

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WILLIAM HILL U.S. HOLDCO, INC. and BRANDYWINE BOOKMAKING
LLC,

Petitioners,

v.

CG TECHNOLOGY DEVELOPMENT, LLC,

Patent Owner.

Case IPR2019-00319
Patent 9,240,098

**DECLARATION OF WAYNE ROTHSCHILD IN
SUPPORT OF PATENT OWNER'S RESPONSE**

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I, Mr. Wayne Rothschild, declare as follows:

I. Introduction

1. I have been asked to submit this declaration on behalf of Patent Owner, CG Technology Development, LLC, in connection with its Patent Owner's Response to a petition for *inter partes* review of U.S. Patent No. 9,240,098 ("the '098 patent"), which I have been told is being submitted to the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

2. Specifically, I have been retained by Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, as a technical expert by Patent Owner to provide my opinions on the technology claimed in, and the patentability or unpatentability of, claims 2, 4-6, 8-15, 17-19, and 21-23 of the '098 patent ("the Challenged Claims"). In particular, I have been asked to respond to the Declaration of Andrew Wolfe filed by William Hill U.S. Holdco, Inc. and Brandywine Bookmaking LLC. For purposes of this declaration, I was not asked to provide any opinions that are not expressed herein.

3. My opinions and views are based on my education, training, and experience in the relevant field of the gaming industry, as well as the materials that I reviewed for this case. All of my opinions, and the bases of those opinions, are true and correct to the best of my knowledge and belief. However, I reserve the

right to supplement this report and my opinions based on any additional material or information provided to me.

4. I am a United States citizen over the age of 18 and make this declaration based on my personal knowledge of the matters discussed herein. I am being compensated for my time on this matter, including my time spent reviewing the Petition, exhibits submitted with the Petition, and other information that I discuss in my declaration. My compensation is not contingent on the outcome of this matter. My opinions and underlying reasoning for the opinions are set forth below. I have no financial interest in Petitioner William Hill or any of the other entities it identified as real parties in interest in its Petition. I also have no financial interest in Patent Owner CG Tech or any of its subsidiaries. I do not have any financial interest in the '098 patent and have not had any contact with any of the named inventors of the '098 patent.

II. Background and Qualifications

5. My qualifications are set forth in my Curriculum Vitae, which is attached as Appendix A. I have over nine years of experience in developing, managing, and launching products relating to the gaming and casino industry, including video game and slot machines. Over my career, I have invented or developed a number of innovative gaming products within the gaming industry, resulting in 38 issued U.S. patents in the gaming space.

A. Educational Background

6. I earned a Bachelor of Science in Mechanical Engineering from University of Texas at Austin in 1989. After years of working in the field as an engineer, I attended Northwestern University where I received a Master of Business Administration from the Kellogg School of Management in 2002.

B. Relevant Professional Experience

7. My experience in the casino gaming industry began as early as 1992 when I was employed at WMS Gaming, Inc. From 1992-1997 and 2000-2004 I held positions with WMS Gaming in the capacities of Executive Director New Product Development, Director of Technical Engineering and Manager of Mechanical Engineering. In these various roles, I was responsible for electrical, mechanical and software development of networked gaming machines.

8. While working for WMS Gaming, I was registered with the Nevada Gaming Control Board. As part of my registration, I was required to follow certain rules and regulations specific to the gaming industry, attend compliance training, and ensure my registration status was current.

9. I founded and operated a consumer products sales, manufacturing and distribution company, Neat-Oh! International, LLC from 2005-2018 with direct responsibilities including product development, demand planning, sales forecasting and inventory management among other management and operational roles.

10. I am a named inventor on more than 50 issued US patents, 38 of which are related to gaming machines. My first gaming patent issued in 1994 and my most recent gaming related patent issued in 2017. Additionally, I have numerous patent applications that are currently pending.

11. At WMS Gaming, Inc., I began as a Manager of Mechanical Engineering, where I was responsible for the design of slot machines and video gaming devices. This included the design and/or selection and integration of enclosures, currency acceptors, currency dispensers, printers, card readers, scanners, input/output devices including buttons, displays, video monitors, touch screens, lights, reels, etc. In this role I also managed the integration of network interface equipment to connect the back-end systems of the gaming machines in different gaming jurisdictions. My role also included managing a team of engineers to resolve engineering-related issues with gaming machines. Around 1995, I was promoted to Director of Technical Engineering, where I was responsible for all aspects relating to the development, manufacturing, and launch of gaming devices like slot machines and video lottery terminals. After a short spell working as the Director of Engineering at General Binding Corp., I returned to WMS Gaming as the Executive Director of New Product Development. In this role I also supervised multi-disciplined teams of designers, developers, programmers, testers, and/or engineers to create, develop, and launch new product lines.

12. My complete academic background, professional experience, and publications are set forth in my CV. A list of my issued patents as printed from the uspto.gov website is attached hereto as Appendix B, and a list of my patent applications as printed from the uspto.gov website is attached hereto as Appendix C.

III. Materials Considered

13. In forming my opinions, I have relied on my experience, including over nine years of experience in the gaming industry. I have also read and considered the '098 patent, its prosecution history, the Petition for *Inter Partes* Review of the '098 patent filed by Petitioners, the Declaration of Dr. Andrew Wolfe in support of that Petition, the Institution Decision issued by the Patent Trial and Appeal Board, all other material referenced herein, including the following exhibits, some of which I understand are being filed with the response:

Exhibit	Description
Ex. 1001	Wolfe Declaration
Ex. 1002	U.S. Patent No. 9,240,098 ('098 patent)
Ex. 1003	U.S. Patent No. 6,612,928 (<i>Bradford</i>)
Ex. 1004	U.S. Patent Publication No. 2005/0054417 (<i>Parrott</i>)
Ex. 2017	Nev. Gaming Comm'n Reg. 5.220(7), effective March 23, 2006 to August 31, 2017.

Ex. 2018	Nev. Gaming Comm'n Reg. 5.225(7), effective September 1, 2017.
Ex. 2019	Proposed Amendment to Nev. Gaming Comm'n Regs. 5.220 and 5.225, proposed May 8, 2017, effective September 1, 2017.
Ex. 2020	Bailey Schulz, <i>Nevada regulators may need to revisit sportsbook registration rules</i> , LAS VEGAS REV. J., August 18, 2019.
Ex. 2021	P.L. 2018, Ch. 33, 218th Leg., Assemb. No. 4111 (N.J. June 11, 2018)
Ex. 2022	13 Miss. Admin. Code Pt. 9

IV. Legal Standards

14. I have been asked to provide my opinion on whether certain prior art references disclose or teach elements recited in the claims of the '098 patent. I am not a legal expert. My understanding of the legal standards that apply in reaching the conclusions in this declaration were provided to me by counsel for Patent Owner.

15. Counsel has informed me that this proceeding will focus primarily on two issues related to unpatentability of the '098 patent. Particularly, anticipation under § 102 of the Patent Laws and obviousness under § 103 of the Patent Laws. I have been informed that Petitioners must demonstrate unpatentability by a preponderance of the evidence.

A. Claim Construction

16. I have been informed that in this proceeding, the claims are given their broadest reasonable interpretation in light of the patent's specification as a person of ordinary skill in the art (POSA) would understand them.

B. Anticipation

17. I understand that the subject matter of a patent claim is anticipated only if a single prior art reference teaches each and every element recited in the claim. The prior art reference also needs to disclose the elements arranged the same way that they are arranged in the claim—that is, it is not enough that the reference might disclose all the elements recited in a claim, it must disclose them exactly as they are set forth in the claim. Moreover, the disclosure of the prior art must be substantial enough that it would have taught a person of ordinary skill in the art to make and use the invention recited in the claim without undue experimentation.

18. I understand that, in some cases, a prior art reference can be considered to disclose an element of the claim even if the reference does not expressly teach it. But to do so, I understand that a person of ordinary skill in the art would have to recognize, from what is expressly disclosed in the reference, that the missing element was necessarily present despite the reference failing to expressly disclose it.

C. Obviousness

19. I understand that a patent claim that may not be anticipated might still be unpatentable if the claimed subject matter as a whole would have been obvious to a person of ordinary skill in the art in view of the prior art at the time of the invention. I understand that the claimed subject matter must be considered in its entirety when determining obviousness. Additionally, I understand that this obviousness analysis takes into account the scope and content of the prior art, the differences between the claimed subject matter and the prior art, and the level of ordinary skill in the art at the time of the invention. I understand that the proponent of an obviousness challenge must provide clear reasoning to show why the claimed subject matter would have been obvious to a person of ordinary skill in the art at the time of the invention.

20. I understand that multiple prior art references or teachings can be combined to show that a patent claim would have been obvious. When taking this approach, I understand that the proponent of obviousness must show that all of the elements in the claims are disclosed and that a person of ordinary skill in the art would have had reason or motivation to combine the references in the way the elements are recited in the claim, without the use of hindsight. I understand that the reason or motivation does not need to be explicitly mentioned in the prior art but

that a rationale for making the combination is necessary before the claims can be found obvious.

V. The '098 Patent

21. The '098 patent is directed towards a gaming kiosk that provides for direct registration of a player for gaming activities absent the need for in-person registration by a gaming representative. The account registration process for gaming kiosks, and especially casino gaming kiosks, was heavily governed by regulations. The regulations at the time of the invention of the '098 patent required a player to register for wagering accounts in-person before an authorized casino representative. Ex. 2017 at 28.¹ The player needed to present government-issued identification documents in-person for examination and verification by an authorized casino employee to ensure the player was eligible to participate in wagering activities. It was only after this in-person registration and verification process that a player could participate in wagering activities at kiosks or other computer-based gaming devices physically outside of a casino. Specifically, the regulation required that:

Before a wager may be made on a system, the patron must personally appear at the licensee's establishment to open a wagering account. An employee of the licensee must examine, in the presence of the patron, and record the patron's:

¹ I understand that the language requiring a patron to personally appear at the gaming establishment became effective on March 23, 2006. *See* Ex. 2016 at 3.

- (a) Driver's license;
- (b) Passport;
- (c) Non-resident alien identification card;
- (d) Other reliable government-issued identification credential; or
- (e) Other picture identification credential normally acceptable as a means of identification when cashing checks.

Ex. 2017 at 28.

22. Nevada still requires a patron to appear in-person before an employee of the casino to register and have their government-issued picture verified before the patron can create a wagering account. *See* Ex. 2018 at 30 (“A licensee shall not allow a patron to make any wagers using the wagering account until the patron personally appears before an employee of the licensee at its licensed gaming establishment . . . where the patron presents a government issued picture identification credential confirming the patron’s identity.”).²

23. The Professional and Amateur Sports Protection Act (PASPA), enacted in 1992, made sports gambling unlawful. 28 U.S.C. § 3702. It included a “grandfather” provision providing an exception for Nevada. 28 U.S.C. § 3704. From 1992 through 2018, Nevada was the only jurisdiction to legally permit sports gambling, commonly referred to as sports wagering or sports booking. The

² I understand that this language was added in a proposed amendment on May 8, 2017 and was adopted in September 2017. *See* Ex. 2019 at 6.

Supreme Court overturned PASPA on May 14, 2018, allowing any state to authorize sports gambling schemes. *See Murphy v. Nat'l Collegiate Athletic Ass'n*, 138 S. Ct. 1461 (2018). In response, other states outside of Nevada, including Delaware, Mississippi, New Jersey, New Mexico, Pennsylvania, Rhode Island, and West Virginia, began opening sports books. Some of these sports books allow for remote registration and verification. *See* Ex. 2020 at 3; *see e.g.*, Ex. 2021 (permitting sports betting in-person or over the internet); *see e.g.*, Ex. 2022 at 12 (limiting sports betting to the property boundaries within a casino or hotel facility).

24. Thus, in-person verification by an authorized employee was standard practice in the gaming industry at the time the '098 patent was filed. Despite it being specifically required by regulations, casinos also found value in requiring in-person registration because it allowed the operators to interact with players, build customer relationships, offer promotions or credit applications, and identify high stakes players. As such, attempts to provide for automated registration processes not only contradicted the regulations in place at the time, but also contradicted conventional wisdom in the gaming industry.

25. The '098 patent provided a novel gaming device that enabled a player to independently register for an account and verify his or her identity at the kiosk. Ex. 1002, '098 patent at Abstract. This provided an efficient solution to the time

consuming and cumbersome registration and verification process that players previously did in real time with a human casino representative.

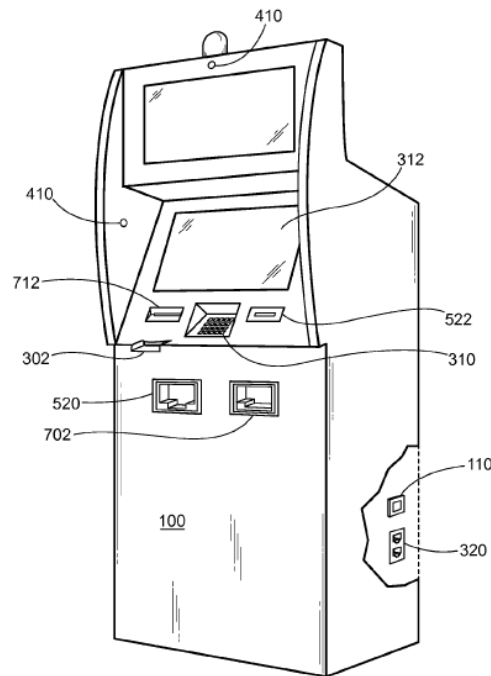


Fig. 1(a)

26. The claimed invention's use of a direct registration and verification process provides advantages for both casinos and patrons. By implementing this apparatus, new players can quickly and efficiently register for accounts without needing to find the customer service counter or sports book location within the casino and wait in line. The '098 patent also enables the use of remote installation of the gaming kiosks outside of the gaming operator's location, '098 patent at 1:11-15, thereby providing players with the opportunity to register for accounts and engage in wagering activities at third party locations where the gaming kiosks are installed or anywhere a gaming device might be permitted. The '098 patent's

gaming device also provides the gaming operator with reduced labor and operating costs.

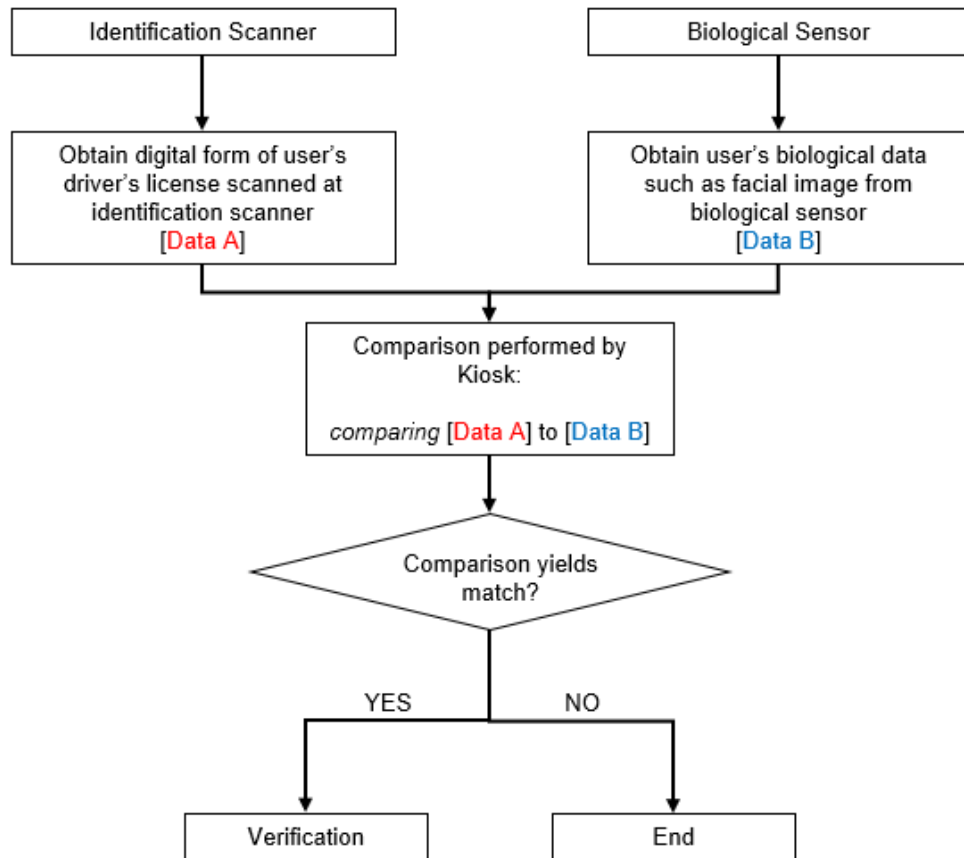
27. The '098 patent goes above and beyond Petitioners' cited prior art. In fact, *Bradford* simply discloses that a player may use a two-level verification protocol, after being pre-registered at the casino customer service counter, to take actions at a gaming device instead of waiting for a casino representative to verify the player's identity and interrupt playing. Ex. 1003, *Bradford*, at 3:50-56. *Bradford* expressly requires that the player must first pre-register with an authorized casino employee before it can use the two-level verification process, does not explain that this step can be omitted, and does not explain or provide details for how a player can register for an account any other way. *Id.* at 3:50-54, 14:23-25. In my view, a person of ordinary skill would readily understand that *Bradford* requires all players to pre-register with an authorized casino representative before they can use the system and verify their identity at a gaming device.

28. Each of the challenged claims in the '098 patent reflects this registration and verification process. It is my opinion that independent claim 2 recites this direct registration and verification step by requiring "input-output device(s) mounted in the kiosk housing and designed to accept registration/login information;" an "identification scanner . . . designed to accept an identification

document and to scan identification information from the identification document into digital form for transmission over a network;" and microprocessors programmed to "obtain a digital form of the patron's identification . . . using the identification scanner." '098 patent at 7:6-40. It is my opinion that neither *Bradford* nor *Parrott* disclose these claim elements.

29. In my opinion, in an exemplary embodiment, the '098 patent's gaming device presents instructions to a user to insert a government-issued ID, such as a driver's license, into the identification scanner. *Id.* at 1:27-30. And the identification scanner is used to obtain a digital form of the user's identification from the user's government-issued ID. *Id.* The gaming device further includes a biological sensor for obtaining biological data from the same user at the kiosk. *Id.* at 1:31-33. As an example, the biological sensor may obtain a facial image of the user. *Id.* at 1:58-60. The gaming device also includes at least one processor for executing instructions stored on a memory to compare the digital form of the biological data captured from the biological sensor, such as the facial image of the user, to the digital form of the user's identification obtained from the identification scanner, such as the user's scanned driver's license. *Id.* at 3:40-57. Based on the comparison of the biological data from the biological sensor to the digital data from the identification scanner, the gaming device verifies the identity of the user

as well as the user's acceptability for gaming. *Id.* This functionality is show below in a flow diagram.



VI. Scope and Content of the Asserted Prior Art

A. *Bradford*

30. *Bradford* is U.S. Patent No. 6,612,928, titled “Player Identification Using Biometric Data in a Gaming Environment.” It discloses a two-level verification system that is used to confirm a player’s identity while participating in wagering activities at a casino gaming device or kiosk, such as a slot machine.

31. *Bradford* attempts to solve a specific problem in the casino industry related to a remote verification system that ensures the player’s identity when their

identity must be verified before taking certain actions at the gaming device. One such action that requires verification of a player's identity is when that player wins money at a slot machine that requires an IRS reporting form to be completed. Prior to *Bradford*, this IRS reporting form was created manually. Thus, as *Bradford* states, a "player will need to wait until an attendant comes over and enables the payout and handles any required governmental forms." *Bradford* at 1:41-46. This process required casinos to "typically assign one attendant to each high stakes player, where the attendant takes care of the incessant governmental forms." *Bradford* at 1:53-56. This interrupted and often delayed play by the patron.

32. *Bradford* also sought to improve the methods of controlling wagering activities through physical access which required casino employees to verify a player's identity and age for admission into the casino. *Bradford* at 1:61-67. *Bradford* explains that "the currently used method of controlling game use is through physical access. Typically the games are in an area that is physically isolated, and an attendant checks ID for admission into the areas as a whole." *Id.* This limited gaming to specific locations, which may not be convenient for patrons.

33. *Bradford*'s system addresses these concerns by enabling a two-level verification system that allows pre-registered players to quickly identify themselves and verify their identity (and age) to take an action at the device, such

as engaging in game play (e.g., wagering), authorizing tax documents, or transferring funds. *Id.* at 2:64-3:2.

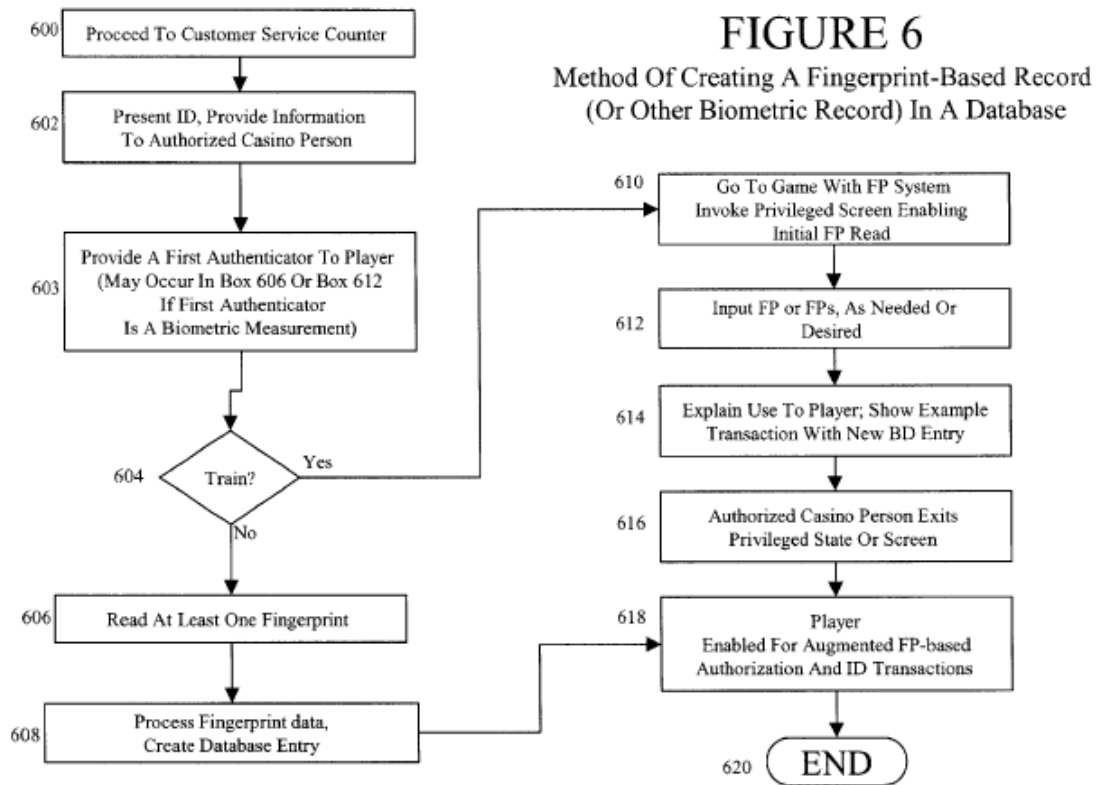
34. *Bradford* provides that “[a] player and a casino or establishment uses the present invention in several steps. The first is to create an entry in the player identification database, which associates a first authenticator and a second authenticator. The player then goes and uses a game device.” *Bradford* at 3:50-54. A person having ordinary skill in the art would understand, therefore, that a player would need to pre-register for an account with a gaming representative as a first step and only after pre-registration could that player go and use the game device.

35. *Bradford* describes its creation of an entry in the player identification database with reference to Figure 6. Specifically, it mentions that “[a] player currently without an entry in the player ID database would first go to a customer service counter and ask for an account, box 600. The process then moves to box 602, where an authorized person enters the initial data from the player into the database, using a privileged data entry screen into the player authentication database.” *Bradford* at 14:21-27. Thus, *Bradford* makes clear to a person of ordinary skill in the art that a player needs to go the casino customer service counter and present her first and second authenticators to the authorized casino employee so that the employee can enter that data into the player identification database.

36. A POSA would further understand from the *Bradford* disclosure that it is the attendant that “enters the player’s biometric measurement into the system,” which is preferably “fingerprint data, read from a fingerprint reader,” as a second authenticator for the player. *Id.* at 16:26-34; Fig. 6 (at step 606). The attendant then manually “creates the entry in the player ID database corresponding to this player, associating the data corresponding to a first and second authentic authenticator with this entry, the second of which is always a biometric authenticator.” *Id.* at 16:40-45; Fig. 6 (at step 608); *see also id.* at 3:28-36 and 3:54-62.

37. In order to use *Bradford*’s system, a player must separately complete this pre-register step by directly interacting with a human gaming representative in real time to verify the player’s identification and create a player account in the player identification database. *Bradford* at 3:50-54, 14:23-25. Without a player account, a player cannot take advantage of *Bradford*’s two-level verification system at a game device because there would be no reference of that player in the player identification database. In other words, unregistered players would not be able to verify their identity at a gaming device.

38. *Bradford* only explains this one way for a player to register and set up an account. *See generally id.* *Bradford* outlines its pre-registration step in Figure 6 that I have reproduced below.



39. *Bradford* explains “[a]n important aspect of the present invention is that a casino may decide how much information is required from a player to make use of the enhanced authorization system.” *Id.* at 14:43-46. That is, the player can decide how much personal information to share, and the casino can decide what actions can be taken when using the two-level verification based on the information given by the player. That is, a player may provide enough information, including e.g., a social security number, that will be used to fully complete a required tax form. *Id.* at 14:46-51, 14:54-58. Alternatively, a player may provide less information and may still need to perform some aspect manually. *Id.* at 58-61.

In some instances, a player may provide information to set up an electronic funds account. And in some instances, a player may just provide information about age in order to use the two-level verification system to enable game play. *Bradford* explains that a casino representative, during registration, will ask whether the player wants information like a social security number entered into the player information database, since that number is used by the IRS as an individual taxpayers' identification number, for ease of completing the tax forms remotely. *Id.* at 14:46-51. Thus, this registration process in *Bradford* can be tailored to the player and the casino.

40. *Bradford* seeks to protect a player's personal data all while providing an efficient identification verification system. *Id.* at 3:36-38. *Bradford* explains that only authorized casino employees are allowed to access the data entry screens needed to enter player information into the database. *Id.* at 14:25-28. It recommends that only a "selected, small subset of trusted employees" should be permitted to make entries into the player ID database. *Id.* at 14:28-31. And those trusted employees will have to use their own two-level verification process to access the privileged screens on the player ID system. *Id.* at 14:31-41. A POSA would readily understand that *Bradford* is aware of the sensitivity players have to sharing personal information and having it stored within a database. A POSA would understand that *Bradford* seeks to protect that information, maintain as

much anonymity as possible, yet still provide a convenient system for verifying identity at a gaming device to limit disruptions. *Bradford* even explains that in some instances, a player can even use an anonymous player ID as the first authenticator data, further protecting the players identify, which is a concern for many casino patrons. *See id.* at 32:26-28.

41. In addition, *Bradford*'s first authenticator and first authenticator data are used for "data matching only," and not for the specific personal data they hold. *Id.* at 5:63-64. It states that whether a driver's license or bank card is used, "the actual meaning of the data on the magnetic stripe is not important; it is simply being used as a unique data sequence to find a matching data sequence in the player ID database." *Id.* at 6:7-10. This enables the *Bradford* system to store personal information in the database and provide the player the convenience of using an existing card or other identification means, without exposing personal information beyond a limited number of authorized casino personnel. This eliminates the need for a player to carry an extra card, e.g., a player tracking card, that might be lost or forgotten, while still protecting personal information from being copied or intercepted.

42. Thus, a POSA would understand that *Bradford* is concerned with the privacy of potential patrons and includes systems and procedures to secure a player's personal information.

43. *Bradford* explains that a player's entry in the player identification database associates that player with two authenticators—a first authenticator and a second authenticator. *Bradford* at 3:28-36, 3:54-62. The player's first authenticator is typically a player ID card or some other card with machine readable means, such as a magnetic stripe or an RFID tag having a unique alphanumeric identifier. *Bradford* at 3:6-13. The second authenticator is a biometric reading, predominantly described by *Bradford* as the player's fingerprint. *Bradford* at 3:23-27 (“[i]t is expected that at the present time, the predominant biometric used will be based on fingerprints.”). Although *Bradford* suggests that other things may be used as the first authenticator, like a credit card or a driver's license, they are all used as a unique identifier to match the unique identifying data within the player identification database within the *Bradford* system. *Id.* at 5:63-66, 6:4-10. Likewise, *Bradford* suggests that the second authenticator may be a facial feature scan instead of the preferred fingerprint. *Id.* at 6:52-58. Thus, regardless of the physical form of the first or second authenticator, the *Bradford* system uses them in the same manner—matching first authenticator data to first authenticator data stored in the player database, and then matching second authenticator data to second authenticator data stored in the player database.

44. Only after establishing an account in real time with a live gaming representative can a player use *Bradford*'s two-level verification system while

wagering at a slot machine or taking other action that requires identity verification. *Id.* at 3:50-54. And a player can only take advantage of the benefits of *Bradford's* system if that player uses the same first and second authenticators at the game device that were used when registering with the casino personnel and associated with the player in the database. *Id.* at 3:54-62.

45. *Bradford* explains that the pre-registered player presents her first authenticator (i.e., player tracking card) to the gaming machine. *Bradford* at 5:63-66. The system uses the first authenticator data, a unique data sequence, to search the player identification database for a matching entry and locate the associated second authenticator data. *Id.* According to *Bradford*, the actual meaning of the unique data sequence, i.e., the actual information that the first authenticator may have, and effectively the first authenticator data and the physical first authenticator, is not important. *Id.* at 6:4-10. Whatever it is, it is only used to find a matching entry in the database. *Id.* Specifically, *Bradford* states that the alphanumeric data on the card is simply “read off of the card [and] used to find matching first authenticator data in the player ID database.” *Bradford* at 6:4-6. “That is the extent of its use.” *Id.* at 6:6-7.

46. After the player's account is located in the database using the first authenticator data, the system then locates the player's second authenticator data, and the system prompts the player to scan the fingerprint or other biometric data

that was used during the pre-registration process (and stored in the database). *Id.* at 3:54-62. Because the player's entry in the player database is already located using the first authenticator data, the second authenticator data obtained from the player is simply compared to the second authenticator data stored in the database for a further verification (i.e., the second factor in the two-factor system). *Bradford* at 3:63-4:2.

47. While the player's entry in the database includes first authenticator data and second authenticator data, the *Bradford* system does not compare the first and second authenticator to one another. There are a few reasons for this. One is that the first and second authenticators are different types of data. They need to be different to provide for two-step authentication. Otherwise, it would be merely providing the same authenticator twice. Second, *Bradford* explains that the first authenticator is used to search the player identification database to find the entry that has the matching first authenticator data. *Id.* at 3:56-58, 6:3-6. The second authenticator is then used to confirm that the second authenticator presented at the gaming device matches the second authenticator data that is associated with that player's entry in the database. This reduces the computing time because *Bradford* uses a simple alphanumeric data sequence to find a matching data sequence in a database filled with numerous different player profiles. It then uses the more detailed biometric data to confirm the player's identity, but it only needs to

compare the biometric data against a single stored entry—i.e., the stored second authenticator data the player pre-registered with. Thus, the *Bradford* system uses a simple low-data comparison when trying to locate the player's account in the database, i.e., when it is comparing a one to many routine. And the *Bradford* system uses a high-data comparison when it is verifying the player's biometric data, i.e., when it is comparing a one to one routine. This is particularly important in the context of a casino gaming machine, where there are potentially thousands of users and records to search for verification.

48. On the other hand, the *Bradford* system fails to work if the registered player uses a different first or second authenticator than used during pre-registration. The player's entry in the database is associated with the specific first and second authenticator data that the player presented during pre-registration. The system cannot find the matching entry if a player uses a different authenticator. As explained above, the first authenticator is used for data matching purposes only and the actual meaning of the unique data sequence is not important. *Id.* at 5:63-66, 6:4-10. Thus, for example, if a player pre-registers with her credit card, the player cannot then use her driver's license at the gaming device because any unique data sequence read from the player's license is not associated with the player's entry in the database.

49. I have read and understood *Bradford*. And while the *Bradford* system provides a solution to the problems associated with the income tax form processing and remote gaming, it does not disclose a gaming kiosk designed to directly register players as described in the challenged claims of the '098 patent. As explained above, and consistent with the regulations at the time, a POSA would understand that *Bradford* requires a human gaming representative to establish a player's account at the customer service counter of a casino before the player can use a game device. *Bradford* at 3:50-54; *see also id.* Figs. 6, 7, 10, 11, 12 and 15 (depicting a process where a player must first register or establish an account with an authorized casino person at the customer service counter). In fact, this is the only example of registration that *Bradford* provides. Moreover, *Bradford* explains that a casino attendant is even required to renew a player's expired account. *Bradford* at 17:32-36.

B. Parrott

50. *Parrott* is Patent Application Publication No. US 2005/0054417, titled "Gaming Machine with Scanning Capability." It relates to a gaming apparatus for use in a casino that is capable of offering several gaming options, including video poker, video blackjack, slots, video keno, video bingo, and a multi-purpose gaming unit. Ex. 1004, *Parrott* ¶¶ [0002], [0053]. *Parrott* discloses that in one embodiment, the gaming machine may include a card reading device that can read

data from a user's card, such as a credit card or player tracking card. *Id.* ¶ [0040].

In some embodiments the games include a scanner 650 for inputting gaming selections. *See, e.g., id.* ¶¶ [0061], [0067], [0073], [0079], [0086]. *Parrott* explains that a player can use the scanner 650 to scan an object 648 into the gaming machine. For example, a player could apply for a player tracking card by scanning her driver's license. *Id.* ¶ [0105]. The *Parrott* system would gather data from the card to allow the player to automatically apply for a tracking card. *Id.* It also provides that a player could fill-in additional information that was not gathered from the card. *Id.*

51. *Parrott* explains that its system may use an optical character recognition (OCR) routine to allow for this automatic player tracking card application process. *Id.* ¶ [0102]. The user would scan a driver's license or credit card, and the OCR routine would review the text and numbers from the card to populate a player tracking card application. *Id.* The gaming machine could then print the player tracking card. *See id.* ¶ [0039]. As an example, *Parrott* explains that a user inserts a driver's license and the information gathered from the license may be stored and checked against known databases to determine if the license is accurate and should be authorized. *Id.* ¶ [0102]. *Parrott*, however, does not disclose a method to ensure the player matches the ID. It is a single-level identification system without player verification.

52. I understand that Dr. Wolfe and Petitioners rely on the features from *Parrott* related to its disclosed scanner, and suggest that a person of ordinary skill in the art would either understand that the first authenticator reader in *Bradford* is a scanner or that it would have been obvious to use the scanner and method described in *Parrott* to scan a driver's license and extract personal information from it as the first authenticator in *Bradford*. For the reasons I discuss below, I respectfully disagree. In my view, a POSA would not consider combining the features of *Parrott* to *Bradford* at least in part because they would not be compatible with *Bradford*'s overall system and would significantly change its operation.

VII. Level of Ordinary Skill in the Art

53. In rendering the opinions set forth in this declaration, I was asked to consider the patent claims and the prior art through the eyes of a POSA. I understand a POSA is determined by looking at (1) types of problems encountering in the art; (2) prior art solutions to those problems; (3) rapidity with which innovations are made; (4) sophistication of the technology; and (5) education level of active workers in the field.

54. Based on my experience in the gaming industry since 1992 and through the present, and accounting for the factors identified above, I believe a

POSA as of March 15, 2013³ would have a B.S. in computer or electrical engineering or related field of study like mechanical engineering, at least two years of professional gaming system design experience or equivalent, as well as two years of experience with, or equivalent knowledge of, the gaming industry, including knowledge of the standards and regulatory compliance required in the gaming industry as well as design and market drivers relating to gaming devices in the casino and/or sports betting fields.

55. I understand that the technical expert retained by Petitioners in this matter, Dr. Andrew Wolfe, has offered an opinion about the level of ordinary skill in the art as it pertains to the '098 patent. Dr. Wolfe suggested that a POSA would have at least a bachelor's degree in computer or electrical engineering or related field of study, and at least two years of professional computer system design experience or equivalent. Ex. 1001 ¶ 25. This is similar to my definition of a POSA, except that Dr. Wolfe's definition lacks any experience with the gaming industry.

56. In my opinion, experience with the gaming industry regulations, market incentives, or design implications is a key aspect to the knowledge of a POSA as it pertains to the '098 patent. A person lacking experience in the casino

³ I have been told to assume that July 15, 2013 is the effective filing date of the '098 patent.

industry would not fully understand the problems encountered in the field and would not understand the limitations faced by those in the industry in developing solutions to those problems. The gaming industry is highly regulated and has specific objectives that are not common in other fields. All of which informs the problems encountered in the casino industry, as well as the solutions available to those in the industry.

57. Moreover, the '098 patent is specifically directed to gaming devices and includes objectives and solutions focused in the gaming industry. *See e.g.*, '098 patent at 2:29-33. I also understand that every prior art reference relied on by Dr. Wolfe and Petitioners is also specifically directed to gaming devices for the gaming industry. *See generally, Bradford, Parrott.* In my opinion, Dr. Wolfe's definition is not representative of the full breadth of knowledge and understanding associated with the inventions of the '098 patent. While general computer system design experience may be valuable, a POSA must also understand aspects specific to the gaming industry. At a minimum, these would include an understanding of the regulations, design implications, and the relevant design motivations that may be applicable and unique to the gaming industry.

58. Although this is my view on the level of ordinary skill appropriate for the '098 patent, I would reach the same conclusions regardless of whether Dr. Wolfe's definition or my definition is applied.

VIII. Claim Construction of Identified Terms

A. “Designed to Accept Registration/Login Information”

59. I understand that the Board did not provide a preliminary construction for the term “designed to accept registration/login information.” In my analysis below, I apply the broadest reasonable interpretation of the term in the context of this technology. Under this interpretation, it is my opinion that one of ordinary skill in the art at the time of the invention of the '098 patent would have understood the broadest reasonable interpretation of “designed to accept registration/login information” to mean “designed to be capable of accepting both registration and login information of a patron.”

60. This is clear from the way the inventors describe their invention. It is the gaming device of the '098 patent that permits registration and verification of a player at the kiosk itself, without the need for the player to appear before an authorized gaming representative and for that representative to examine and verify a patron's identity in the patron's presence. '098 patent at 3:55-60, 4:1-5.

61. This understanding is consistent with the use of the term in the patent's specification. In particular, the specification discusses registration as creating a new user account, stating that the kiosk “may have components that permit verification and registration of a patron.” '098 patent at 2:28-31. The '098 patent also explains that “the patron may establish a patron wagering account.” Ex.

1002 at 3:63-64. A POSA would understand this to mean that the gaming device or kiosk is capable of registering accounts for new patrons as well as allow returning users to log in to access their accounts.

62. The specification of the '098 patent uses the term *login* differently from *registration*. For instance, when referring to Fig. 6, the specification uses the term *login* “when a patron 130 returns in the future, the patron may be able to use a shorter-form sign-in, by entering an account number and PIN, or a card and a PIN, or the like,” *Id.* at 4:28-34 (stating that “[t]his *login* may fail if the account is expired or locked out.”) (emphasis added). Thus, it is commonly understood that a user must first register for an account before being able to login. A POSA would understand that a returning patron is already registered because a patron must be registered to take an action and if a returning patron could simply use a shorter form sign-in, then the short form sign-in would not be any different than full registration.

63. The '098 patent explains that both of these functions—registration and login—are performed at the computing device. For example, the kiosk 100 would have components to permit verification and registration of a patron, '098 at 2:41-44, and it would also have the necessary components to accept an account number and PIN or a card and PIN, as required by the shorter-form sign-in process, *id.* at 2:46-50, 4:11-14; Fig. 6. A POSA would understand that this shorter form

sign-in is a login process and a patron would only receive login information after successfully registering. *Id.* Thus, a POSA would understand that the gaming device must be capable of both registering a new patron and logging in returning patrons. And it is my opinion that claim 2 recites this functionality.

64. In my view, this understanding is confirmed by other claim language. In addition to the claimed “input-output device(s) . . . designed to accept registration/login information and gaming commands from a human patron,” claim 2 recites an “identification scanner mounted in the kiosk housing and designed to accept an identification document and to scan identification information” from it. *Id.* at 7:10-22. If the claimed device does not need to be capable of accepting registration information from a patron, the identification acceptor would not need to scan identification information from the identity document and convert it into digital form for transmission. Instead, the claimed device would only need to be capable of accepting login information from the patron, described in the '098 patent as “a shorter-form sign-in, by entering an account number and PIN, or a card and a PIN, or the like.” *Id.* at 4:11-15.

65. I also understand that the '098 patent uses the term *input/output* throughout the specification and also in the claims. '098 patent at 1:39-40, 2:52-53. The term *input/output* is commonly used to refer to both inputs and outputs. For example, the '098 patent describes components of the kiosk or gaming device that

include (among other things) a processor, *input/output* devices, currency acceptor, and dispenser. *Id.* at 2:52-56 (emphasis added). The '098 patent also explains that “*input-output* device(s) mounted in the kiosk housing is designed to *accept* registration/login information and gaming commands from a human patron and to *present* information to the human patron for interactive gaming.” *Id.* at 1:21-25.

That is, input-output devices refer to both an input device that is capable of accepting registration/login information (and gaming commands) as well as an output device that is capable of presenting information to the patron. And a POSA would understand the '098 patent to use the conjunctive *input/output* or *input-output* terms to refer to both *input and output* devices; not input or output devices. In my view, a POSA would similarly understand the conjunctive *registration/login* term to refer to both *registration and login*.

B. “Scan Identification Information From the Identification Document into Digital Form”

66. I also understand that the Board did not a provide a preliminary construction for the term “scan identification information from the identification document into digital form” or the related term “obtain a digital form of the patron’s identification from the patron’s government-issued identification document using the identification scanner.” In my analysis below, I apply the broadest reasonable interpretation of these terms in the context of this technology. In my view, a POSA would understand the term “scan identification information

from the identification document into digital form” to mean “convert, by scanning, the identification information from the physical identification document into a digital representation of that information.”

67. This is clear from the way the inventors describe their invention. It is the gaming device of the '098 patent that permits registration and verification of a player at the kiosk itself, without the need for the player to appear before an authorized gaming representative in real time and for that representative to examine and verify a patron's identity in the patron's presence. '098 patent at 3:55-4:5. As part of this, the '098 patent describes a system that scans the patron's identification document, obtains information from it, and converts it to a digital form so it can be digitally transmitted.

68. The '098 patent explains that a patron inserts an identification document into the identification scanner in the gaming device or scans it or provides a picture of it. *Id.* at 2:61-3:5. The gaming device is programmed to scan the patron's identification document or collect information from it and “populate a registration information” template that is displayed to the patron. *Id.* The patron can fill in any information that is still required for registration that was not ascertainable from the identification document “that was inserted.” *Id.* A POSA would understand this to mean that the ID acceptor scans information from a

player's identification, which will be used (at least in part) to register the player for gaming activities.

69. A POSA would also understand this to be different from merely reading a code or other data from the player's identification document. Scanning and reading have distinct meanings to a POSA. Reading, as understood by a POSA, would consist of decoding information obtained on a magnetic stripe, RFID tag, microchip, barcode, or identifying alphanumeric, machine readable or other data into a unique identifier. For example, when a person swipes a credit card at a payment terminal, a POSA would understand that the credit card reader is quickly reading the unique credit card information, and not scanning a digital image of the card. In contrast, a POSA would understand that a scanner is a device that captures an electronic image of the scanned document—.. The scanned image may contain a photograph, signature, government seal, or other data from the document. A POSA would further understand that post-processing OCR or other means can reveal name, address, and other pertinent identification information.

70. The specification of the '098 patent further explains that a patron's identity can be verified by comparing a live photograph of the patron, taken by a camera of the gaming device, against the photo scanned from the patron's government-issued ID. *Id.* at 3:45-50. A POSA would understand that in order to do this, the identification acceptor would have to scan the player's identification

document, obtain information from the physical ID, and convert it into a digital form. In other words, a POSA would understand that merely reading data from the player's identification document, e.g., reading an alphanumeric data sequence, would not obtain meaningful information from the ID that could be compared against a photograph taken of the player. In fact, merely reading alphanumeric data from the player's identification document, e.g., a driver's license, would simply not obtain a digital representation of the ID's photograph. Thus, the scanned photograph from the player's identification document could not possibly be compared to a picture of the patron taken at the computing device if the claimed identification scanner was not designed to scan the identification information, such as the photograph, from the government-issued identification document.

IX. Patentability of the Challenged Claims

71. I understand that Petitioners have challenged claims 2, 4-6, 8-15, 17-19, and 21-23. Of these claims, I understand that claims 2 and 15 are the only independent claims, and the remaining challenged claims all depend from either claim 2 or 15. I have not reviewed any of the remaining claims in the '098 patent (e.g., claims 1, 3, 7, 16, 20, and 24-26) that Petitioners have not challenged; nor do I express any opinions about those claims.

72. It is my opinion that the Petitioners have not shown that *Bradford* teaches or discloses all of the elements of the '098 patent, either alone or in combination with general knowledge or *Parrott*.

**A. *Bradford* Does Not Disclose a Computer Gaming System
“Designed to Accept Registration/Login Information”**

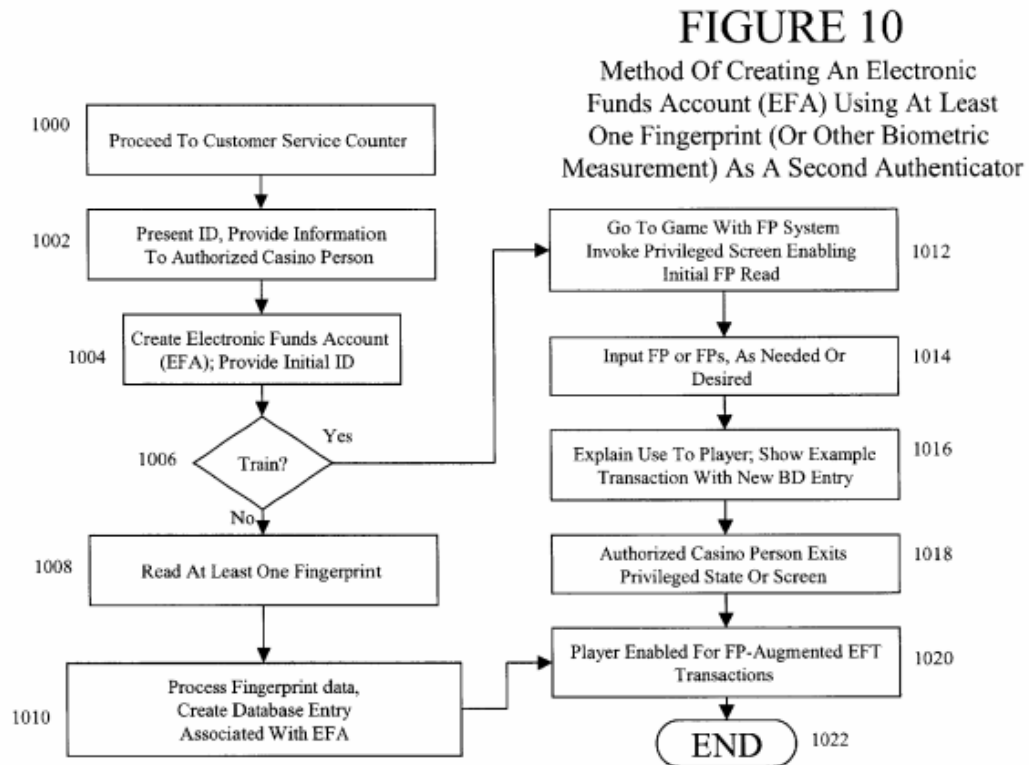
73. Independent claim 2 (and independent claim 15), requires “input-output device(s) mounted in the kiosk housing and designed to accept registration/login information.” '098 patent at 7:20-24. As mentioned above, unlike the gaming device claimed in the '098 patent, *Bradford* does not allow for independent and direct registration of new players at the gaming kiosk itself. *Bradford* requires a player to pre-register with an authorized casino employee before being able to use the two-level verification system. Moreover, *Bradford* neither discloses nor contemplates obtaining any personal information from the player at the gaming kiosk and is not configured to accept registration information.

74. *Bradford* repeatedly indicates that a player must first pre-register with an authorized casino employee before using the two-level verification system at the gaming device. *Bradford* explains that “[a] player and a casino or establishment uses the present invention in several steps. The *first* is to create an entry in the player identification database, which associates a first authenticator and a second authenticator. The player *then* goes and uses a game device.” *Bradford* at 3:50-54. *Bradford* discloses several different embodiments of its two-level verification

system, but all require a player to pre-register before taking action at a gaming kiosk. *Id.* at Figs. 6, 7, 10, 11, 12. And *Bradford* describes this method for the creation of an entry in the player identification database. *Id.* at 14:21-23. In conjunction with Figure 6 (gaming), *Bradford* explains that a “player currently without an entry in the player ID database would first go to a customer service counter and ask for an account, box 600. The process then moves to box 602, where an authorized person enters the initial data from the player into the database.” *Id.* at 14:23-27. In conjunction with Figure 10 (electronic fund account), *Bradford* likewise explains that “a player go[es] to a customer service counter or other location where an attendant having access to a terminal (or station) where the attendant can invoke a privileged screen where they can enable an [electronic funds account] EFA.” *Id.* at 22:25-31.

75. I understand that Petitioners have argued that because *Bradford* has input/output devices that may be used to request an electronic fund transfer (EFT), it discloses a kiosk that is “designed to accept registration/login information.” Pet. at 26. Petitioners contend that “to perform an ordinary EFT, it would be necessary to provide registration/login information through the gaming device . . . to be able to access the electronic fund account.” *Id.* I respectfully disagree; this is not what *Bradford* discloses and not how *Bradford* ‘s system works.

76. I agree that a POSA would understand that before an electronic fund transfer can be performed, an electronic fund account must have been set up. But I disagree that *Bradford* discloses that this can be done at a gaming kiosk in its system. *Bradford* explains that in order to take any action with the two-level verification process, including an EFT, the patron must first pre-register with an authorized casino employee at the customer service counter. *Bradford* at Figs. 10, 11. While a POSA would readily understand this from the context of *Bradford*, *Bradford* explicitly discloses the real time pre-registration step before a gaming representative in conjunction with the EFA embodiment in Figure 10 (that I reproduce below). The first step of setting up an EFA in *Bradford*'s system is "Proceed To Customer Service Counter" and the second step of setting up an EFA is "Present ID, Provide Information To Authorized Casino Person." *Id.* at 22:25-35, Fig. 10. *Bradford* does not disclose any other way to register or establish an EFA. In fact, *Bradford* explains that only a player that has "already registered (having an entry in the player ID database)" can use the two-level verification system for EFTs. *See id.* at 27:11-13, Fig. 12.



77. Thus, whether a player is seeking to use the *Bradford* system to enable game play, authorize tax forms, or transfer funds electronically, the pre-registration process is the same. *See id.* Figs. 6, 7, 10, 11, and 12. Although *Bradford* contemplates that this pre-registration may occur in-person or via a video link at the customer service counter, it makes clear that this pre-registration step is still done before a casino attendant in real time and before the player can use the two-level authentication at the gaming device. *Bradford* at 32:8-25. At no point does *Bradford* disclose scanning a player's ID, obtaining personal information from it, and using that as part of the registration process. *Id.* When registering by

video, the casino attendant will confirm the ID of the person in front of them (by video) or may check the ID by accessing it from a state or governmental ID database. *Id.* In all instances, the casino attendant confirms that the person appearing before them (by video) matches the retrieved ID. *Id.*

78. Thus, it is my opinion that *Bradford* does not directly register players for player accounts, as provided by the gaming kiosk of the '098 patent. Because *Bradford* lacks an independent registration process, absent the need for an authorized casino personnel, I do not believe *Bradford* discloses or teaches all of the elements of the '098 patent.

B. *Bradford* Does Not “Scan Identification Information From the Identification Document into Digital Form”

79. Independent claim 2 requires an identification acceptor that can “scan identification information from the identification document into digital form,” and “microprocessors” that are programmed to “obtain a digital form of the patron’s identification from the patron’s government-issued identification document using the identification scanner.” '098 patent at 7:10-33. Thus, the claimed identification acceptor scans the identification document and converts the physical information into a form that can be transmitted digitally.

80. As mentioned above, *Bradford* simply discloses a *reader* that is capable of reading the alphanumeric data sequence from the magnetic stripe of a card or other machine-readable symbols. *Bradford* at 5:55-6:10. In my view, a

POSA would not understand this disclosure in *Bradford* to be a scanner that obtains a digital representation of the player's first authenticator even if the player used a driver's license. In other words, a POSA would not understand the first authenticator reader disclosed in *Bradford* to convert, by scanning, the identification information from the physical identification document into a digital representation of that information. Thus, it is my opinion that *Bradford* does not disclose an identification acceptor designed to "scan identification information from the identification document into digital form."

81. I understand that Petitioners argued that *Bradford* discloses a scanner when the first authenticator is a document or card that is machine-readable. Pet. at 19-20. I respectfully disagree. First, in my view, a POSA would recognize that *Bradford* does not disclose a scanner, but instead, discloses a reader. All of the examples that *Bradford* provides include merely reading an alpha-numeric data sequence from the player's chosen form of the first authenticator. *Bradford* at 6:3-10. For example, *Bradford* discloses a first authenticator reader that reads the information on a magnetic stripe of a debit card or the like and uses that unique alphanumeric sequence as the player's first authenticator data. *Id.* at 5:55-58. Similarly, *Bradford* discloses a first authenticator reader that reads machine readable symbols from a (future implemented) driver's license. *Id.* at 5:58-63. And *Bradford* assures players that the first authenticator reader is only reading the

alphanumeric data on a machine-readable card to associate that player with a unique identifier in the player identification database. *Bradford* at 6:4-10. The actual meaning of the card does not matter. *Id.* *Bradford* explains that the card itself or the substance on the card are not important and will not be stored. *Id.*

82. Thus, it is my opinion that *Bradford* does not disclose an “identification scanner . . . designed . . . to scan identification information from the identification document into digital form for transmission over a network.” Because *Bradford* lacks at least this element, I do not believe *Bradford* discloses or teaches all of the elements of at least claim 2, and claim 15 which recites similar subject matter, of the '098 patent. I further understand that *Bradford* cannot disclose or teach every element of dependent claims 4-6, 8-14, 17-19, and 21-23 at least because it does not disclose or teach all of the elements of claims 2 and 15, which they depend from.

C. In Addition to Independent Claim 2, Bradford Does Not Anticipate Dependent Claim 12

83. I understand that claim 12 depends from independent claim 2. Thus, I understand that claim 12 incorporates all of the limitations of independent claim 2 and adds that the kiosk of claim 2 must further comprise “a credit card acceptor.” '098 Patent at 8:17-18. Thus, I understand dependent claim 12, therefore, requires both an “an identification scanner mounted in the kiosk housing and designed to accept [a government-issued] identification document,” as recited in claim 2, and

“a credit card acceptor,” as recited in claim 12. *Id.* at 7:10-13, 8:17-18. This understanding is also consistent with the specification and figures of the '098 patent. Figure 1(a) discloses a kiosk or computing device that has an “ID card acceptor 302,” *and* a “credit/ATM card acceptor 522.” *Id.* at 2:33-38, Fig. 1(a). For at least the following reasons, I believe that *Bradford* separately fails to disclose the arrangement of elements set forth in claim 12.

84. I understand that Petitioners argue that *Bradford* discloses “a credit card acceptor,” because *Bradford* explains that the player may use one of their preexisting cards or forms of identification as a first authenticator, including a credit card, check card, debit card, and the like. Pet. at 53-54. In conjunction with claim 2, Petitioners argued that *Bradford* disclosed “the identification acceptor being designed to accept a government-issued identity document” because *Bradford* listed a driver's license as an example of a first authenticator that a player could use. *Id.*

85. While I agree that *Bradford* explains that the first authenticator could be a driver's license or a credit card, *Bradford* does not disclose using both. In other words, *Bradford*'s two-level verification system includes only one first authenticator (and only one second authenticator) for each player. *Bradford* never discloses or suggests how or even why a player could register using multiple first authenticators or multiple second authenticators. And in my view a POSA would

readily understand *Bradford* in this manner. Thus, in my view, a POSA would understand that *Bradford* discloses using one or the other of a driver's license or a "credit card, check card, debit card, and the like," but not both.

D. The Challenged Claims are Not Obvious Over the Cited References

1. *Bradford* in Combination with General Knowledge Does Not Render the Challenged Claims Obvious

86. It is my opinion that the Petitioners have not established that *Bradford* in combination with general knowledge of a POSA discloses or teaches all of the elements of the challenged claims of the '098 patent.

87. In my opinion, Petitioners have not explained which features of the challenged claims *Bradford* is missing. Moreover, I understand that Petitioners argue that if a POSA would not have envisaged combining all of the features of the embodiment of Figure 4 of *Bradford* in a standalone system, "[i]t would have been obvious to a POSITA to incorporate the features of the embodiment illustrated in Figure 4 of *Bradford* into a standalone machine like the one illustrated in Figure 3 of *Bradford*." Pet. at 56-57. In my opinion, Petitioners have not explained why a POSA would be motivated to combine from the various embodiments of *Bradford* into a system that meets the challenged claims.

88. For example, in reviewing Petitioners' arguments, I noted that they relied on more than simply the *Bradford* embodiments depicted in Figures 3 and 4.

In fact, Petitioners and Dr. Wolfe rely not only on the *Bradford* embodiments depicted in Figures 3 and 4, but also the embodiments depicted in Figures 15 and 16, as well as the embodiments depicted in claims 50, 55, and 65. Pet. at 15-17, 32-34, 40, and 44-45. In my opinion, these different embodiments describe different aspects of *Bradford*'s system and a POSA would not necessarily combine them all without motivation. For example, the embodiment described in Figure 15 relates to *Bradford*'s embodiment for "age verification" using an anonymous legal age account. *Bradford* at 32:2-27; Fig. 15. In this embodiment, *Bradford*'s system requires a different first authenticator—an anonymous player ID—than the first authenticator Petitioners previously characterized as the claimed "digital form of the user's identification from the user's government-issued identification document." Here, a POSA would understand that the user's government-issued identification document would not be used as the first authenticator because it specifically calls for an *anonymous* player ID as the first authenticator. *Bradford* at 32:2-27. In my opinion, Petitioners and Dr. Wolfe did not explain why a POSA would combine these different embodiments.

89. Additionally, for the reasons explained above, Petitioners have not—and cannot—explain how *Bradford* discloses a kiosk "designed to accept registration/login information" or "scan identification information from the identification document into digital form," as recited in claim 2. Nor have

Petitioners explained how or why a POSA would modify the teachings of *Bradford* to arrive at the claimed invention. In my opinion, for the reasons explained above, a POSA would not be motivated to modify *Bradford*'s system based solely on general knowledge.

2. *Bradford* in Combination with *Parrott* Does Not Render the Challenged Claims Obvious

90. It is my opinion that the Petitioners have not established that *Bradford* in combination with *Parrott* discloses or teaches all of the elements of the challenged claims of the '098 patent.

91. *Bradford*'s two-level verification system allows a pre-registered player to quickly verify identity to take a particular action at a gaming device. *Bradford* explains that in order to take advantage of the two-level verification, a player must first pre-register with a gaming representative and create an entry in a player ID database, which associates that player with a first authenticator and a second authenticator. *Bradford* at 3:50-54, 14:23-25.

92. After registering and setting up an account, the player uses a game device and, eventually, may need to present a first authenticator to use the two-level authentication system. To do so, the player must provide the same first authenticator that was used to register for an account to the gaming device. *Id.* at 3:56-57, 5:63-66. If not, the player's account in the database will not be found. This is because *Bradford*'s system uses the first authenticator data, a unique data

sequence, to search the player database for a matching entry and find the associated second authenticator data. *Id.* at 3:56-57, 6:3-10. If the player is registered, the player provides the same second authenticator that was used to register for an account at the gaming device. *Id.* at 3:58-4:2. Because the player's entry in the player database is already located using the first authenticator data, the second authenticator data obtained from the player is simply compared to the second authenticator data stored in the database to determine if there is a match. *Id.* If the player does not present the same first authenticator that was used to register an account, the *Bradford* system will never locate the player's account. In my view, a POSA would readily understand this functionality of *Bradford*.

93. As mentioned previously, *Parrott* does not disclose a method to verify a player's identity, but rather a single-level identification system without player verification. Thus, even if the scanner of *Parrott* could be combined with *Bradford*, which I do not agree with as I explain below, replacing *Bradford*'s first authenticator reader with a scanner would not work. And in my view, a POSA would readily recognize that it would not work. *Bradford*'s system requires the player to provide the same first authenticator data (from the first authenticator) at the gaming device that the player used to register. That is, the first authenticator data the player provides at the gaming device must match the first authenticator

data stored in the player's account in the database. If not, the player cannot take advantage of the two-level verification system in *Bradford*.

94. Moreover, *Bradford* specifically explains that the system does not read or scan any personal information from a player's first authenticator. At most, it reads the unique alphanumeric data from the first authenticator and is only used to locate the associated entry in the player identification database. *Bradford* at 3:56-58. *Bradford* is concerned with the privacy of its players and ensures that the first authenticator is used strictly for data matching, and it will not be used to access or record anything having to do with the meaning of the card. *Bradford* at 5:63-66. *Parrott* discloses an opposite approach by explaining that its system uses an OCR routine to allow for an automatic player tracking card application process. *Parrott* at ¶ [0102]. In doing so, *Parrott*'s system emphasizes that the substance of the player's personal information is important, and that the information gathered from a user's driver's license may be stored and checked against known databases to determine if it is accurate and should be authorized. *Id.* Thus, it is my opinion that providing a scanner that captures personal information from a player's driver's license instead of merely reading a unique alphanumeric data sequence is contrary to the overall operation and objective of *Bradford*'s system.

X. Conclusion

95. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

96. I declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

97. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on this 21st day of October 2019.

By: 
Wayne Rothschild

APPENDIX A

Wayne H. Rothschild

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www.linkedin.com/pub/wayne-rothschild/0/228/58b/

SUMMARY

Dynamic business executive, engineer, and prolific inventor with a history of break-through innovations relating to the casino and gaming field that have transformed the industry and provided long-term competitive advantages. Over 9 years of experience in developing, managing, and launching gaming machines through various roles spanning from Engineer to Director. Inventor with over 60 U.S. Patents, including 38 patents relating to the gaming industry. Exceptional strategist and tactician based on a unique balance of creativity and logical thinking. Capable leader, team member and individual contributor.

Extensive leadership, management and hands-on experience in sales, marketing, finance, engineering management, operations, sourcing, manufacturing, logistics, product development, legal and human resources evident from the demonstrated ability to convert innovative concepts into new corporate divisions and free-standing business.

EDUCATION

Northwestern University, Evanston, IL (2002)

MBA Kellogg Graduate School of Management

The University of Texas at Austin, Austin, TX (1989)

BS Mechanical Engineering

- Pi Tau Sigma National Honor Society; University of Texas Posse Honorary Organization
- IBM Austin, Technology Research Project
- The University of Texas Lacrosse Team

KEY ACCOMPLISHMENTS

- Grew **WMS Gaming** from early stage (team of 12) to international company of 1,000 by creating breakthrough products.
- Created **Neat-Oh! International**, designed and sold more than 10 million units in 83 countries on 6 continents.
- Repositioned **General Binding Corporation** with significantly improved products, quality and margins.
- Developed the re-sealable packaging for **Kraft Foods** that transformed packaged refrigerated foods industry wide.
- Amassed **60+ US Patents** (issued and pending) providing sustainable competitive advantages and royalty streams.

EXPERIENCE

Independent Consultant, Northfield, IL, April 2018-Present

- Providing clients business strategy including innovation, marketing, product development, and project management.
- Expert witness, researcher, and strategist supporting patent infringement litigation for multiple clients and industries.

Neat-Oh! International, LLC, Northfield, IL, February 2005-August 2018

President & Chief Product Officer

- Sold the patents, trademarks, brands, product lines and inventory to several strategic buyers and closed the business.
- Founded company; raised capital; recruited staff; managed customer, supplier, bank and investor relationships.
- Accountable to a highly respected Board of Directors, investor groups, customers and consumers.
- Developed a robust organizational structure through mentoring, training, and succession planning.
- Built a world-class supply chain internationally recognized for quality, safety, accuracy and reliability.
- Designed, manufactured and sold products to thousands of accounts: i.e. Wal-Mart, Target, Costco, Tesco, Amazon, etc.
- Delivered product to both bricks and mortar and on-line retailers via 70% FOB China and 30% domestic USA shipments.
- Sold design services and OEM manufacturing to major corporations based on recognition of expertise and capabilities.
- In-licensed the world's best toy brands (Mattel, Star Wars, LEGO) and out-licensed technology to major corporations.
- Received 120+ awards recognizing product and company excellence.

Innovation Management LLC, Northfield, IL, March 2004-December 2005

General Manager

- Created consulting firm to help commercialize intellectual property using personal network of subject matter experts.
- Serviced clients including Bose Corporation, WMS Gaming, Golden Voice Technology, and individual inventors.
- Spun-off Neat-Oh! International from Innovation Management.

WMS Gaming, Inc., Chicago, IL, June 2000-March 2004

Executive Director of New Product Development

- Recruited by WMS to invigorate the company's products and establish WMS' industry leadership position.
- Lead multi-disciplined teams to create entirely new domestic product lines and create products for international markets.

- Responsibilities included: product development, software development, firmware development, embedded systems, hardware development, product management, systems engineering, project management and advanced R&D.
- Responsible for all physical product development and technical due diligence of external technology and companies.
- Revolutionized the gaming industry with patented cutting-edge video and sound technology integrated into game play.
- Created, established and nurtured partnerships with the world's leading technology experts.
- Managed global teams (100+ staff) including software development, electrical engineering, and mechanical engineering.
- Initiated and evaluated technology licensing opportunities with Bose, Sony and others.
- Convinced management to pursue an ergonomically correct cabinet design which is credited for doubling the machine's average earnings and thereby justifying its higher selling price and margin.
- Designed incentive compensation program with cooperative and competitive features resulting in 30% increase in productivity.
- Established a Systems Engineering group to focus product development on customer requirements.
- Developed a technology which changed the way key products are designed, manufactured and serviced resulting in NPV savings of \$42 Million over 3 years.

General Binding Corporation, Director of Engineering, Buffalo Grove, IL, June 1997-June 2000

- Transformed a stale, poor quality product offering into world-class product portfolio.
- Launched 16 SKUs in first 18 months with innovative features and lower costs considerably lifting sales and margins.
- Implemented DFM, FMEA, GD&T resulting in higher quality, profits and significantly fewer warranty claim expenses.
- Responsibilities grew from directing single site to supervising engineering development at four locations across USA.
- Managed and enforced patent portfolio including optimization to save over \$100K/year in patent maintenance fees.
- Received award from the CEO of GBC for "Results Beyond Expectations."

WMS Gaming, Inc., Chicago, IL, December 1992-June 1997

Director of Technical Engineering (1995-June 1997)

- Responsible for all electrical, mechanical and project management for the creation and manufacturing release of gaming devices including slot machines, video slots, video lottery terminals and other gaming machines.
- Design and manage the incorporation of slot machine interface boards to communicate with various slot tracking systems around the world.
- Evaluate and engineer the incorporation of ticket-in ticket-out technologies into WMS products.

- Developed and launched the world's most innovative video game and slot machine platforms.
- Propelled this start-up to become a recognized player in the gaming industry.
- Promoted from Mechanical Engineering Manager to Director of Engineering.

Manager of Mechanical Engineering (1992-1995)

- Project Management of new products and resolution of engineering related issues with gaming equipment in the field.
- Manage and perform design for all mechanical design and product launch of gaming devices including cabinetry, currency acceptors, currency dispensers, printers, monitors, player tracking card readers, etc.
- Implement network interface equipment to connect and support to back-end systems in numerous gaming jurisdictions and/or at various operators.
- Prototyping and testing of gaming devices as standalone machines and as networked to central monitoring and control systems.
- Responsible for design and development of cabinetry peripherals, slot machine interface boards, networking interfaces.

Kraft Foods, Glenview, IL, December 1989-December 1992

Design Engineer

- Designed, developed, patented and deployed the manufacturing technology to launch zipper-bag food packaging.
- Authored a whitepaper resulting in funding for my creation, operation and management of a laser research laboratory.
- Improved the design of high-speed manufacturing equipment benefiting manufacturing plants world-wide.
- Participated as a key team member facilitating the launch of dozens of new products and new product variations.
- Accomplishments resulted in +\$100MM in new revenues and cost savings.

LTV Aerospace and Defense, Grand Prairie, TX, 1986-1988

Co-Op Design Engineer

- Designed a gantry robot, robotic end-effectors and advanced water jet technology for work with composite materials.
- Performed aircraft structural engineering, design verification and testing under secret security clearance.

AFFILIATIONS

National Society of Professional Engineers, past member (CEs not current)

Certified Licensing Professional, CLP (CEs not current)

Nevada Gaming Control Board, past registration

PUBLICATIONS

- Authored the chapter “Commercializing the Innovation” for the book: *Business Innovation in the 21st Century*, Praveen Gupta, BookSurge Publishing, 2007. (5 star reviews on Amazon)
- Covered in approximately 100 articles including: *The Wall Street Journal*, *Good Housekeeping*, *Crain’s Chicago Business*

AWARDS AND RECOGNITIONS

- Received ‘Most Innovative Gaming Product’ Silver Medal by Casino Journal Magazine
- Recognized for a ‘Trend Setting Product for 2003’ by Innovation Magazine
- Recognized as WMS Gaming’s most prolific inventor

SOFTWARE

Experienced with Excel, Word, Outlook, PowerPoint, Salesforce, various ERP, MRP, accounting and CAD systems, etc.

APPENDIX B

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- 19 [7,819,737](#)  [Gaming machine having an enhanced game play scheme](#)
- 20 [7,722,466](#)  [Integration of casino gaming and non-casino interactive gaming](#)
- 21 [7,641,555](#)  [Method and apparatus for automated configuration of gaming machine operating parameters](#)
- 22 [7,618,323](#)  [Gaming machine system having a gesture-sensing mechanism](#)
- 23 [7,597,209](#)  [Multipurpose storage device and method](#)
- 24 [7,585,220](#)  [Gaming machine with superimposed display image](#)
- 25 [7,513,830](#)  [Extendable display for a gaming machine](#)
- 26 [7,510,475](#)  [Gaming machine with superimposed display image](#)
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- 28 [7,458,890](#)  [Reel spinning slot machine with superimposed video image](#)
- 29 [7,452,280](#)  [Gaming machine with common top box substructure](#)
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- 31 [7,367,886](#)  [Gaming system with surround sound](#)
- 32 [7,364,508](#)  [Gaming machine environment having controlled audio and visual media presentation](#)
- 33 [7,347,778](#)  [Gaming machine system having automatic reporting feature](#)
- 34 [D563,105](#)  [Storage bin with lid](#)
- 35 [7,320,642](#)  [Security of gaming software](#)
- 36 [7,160,187](#)  [Gaming machine with superimposed display image](#)
- 37 [6,988,945](#)  [Coin collection system for a gaming machine](#)
- 38 [D509,254](#)  [Gaming machine](#)
- 39 [6,852,022](#)  [Coin collection system for a gaming machine](#)
- 40 [6,786,818](#)  [Gaming machine with interacting symbols on symbol array](#)
- 41 [6,773,216](#)  [Binding apparatus](#)
- 42 [6,517,433](#)  [Reel spinning slot machine with superimposed video image](#)
- 43 [6,129,355](#)  [Reel device for gaming machines](#)

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IN/rothschild AND IC/wheeling

PAT. NO.

Title

- 1 [6,129,355](#)  [Reel device for gaming machines](#)
- 2 [5,558,197](#)  [Coin escalator for gaming devices](#)
- 3 [5,525,363](#)  [Cheese pouch having easy opening and reclosing characteristics](#)
- 4 [5,519,982](#)  [Pouch having easy opening and reclosing characteristics and method and apparatus for production thereof](#)
- 5 [5,456,468](#)  [Video monitor insertion and extraction mechanism for video game machines](#)
- 6 [5,431,492](#)  [Drain system for slant top video game cabinets](#)
- 7 [5,386,903](#)  [Coin fill and delivery system for gaming machines](#)
- 8 [D351,869](#)  [Video game cabinet](#)

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APPENDIX C

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PUB. APP. NO.	Title
1	20190076746 AUTONOMOUS, GRAVITY-ASSISTED MOTORIZED RACER CONFIGURED TO TRAVEL THROUGH NON-STRAIGHT TUBE SEGMENTS
2	20180185762 AUTONOMOUS, GRAVITY-ASSISTED MOTORIZED RACER CONFIGURED TO TRAVEL THROUGH NON-STRAIGHT TUBE SEGMENTS
3	20180043273 Autonomous, Gravity-Assisted Motorized Racer Configured To Travel Through Non-Straight Tube Segments
4	20170020251 MULTIPURPOSE STORAGE DEVICE AND METHOD
5	20150038227 SYSTEM, METHOD, AND APPARATUS FOR PRESENTING MEDIA IN A WAGERING GAME MACHINE
6	20140262862 MULTIPURPOSE STORAGE DEVICE AND METHOD
7	20130252708 Gaming Machine Having An Enhanced Game Play Scheme
8	20120122560 SYSTEM, METHOD, AND APPARATUS FOR PRESENTING MEDIA IN A WAGERING GAME MACHINE
9	20120006701 CONVERTIBLE STORAGE CONTAINER
10	20110011856 MULTIPURPOSE STORAGE DEVICE AND METHOD
11	20110003629 Gaming Machine Having Enhanced Game Play Scheme
12	20090321434 MULTIPURPOSE STORAGE DEVICE AND METHOD

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- 13 [20090181758 Gaming Machine With Superimposed Display Image](#)
- 14 [20090131148 GAMING MACHINE WITH SUPERIMPOSED DISPLAY IMAGE](#)
- 15 [20090117990 Gaming Machine Having An Enhanced Game Play Scheme](#)
- 16 [20090057308 CONVERTIBLE STORAGE CONTAINER](#)
- 17 [20090036198 Gaming Machine With Common Top Box Substructure](#)
- 18 [20080305868 Gaming machine system having automatic reporting feature](#)
- 19 [20080176654 Gaming machine environment having controlled audio media presentation](#)
- 20 [20080076549 Security of gaming software](#)
- 21 [20070243932 Wagering Game System Secure Identification Module](#)
- 22 [20070228651 Reel spinning slot machine with superimposed video image](#)
- 23 [20070167218 Method and apparatus for utilizing tickets to progress game play in a gaming machine](#)
- 24 [20060277805 Gaming machine with common alterable signage display](#)
- 25 [20060169691 Multipurpose storage device and method](#)
- 26 [20060169690 Multipurpose storage device and method](#)
- 27 [20060146990 Call logging notification apparatus, system and method](#)
- 28 [20060091280 Flat panel display organizer and method](#)
- 29 [20060019747 System, method, and apparatus for presenting media in a wagering game machine](#)
- 30 [20050277477 Extendable display for a gaming machine](#)
- 31 [20050197191 Method and apparatus for automated configuration of gaming machine operating parameters](#)
- 32 [20050187019 Gaming machine with an electromechanical coin sound simulator](#)
- 33 [20050181879 Gaming terminal having secondary display](#)
- 34 [20050137006 Gaming system having player-profile input feature for maintaining player anonymity](#)
- 35 [20050130737 Gaming machine having an enhanced game play scheme](#)
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- 38 [20050059457 Apparatus and method for presenting media content on a gaming device](#)
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- 41 [20040248648 Gaming machine with alterable display mechanism](#)
- 42 [20040248647 Gaming machine with alterable display feature](#)
- 43 [20040248642 Adaptable gaming machine in a gaming network](#)
- 44 [20040235570 Gaming machine with personal climate Control](#)
- 45 [20040198485 Gaming machine with superimposed display image](#)

- 46 [20040176162 Gaming machine system having automatic reporting feature](#)
- 47 [20040166940 Configuration of gaming machines](#)
- 48 [20040166937 Gaming machine system having a gesture-sensing mechanism](#)
- 49 [20040166936 Gaming machine system having an acoustic-sensing mechanism](#)
- 50 [20040162144 Communication between players at gaming terminals](#)
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