at 40:2-4.

163. Figure 9a of Kelly683 is an example of “a prize table 480” that is “displayed to the operator” so that “the operator would modify the prize characteristics as desired and send any updated characteristics to all linked (or all desired linked) game units over a network or other communication device.” Ex. 1005 at 34:64-35:8. In particular, Kelly683’s prize table 480 includes “the prize credit

global payout percentage 490.” Ex. 1005 at 35:9-14. This field “allows an operator to view and to change a global payout percentage based on all of the prizes in the prize list 482, their actual cost 484, and their purchase cost 486.” Ex. 1005 at 37:19-23.

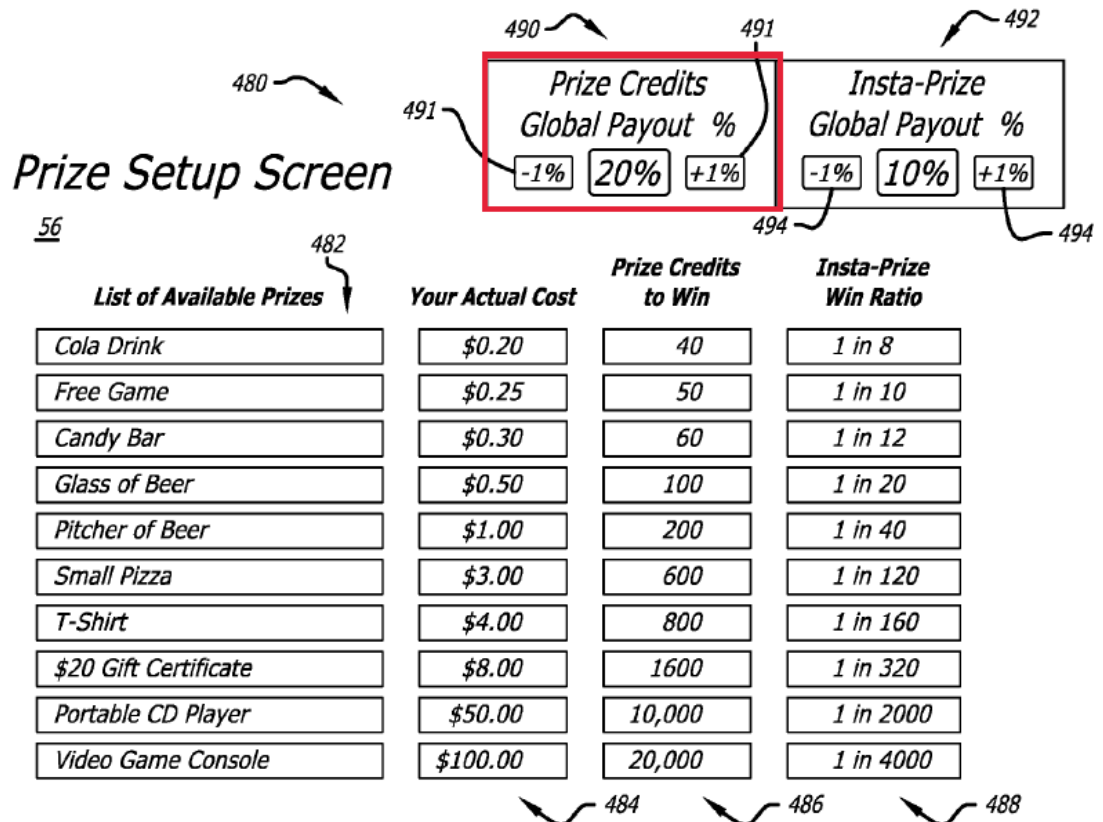


FIG. 9a

164. Kelly683 explains that “[a] prize actual cost, A, which is provided by the operator, is divided by the global payout percentage entered by the operator, P, where  $R=A/P$ .” Ex. 1005 at 38:44-47. “The resulting value, R, represents the amount of revenue required to achieve the desired payout percentage.” Ex. 1005 at 38:49-

50. “Once the required revenue,  $R$ , is determined for a particular prize, then the average number of prize credits or tickets,  $T$ , that are known to be awarded per game is determined (average ticket payout).” Ex. 1005 at 38:55-58. Kelly683 discloses that it is then “possible for the game’s manufacturer to adjust game difficulty so that, on average, a predetermined number of prize credits will be awarded for each game played.” Ex. 1005 at 38:58-60. Kelly683 provides a number of examples of adjusting the game difficulty, including adjusting the duration of timed games: “Durations of games, which have a fixed duration, can also be adjusted to achieve an average payout level of prize credits.” Ex. 1005 at 38:6. Thus, Kelly683 discloses adjusting a *variable parameter* that represent parameters characterizing *game structure*—the duration of games—in order to achieve the global payout percentage inputted by the operator.

165. Like the ’164 patent, the gaming system of Kelly683 uses both a *game structure* and *prizing structure*. For *game structure*, Kelly683 explains that the global payout percentage and win ratio can be achieved by adjusting the game structure:

For example, in an action game the speed of controlled objects, response of input devices, and the like, can be adjusted so that most players don’t receive a score higher than particular value. In card games, the frequencies of winning combinations of cards can be adjusted. In quiz games, the difficulty of the questions at various times during the game can be adjusted so that average

players will typically win a certain number of prize credits per game. Durations of games, which have a fixed duration, can also be adjusted to achieve an average payout level of prize credits.

Ex. 1005 at 38:65-39:7.

166. For *prizing structure*, Kelly683 discloses that the gaming system will automatically adjust the prizing structure to meet the desired goals:

[T]he redemption system of the present invention vastly decreases operator involvement in a prize redemption system and the overhead of maintaining a prize structure for redemption games. An operator need only input desired prizes and a desired percentage of income that is to be paid back to players, and the system can automatically determine prize credit costs and win ratios for the entered prizes, which achieve the desired profitability of the game apparatus. These entered prizes and prize costs are then automatically provided to players on the game apparatus. This reduces the operator's need to update prizes and prize costs, and it provides a far more exact system for maintaining prizes and achieving a desired profitability of offered games, thereby reducing operating and maintenance costs of redemption games and allowing redemption games to be provided in the non-traditional gaming environments.

Ex. 1005 at 5:55-6:3.

167. A POSITA would have understood that the gaming system of Kelly683 uses the global payout percentage and win ratios, as well as the gaming structure and prizing structure *for use in the course of game play*, particularly since the gaming structure and prizing structure are adjusted throughout game play to achieve the global payout percentage and win ratios.

168. Kelly683 teaches that server 108 (*server*) processes and stores (*to process and store*) the global payout percentage and win ratios (*mandated parameters*). Kelly683 teaches the global payout percentage and win ratios are stored in the prize table. Ex. 1005 at 44:29-35, Fig. 9a. “Information in the prize table 480 can be stored locally, or by the central location and can be downloaded when needed.” Ex. 1005 at 43:21-23. A POSITA would have understood that server 108 is included in “central location.”

169. Kelly683 teaches that server 108 (*server*) processes and stores (*to process and store*) the parameters characterizing the gaming structure and prizing structure (*variable parameters*).

170. To the extent Kelly683 does not expressly disclose that server 108 processes and stores the *mandated parameters* and *variable parameters*, it would have been obvious.

171. A POSITA would have been motivated to implement server 108 of Kelly683 to process and store the monetary account of the player with the other registration information since such information is associated with each other. A POSITA would have had a reasonable expectation of success because the proposed modification would simply be change in programming, involving a combination of

known prior art elements according to known methods and techniques to yield predictable results.

**6. [1.b]: “a communication interface adapted to couple bi-directional communications between the one or more remote users utilizing electronic communication devices,”**

172. In my opinion, Kelly683 discloses this limitation.

173. Kelly683 discloses that the game units 10 include a “communication device 24”, Ex. 1005 at 9:10-14, (*a communication interface*) “coupled to a main bus of the system, a telephone modem, a cable modem a direct network connection, or another device for communication information according to standard network or modem protocols” (*adapted to couple bi-directional communications*). Ex. 1005 at 13:24-33.

174. Kelly683 discloses “[c]ommunication device 24 can also be used to allow game unit 10 to communicate with an operator, server, or other central controller that regulates and coordinates prize distribution to game apparatuses linked to the controller in the current redemption system.” Ex. 1005 at 15:4-8. *See also id.* at 20:19-21 (“Game units 10 a and 10 b can likewise be linked to other types of computing and electrical devices through communication devices 24.”). This can include information being disseminated to the game units, and also the game units

sending information to the server. Ex. 1005 at 15:8-23. Examples of communication devices 24 include “a network interface card coupled to a main bus of the system, a telephone modem, a cable modem, [and] a direct network connection . . . .” Ex. 1005 at 15:25-30. *See also id.* at 19:59-67 (“. . . the communication between different game apparatuses is accomplished using telephone lines, ISDN lines, direct-connect data lines, fiber optic lines, cellular phone or pager wireless receiver/transmitter devices, and/or other types of communication devices and channels.”).

175. Kelly683 explains that this communication device 24 “can also be used to communicate directly or indirectly with other game units 10 and other processing devices to allow multiple players to participate in a game process.” Ex. 1005 at 14:60-63. Kelly683 provides an example where “one game unit 10 can allow a player to control one player-controlled object in a video game, while a different game apparatus linked through communication device 24 can allow a different player to control his or her own object in the same video game.” Ex. 1005 at 14:63-67. *See also id.* at 14:67-15:3. Examples of networked games “where players on separate game units are simultaneously competing” include “a first player that is playing a first person, point-of-view, virtual reality video game on one game unit 10 a can interact in ‘real time’ with a second player of a second game unit 10 b who is also playing the same game. The first player can view a computer-generated object that

is controlled by the second player, and vice-versa.” Ex. 1005 at 19:27-33. *See also id.* at 20:38-41 (“The game system 100 can also be used to provide networked games between players of different game units 10, such as the real-time and non-real time games described above.”).

176. As an example of *bi-directional communications*, Kelly683 discloses that the game units “sends a request for information, such as current prize costs, tournament score and the like, residing on, for example, server 108.” Ex. 1005 at 21:47-50. In Kelly683, the game unit can then receive back from server 108 a web page written in HTML. Ex. 1005 at 21:50-62. *See also id.* at 22:30-32 (“players of game unit 10 a and game unit 10 b can directly interact in games over the Internet 130”); 20:32-34 (“a server 108 can likewise directly communicate information to a game unit 10 a or 10 b, or both units and the server can all interact.”).

177. A POSITA would have understood that the gaming system uses the communication device for communicating between the players in different locations using game units that also include communication devices (*bi-directional communications between the one or more remotes users utilizing electronics communication devices*). Ex. 1005 at 21:41-43 (“Game units 10a and 10b can be coupled to the Internet 130 with a suitable communication device, such as a network interface, a telephone modem, a cable modem, and the like.”).

7. **[1.c]: “a game processor coupled to memory generating game play information, the game processor providing at least:”**

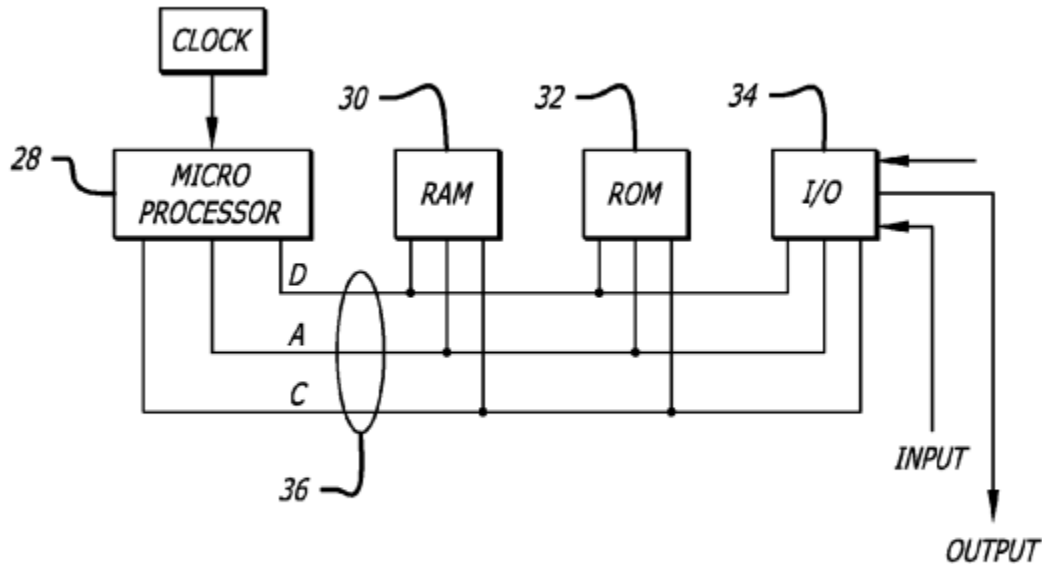
178. In my opinion, Kelly683 discloses this limitation.

179. Kelly683 discloses a “game processor [that] interprets the commands and influences game states and game events in the game process accordingly” (*a game processor...generating game play information*). Ex. 1005 at 10:12-15. In Kelly683, the game unit 10 includes a “game processor 12” that “implements (e.g., controls, influences, coordinates, monitors, calculates, and the like) the functions of the game unit 10 during a game process and includes several input and output functions.” Ex. 1005 at 9:10-18. Kelly683’s “[g]ame processor 12” in turn “includes a microprocessor 28, random access memory (RAM) 30, read-only memory (ROM) 32 . . . .” Ex. 1005 at 15:38-40. *See also id.* at Fig. 1a, 11. Kelly683 discloses that “[m]icroprocessor 28 executes a process, described by software instructions stored in memory, which recognizes a game command from player input devices 16.” Ex. 1005 at 15:48-51. Kelly683 discloses that examples of suitable microprocessors include “the Intel 8031 8-bit microprocessor” and “Pentium-class/power PC class microprocessors.” Ex. 1005 at 46:61-67.

180. The game processor is coupled to RAM and ROM (*a game processor coupled to memory*) as shown in Fig. 1a. Ex. 1005 at 9:27-30, 15:40-16:3, Fig. 1a.

Kelly683's "software instructions 'can be stored in a 'computer readable medium', which, by way of example, includes memory such as RAM and ROM, magnetic disks . . . ." Ex. 1005 at 15:51-56. Kelly683 goes on to explain that the storage medium may be in the form of "a hard disk drive." Ex. 1005 at 15:56-59. Kelly683 explains that "Microprocessor 28 is coupled to RAM 30 . . . ." and that "[m]ethods for coupling RAM 30 and ROM 32 to the microprocessor 28 by bus 36 including data, address, and control lines are well-known to those skilled in the art." Ex. 1005 at 47:12-21. *See also id.* at 18:33-36 ("server 108 can be a separate device or apparatus which includes a controller, such as a microprocessor, and/or a storage device, such as a hard disk drive, memory devices, and the like.").

181. Kelly683 discloses that "the game processor interprets the commands and influences game states and game events in the game process accordingly." Ex. 1005 at 10:13-15. *See also id.* at 15:35-38 ("Game processor 12 receives signals and commands from the player input devices 16 and translates/interprets those signals and commands so that the game process can be updated.").



**FIG. 1a**

**8. [1.c.i]: “the game play information including game play with virtual money (vCoins),”**

182. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that the *game play information* provided by the game processor includes *game play* with game credits (*with virtual money (vCoins)*). Ex. 1005 at 9:41-43 (“a signal is sent to game processor 12 to increase the player’s game credits, i.e., to indicate that one or more game plays have been paid.”).

183. The ’164 patent explains: “the games may be played either with real money, or may be played with virtual money, sometimes referred to as vCoins.” Ex. 1001 at 14:26-28. The ’164 patent explains that “vCoins may be acquired by

purchase, or may be awarded in a non-cash purchase manner such as provided for a credit, an inducement or a promotion.” Ex. 1001 at 14:38-40. Furthermore, “[t]he vCoins may be traded for cash or other forms of games, prizes or non-cash goods or services.” Ex. 1001 at 14:43-45.

184. Figure 16 of Kelly683 discloses a functional diagram depicting various “operations” of a server, including “a purchase game credits operation 1104.” Ex. 1005 at 51:31-38.

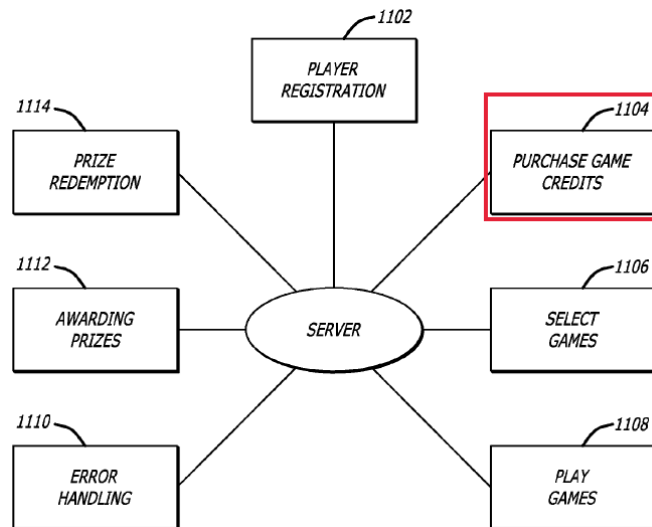


FIG. 16

185. Kelly683 discloses that “[s]uch game credits are used to play games in order to win prize credits.” Ex. 1005 at 52:40-41. *See also id.* at Fig. 18; (“Once it is

ascertained that registration is complete, the purchase of the game credits is permitted in operation 1304.”).

186. Figures 5a to 5d, 6a to 6b, and 8a of Kelly683 disclose “[g]ame credits display 288” which “displays how many game credits the player has left, which typically corresponds to how much monetary input the player has provided . . . .” Ex. 1005 at 23:42-44. Kelly683 goes on to explain that “[t]ypically, each game offered on game unit 10 requires a predetermined number of game credits to play, and this number can vary depending on the type of game played and the options selected for a game.” Ex. 1005 at 23:47-50. Kelly683 also explains that “a player can store game credits and retrieve/use game credits from previous game sessions if a ‘game credit account’ is implemented for the player, similar to the prize credit account described subsequently” Ex. 1005 at 23:50-54. Kelly683 goes on to explain how a prize credit account (and hence a game credit account) functions:

In some embodiments, the individual game unit can store these previously won prize credits in a “credit account” with a player ID (name, address, ID number, and the like). In networked embodiments, such as shown in FIGS. 3 and 4, the server 108 can store the prize credits won by a player over previous game sessions and can send this information to an individual game unit when requested by the game unit, e.g., when the player associated with a credit account plays a game on the game unit. Thus, a player can access his or her credit account by playing any individual game unit connected to the server that stores that player's credit account information.

Ex. 1005 at 24:4-15.

187. Kelly683 further discloses prize credits as a form of currency:

The tournament prize can be an actual physical prize, such as a computer, stereo, and the like; or the tournament prize can be in a form of currency, such as prize credits, vouchers, or cash that are exchangeable for other prizes. For example, the tournament prize can be indicated in terms of monetary units, such as dollars and cents. In other embodiments, the tournament prize can be expressed as a number of points that have a correspondence to the amount of monetary value contributed to the tournament score by the game unit 10 a or 10 b.

Ex. 1005 at 31:58-66. Kelly683 discloses that prize credits can be redeemed for prizes. Ex. 1005 at Fig. 6b; 29:26-30:9. Kelly683 further discloses that prize credits can be converted to game credits: “the player might decide to use prize credits to ‘buy’ additional games on a game unit 10, e.g., convert prize credits to game credits. Those bought game credits can then be stored in a ‘game credit account’, if desired.”

Ex. 1005 at 30:12-16.

**9. [1.c.ii]: “the virtual money (vCoins) being acquired in response to a purchase utilizing the payment information of the users,”**

188. In my opinion, Kelly683 discloses this limitation.

189. Kelly683 discloses that game credits can be purchased (*the virtual money (vCoins) being acquired*) using “user verification or validation [that] can be input by the player, such as a player identification and/or password that, for example, allows a monetary value to be billed to a player or deducted from a player's monetary

account at a bank or other institution” (*in response to a purchase utilizing the payment information of the users*). Ex. 1005 at 9:33-41.

190. Kelly683 discloses that “[u]pon purchase, the game credits are automatically stored under the corresponding account in operation 1306.” Ex. 1005 at 52:50-51. Kelly683 discloses secondary account holders, which are limited, and primary account holders, which have “exclusive authority to modify and/or delete a current account, and transfer game credits, prize credits, and prizes to and from the various secondary accounts.” Ex. 1005 at 52:24-29. In order to establish such a primary account, the “primary account holder may be required to enter at least one valid credit card number as a way to establish eligibility.” Ex. 1005 at 52:30-33.

191. Kelly683 further discloses that its game units 10 may include a “monetary input device 14.” Ex. 1005 at 9:10-14. *See also id.* at Figs. 1, 3. The purpose of the monetary input device is “to receive the monetary input that is inserted by a player into the game apparatus in the gaming environment.” Ex. 1005 at 9:33-35. Kelly683 discloses that monetary input devices may include “debit card or credit card readers” as well as electronic monetary forms, such as “‘E-cash’, ‘cybercash’ or other electronic monetary forms.” Ex. 1005 at 9:45-50. *See also id.* at 18:19-22 (“Each game unit 10 a and 10 b accepts monetary input 104, such as coins, tokens, a debit card, a credit card, a smart card, or other forms of monetary or

validated input.”); 24:50-56 (“One convenient way to receive the player’s identification is to require that players provide monetary input in the form of a credit card, a debit card, an ATM card and PIN number, a smart card, and the like, which includes an electronic form of identification.”). In particular, Kelly683 discloses that: “user verification or validation can be input by the player, such as a player identification and/or password that, for example, allows a monetary value to be billed to a player or deducted from a player’s monetary account at a bank or other institution.” Ex. 1005 at 9:50-55. Kelly683 further discloses that winnings can be redeemed by crediting a player’s bank account: “a player may be remotely awarded the tournament prize from a prize distributor, e.g., the player can be sent prizes through the mail or delivery service, a player’s bank account can be credited, and the like.” Ex. 1005 at 21:17-20.

**10. [1.c.iii]: “the virtual money (vCoins) acquired in response to a purchase being subject to a multiplier,”**

192. In my opinion, Kelly683 discloses or renders obvious this limitation.

The ’164 patent explains that:

[T]he games may be played either with real money, or may be played with virtual money, sometimes referred to as vCoins. A vCoin will typically be a multiplier times the corresponding numeric monetary value, e.g. one dollar equals 500 vCoins. The multiplier is typically an integer number, and is usually an amount of 100, 500 or 1000, though any amount may be used.

Ex. 1001 at 14:26-32.

193. Kelly683 discloses that “[e]ach game credit is equal to a fixed monetary value, such as 25 cents.” Ex. 1005 at 23:46-47. Kelly further discloses that “when purchasing credits the player might be offered 10 game credits for \$1.00, 30 game credits for \$2.50, 60 game credits for \$4.75, and 120 games for \$8.50.” Ex. 1005 at 52:54-57. Kelly683 further discloses tournament prizes that are “expressed as a number of points that have a correspondence to the amount of monetary value contributed to the tournament score by the game unit 10 a or 10 b. For example, every dollar of monetary value contributed by a game unit can be expressed as 10 points of a tournament prize.” Ex. 1005 at 1:66-32:1.

194. A POSITA would have understood that the relationship between the game credit and the fixed monetary value is a multiplier.

**11. [1.c.iv]: “implementing a first set of variable parameters to provide a first game play experience, and”**

195. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses multiple ways of implementing a first set of variable parameters to provide a first game play experience. One way uses the gaming structure where a first game play experience is less difficult.

196. Kelly683 discloses that “[i]t is possible for the game’s manufacturer’s to adjust game difficulty so that, on average, a predetermined number of prize credits will be awarded for each game played.” Ex. 1005 at 38:58-60. Kelly683 discloses how an operator enters a global payout percentage, which is used to determine “the amount of revenue required to achieve the desired payout percentage.” Ex. 1005 at 38:49-50.

197. Another way uses the *prizing structure* where a *first game play experience* results in “a ‘best fit’ of prizes awarded according to the operator’s odds.” Ex. 1005 at 36:63-66. “For example, every 8,000 games, two video consoles are to be awarded.” Ex. 1005 at 37:1-3; *see also* Ex. 1001 at 16:65-17:4 (“The game play experience may be varied by changing the play probabilities. In one implementation, game play experience may utilize real world probabilities for the game play portion of the experience, but utilize other probabilities for the prizing portion of the overall game.”).

198. Kelly683 explains that “[t]he difficulty and thus the average prize credits awarded per game can be adjusted using a variety of techniques that depend on the type of game being played.” Ex. 1005 at 38:62-65. Examples disclosed by Kelly683 of adjusting difficulty include:

- “[I]n an action game the speed of controlled objects, response of input devices, and the like, can be adjusted so that most players don’t receive a score higher than a particular value.” Ex. 1005 at 38:65-39:1.
- “In card games, the frequencies of winning combinations of cards can be adjusted.” Ex. 1005 at 39:1-2.
- “In quiz games, the difficulty of the questions at various times during the game can be adjusted so that average players will typically win a certain number of prize credits per game.” Ex. 1005 at 39:2-5.
- One particular example for adjusting game difficulty disclosed by Kelly683 is adjusting the duration of timed games: “Durations of games, which have a fixed duration, can also be adjusted to achieve an average payout level of prize credits.” Ex. 1005 at 9:5-7.

199. Kelly683 discloses *implementing a first set of variable parameters to provide a first game play experience* in that the user can have a first game play experience by playing the game prior to the adjustment of difficulty.

200. A POSITA would understand that the game processor implements the first set of variable parameters. Ex. 1005 at 9:15-18 (“Game processor 12 implements (e.g., controls, influences, coordinates, monitors, calculates, and the

like) the functions of the game unit 10 during a game process and includes several input and output functions.”).

**12. [1.c.v]: “modifying the variable parameters to provide a second set of variable parameters providing a second game play experience, where the first game play experience differs from the second game play experience,”**

201. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses *modifying the variable parameters* (discussed in Section X.A.11) *to provide a second set of variable parameters providing a second game play experience*.

202. First, Kelly683 discloses adjusting the parameters characterizing the *gaming structure (variable parameters)* to provide a more difficult game play (*a second set of variable parameters providing a second game play experience*). Ex. 1005 at 38:63-39:7. Kelly683 discloses that *the first game play experience differs from the second game play experience* because the second game play experience is more difficult than the first game play experience (e.g., more difficult to achieve a score higher than a particular value, frequencies of winning combinations is lower, difficulty of questions is higher). *Id.*

203. Second, Kelly683 discloses adjusting the parameters characterizing the *prizing structure (variable parameters)* to provide prizes at different odds. Ex. 1005 at 36:63-37:9. “For example, every 8,000 games, two video consoles are to be

awarded. If it is randomly determined that a third video console is to be awarded within, e.g., the 3,000th game, then a different prize can be awarded so that the desired odds are better met.” Ex. 1005 at 37:1-6. Kelly683 discloses that *the first game play experience differs from the second game play experience* because the play probabilities have changed. *Id.*; *see also* Ex. 1001 at 16:66-17:1 (“The game play experience may be varied by changing the play probabilities.”).

204. A POSITA would understand that the game processor modifies the variable parameters to provide a second set of variable parameters. Ex. 1005 at 9:15-18.

**13. [1.d]: “memory storing account information which varies through game play,”**

205. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that “server 108 can store the prize credits won by a player over previous game sessions and can send this information to an individual game unit when requested by the game unit, e.g., when the player associated with a credit account plays a game on the game unit.” Ex. 1005 at 24:7-18; *see also* Ex. 1001 at 8:2-4.

206. In Kelly683, the game unit 10 includes a “game processor 12” that “implements (e.g., controls, influences, coordinates, monitors, calculates, and the like) the functions of the game unit 10 during a game process and includes several

input and output functions.” Ex. 1005 at 9:10-18. Kelly683’s “[g]ame processor 12” in turn “includes a microprocessor 28, random access memory (RAM) 30, read-only memory (ROM) 32 . . . .” Ex. 1005 at 15:38-40. *See also id.* at Fig. 1a. Kelly683 discloses that “[m]icroprocessor 28 executes a process, described by software instructions stored in memory, which recognizes a game command from player input devices 16.” Ex. 1005 at 15:48-51. Kelly683’s “software instructions ‘can be stored in a ‘computer readable medium’, which, by way of example, includes memory such as RAM and ROM, magnetic disks . . . .” Ex. 1005 at 15:51-56. Kelly683 goes on to explain that the storage medium may be in the form of “a hard disk drive.” Ex. 1005 at 15:56-59.

207. Kelly683 discloses a systems that includes a server 108 as well as one or more game units 10 coupled to that server. Ex. 1005 at 18:32-52. *See also id.* at Fig. 3. Kelly683’s “server 108 can be a separate device or apparatus which includes a controller, such as a microprocessor, and/or a storage device, such as a hard disk drive, memory devices, and the like.” Ex. 1005 at 18:33-36. Kelly683 goes on to describe how the server 108 can send information, such as HTML web pages, to game units where it is cached in the game unit’s memory. Ex. 1005 at 21:58-62 (“The server 108 then sends a web page written in, for example, HTML format back to the requesting game unit or client machine, where it is ‘cached’ in the memory

(typically the RAM, hard disk, or a combination of the two) of the game unit or a client machine.”).

208. Kelly683 discloses that gameplay can be executed locally on the game units 10 or on the server 108. Ex. 1005 at 10:13-15 (“the game processor interprets the commands and influences game states and game events in the game process accordingly.”); 19:47-50 (“Alternatively, if the network transmits data quickly enough, the server 108 can execute a game and send and receive appropriate data between the server and game units.”). Similarly, Kelly683 discloses that *account information which varies through game play* can be stored on both the game units 10 and the server 108. For example, Kelly683 discloses that “the server 108 can store the prize credits won by a player over previous game sessions and can send this information to an individual game unit when requested by the game unit, e.g., when the player associated with a credit account plays a game on the game unit.” Ex. 1005 at 24:7-13. *See also id.* at 24:5-7 (“the individual game unit can store these previously won prize credits in a ‘credit account’ with a player ID (name, address, ID number, and the like)”); 24:13-15 (“Thus, a player can access his or her credit account by playing any individual game unit connected to the server that stores that player’s credit account information.”); 26:44-48 (“As described above, the credit account can be implemented on storage devices such as memory, hard disk, and the

like, either local to the individual game unit, or on a connected server that links multiple game units.”); 27:20-23 (“If not, the player can simply end his or her game, with the newly-won prize credits added to his or her credit account that is stored on the game unit or a server (if applicable).”).

209. A POSITA would have understood that the credit account (*account information*) *varies through game play* as the player wins or loses. Ex. 1005 at 15:17-23. A POSITA would have further understood that the storage device of server 108 stores (*memory storing*) the credit account (*account information*).

**14. [1.e]: “a decision engine for performing game analytics on the game play, and”**

210. In my opinion, Kelly683 discloses this limitation. The term “decision engine” appears once in the ’164 patent, explaining that the “decision engine” uses data—including “user specific play, such as the number of times a game is played during one contact or session, whether the player continuously plays that game without interruption, e.g., diverting to other forms of entertainment or information, and the frequency between player visits, such as to a sponsoring website”—“ to optimize the prizing structure for a desired end goal, e.g., maximizing game play and therefore sales of game plays.” Ex. 1001 at 45:34-39.

211. Kelly683 discloses that “[g]ame system 100 is also well suited to implement tournament games.” Ex. 1005 at 20:48-49. Kelly683 goes on to explain that “game units at different sites can also be linked together and/or to a server 108” and that such a “[s]erver 108 may coordinate prizes between game units, or determine a tournament prize 112 at the conclusion of a tournament . . . .” Ex. 1005 at 20:59-21:3. Figure 7 “is a flow diagram illustrating a method of implementing a tournament game . . . .” Ex. 1005 at 7:53-54. Kelly683 explains that for a tournament game, “[p]layers from gaming environments in several different locations can thus interact or compete simultaneously in offered games, or over a predetermined time period during which the tournament is open to players.” Ex. 1005 at 31:15-19.

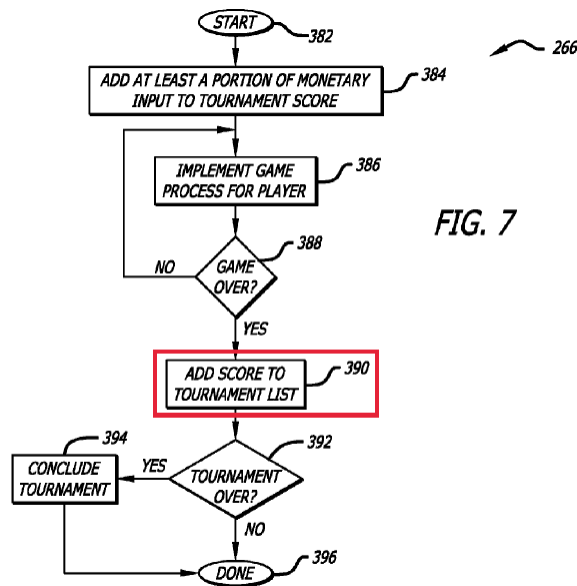


FIG. 7

212. At step 390 of Figure 7, Kelly683 discloses a step for “add score to tournament list.” Kelly683 explains that “[t]he tournament list preferably includes all the players in the tournament by name or other identification and their associated game scores.” Ex. 1005 at 32:25-27. Kelly683 goes on to explain that:

. . . additional information can also be stored in the tournament list, which can be used to help determine a winner or to provide statistical information for the operator of the tournament. For example, the time the player took to play a game, the number of times a player has participated in similar previous tournaments, and the like[.]

Ex. 1005 at 32:31-33. Kelly683 explains that the tournament list can be stored locally on a game unit, but is typically stored on the tournament server. Ex. 1005 at 32:34-39.

213. As discussed above, Kelly683 discloses the adjustment of game difficulty to achieve an average payout level of prize credits, which in turn will achieve the global payout percentage inputted by an operator. Examples disclosed by Kelly683 of adjusting difficulty include:

- “[I]n an action game the speed of controlled objects, response of input devices, and the like, can be adjusted so that most players don’t receive a score higher than a particular value.” Ex. 1005 at 38:65-39:1.

- “In card games, the frequencies of winning combinations of cards can be adjusted.” Ex. 1005 at 39:1-2.
- “In quiz games, the difficulty of the questions at various times during the game can be adjusted so that average players will typically win a certain number of prize credits per game.” Ex. 1005 at 39:2-5.
- One particular example for adjusting game difficulty disclosed by Kelly683 is adjusting the duration of timed games: “Durations of games, which have a fixed duration, can also be adjusted to achieve an average payout level of prize credits.” Ex. 1005 at 39:5-7.

214. Kelly683’s disclosures about adjusting game difficulty involves the storing of statistical information on gameplay. For Kelly683’s example involving games of a fixed duration, statistical information on the duration of games would be needed to adjust the game duration to achieve an average payout level of prize credits. Ex. 1005 at 39:5-7. For Kelly683’s example involving the difficulty of questions in a quiz game, statistical information on answers to questions is needed to adjust the difficulty so that average players will typically win a certain number of prize credits per game. Ex. 1005 at 39:2-5.

215. Kelly683 discloses a process for “providing statistical information” (*a decision engine for performing game analytics on the game play*). Ex. 1005 at 32:27-

33. This statistical information includes the “number of times the player has played” (Ex. 1005 at 25:23-24), “the time the player took to play a game, the number of times a player has participated in similar previous tournaments, and the like” (Ex. 1005 at 32:27-33), “the number of games played and the number of times the specific prize goal was hit” (Ex. 1005 at 40:33-45), and “the amount of times a particular game is played, the number of times that difference games are played, or by achieving a game-related goal” (Ex. 1005 at 56:49-51). Kelly683 discloses that “[t]he ‘hit ratio’ is the fraction of games played, on average, in which a specific prize goal is met and thus a specific prize is won.” Ex. 1005 at 40:19-21. Kelly683 explains that “some games may have much different hit ratios than other games depending on the nature of the game action, randomness, and the like, and the difficulty of the specific prize goal” that “normalization factor” can be used, which “indicates how much an individual ratio 488 should be adjusted based on the particular game played.” Ex. 1005 at 40:59-41:9. Kelly683 explains that while the normalization factor “can be estimated initially,” “[a]fter a number of games have been played on a game unit 10, the normalization factor for each game can be based on the actual hit ratio determined for each game.” Ex. 1005 at 41:30-33.

216. The gaming system of Kelly683 uses this statistical information to optimize the prizing structure for a desired goal. *See, e.g.*, Ex. 1005 at 36:63-66 (“In

one embodiment, the random determination of whether a particular prize is to be awarded is also modified by statistical information to create a ‘best fit’ of prizes awarded according to the operator's desired odds.”).

**15. [1.f]: “a prizing system to award a win to the one or more remote users determined by a prizing structure.”**

217. Kelly683 discloses this limitation. Kelly683 discloses a prize award operation 1112 and redemption operation 1114 (together, *a prizing system*) that awards prizes to the players (*to award a win to the one or more remote users*). The prizes (*win*) is determined by the *prizing structure*. Specifically, “the redemption system provides an operator the ability to adjust prizes and determine the desired prize costs and win ratios.” Ex. 1005 at 5:3-5. Kelly683 discloses that “the prize information is automatically determined for each of the prizes in view of a desired profitability of the game apparatus.” Ex. 1005 at 5:7-19.

218. Kelly683 explains “[t]he present invention provides a prize redemption system and method for use with one or more game apparatuses. Players may win ‘prize credits’ by playing the game apparatus, and may then select a prize from a prize menu offered on the game apparatus.” Ex. 1005 at 4:12-16. Kelly683 goes on to explain that “the redemption system of the present invention vastly decreases operator involvement in a prize redemption system and the overhead of maintaining

a prize structure for redemption games.” Ex. 1005 at 5:55-58. Kelly683 then explains “[a]n operator need only input desired prizes and a desired percentage of income that is to be paid back to players, and the system can automatically determine prize credit costs and win ratios for the entered prizes, which achieve the desired profitability of the game apparatus.” Ex. 1005 at 5:58-61.

219. Figure 9a of Kelly683 is an example of “a prize table 480” that is “displayed to the operator” so that “the operator would modify the prize characteristics as desired and send any updated characteristics to all linked (or all desired linked) game units over a network or other communication device.” Ex. 1005 at 34:64-35:8. Kelly683’s prize table 480 also includes “the specific prize win percentage 492.” Ex. 1005 at 35:9-14.

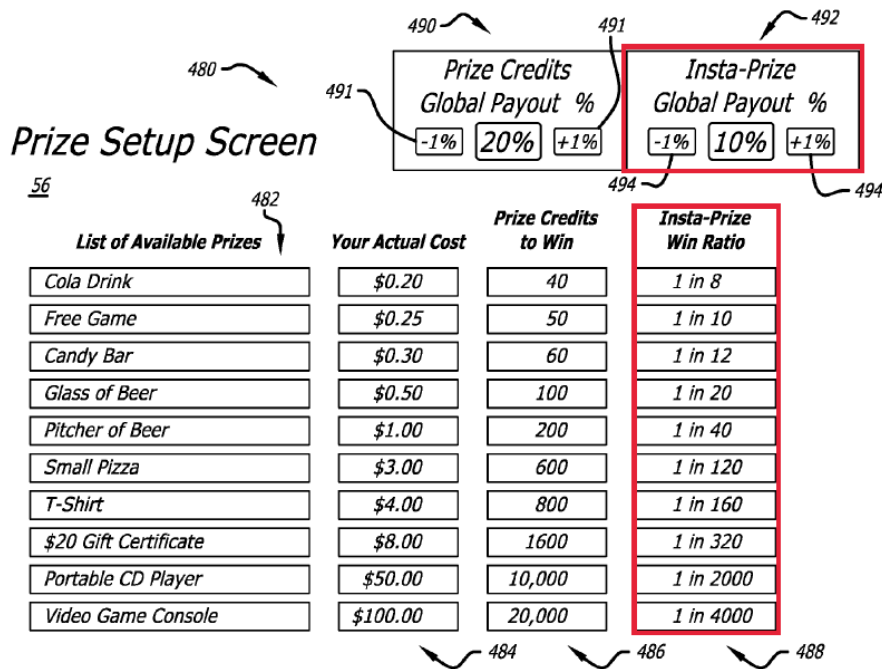


FIG. 9a

220. The specific prize global payout percentage 492 field “allows an operator to view and to change a global payout percentage that is based on all of the prizes and prize ratios in fields 488,” and “indicates the percentage of an operator’s revenue from the games that the operator will pay back, on average, to players in the form of specific prizes based on the ratios in fields 488.” Ex. 1005 at 37:54-61. Specifically, “this percentage number in field 492 is entered by the operator, and the redemption system will automatically adjust the ratios 488 to achieve the percentage value.” Ex. 1005 at 37:62-65. The “[s]pecific prize win ratio fields 488 list the individual prize ratios of winning the associated prizes as a specific prize or an ‘instant prize’ during a game implemented by the game unit 10.” Ex. 1005 at 36:8-

11. *See also id.* at 5:31-35 (“... a win ratio for each of the prizes in terms of how frequently the particular prize is awarded when a specific prize goal is met. The win ratio is determined in accordance with the operator’s desired amount of payout.”).

221. To the extent that *to award a win* is construed to exclude to award a prize, Kelly683 also discloses determining a “winning player” based on the outcome of at least one game in a tournament. Ex. 1005 at 58:50-52 (“a second portion of the total amount of prize credits or prizes is awarded to one or more winning players based on the outcome of at least one game thereof.”), Fig. 22.

**B. Dependent Claims 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29**

**1. Claim 2: “the server further includes player's club information.”**

222. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses a “player registration operation” by players are provided with “an interface such as a web page which prompts the user to create a personal user name, or user identification code, and a password.” Ex. 1005 at 51:59-63. *See also id.* at Fig. 16 (“Player Registration”), Fig. 17 (“Prompt Entry of User Information”). Kelly683 explains that required user information may include “a name and an e-mail address” and further optional user information may include “demographics, game preferences, and the like . . . .” Ex. 1005 at 51:63-67. Kelly683 discloses that “[a]t

anytime, the user may update any of the foregoing profile information.” Ex. 1005 at 52:5-6. Before updating this profile information, Kelly683 discloses that a user may be required to first enter a “user identification code, and/or the password.” Ex. 1005 at 52:8-10.

223. Kelly683 discloses that a user registering an account as part of the player registration operation 1102 will have “exclusive authority to modify and/or delete a current account, and transfer game credits, prize credits, and prizes to and from the various secondary accounts.” Ex. 1005 at 52:26-29. Kelly683 discloses that such a primary account holder “may be required to enter at least one valid credit card number as a way to establish eligibility.” Ex. 1005 at 52:30-33.

224. Figure 16 of Kelly683 discloses a functional diagram depicting various “operations” of a server, including “a purchase game credits operation 1104.” Ex. 1005 at 51:31-38. *See also id.* at Fig. 16. *See also id.* at Fig. 18 (“Accept Payment for Game Credits”); 52:38-40 (“. . . purchase game credits operation 1104 of FIG. 16 is carried out. Such game credits are used to play games in order to win prize credits.”).

225. Kelly683 further discloses a “[m]onetary input device 14” that “is used to receive the monetary input that is inserted by a player into the game apparatus in the gaming environment.” Ex. 1005 at 33-35. Kelly683 explains that monetary input

devices may include “debit card or credit card readers” as well as electronic monetary forms, such as “‘E-cash’, ‘cybercash’ or other electronic monetary forms.” Ex. 1005 at 9:45-50. *See also id.* at 18:19-22 (“Each game unit 10 a and 10 b accepts monetary input 104, such as coins, tokens, a debit card, a credit card, a smart card, or other forms of monetary or validated input.”); 24:50-56 (“One convenient way to receive the player’s identification is to require that players provide monetary input in the form of a credit card, a debit card, an ATM card and PIN number, a smart card, and the like, which includes an electronic form of identification.”). In particular, Kelly683 discloses that: “user verification or validation can be input by the player, such as a player identification and/or password that, for example, allows a monetary value to be billed to a player or deducted from a player’s monetary account at a bank or other institution.” Ex. 1005 at 9:50-55. Kelly683 further discloses that winnings can be redeemed by crediting a player’s bank account: “a player may be remotely awarded the tournament prize from a prize distributor, e.g., the player can be sent prizes through the mail or delivery service, a player’s bank account can be credited, and the like.” Ex. 1005 at 21:17-20.

226. Kelly683 discloses that “each game offered on game unit 10 requires a predetermined number of game credits to play, and this number can vary depending on the type of game played and the options selected for a game,” and that “[e]ach

game credit is equal to a fixed monetary value, such as 25 cents.” Ex. 1005 at 23:46-50. Kelly683 further discloses that players can win “prize credits” or “ticket credits” from games, which can be used to redeem prizes, but also to “‘buy’ additional games on a game unit 10, e.g., convert prize credits to game credits.” Ex. 1005 at 23:59-61; 30:12-16. Kelly683 also explains that “a player can store game credits and retrieve/use game credits from previous game sessions if a ‘game credit account’ is implemented for the player, similar to the prize credit account described subsequently.” Ex. 1005 at 23:50-54. Kelly683 goes on to explain how a prize credit account (and hence a game credit account) functions:

In some embodiments, the individual game unit can store these previously won prize credits in a “credit account” with a player ID (name, address, ID number, and the like). In networked embodiments, such as shown in FIGS. 3 and 4, the server 108 can store the prize credits won by a player over previous game sessions and can send this information to an individual game unit when requested by the game unit, e.g., when the player associated with a credit account plays a game on the game unit. Thus, a player can access his or her credit account by playing any individual game unit connected to the server that stores that player's credit account information.

Ex. 1005 at 24:4-15. Note also that “the player might decide to use prize credits to ‘buy’ additional games on a game unit 10, e.g., convert prize credits to game credits.

Those bought game credits can then be stored in a ‘game credit account’, if desired.”

Ex. 1005 at 30:12-16.

**2. Claim 4: “the player's club information includes information on non-cash amounts.”**

227. In my opinion, Kelly683 discloses this limitation. As discussed above in Section X.B.1, Kelly683 discloses both game credit accounts and prize credit accounts.

228. As discussed above in Section X.A.11, Kelly683 discloses a variety of techniques to adjust difficulty, such as adjusting the length of a fixed duration game, so that average prize credits are awarded in order to achieve the global payout percentage inputted by the operator. Kelly683 discloses a “hit ratio” which is “the fraction of games played, on average, in which a specific prize goal is met and thus a specific prize is won.” Ex. 1005 at 40:19-21. Kelly683 explains that an “estimated hit ratio” can be used initially, and that:

. . . once the game unit 10 has been played one or more times by actual players (e.g., after 100 times), the system can automatically adjust the hit ratio to the actual win frequency determined from the players' use of the game unit 10 by, for example, storing the number of games played and the number of times the specific prize goal was hit.

Ex. 1005 at 40:33-39.

**3. Claim 5: “The system for electronic game play of claim 1 wherein the game processor utilizes a threshold value to change from the first game play experience to the second game play experience.”**

229. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that the *game processor* can modify the gaming structure to make the game play more difficult (*change from the first game play experience to the second game play experience*) by using the number of games played (*utilizes a threshold value*). Ex. 1005 at 40:19-39 (“the system can automatically adjust the hit ratio to the actual win frequency determined from the players' use of the game unit 10 by, for example, storing the number of games played.”).

230. Kelly683 also disclose that the *game processor* can modify the prizing structure to have game play reflect different play probabilities (*change from the first game play experience to the second game play experience*) by using the duration of games or by tracking the number of plays since a last win to achieve desired odds (*threshold value*). Ex. 1005 at 11:16-27 (tracking time), 38:55-39:7 (“duration of games”), 36:63-37:9 (tracking wins).

**4. Claim 6: “the threshold value includes information on length of time played.”**

231. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses modifying the prizing structure based on duration of games (*information on the*

*length of time played*). Ex. 1005 at 11:16-27 (tracking time), 38:55-39:7 (“duration of games”); *see also* Section X.A.1. Kelly683 explains that “[t]he difficulty and thus the average prize credits awarded per game can be adjusted using a variety of techniques that depend on the type of game being played.” Ex. 1005 at 38:62-65. One specific example that Kelly683 provides is: “Durations of games, which have a fixed duration, can also be adjusted to achieve an average payout level of prize credits.” Ex. 1005 at 39:5-7.

**5. Claim 7: “the threshold value includes information on frequency of play”**

232. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses modifying the gaming structure based on the number of times played (*information on frequency of play*). Ex. 1005 at 40:19-39; *see also* Section X.A.1.

233. Kelly683 discloses a variety of techniques to adjust game difficulty so that average prize credits are awarded in order to achieve the global payout percentage inputted by the operator. Kelly683 discloses a “hit ratio” which is “the fraction of games played, on average, in which a specific prize goal is met and thus a specific prize is won.” Ex. 1005 at 40:19-21. Kelly683 explains that an “estimated hit ratio” can be used initially, and that:

. . . once the game unit 10 has been played one or more times by actual players (e.g., after 100 times), the system can automatically adjust the hit ratio to the

actual win frequency determined from the players' use of the game unit 10 by, for example, storing the number of games played and the number of times the specific prize goal was hit.

Ex. 1005 at 40:33-39. *See also id.* at 40:55-57 (“each offered game is normalized to the desired specific prize ratios based on the frequency of players achieving the specific prize goal.”).

**6. Claim 9: “the threshold value includes information on the number of plays since a last win”**

234. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses modifying the prizing structure by tracking the number of plays since a last win to achieve desired odds (*the number of plays since a last win*); Ex. 1005 at 36:63-37:9 (tracking wins); *see also* Section X.A.1.

235. Kelly683 discloses that “[h]igher-valued prizes are won less often than lower valued prizes.” Ex. 1005 at 36:22-23. Kelly683 discloses one means of ensuring this by keeping track of *the number of plays since a last win*:

When a player wins a specific prize after a specific prize goal is achieved in a game, the video console prize is first checked, i.e., the system checks whether the current game is the 4000th game (where the goal was met) since the video game console was last awarded to a player on this game unit 10 (or the 4,000th game since console was awarded within the entire redemption system, i.e., among multiple game units 10). If so, the console is awarded. If not, the next most valuable prize in the table (e.g., the T-Shirt) is similarly checked.

Ex. 1005 at 36:30-37. Kelly683 also discloses that “the selection of a specific prize from the table 480 can be based on random and/or statistical determination. For

example, the individual ratios 488 may indicate the chance of winning the particular listed prize when a specific prize goal is met (the goal can be met by skill, chance, and the like).” Ex. 1005 at 36:50-53. Kelly683 goes on to explain “the random determination of whether a particular prize is to be awarded is also modified by statistical information to create a ‘best fit’ of prizes awarded according to the operator’s desired odds . . . .” Ex. 1005 at 36:63-66. Kelly683 explains that “this is done to offset the sometimes undesirable results that purely random (or pseudo-random) determination . . . .” Ex. 1005 at 36:66-37:1. Kelly683 discloses an example of such modifying of the random or pseudo-random determination: “. . . every 8,000 games, two video consoles are to be awarded. If it is randomly determined that a third video console is to be awarded within, e.g., the 3,000th game, then a different prize can be awarded so that the desired odds are better met.” Ex. 1005 at 37:1-9.

**7. Claim 11: “the first set and second set of variable parameters are set based on a comparison of game play information across multiple users devices.”**

236. In my opinion, Kelly683 discloses this limitation. Ex. 1005 at 9:40-55, 23:42-58, 24:4-18, 30:1-16, 20:48-21:3.

237. For *gaming structure*, Kelly683 discloses modifying the parameters characterizing the gaming structure to increase difficulty (*the first set and second set of variable parameters are set*) based on the average prize credits awarded across

game units (*based on a comparison of game play information across multiple user devices*). Ex. 1005 at 38:58-60 (“It is possible for the game's manufacturer to adjust game difficulty so that, on average, a predetermined number of prize credits will be awarded for each game played.”).

238. For *prizing structure*, Kelly683 discloses modifying the parameters characterizing the prizing structure to change the play probabilities (*the first set and second set of variable parameters are set*) based on the frequency of players utilizing game units achieving a specific prize goal (*based on a comparison of game play information across multiple user devices*). Ex. 1005 at 40:55-57 (“In the preferred embodiment, each offered game is normalized to the desired specific prize ratios based on the frequency of players achieving the specific prize goal.”).

**8. Claim 12: “the game play information includes information on a loss”**

239. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that the game play information provided by the game processor includes information on whether a player has been “eliminated from the tournament after losing a predetermined number of games” (*information on a loss*). Ex. 1005 at 34:19-24; *see also* 15:10-23, 32:20-33.

**9. Claim 13: “the game play information includes information on a series of outcomes.”**

240. In my opinion, Kelly683 discloses this information. Kelly683 discloses that the game play information provided by the game processor includes information on game credits and prize credits accrued from previous outcomes of the game play. Ex. 1005 at 9:40-55, 23:42-58, 24:4-18, 30:1-16. To the extent series of outcomes excludes game credits, Kelly683 also discloses that the game play information provided by the game processor includes information on each player’s score or performance after successive game play as well as the outcomes from a series of games in a tournament. Ex. 1005 at 20:48-21:3, 58:29-56, Fig. 22.

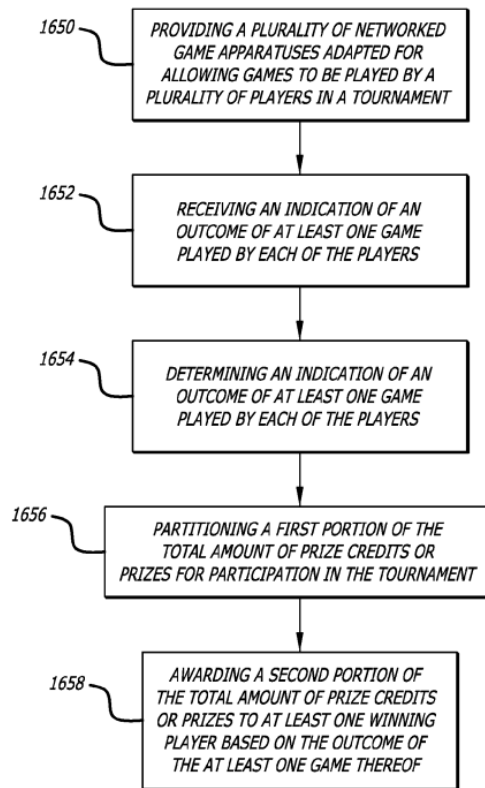


FIG. 22

**10. Claim 15: “the game play information includes information on a first game play event”**

241. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that the game play information provided by the game processor includes information on an initial game play event based on the user input (*information on a first game play event*). Ex. 1005 at 10:12-15 (“Each type of user input can provide a particular game command to the game processor 12, and the game processor interprets the

commands and influences game states and game events in the game process accordingly.”); *see also* 1:44-46, 9:62-66, 46:32-37, 46:49-52.

**11. Claim 19: “the game play information includes information tracking the users play”**

242. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses that the game play information provided by the game processor includes statistical information on the users play including the player’s “score 362 of the game” as well as “the time the player took to play a game, the number of times a player has participated in similar previous tournaments, and the like.” Ex. 1005 at 26:59-27:1, 32:20-33.

**12. Claim 23: “the prizing structure is modified by modifying bonus prizing.”**

243. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses *modifying the prizing structure by modifying the awarding of a progressive bonus award (bonus prizing)*. Ex. 1005 at 16:13-25. To the extent that bonus prizing refers to a prize awarded during a bonus round, Kelly683 discloses prizes awarded during an optional speed bonus. Ex. 1005 at 26:59-27:18.

**13. Claim 24: “the prizing structure is modified by modifying awarding of non-cash prizes.”**

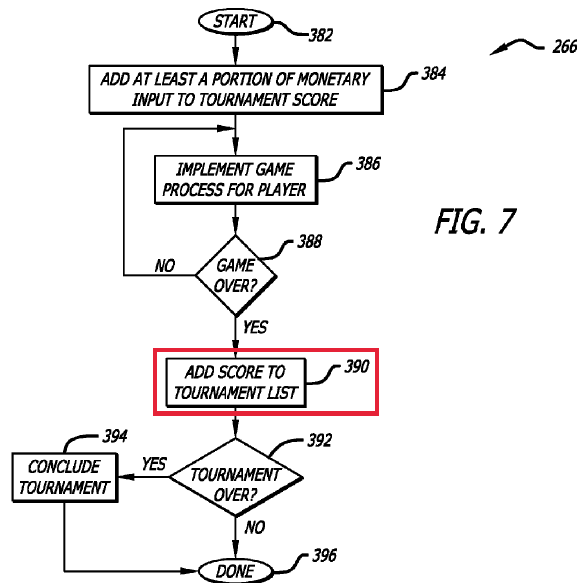
244. In my opinion, Kelly683 discloses this limitation. Kelly683 discloses modifying *the prizing structure by modifying the awarding of* tickets, prize credits, or game credits (*non-cash prizes*). Ex. 1005 at 12:22-23 (“‘tickets’ or ‘prize credits’ are used as a medium of conversion from game score to prize value”), 50:52-53 (“If game credits were won, such game credits are added to the account of the player.”); *see also* 16:13-25, 26:59-27:18, 27:55-28:2, 38:55-39:7.

**14. Claim 29: “the decision engine for game analytics tracks user specific play.”**

245. In my opinion, Kelly683 discloses this limitation. As discussed in Section X.A.14, Kelly683 discloses a process for providing statistical information (*decision engine for game analytics*), including “[t]he number of times the player has played”. Ex. 1005 at 25:23-24; *see also id.*, 32:27-33. The number of times a player has played is *user specific play*.

246. Kelly683 discloses that “[g]ame system 100 is also well suited to implement tournament games.” Ex. 1005 at 20:48-49. Kelly683 goes on to explain that “game units at different sites can also be linked together and/or to a server 108” and that such a “[s]erver 108 may coordinate prizes between game units, or determine a tournament prize 112 at the conclusion of a tournament . . . .” Ex. 1005

at 20:59-21:3. Figure 7 “is a flow diagram illustrating a method of implementing a tournament game . . . .” Ex. 1005 at at 7:53-54. Kelly683 explains that for a tournament game, “[p]layers from gaming environments in several different locations can thus interact or compete simultaneously in offered games, or over a predetermined time period during which the tournament is open to players.” Ex. 1005 at 31:15-19.



247. At step 390 of Figure 7, Kelly683 discloses a step for “add score to tournament list.” Kelly683 explains that “[t]he tournament list preferably includes all the players in the tournament by name or other identification and their associated game scores.” Ex. 1005 at 32:25-27. Kelly683 goes on to explain that:

. . . additional information can also be stored in the tournament list, which can be used to help determine a winner or to provide statistical information for the

operator of the tournament. For example, the time the player took to play a game, the number of times a player has participated in similar previous tournaments, and the like[.]

Ex. 1005 at 32:31-33. Kelly683 explains that the tournament list can be stored locally on a game unit, but is typically stored on the tournament server. Ex. 1005 at 32:34-39.

248. As discussed above in Section X.A.11, Kelly683 discloses the adjustment of game difficulty to achieve an average payout level of prize credits, which in turn will achieve the global payout percentage inputted by an operator. Examples disclosed by Kelly683 of adjusting difficulty include:

- “[I]n an action game the speed of controlled objects, response of input devices, and the like, can be adjusted so that most players don’t receive a score higher than a particular value.” Ex. 1005 at 38:65-39:1.

- “In card games, the frequencies of winning combinations of cards can be adjusted.” Ex. 1005 at 39:1-2.

- “In quiz games, the difficulty of the questions at various times during the game can be adjusted so that average players will typically win a certain number of prize credits per game.” Ex. 1005 at 39:2-5.

- One particular example for adjusting game difficulty disclosed by Kelly683 is adjusting the duration of timed games: “Durations of games, which have

a fixed duration, can also be adjusted to achieve an average payout level of prize credits.” Ex. 1005 at 39:5-7.

249. Kelly683’s disclosures about adjusting game difficulty involves the storing of statistical information on gameplay. For Kelly683’s example involving games of a fixed duration, statistical information on the duration of games would be needed to adjust the game duration to achieve an average payout level of prize credits. Ex. 1005 at 39:5-7. For Kelly683’s example involving the difficulty of questions in a quiz game, statistical information on answers to questions is needed to adjust the difficulty so that average players will typically win a certain number of prize credits per game. Ex. 1005 at 39:2-5.

250. Kelly683 discloses *a decision engine for performing game analytics on the game play* by storing and calculating information related to hit ratios. Kelly683 discloses that “[t]he ‘hit ratio’ is the fraction of games played, on average, in which a specific prize goal is met and thus a specific prize is won.” Ex. 1005 at 40:19-21. Kelly683 explains that “some games may have much different hit ratios than other games depending on the nature of the game action, randomness, and the like, and the difficulty of the specific prize goal” that “normalization factor” can be used, which “indicates how much an individual ratio 488 should be adjusted based on the particular game played.” Ex. 1005 at 40:59-41:9. Kelly683 explains that while the

normalization factor “can be estimated initially,” “[a]fter a number of games have been played on a game unit 10, the normalization factor for each game can be based on the actual hit ratio determined for each game.” Ex. 1005 at 41:30-33. Kelly683 goes on to explain that “[t]he redemption system separately keeps track of actual hit ratios for each game offered on game unit 10 by recording the number of games (for each type of game) and the amount of the specific prize goals met.” Ex. 1005 at 41:33-37.

**XI. OPINIONS ON GROUND 2: KELLY638 IN VIEW OF PAULSEN RENDERS OBVIOUS CLAIMS 2 AND 4**

251. In my opinion, Kelly638 in view of Paulsen renders obvious claims 2 and 4.

**A. Motivation to Combine**

252. In my opinion, a POSITA would have been motivated to combine the teachings of Kelly683 and Paulsen.

253. First, a POSITA would have recognized that the player tracking system taught by Paulsen would have promoted player engagement in Kelly683. A POSITA would have understood that player tracking programs like that taught in Paulsen were well-known marketing methods by 2004. As Paulsen explains, “it is desirable

to encourage players to use their player tracking cards during game play.” Ex. 1008 at ¶[0010].

254. “These loyalty incentives provide a way to maintain a player’s interest in play games at a particular casino.” *Id.* This is why “[p]layer tracking cards and player tracking programs have become a de facto marketing method at casinos.” *Id.*, ¶[0009].

255. Second, a POSITA would have been motivated to include the player tracking system to advance the objective of Kelly683 to increase revenue. Kelly683 explains, “[t]he availability of specific prizes and tournament play on the game unit 10 tends to cause greater player interest and involvement and thus increases the game's earnings.” Ex. 1005 at 25:10-12.

256. By encouraging players to continue game play through incentives, these programs also increase the amount of money that players spend on game play, thus increasing revenue.

257. Third, a POSITA would have been motivated to implement a player tracking program as taught by Paulsen in the system of Kelly683 to improve the user experience.

258. A POSITA would have recognized that player tracking programs provides information that allows operators to customize the experience to the

user. For example, “the traditional player tracking programs can be used even more effectively to maintain player interest in the games, and to provide gaming establishments with valuable information that allows them to better serve their players.” Ex. 1007 at 25:10-15.

**B. Reasonable Expectation of Success**

259. In my opinion, a POSITA would have been able to implement the player tracking system of Paulsen into the game system of Kelly683 with a reasonable expectation of success.

260. First, Kelly683 and Paulsen already track information specific to the player. Including player’s club information would have merely required associating additional information to the player’s account, for example, by adding another row or table to a database.

261. Second, it would have involved a combination of known technologies (processors, memory) according to known methods (programming) to yield the predictable result of adding more functionality to an object in the game—namely, player information.

**A. Dependent Claim 2: “wherein the server further includes player's club information.”**

262. In my opinion, Kelly683 in view of Paulsen renders obvious this limitation. Kelly683 discloses player's account information that includes a user identification code (*player identification information*) and tracks a player's credits and prizes. Ex. 1005 at 59:66-60:1 (“a current amount of available credits of a particular user based on the user identification code”); *see also id.*, 30:34-40, 50:20-22, 50:35-37. Kelly683 discloses this limitation, *see Error! Reference source not found.* above, but to the extent that Kelly683 does not disclose *player's club information*, a POSITA would have been motivated and obvious to implement this feature based on the teachings of Paulsen.

263. Paulsen discloses a *server* that includes information on both player tracking cards, such as club cards, and player tracking programs (either, *player's club information*). Ex. 1007 at ¶¶[0008]-[0009]. This system provides “rewards, or ‘comps,’ to players in proportion to the player's level of patronage (e.g., to the player's playing frequency and/or total amount of game plays at a given casino).” *Id.*, ¶[0008]. “In some instances, a wearable RFID ‘club card’ can automatically provide player tracking information to a gaming machine.” *Id.*, ¶[0048]. “In other instances, a player can input player tracking identification information into a cell

phone to provide player tracking information to a gaming machine.” *Id.* Information such as “how much money the player has wagered on each game, the time when each game was initiated, and the location of the gaming machine” is sent to “a player tracking server” and is used “to generate player tracking points and add the points to a player tracking account....” *Id.*, ¶[[0049]. “The player tracking points generated by the player tracking server are stored in a memory of some type on the player tracking server.” *Id.*

264. In my opinion, a POSITA would have been motivated to modify Kelly683 for the server to include player tracking cards and player tracking programs because it would allow a more detailed view of tracking play, which would allow for rewarding patronage and engagement. A POSITA would have recognized that it was desirable to track play to “to maintain player interest” as well as “to provide gaming establishments with valuable information....” Ex. 1007 at ¶[[0010].

265. In my opinion, a POSITA would have had a reasonable likelihood of success in implementing such a modification because it would be a simple programming change to track player club information. It would have involved a combination of known technologies (processors, memory) according to known methods (programming) to yield the predictable result of adding more functionality

to an object in the game—namely, player information. Notably, Paulsen already discloses similar tracking of player information. Ex. 1007 ¶ [0049].

**D. Dependent Claim 4: “the player’s club information includes information on non-cash amounts.”**

266. In my opinion, Kelly683 in view of Paulsen renders obvious this limitation. Kelly683 discloses game credit accounts, prize credit accounts, and a variety of techniques to adjust difficulty, such as adjusting the length of a fixed duration game, so that average prize credits are awarded in order to achieve the global payout percentage inputted by the operator. *See Error! Reference source not found.* above. Specifically, Kelly683 discloses a “hit ratio” that the system can automatically adjust to the actual win frequency after a threshold is reached. *Id.* Kelly683 discloses this limitation, *id.*, but to the extent that Kelly683 does not disclose *the player’s club information* or *information on non-cash amounts*, a POSITA would have been motivated and obvious to implement these features based on the teachings of Paulsen.

267. Paulsen discloses that the player tracking cards and player tracking programs (either, *player’s club information*) includes player tracking points (*information on non-cash amounts*). Ex. 1007 at ¶ [0049] (“the player tracking server may use the game play information provided by the player tracking unit to generate

player tracking points and add the points to a player tracking account identified by the player tracking card”).

268. In my opinion, a POSITA would have been motivated to modify Kelly683 to include player tracking cards and player tracking programs because it would allow a more detailed view of tracking play, which would allow for rewarding patronage and engagement. A POSITA would have recognized that it was desirable to track play to “to maintain player interest” as well as “to provide gaming establishments with valuable information....” Ex. 1007 at ¶[0010].

269. In my opinion, a POSITA would have had a reasonable likelihood of success in implementing such a modification because it would be a simple programming change to track player club information, including information on non-cash amounts. It would have involved a combination of known technologies (processors, memory) according to known methods (programming) to yield the predictable result of adding more functionality to an object in the game—namely, player information. Notably, Paulsen already discloses similar tracking of player information, including information on non-cash amounts. Ex. 1007 at ¶[0049].

**XII. OPINIONS ON GROUND 3: WALKER IN VIEW OF SCHNEIER143  
RENDERS OBVIOUS CLAIMS 1, 2, 4-7, 9, 11-13, 15, 19, 23, 24, AND 29**

270. In my opinion, Walker discloses each limitation of the challenged claims except for certain limitation related to the details of how virtual currency is used which are taught by Schenier143.

**A. Motivation to Combine**

271. A POSITA would have been motivated to combine the teachings of Walker and Schenier143. Specifically, a POSITA would have recognized that the use of credits during game play by Schenier143 would have been a natural extension of the credits in Walker.

272. First, Walker and Schenier143 share the same inventors—namely Jay Walker and James Jorasch. A POSITA implementing and improving the system of Walker would have naturally looked at other patents and applications of the inventors of Walker to identify any features or details that would have improved the system.

273. Second, the use of credits during game play, not just to engage in game play, would have enhanced the user experience. For less skilled players, the ability to purchase items that advance the player to the next level would have prevented the player from becoming frustrated. For more advanced players, the ability to earn credit during game play would have made the game more interesting.

**B. Reasonable Expectation of Success**

274. A POSITA would have been able to implement the use of credits during game play taught by Schneier143 into the game system of Walker with a reasonable expectation of success.

275. First, the systems of Walker and Schneier143 have substantially similar structures and functions. Given that Walker and Schneier143 share the same inventors, these structures and function even share the same names. Importantly, Walker and Schneier143 use credits in the same. Indeed, Schneier143 merely discloses more detailed functionality.

276. Second, it would have involved a combination of known technologies (processors, memory) according to known methods (programming) to yield the predictable result of adding more functionality to an object in the game—namely, credits.

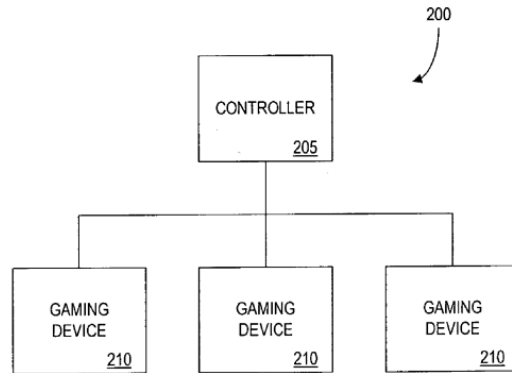
**C. Independent Claim 1**

- 1. Preamble: “A system for electronic game play involving one or more remote users of a system in an electronic environment, the remote users utilizing electronic communication devices having display capabilities, the electronic communication devices having input capability and generate an output corresponding to the input, the electronic communication devices having storage to store information from a remote source, comprising:”**

277. To the extent the preamble is limiting, it is my opinion that Walker alone or in view of the knowledge of a POSITA discloses the preamble.

278. Walker discloses “system 200...may include a controller 205 (an example of which is depicted in FIG. 3) in one or two-way communication with a plurality of gaming devices 210 (an example of which is depicted in FIG. 4) via a network such as, for example, the Internet or via another communications link” (*system for electronic game play*). Ex. 1006 at ¶[0051], Fig. 2; *see also* ¶[0062] (“embodiment 300 of controller 205”). A POSITA would have understood that the controller and gaming devices create a *system for electronic game play* because these components are electronic. *See also* Ex. 1006 at ¶[0062] (“The controller 300 may be implemented as a system controller...or any other equivalent electronic”), [0069] (“The gaming device 400 may be implemented as a system controller...or any other

equivalent electronic”), (“The gaming device 400 may comprise any or all of the gaming devices 210”).



279. Walker generally describes “systems and methods [to] facilitate adjustment of a game in order to help ensure that a set of results obtained during a plurality of game plays of a game satisfy one or more predetermined criteria....” Ex. 1006 at ¶[0022]. Walker discloses that its gaming system (*system for electronic game play*) may include a controller in communication with a plurality of gaming devices via a network such as the Internet (*in an electronic environment*). *Id.*, ¶[0051] (“**The system 200...may include a controller 205 (an example of which is depicted in FIG. 3) in one or two-way communication with a plurality of gaming devices 210 (an example of which is depicted in FIG. 4) via a network such as, for example, the Internet or via another communications link.**”). Walker discloses that the electronic controller is remote from the one or more players who operate the

electronic gaming devices (*involving one or more remote users of a system in an electronic environment*). *Id.*, ¶¶[0055] (“**Communication** between the gaming devices 210 and the controller 205, and among the gaming devices 210, **may be direct or indirect, such as over the Internet through a Web site maintained by a controller 205 on a remote server....**”), [0062] (“**The controller 300 may be implemented as** a system controller, a dedicated hardware circuit, an appropriately programmed general-purpose computer, or **any other equivalent electronic, mechanical or electromechanical device.**”), [0069] (“**The gaming device 400 may be implemented as** a system controller, a dedicated hardware circuit, an appropriately programmed general-purpose computer, or **any other equivalent electronic, mechanical or electromechanical device.**”); *see also id.*, ¶¶[0025] (“Embodiments of the invention may be practiced, for example, by an operator of a Web server that hosts a website, which players may log on to and play games of skill to win prizes.”), [0091] (“Note that, in one or more embodiments, a player may operate a plurality of gaming devices.”), [0092] (“In one or more embodiments, a player may remotely operate a gaming device....”), [0093] (“The gaming device 400 may allow a player to play a game of skill, a game of chance, or a game that combines elements of skill and chance.”).

280. Walker discloses that “a player may remotely operate a gaming device” (*remote users utilizing electronic communication devices*). Ex. 1006 at ¶[0091]. The system of Walker allows multiple players to communicate and play through the gaming devices (*involving one or more remote users of a system in an electronic environment*). Ex. 1006 at ¶[0055] (“Communication between the gaming devices 210 and the controller 205, and among the gaming devices 210, may be direct or indirect, such as over the Internet through a Web site maintained by a controller 205 on a remote server....”).

281. “The gaming device 400 comprises a processor 405...in communication with an output device 410,” which “may comprise, for example, a cathode ray tube (CRT) monitor, liquid crystal display (LCD) screen, or light emitting diode (LED) screen” (*electronic communication devices having display capabilities*). Ex. 1006 at ¶[0070]; Fig. 4.

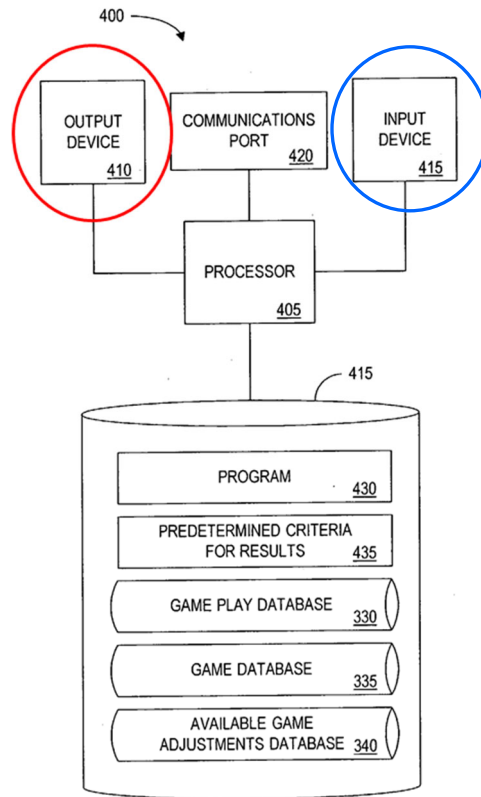


FIG. 4

Ex. 1006 at Fig. 4 (annotated)

282. Walker discloses *electronic communication devices having input capability and generate an output corresponding to the input* because “the controller...may receive a selection of a game that a player would like to play” and that “a player may use a player device or a gaming device to select a game that he would like to play from a list of available games.” Ex. 1006 at ¶[0219]. Walker

explains that “the controller may...direct the gaming device to initiate the requested game.” Ex. 1006 at ¶[0220]; ¶¶[0070] (“**The gaming device 400 comprises a processor 405...in communication with an output device 410, [and] an input device 415....**”), [0087] (“Input device 415 may be a device that is capable of receiving an input (e.g., from a player or another device). **Input device 415 may be a component of gaming device 400....**Some examples of an input device 415 include: a bar-code scanner, a magnetic stripe reader, a computer keyboard or keypad, a button, a handle, a keypad, a touch-screen, a microphone, an infrared sensor, a voice recognition module, a coin or bill acceptor, a sonic ranger, a computer port, a video camera, a motion detector, a digital camera, a network card, a universal serial bus (USB) port, a GPS receiver, a radio frequency identification (RFID) receiver, an RF receiver, a thermometer, a pressure sensor, an infrared port (e.g., for receiving communications from a second gaming device or a another device such as a smart card or PDA of a player), and a weight scale.”).

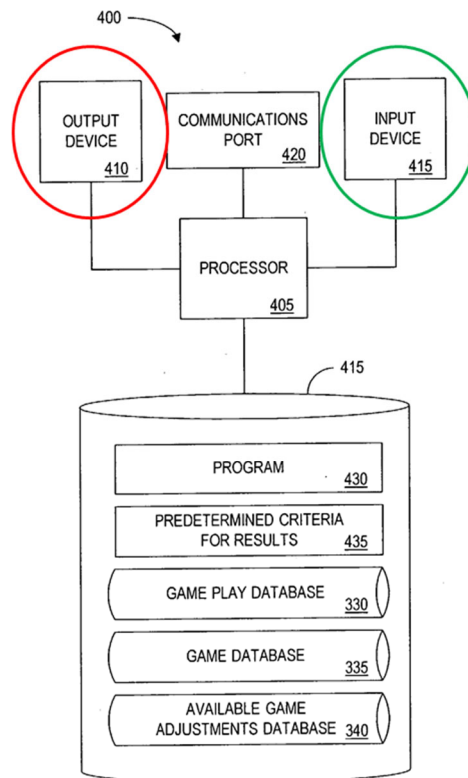


FIG. 4

*Id.*, FIG. 4 (annotated).

283. A POSITA would have understood that the player inputs a selection of a game (e.g., through the input device) and the gaming device outputs the corresponding selected game (e.g., through the display capabilities of the output device 410) (in red).

284. Walker further discloses that the output displayed to a player on the gaming device may correspond to the player's input (*generate an output*

*corresponding to the input*). For example, Walker discloses that “the controller...may receive a selection of a game that a player would like to play” and that “a player may use a player device or a gaming device to select a game that he would like to play from a list of available games.” *Id.*, ¶[0219]. Walker explains that “the controller may...direct the gaming device to initiate the requested game.” *Id.*, ¶[0220]. A POSITA would have understood that in such a scenario, the player inputs a selection of a game (e.g., through the input device) and the gaming device outputs the selected game (e.g., through the display capabilities of the output device). Similarly, the user’s control of game play events by way of the gaming controls of the player’s device (inputs), which is depicted on the display (outputs corresponding to the inputs) likewise satisfies this element. To the extent Walker does not disclose the specifics of generating an output corresponding to an input, a POSITA would have found it obvious to implement this feature. A POSITA would have understood that it would have been advantageous to allow the player to select a game through the built-in input device capabilities. A POSITA would have similarly understood that it would have been advantageous to make use of the built-in display capabilities of the output device to initiate a requested game. A POSITA would have had a reasonable expectation of success in implementing this modification because it would have involved modifying Walker in a manner Walker suggests is feasible—

using disclosed elements of a gaming device (i.e., input and output devices) in order to implement disclosed capabilities of the gaming device (i.e., selection and initiation of games).

285. Walker discloses the electronic communication devices having storage to store information from a remote source. Walker discloses that each gaming device has a memory (the electronic communication devices having storage). *Id.*, ¶[0070] (“**The gaming device 400 comprises a processor 406...in communication with...a memory 425.**”). Walker explains that the memory (storage) stores a program for controlling the processor, and the processor performs the instructions of the program. *Id.*, ¶[0072] (“**The memory 425 stores a program 430 for controlling the processor 405. The processor 405 performs instructions of the program 430,** and therefore operates in accordance with the present invention, and particularly in accordance with the methods described in detail herein.”). The program instructions (information) may initially be loaded from a remote computer (remote source) before they are eventually stored in the gaming device’s memory (storage to store information from a remote source). *Id.*, ¶[0074] (“Various forms of computer readable media may be involved in carrying one or more sequences of one or more instructions to processor 405...for execution. For example, **the instructions may initially be borne on a magnetic disk of a remote computer.** The remote computer

can load the instructions into its dynamic memory and send the instructions over a telephone line using a modem. A modem local to a gaming device 400 (or, e.g., a controller 205) can receive the data on the telephone line and use an infrared transmitter to convert the data to an infrared signal. An infrared detector can receive the data carried in the infrared signal and place the data on a system bus for processor 405. **The system bus carries the data to main memory, from which processor 405 retrieves and executes the instructions.** The instructions received by main memory may optionally be stored in memory 425 either before or after execution by processor 405.”).

**2. [1.a]: “a server including memory to process and store:”**

286. In my opinion, Walker discloses this limitation.

287. Walker discloses that “controller 300 may comprise, for example, a server computer operable to communicate with one or more client devices such as gaming devices 210.” Ex. 1006 at ¶[0062]. “The controller 300 comprises a processor 305...in communication with a communications port 310...and a memory 315.” Ex. 1006 at ¶[0064]. [0065] (“The memory 315 stores a program 320 for controlling the processor 305.”).

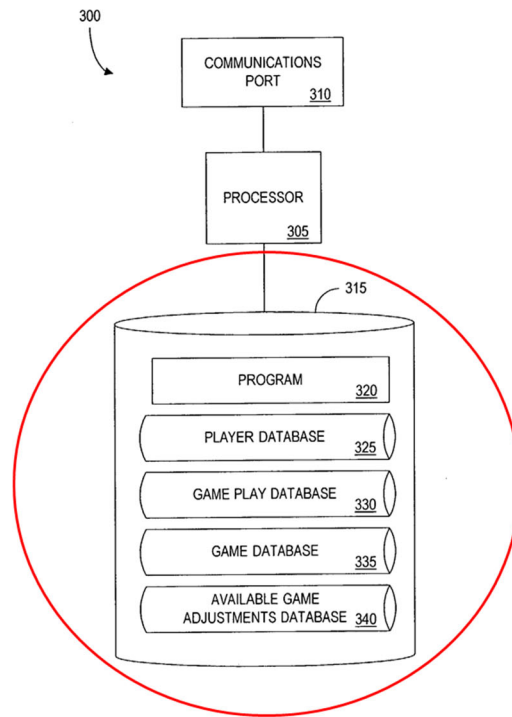


FIG. 3

*Id.*, FIG. 3 (annotated).

288. A POSITA would have understood that the controller 205/300 (*server*) is used to process and store information used by the system (*to process and store*) given Walker’s teaching that the controller processes and stores the program for gaming. Ex. 1006 at ¶ [0065] (“The memory 315 stores a program 320 for controlling the processor 305.”).

**3. [1.a.i]: “registration user information of the remote users,”**

289. In my opinion, Walker discloses this limitation.

290. Walker discloses that the controller's memory may store a plurality of databases, including a player database 325, annotated in red in Figure 3 below. Ex. 1006 at ¶[0067] (“**The memory 315 also stores a plurality of databases, including a player database 325....**”). Walker explains that the player database includes records indicating the players registered with a gaming establishment (*registration user information of the remote users*). *Id.*, ¶[0098] (“Referring now to FIG. 5, an exemplary tabular representation 500 illustrates an embodiment of a player database 325. **The tabular representation 500 of the player database 325 includes a number of example records or entries, each indicating a player registered with a gaming establishment....**The tabular representation 500 also defines fields for each of the entries or records. The fields specify: (i) a player identifier 505; (ii) a player name 510; (iii) player contact information 515; (iv) a financial account identifier 520 (e.g., to which a payment associated with game play may be charged or credited to); and (v) a skill level 525.”), [0104] (“**A record may be opened in the player database when a player first registers** with a gaming establishment (e.g., as a member of frequent player of the gaming establishment).”). The information regarding players stored in Walker's player database, including the information in the fields described above, are examples of *registration user information of the remote users*.

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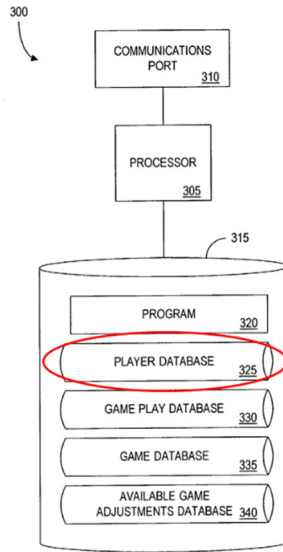


FIG. 3

*Id.*, FIG. 3 (annotated).

**4. [1.a.ii]: “payment information of the remote users, and”**

291. In my opinion, Walker discloses this limitation.

292. Walker discloses “[t]he fields [of player database 325] specify...a financial account identifier 520 (e.g., to which a payment associated with game play may be charged or credited to).” Ex. 1006 at ¶¶[0098]; *see also* ¶¶ [0199]-[0204]. As discussed in Section X.C.4, the controller’s memory stores the player database, which will include the financial account identifier of remote players (*payment information of the remote users*).

5. **[1.a.iii]: “mandated and variable parameters for use in the course of game play, wherein the mandated parameters represent parameters which must be achieved by the system as a whole, and the variable parameters represent parameters characterizing at least one of: a game structure and a prizing structure,”**

293. In my opinion, Walker discloses this limitation.

294. Walker discloses one or more predetermined criteria (*mandated parameters*) that must be satisfied during game play (*represent parameters which must be achieved by the system as a whole*). *see also* Ex. 1001 at 5:30-34. The Walker system achieves the mandated parameters by “adjustment of a game in order to help ensure that a set of results obtained during a plurality of game plays of a game satisfy one or more predetermined criteria (e.g., that a standard deviation of the results is not greater than a maximum predetermined standard deviation and not lower than a minimum predetermined standard deviation).” Ex. 1006 at ¶[22]; *see also* ¶[23] (“The present invention, in accordance with one or more embodiments, allows a gaming establishment to adjust a game such that results of a game are maintained within a range determined to be desirable by the gaming establishment.”); ¶[0024].

295. Walker discloses variable parameters that represent parameters characterizing at least one of: a game structure and a prizing structure. *See also* Ex.

1001 at 6:6-9, 6:35-39. Like the '164 patent, the Walker system uses both a gaming structure and prizing structure. For gaming structure, Walker explains that the predetermined criteria can be achieved by adjusting “one or more game parameters” that “may be variables that affect the performance, scoring, difficulty, outcome, or other aspects of the game.” Ex. 1006 at ¶[0155]. These game parameters include “factors that affect the difficulty of a game (e.g., complexity of a game, hints provided, the sensitivity of controls, difficulty of trivia questions, number of opponents)” (Ex. 1006 at ¶[0156]), “rules of a game (e.g., number of strikes allowed in a baseball game, cost of vowels in a word guessing game)” (id., ¶[0159]), “factors that affect the duration of a game (e.g., a number of rounds, a number of lives)” (id., ¶[0160]) and “an amount of time that a player is allowed to achieve an event in a game or complete a game play of the game” (id., ¶[0166]). See generally Ex. 1006 at ¶¶[0155]-[0166].

296. For *prizing structure*, Walker explains that the predetermined criteria can be achieved by adjusting “what prize is awarded.” Ex. 1006 at ¶[0028]. Walker further discloses “[a]n operator of a gaming establishment may desire to, for example, raise a median or mean score of a game in order to further motivate players by enabling more players to achieve a score that corresponds to a prize (e.g., a more

valuable prize) or that is closer to a score that corresponds to a prize.” Ex. 1006 at ¶[0028].

297. A POSITA would have understood that the Walker system uses the predetermined criteria, as well as the game parameters and prizing, *for use in the course of game play* by determining whether a set of results meets the predetermined criteria (Ex. 1006 at ¶¶[0261]-[0264]), and if necessary, adjusting the game by “(i) determining the at least one goal of the adjustment; (ii) determining the one or more game parameters to be adjusted; (iii) determining a respective new value for each of the one or more game parameters to be adjusted; and (iv) executing the adjustment” (Ex. 1006 at ¶[0267].).

298. A POSITA would have understood that the controller processes and stores (*server including memory to process and store*) the predetermined criteria (*mandated parameters*) and game and prize parameters (*variable parameters that represent parameters characterizing at least one of: a game structure and a prizing structure*). Ex. 1006 at ¶[0077] (“The memory 425 [of the controller] also stores a predetermined criteria for results 435.”), ¶[0082] (“In one or more embodiments, gaming device 400 may access the predetermined criteria for results 435 from another device rather than storing it locally. For example, gaming device 400 may obtain such information from controller 300.”), ¶[0106] (“Note that game parameter

values may be stored in a database and retrieved as needed by the gaming device. Alternatively, the gaming device 210 or controller 205 may calculate an appropriate value for a game parameter as necessary.”); ¶[0106] (“In another example, a binary indication (e.g., ‘yes’ or ‘no’) of whether a prize was won as a result of a game play may be stored in the game play database.”) *see also* ¶¶[0067], [0246], Figure 8.

299. Additionally, Walker discloses monitoring the variance in prizes awarded to ensure the variance in prizes awarded based on the results of the games is not too high which may be discouraging to players. Ex. 1006 at ¶[0025] (“a computing device may monitor the games played to determine a variance in prizes awarded based on results of the games. If the variance in prizes awarded is too high, this may be discouraging to players, since expert players may win large prizes while novice players win almost nothing. Similarly, if the variance in prizes is too low, players may become bored because there is not enough variation in the prizes awarded. If the computing device determines that the variance in prizes for a game is too high or too low, then it may modify the game to alleviate this problem.”).

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800

GAME IDENTIFIER: G-5327		802
	AVAILABLE ADJUSTMENT	804
		ANTICIPATED CHANGE IN STANDARD DEVIATION
		806
R-8-01	INCREASE SPEED OF SPACESHIP BY 10-20%	+ 20 POINTS
R-8-03	DECREASE SPEED OF SPACESHIP BY 10-20 %	- 30 POINTS
	INCREASE NUMBER OF LIVES FROM 3 TO 5	- 50 POINTS
R-8-05	INCREASE NUMBER OF HITS NEEDED TO DESTROY A SMALL METEORITE BY 30-50% AND INCREASE SPEED OF SMALL METEORITE BY 20-30%	+ 90 POINTS
R-8-07	INCREASE POINTS AWARDED FOR DESTROYING LARGE METEORITE BY 20-30%% AND DECREASE POINTS AWARDED FOR DESTROYING SMALL METEORITE BY 20-30%	- 100 POINTS
R-8-09	INCREASE TEMPO OF BACKGROUND MUSIC BY 5%	- 5 POINTS
	ADD "SLOW DOWN / REVERSE DIRECTION" CAPABILITY TO SPACESHIP	+ 30 POINTS
	DECREASE PRECISION OF SPACESHIP HEADING CONTROLS BY 2 DEGREES	- 40 POINTS
	INCREASE SPEED OF MISSILES BY 10-20%	+ 15 POINTS

FIG. 8

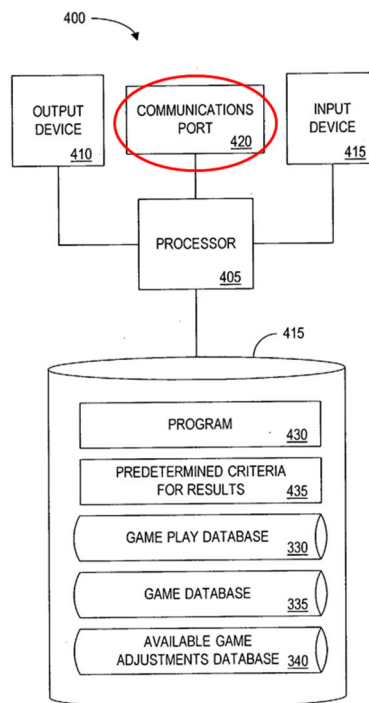
Ex. 1006 at FIG. 8

6. [1.b]: “a communication interface adapted to couple bi-directional communications between the one or more remote users utilizing electronic communication devices,”

300. In my opinion, Walker discloses this limitation.

301. Walker discloses that each gaming device (*electronic communication device*) used by a player (*one or more remote users*) includes a communications port (*a communication interface*). Ex. 1006 at ¶[0070] (“The gaming device 400

comprises...a communication port 420.”), [0074] (“[I]nstructions may be received via communications port 420 as electrical, electromagnetic or optical signals, which are exemplary forms of carrier waves that carry data streams representing various types of information.”).



Ex. FIG. 4

*Id.*, FIG. 4 (annotated).

302. Walker discloses that the communication port is adapted to couple bi-directional communications between the one or more remote users utilizing electronic communication devices. Using the communication port (communication

interface), remote players may use the gaming devices 210 (one or more users utilizing communication devices) to be in two-way communications with each other (adapted to couple bi-directional communications). Ex. 1006 at ¶[0051] (“The system 200...may include a controller 205 (an example of which is depicted in FIG. 3) in one or two-way communication with a plurality of gaming devices 210 (an example of which is depicted in FIG. 4) via a network such as, for example, the Internet or via another communications link.”). ¶[0055] (“Communication...among the gaming devices 210, may be direct or indirect, such as over the Internet through a Web site maintained by controller 205 on a remote server or over an on-line data network including commercial on-line service providers, bulletin board systems and the like. In yet other embodiments, the gaming devices 210 may communicate with one another...over RF, cable TV, satellite links and the like.”).

303. A POSITA would have understood that the communications ports of the gaming devices in communication with one another together form a communication interface adapted to bi-directional communication (*a communication interface adapted to couple bi-directional communications between the one or more remote users utilizing electronic communication devices*).

7. **[1.c]: “a game processor coupled to memory generating game play information, the game processor providing at least:”**

304. In my opinion, Walker discloses this limitation.

305. Walker discloses a processor 305 (*a gaming processor*) that operates the Walker gaming system. Ex. 1006 at ¶[0065] (“The processor 305 performs instructions of the program 320, and thereby operates in accordance with the present invention, and particularly in accordance with the methods described in detail herein.”).

306. “The controller 300 comprises a processor 305” and “[t]he processor 305 is in communication with...a memory 315” (*game processor coupled to memory*). Ex. 1006 at ¶[0064]. Because the processor performs instructions for the program, a POSITA would have understood that the controller uses the processor for *generating game play information*. Ex. 1006 at ¶[0146] (“Note that information stored in the embodiment of the game database illustrated in FIG. 7A may be calculated using information stored in the game tracking database 330. For example, the controller 205 may access the game play database 230 to determine a set of scores achieved for a particular game. The controller may determine the standard deviation in scores and the mean score. The calculated standard deviation of the scores and the

calculated mean of the scores may then be stored in the record of the game in the game database 335.”).

**8. [1.c.i]: “the game play information including game play with virtual money (vCoins),”**

307. In my opinion, Walker in view of Schneier143 discloses this limitation.

308. Walker discloses that the *game play information* provided by the processor includes *game play* with alternate currency including credits (*with virtual money (vCoins)*). Ex. 1006 at ¶[197] (“A player may pay ten electronic credits per game play of a game. Examples of alternate currencies include tickets, credits, points, Beenz, frequent flyer miles, and minutes of long distance phone time.”); *see also id.*, ¶[0089] (“Exemplary methods of accepting payment by a payment system of gaming device 400 include...(ii) receiving an alternate currency (e.g., a paper cashless gaming voucher, a coupon, a non-negotiable token), and accordingly the payment system may comprise a bar code reader or other sensing means....”).

309. To the extent that Walker does not expressly disclose the use of credits during game play (*game play with virtual money*), this limitation was disclosed by Schneier143. Specifically, Schneier143 discloses credits that can be earned during game play. For example, Schneier143 discloses that “[t]he number of credits available may also be incremented after achieving a certain level of performance in

the game.” Ex. 1008 at 63:23-25. In one example game, “scoring over a million points in DONKEY KONG might result in an extra credit being added to the available credit balance.” Ex. 10078, 63:25-27; *see also* 63:27-29 (“Finding a secret room within a game might add five credits. Hitting a home run may earn ten credits.”).

310. Schenier<sup>143</sup> also discloses that the credits can be used to purchase items during game play. For example, Schneier<sup>143</sup> discloses “[e]xtra credits can be required to complete restricted stages of a game” or “the player could be charged an additional credit for the use of a special weapon, access to a map of the dungeon, or hints on avoiding traps.” Ex. 1008 at 63:12-19. Schneier<sup>143</sup> also discloses how “[e]ach credit might also buy a certain number of lives.” *Id.*, 63:37-38, 63:8-11.Ex.

311. A POSITA would have recognized that the use of virtual money credits during game play by Schneier<sup>143</sup> would have been a natural extension of the credits in Walker.

**9. [1.c.ii]: “the virtual money (vCoins) being acquired in response to a purchase utilizing the payment information of the users,”**

312. In my opinion, Walker discloses this limitation.

313. As discussed for [1.a.ii], Walker discloses that the gaming system stores financial account information for each player (*payment information of the users*).

See Section X.C.4. “[A] player may purchase an alternate currency...using money or some other form of consideration.” Ex. 1006 at ¶[0197]. A POSITA would have understood that the player would purchase credits (*virtual money*) with the player’s financial account information (*acquired in response to a purchase utilizing the payment information of the users*). See *id.*, ¶¶ [0199]-[0204].

**10. [1.c.iii]: “the virtual money (vCoins) acquired in response to a purchase being subject to a multiplier,”**

314. In my opinion, Walker discloses this limitation.

315. Walker further discloses that certain monetary values are equivalent to certain numbers of electronic credits. Walker explains that “a player may pay an entry fee for a game play.” Ex. 1006 at ¶[0196]. Walker discloses that “a player may pay \$0.25 per game play of a game. In a second example, a player may pay ten electronic credits per game play of a game.” Ex. 1006 at ¶[0197].

316. A POSITA would have understood that in the exemplary embodiment disclosed the electronic credits (*virtual money*) *acquired in response to a purchase is subject to a multiplier* of \$0.025. For example, where \$0.25 is equivalent to ten electronic credits, the multiplier is 40 times the corresponding monetary value.

**11. [1.c.iv]: “implementing a first set of variable parameters to provide a first game play experience, and”**

317. In my opinion, Walker discloses this limitation. Walker discloses multiple ways of implementing a first set of variable parameters to provide a first game play experience. Using the gaming structure, the system implements game parameters providing a first game play experience that is less difficult. For example, the number of lives may first be set to 5, the speed of the spaceship may be set at a certain variable, or the precision of the spaceship may be set at a certain level. Ex. 1006 at ¶¶[0155]-[0166], Figure 8.

318. Using the *prizing structure*, the system implements prize parameters providing a *first game play experience* where the user obtains less prizes or less valuable prizes. For example, the system may set the score to obtain prize at a high score, or provide a lower monetary value prize. Ex. 1006 at ¶[0028].

**12. [1.c.v]: “modifying the variable parameters to provide a second set of variable parameters providing a second game play experience, where the first game play experience differs from the second game play experience,”**

319. In my opinion, Walker discloses these limitations. Walker discloses *modifying the variable parameters* (discussed in Section X.A.11) *to provide a second set of variable parameters providing a second game play experience*. Using

the *gaming structure*, Walker discloses modifying the first set of *variable parameters* to provide a more difficult game play (*a second set of variable parameters providing a second game play experience*). For example, the number of lives may be modified from 5 to 3, the speed of the spaceship may be modified to increase by 10-20%, and the precision required by the spaceship controls may be increased by 2%. Ex. 1006 at Figure 8. Walker discloses that *the first game play experience differs from the second game play experience* because the second game play experience is more difficult than the first game play experience (e.g., less lives, speed of spaceship is faster and therefore less time to react, more precision required to control the spaceship). *Id.*

320. Using the *prizing structure*, Walker discloses modifying the first set of *variable parameters* to obtain a different set of prizes (*a second set of variable parameters providing a second game play experience*). For example, the system may modify the score to achieve a prize to a lower score or provide a higher monetary value prize. Ex. 1006 at ¶[0028].

321. Walker explains that the controller determines a set of results obtained over a plurality of game plays of a game and retrieves them from the game play database. Ex. 1006 at ¶[0233] (“[T]he controller 205 determines a set of results obtained over a plurality of game plays of a game. This determination may involve

selecting the set of results.”.) For example, the controller may select a set of results corresponding to all game plays played in a specific period of time (e.g., the last week). *Id.*, ¶[0236]; *see also id.*, ¶¶[0232]-[0246] (further describing selection of a set of results).

322. After selecting a set of results, the controller determines whether the results satisfy the one or more predetermined criteria associated with the game. *Id.*, ¶[0248] (“[T]he controller 205 may determine whether the set of results selected above satisfies the one or more predetermined criteria associated with the game. Such a determination may comprise, for example, determining the one or more criteria associated with the game. This may be accomplished by, for example, accessing a record of the game in the game database 435 (e.g., based on the game identifier) and retrieving the one or more predetermined criteria stored in the record.”). For example, the controller may determine whether the variance or standard deviation of the set of results is within a predetermined range, above/below a predetermined minimum threshold, or above/below a predetermined maximum threshold. *Id.*, ¶[0249]; *see also id.*, ¶¶[0247]-[0265] (further describing determining whether results meet predetermined criteria).

323. If the controller determines that the set of results does not satisfy the predetermined criteria, the controller adjusts the game, which may involve

determining a goal of adjustment, determining game parameters to be adjusted, determining new values for the game parameters to be adjusted, and executing the adjustment. *Id.*, ¶[0267] (“If it is determined that a set of results for a game does not satisfy one or more predetermined criteria for the game, the controller 205 adjusts the game....Adjusting a game may comprise (i) determining the at least one goal of the adjustment; (ii) determining the one or more game parameters to be adjusted; (iii) determining a respective new value for each of the one or more game parameters to be adjusted; and (iv) executing the adjustment.”). Walker explains that changing the game parameters (*variable parameters*) impacts how the game is played (*game play experience*). For example, in a game of “Space Battles,” the set of game parameters may include “(i) a number of lives, (ii) spaceship speed, and (iii) meteorite size.” *Id.*, ¶[0028]. If the game “ha[s] a variance in results of the game that is too high...the number of lives may be adjusted from a first value to a second value,” such that “increasing the number of lives increases the number of attempts the player has at increasing his score in the game or winning a prize,” thus reducing the variance in results. *Id.* Thus, Walker discloses that the game parameters may be set to some first set of values (e.g., a certain number of lives, spaceship speed, and meteorite size) that define the game play experience (*implementing a first set of variable parameters to provide a first game play experience*). Further, the set of

game parameters may be modified (e.g., by increasing the number of lives) to define a changed game play experience (*modifying the variable parameters to provide a second set of variable parameters providing a second game play experience*). The second game play experience differs from the first (*where the first game play experience differs from the second game play experience*) because a player now has more attempts to score or win a prize. Accordingly, Walker discloses these limitations.

**13. [1.d]: “memory storing account information which varies through game play,”**

324. In my opinion, Walker discloses this limitation.

325. As discussed for [1.a.i], Walker discloses that the controller’s memory (*memory*) stores multiple databases, including a player database. *See* Section X.A.3; *see also* Ex. 1006 at ¶[0067]. Walker explains that the player database may include player account information (*memory storing account information*). Ex. 1006 at ¶[0098] (“The fields [of player database 325] specify: (i) a player identifier 505; (ii) a player name 510;...and (v) a skill level 525.”), Figure 5.

500

PLAYER IDENTIFIER <u>505</u>	PLAYER NAME <u>510</u>	PLAYER CONTACT INFORMATION <u>515</u>	FINANCIAL ACCOUNT IDENTIFIER <u>520</u>	SKILL LEVEL <u>525</u>
P-90,327,942	JOHN BLACK	JBLACK@AOL.COM	1111-2222-3333-4444	EXPERT
P-77,561,218	MARY BROWN	(555) 555-5555	--	BEGINNER
P-01,398,419	BOB BLUE	100 MAIN ST. SMALL TOWN , USA	609 7128 421	UNDETERMINED
P-72,103,022	ALICE GREEN	AG@MSN.COM; (666) 666-6666	72103022	AVERAGE

FIG. 5

Ex. 1006 at FIG. 5

326. The player's account information includes a player's skill level, which may be a value representing that player's average score or average prize value obtained in a particular game. *Id.*, ¶[0103] ("Note further that information other than the categories depicted in FIG. 5 may be stored in the skill level field as an indication of a player's level of skill. For example, an average score or an average value of a

prize obtained by the player (e.g., in a particular game) may be stored as an indication of the player's level of skill in that game.”). A POSITA would have understood that the player's average score may change during game play, and consequently, a player's skill level may change as a player plays more games (*account information which varies through game play*).

**14. [1.e]: “a decision engine for performing game analytics on the game play, and”**

327. In my opinion, Walker discloses this limitation.

328. Walker discloses this limitation. Ex. 1001 at 45:34-39. A POSITA would have understood that Walker discloses a software module for calculating statistics related to the game play (*a decision engine for performing game analytics on the game play*). Walker explains that the controller makes such adjustment decisions based on the game analytics in order to optimize the prizing structure and maximize the game play experience. Ex. 1006 at ¶¶[0002] (“Gaming establishment operators, such as operators of online gaming Web sites and arcades, profit when players play games at their establishments. The operators are thus interested in keeping the players happy and motivated in order to maximize the chances that the players will return in the future to play games and encourage friends and family members to visit the establishments.”), [0025] (“As players play games on the Web

site, a computing device may monitor the games played to determine a variance in prizes awarded based on results of the games. If the variance in prizes awarded is too high, this may be discouraging to players, since expert players may win large prizes while novice players win almost nothing. Similarly, if the variance in prizes is too low, players may become bored because there is not enough variation in the prizes awarded. If the computing device determines that the variance in prizes for a game is too high or too low, then it may modify the game to alleviate this problem.”).

**15. [1.f]: “a prizing system to award a win to the one or more remote users determined by a prizing structure.”**

329. In my opinion, Walker discloses that the controller may award prizes to players to as a result of game play (*a prizing system to award a win to the one or more remote users*). Ex. 1006 at ¶[0223] (“[T]he controller 205 may **provide one or more prizes to a player** as a result of game play. A prize may be any form of consideration, including currencies (e.g., money), products, and services.”); ¶[0026] (“A ‘result’ of a game, as used herein unless expressly stated otherwise, comprises an expression of a player's performance in a game play of a game...[a] binary indication of whether a player won a prize (e.g., “yes” or “no”) during a game play is a result of the game play.”). Walker explains that whether prizes are awarded may be determined by various game rules (*determined by a prizing structure*). For

example, Walker defines a “formula [that] may be used to convert points to credits, money or some other currency used to purchase prizes.” *Id.*, ¶[0229]. Walker also describes prize structures in which “a first prize corresponds to a first range of scores that a player may achieve in one or more plays of the game (e.g., a score of 500-1000 points) while a second prize corresponds to a second range of scores that a player may achieve in one or more game plays of the game (e.g., 1001-1500 points).” *Id.*, ¶[0265].

**D. Dependent Claims 2, 4-7, 9, 11-13, 15, 19, 23, 24, and 29**

- 1. Claim 2: “The system for electronic game play involving one or more remote users of a system in an electronic environment of claim 1 wherein the server further includes player’s club information.”**

330. In my opinion, Walker discloses this limitation. As discussed for limitation [1.a], the controller comprises a server with memory (Ex. 1006 at ¶[0064], and as discussed for limitation [1.a.i], the controller’s memory may store a plurality of databases, including a player database (*id.*, ¶[0067]). Walker further discloses that the player database stored on the server may include a player identifier such as a frequent gamer account (“wherein the server further includes player’s club information”). (*Id.*, ¶[0098] (“The tabular representation 500 of the player database 325 includes...fields for each of the entries or records. The fields specify: (i) a player

identifier 505....”), [0100] (“[A] player identifier may be any information sufficient to identify a player. For example, a player identifier may include an indication of one or more of the following:...(viii) an identifier that identifies another type of account associated with a player (e.g., a frequent shopper or frequent gamer account).”).

331. A POSITA would have understood that a frequent user program, such as a player’s club, is a tool that is used to increase player engagement

**2. Claim 4: “*The system for electronic game play of claim 2 wherein the player’s club information includes information on non-cash amounts.*”**

332. In my opinion, Walker alone or in view of the knowledge of a POSITA renders obvious this limitation.

333. As discussed for claim 2, a player’s frequent gamer account (*player’s club information*) may be used to identify a player in the player database. *See* Section XII.B.1; Ex. 1006 at ¶¶[0098], [0100]. Walker further discloses that the player’s account in the player database may include the number of points a player has won through game play (*wherein the player’s club information includes information on non-cash amounts*). Ex. 1006 at ¶[0231] (“[A] player may win 3400 points in a game play of a game and these points may be credited to his account in a player database stored by the controller 205 (e.g., the player database 325).”).

334. To the extent Walker does not explicitly disclose that a player's point total is connected to the player's frequent gamer account, a POSITA would have found it obvious to implement this feature. A POSITA would have understood that it would have been beneficial to implement a frequent gamer account such that the frequent gamer's identifier is directly associated with all cash balances, point balances (*non-cash amounts*), or other monetary or non-monetary values that serve as a player's credits for prizes or further game play. Such an implementation would have improved the gaming experience for frequent gamers by allowing the gamer to easily access monetary and non-monetary account balances using the frequent gamer identifier. Moreover, such an implementation would have provided an easy way to track frequent gamer status (e.g., a level or status indicating how frequently a player plays the game) by tracking metrics associated with gaming frequency (e.g., point balances (*non-cash amounts*)) in connection with the frequent gamer identifier. A POSITA would have also had a reasonable expectation of success in implementing this modification because it would have involved modifying Walker in a manner Walker suggests is feasible—using disclosed player account types (i.e., frequent gamer account) in order to track disclosed types of player information (i.e., point balances).

**3. Claim 5: “The system for electronic game play of claim 1 wherein the game processor utilizes a threshold value to change from the first game play experience to the second game play experience.”**

335. In my opinion, Walker discloses this limitation.

336. As discussed for limitations [1.c.iv-v], Walker explains that the controller determines whether predetermined criteria are met, and thus whether game parameters should be adjusted, such that game play changes from a first to second experience (*to change from the first game play experience to the second game play experience*). See Sections XII.A.11-12. As discussed, the controller (and its processor (*game processor*)) make this determination based on whether, for example, the variance or standard deviation of a specific set of results is above/below some predetermined minimum/maximum threshold (*game processor utilizes a threshold value*). Ex. 1006 at ¶[0249].

**4. Claim 6: “The system for electronic game play of claim 5 wherein the threshold value includes information on length of time played.”**

337. In my opinion, Walker discloses this limitation.

338. Walker discloses that when selecting a set of results for evaluation, “a characteristic of a game that is indicative of achievement in a game, other than a score or value corresponding to a prize, may be evaluated.” Ex. 1006 at ¶[0245].

“For example,...a total time spent playing...may be determined and compared to one or more gaming predetermined criteria.” *Id.* As discussed for claim 5, these values, which reflect gaming achievements such as total time played, may then be compared to the predetermined threshold. *See* Section XII.B.3; Ex. 1006 at ¶[0249]. In other words, a threshold value representing a predetermined total time spent playing (*the threshold value includes information on length of time played*) is compared to the actual total time spent playing for a selected set of results.

**5. Claim 7: “The system for electronic game play in an electronic environment of claim 5 wherein the threshold value includes information on frequency of play.”**

339. In my opinion, Walker discloses this limitation.

340. As discussed for claim 6, Walker discloses that the threshold value may represent total time spent playing, which itself provides information on how often a game is played (*wherein the threshold value includes information on frequency of play*) since the more frequently a game is played, the greater the total time spent playing. *See* Section XII.B.4. Walker further discloses that the threshold value may represent numerous other metrics that *include[] information on frequency of play*. For example, Walker discloses that “a number of lives lost...or a number of questions answered correctly may be determined and compared to one or more

gaming predetermined criteria.” Ex. 1006 at ¶[0245]. Thus, the predetermined criteria (*threshold value*) may represent a specified number of lives lost or questions answered correctly, and *includes information on frequency of play* because the more frequently a game is played, the greater each of these values.

341. Walker also discloses that *the threshold value includes information on frequency of play* in a second way. As discussed for claim 5, a predetermined minimum/maximum threshold (*threshold value*) may represent a desired variance or standard deviation of a selected set of results. *See* Section XII.B.3; Ex. 1006 at ¶[0249]. Walker discloses that the selected set of results may be “all game plays played during a specific period of time,” such as “all game plays played in the last week” or “all game plays played within two weeks of a promotion.” Ex. 1006 at ¶[0236]. The set of results thus has includes more elements or results the more frequently the game is played. Walker discloses that the variance depends on the number of elements in the set, and that the standard deviation, which is the square root of the variance, thus also depends on the number of elements in the set. *Id.*, ¶¶[0251]-[0258] (formulas for variance and standard deviation). Thus, a predetermined variance or standard deviation (*threshold value*) depends on how frequently the game is played (*includes information on frequency of play*).

**6. Claim 9: “The system for electronic game play of claim 5 wherein the threshold value includes information on the number of plays since a last win.”**

342. In my opinion, Walker alone or in view of the knowledge of a POSITA discloses this limitation.

343. As discussed for claim 5, a specific set of results is evaluated to determine whether a predetermined minimum/maximum threshold (*threshold value*), such as a desired variance or standard deviation, has been met. *See* Section XII.B.3. Walker discloses that the set of results may include, for example, “all game plays played during a specific period of time,” such as “all game plays played within two weeks of a promotion.” Ex. 1006 at ¶[0236]. A POSITA would have understood that a promotion in Walker is a game play win that results in a player’s promotion to the next level of a game (*a last win*). *See, e.g., id.*, ¶¶[0245] (discussing “number of levels completed”), [0265] (discussing a win/awarding of a prize “if a player achieves a particular...level of achievement in one or more game plays of a game (e.g., the player gets to level 3 of the game within two consecutive game plays)”). Thus, since the variance or standard deviation of scores for all game plays played within two weeks of a promotion is compared to the predetermined threshold, the threshold value itself also reflects a variance or standard deviation of scores for all game plays played since the last promotion. As discussed for claim 7, both the

variance and standard deviation include information on the number of elements in a set. *See* Section XII.B.5. Accordingly, when the threshold value represents a variance or standard deviation of scores for all game plays within two weeks of the last promotion, *the threshold value includes information on the number of plays since a last win.*

**7. Claim 11: “The system for electronic game play of claim 1 wherein the first set and second set of variable parameters are set based on a comparison of game play information across multiple users devices.”**

344. In my opinion, Walker discloses this limitation.

345. As discussed for limitations [1.c.iv-v] (*see* Sections XII.A.11-12), Walker discloses selecting a set of results from all game plays (i.e., from all users/devices) (*game play information across multiple users devices*) during a specific period of time (Ex. 1006 at ¶[0236]), evaluating whether the variance or standard deviation of those results is within a predetermined range or meets a predetermined threshold (*id.*, ¶[0249]), and adjusting game parameters (*wherein the first set and second set of variable parameters are set*) based on that evaluation (*id.*, ¶[0267]). A POSITA would have understood that calculating a variance or standard deviation of the selected set of results, which is performed when evaluating whether a game parameter adjustment must be made (*wherein the first set and second set of*

*variable parameters are set*), involves a comparison of the selected results (*based on a comparison of game play information across multiple users*) since variance and standard deviation are both measures of comparison within a data set to determine the amount of variation of values about a mean. *See id.*, ¶¶[0251]-[0258] (formulas for calculating variance and standard deviation both require subtracting the mean/average of all elements in the set from each current element).

**8. Claim 12: “The system for electronic game play of claim 1 wherein the game play information includes information on a loss.”**

346. In my opinion, Walker discloses this limitation.

347. As shown in Figure 6B below, the game play database records game play information such as a status (in red) indicating the current status of the game play. Ex. 1006 at ¶¶[0118] (“Referring now to FIG. 6B, a tabular representation 640 illustrates an example record of another embodiment of a game play database 330.”), [0119] (“The record 640 includes a number of example fields, each field indicating information related to the game play of the record. The fields include...(vi) a status 662 that indicates a current status of the game play (e.g., ‘in progress’ or ‘completed’)....”). As shown, the status field may indicate if a specific game play resulted in no prize, i.e., a loss (*game play information includes information on a loss*).

Declaration of Dwight Crevelt in Support of  
Petition for *Inter Partes* Review USP No. 11,335,164

650

GAME PLAY IDENTIFIER: GP-100-893645 652		GAME IDENTIFIER: G-100 654	
PLAYER IDENTIFIER: P-8031902 656			
START TIME: 03/03/03 12:58 PM 658		END TIME: 03/03/03 1:24 PM 660	
STATUS: GAME FINISHED, NO PRIZE 662			
FINAL SCORE: 1,625 664			
EVENT(S) ACHIEVED 666	NUMBER OF OCCURRENCE(S) OF EVENT 668	POINTS / EVENT OCCURRENCE 670	POINTS FOR EVENT 672
A	22	25	550
B	15	25	375
C	11	50	550
D	3	50	150
E	0	200	0
F	0	500	0

FIG. 6B

*Id.*, FIG. 6B (annotated).

9. **Claim 13: “The system for electronic game play of claim 1 wherein the game play information includes information on a series of outcomes.”**

348. In my opinion, Walker discloses this limitation.

349. As shown in Figure 6A below, the game play database records information on a series of game outcomes for various players, games, etc. (*game*

*play information includes information on a series of outcomes*). Ex. 1006 at ¶[0110] (“Referring now to FIG. 6A, an exemplary tabular representation 600 illustrates an embodiment of a game play database 330. The tabular representation 600 of the game play database 330 includes a number of example records or entries, each indicating a game play conducted on a gaming device of system 200.”).

600 →

GAME PLAY IDENTIFIER 605	GAME IDENTIFIER 610	PLAYER IDENTIFIER 615	START TIME 620	END TIME 625	RESULT ACHIEVED 630	GAMING DEVICE IDENTIFIER 635
GP-109-3984617	G-109	P-90327942	04/11/03 12:59 PM	04/11/03 1:21 PM	3,721	GD-99-003
GP-271-461703	G-271	P-90327942	04/11/03 1:23 PM	04/11/03 1:27 PM	PRIZE LEVEL 3	GD-11-072
GP-109-398403	G-109	P-01398419	04/11/03 1:23 PM	04/11/03 1:51 PM	4,921	GD-08-321
GP-602-19872311	G-602	P-72103022	04/11/03 1:39 PM	04/11/03 1:58 PM	16 TICKETS	66.6.77.101

FIG. 6A

*Id.*, FIG. 6A.

**10. Claim 15: “The system for electronic game play of claim 1 wherein the game play information includes information on a first game play event.”**

350. In my opinion, Walker discloses this limitation.

351. Walker explains that the game play database may store information pertaining to certain “lives,” “rounds,” or “levels.” Ex. 1006 at ¶¶[0027] (“A game

play comprises an attempt to obtain a score or win a prize in accordance with the rules of the game and ends at a designated time (e.g., once the prize is won or **a number of ‘lives’ or ‘rounds’ is played** without having won the prize.”), [0160] (discussing game parameters such as “factors that affect the duration of a game (e.g., **a number of rounds, a number of lives**)”), [0163] (discussing game parameters such as “algorithms that control how points are awarded (e.g., a formula for the number of bonus points that a player receives at the[] end of **a round of a game play** or at the end of a game play”)), [0245] (discussing “**number of levels** completed”), [0265] (discussing awarding of a prize “if a player achieves a particular...**level of achievement** in one or more game plays of a game (e.g., the player gets to **level 3 of the game** within two consecutive game plays”)); *see also id.*, ¶[0109] (“A game play database 330 stores information about individual game plays conducted on gaming devices of system 200.”). A POSITA would have understood that the information collected on the first life/round of several lives/rounds is a first game play event (*game play information includes information on a first game play event*).

**11. Claim 19: “The system for electronic game play of claim 1 wherein the game play information includes information tracking the users play.”**

352. In my opinion, Walker discloses this limitation.

353. Walker discloses that the game play database tracks results of users' game plays (*wherein the game play information includes information tracking the users play*) for further evaluation in determining whether results satisfy predetermined criteria. Ex. 1006 at ¶[0109] (“The game play database 330 may be used, for example, to **track results of game plays** for use in determining whether a range of results for a particular game satisfy one or more predetermined criteria.”).

**12. Claim 23: “The system for electronic game play of claim 1 wherein the prizing structure is modified by modifying bonus prizing.”**

354. In my opinion, Walker discloses this limitation.

355. As discussed for limitations [1.c.iv-v], Walker discloses that game parameters may be adjusted if predetermined criteria are not met. *See* Sections XII.A.11-12. For example, Walker explains that game parameters associated with bonus prizing can be modified (*wherein the prizing structure is modified by modifying bonus prizing*), such as by changing the number of bonus items available, changing the formula for bonus points awarded at the end of a round, or activating bonus features. Ex. 1006 at ¶¶[0158] (discussing modification of game parameters such as “factors that affect a player’s ability to score points in a game (e.g., maximum number of points possible, **number of bonus items available**)”), [0163] (discussing modification of game parameters such as “algorithms that control how

points are awarded (e.g., **a formula for the number of bonus points that a player receives at the[] end of a round of a game play** or at the end of a game play)"); *see also id.*, claim 22 (“[A]djusting comprises: **activating at least one bonus feature of the game.**”).

**13. Claim 24: “The system for electronic game play of claim 1 wherein the prizing structure is modified by modifying awarding of non-cash prizes.”**

356. In my opinion, Walker discloses this limitation.

357. Walker discloses that prizes include not only money, but also any form of consideration such as products or services (*non-cash prizes*). Ex. 1006 at ¶[0223] (“In one or more embodiments, the controller 205 may provide one or more prizes to a player as a result of a game play. A prize may be any form of consideration, including currencies (e.g., money), products and services.”). As discussed for limitation [1.a.iii], Walker discloses tracking one or more predetermined criteria (*mandated parameters*) which represent statistics or measures achieved by the system as a whole, and adjusting one or more parameters (*variable parameters*) in order to meet those predetermined conditions. *See* Section XII.A.5. For example, Walker discloses parameters such as “number of lives” which affect the result of a game, e.g., the prizing structure that determines which prize is awarded for game play. Ex. 1006 at ¶[0028] (“A parameter of a game comprises a rule of the game that

has an associated value and affects the result of a game play of the game (e.g., what prize is awarded for a game play of the game)...For example, [for] a game named ‘Space Battles’...parameters of the game include (i) a number of lives, (ii) spaceship speed, and (iii) meteorize size.”). Walker explains that these parameters may be adjusted, thereby impacting the prizing structure (*wherein the prizing structure is modified by modifying warding of...prizes*), in order to meet a predetermined threshold value such as a variance of results. *Id.*, ¶[0028] (“A parameter of a game may be adjusted by adjusting the value associated with the parameter. For example, a game named ‘Space Battles’ may have a variance in results of the game that is too high....[T]he number of lives may be adjusted from a first value to a second value....[A]djusting this parameter of the number of lives from a first number to a second number that is higher than the first number may result in an adjustment in the variance of results since this adjustment may be particularly effective at increasing the possibility that a novice or low skill player will win a prize or achieve a high score.”); *see also id.*, ¶[0025] (“[A] computing device may monitor the games played to determine a variance in prizes awarded based on results of the games....If the computing device determines that the variance in prizes for a game is too high or too low, then it may modify the game to alleviate this problem.”). Since Walker discloses that prizes encompass products and services (*non-cash prizes*), Walker

thus discloses *wherein the prizing structure is modified by modifying awarding of non-cash prizes.*

**14. Claim 29: “The system for electronic game play of claim 1 wherein the decision engine for game analytics tracks user specific play.”**

358. In my opinion, Walker discloses this limitation.

359. As discussed for limitations [1.c.iv-v] and [1.e], the controller performs actions such as deciding which sets of game play information should be selected for analysis, analyzing the results to calculate variance, standard deviation, or other analytical measures, and comparing these values to predetermined thresholds to decide whether game parameters should be adjusted (*decision engine for game analytics*). See Sections XII.A.11-12, XII.A.14. Walker further discloses that the selected set of results may comprise “all game plays played by a particular player.” Ex. 1006 at ¶[0237]. Thus, Walker discloses tracking user-specific play, selecting sets of user-specific data, and performing analytics on that data (*decision engine for game analytics tracks user specific play*).

**XIII. SECONDARY CONSIDERATIONS**

360. I am not aware of any secondary considerations of non-obviousness for the claims of the '164 patent. If Patent Owner raises any secondary considerations

in its briefing or expert's declaration, I reserve the right to respond to those considerations.

#### **XIV. CONCLUSION**

361. For all the reasons stated above, it is my opinion that the challenged claims of the '164 patent are unpatentable.

362. This declaration and my opinions are made to the best of my knowledge and understanding, and based on the material available to me at the time of signing this declaration. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true. Further, I am aware that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001. I declare under penalty of perjury that the foregoing is true and correct.

Executed this 26th day of March 2025 in Walnut Grove, Missouri.



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Dwight Crevelt

Declaration of Dwight Crevelt in Support of  
Petition for *Inter Partes* Review USP No. 11,335,164

**APPENDIX A**

<b>Exhibit No.</b>	<b>Description</b>
1001	U.S. Patent No. 11,335,164 to Katz, et al. (“the ’164 Patent”)
1002	File History of U.S. Patent No. 11,335,164
1004	Curriculum Vitae of Dwight Crevelt
1005	U.S. Patent No. 8,172,683 (“Kelly683”)
1006	U.S. Patent App. Pub. No. 2004/0002369 (“Walker”)
1007	U.S. Patent App. Pub. No. 2005/0153768 to Paulsen (“Paulsen”)
1008	U.S. Patent No. 5,970,143 to Schneier et al. (“Schneier143”)
1009	U.S. Patent Pub. No. 2003/0078102 to Okita et al. (“Okita”)
1011	U.S. Patent No. 6,511, 377 to (“Weiss”)
1012	U.S. Patent No. 5,371,345 to (“LeStrange345”)
1013	U.S. Patent No. 5,470,079 to (“LeStrange079”)
1014	U.S. Patent No. 5,326,104 to (“Pease104”)
1015	U.S. Patent No. 5,766,076 to (“Pease076”)
1016	U.S. Patent No. 5,855,515 to (“Pease515”)
1017	U.S. Patent No. 5,902,983 to (“Crevelt983”)

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Exhibit No.	Description
1018	U.S. Patent No. 6,347,738 to (“Crevelt738”)
1019	U.S. Patent No. 6,547,131 to Foodman (“Foodman”)
1020	Dwight & Louise Crevelt, <u>Slot Machine Mania</u> 186-889, 224-27 (1988-89)
1021	Dwight & Louise Crevelt, <u>Video Poker Mania</u> 120-123 (1991)
1022	Edward Castronova, <i>Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier</i> , CESifo Working Paper No. 618 (2001)
1023	Edward Castronova, <i>On Virtual Economies</i> , CESifo Working Paper No. 752 (2002)
1024	Richard A. Bartle, <i>Pitfalls of Virtual Property</i> , The Themis Group, (2024)
1025	Elizabeth Kolbert, <i>Pimps and Dragons: How an online world survived a social breakdown</i> 88 (May 28, 2001)
1026	U.S. Patent App. Pub. No. 2003/0114220 to (“McClintic”)