

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ACTIVISION BLIZZARD, INC.,
Petitioner,

v.

MILESTONE ENTERTAINMENT, LLC,
Patent Owner.

IPR2025-00711
Patent 11,335,164 B2

Before LINDA E. HORNER, SCOTT A. DANIELS, and
SCOTT C. MOORE, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Activision Blizzard, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”), seeking *inter partes* review of claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of U.S. Patent No. 11,335,164 B2 (Ex. 1001, “the ’164 patent”). Milestone Entertainment, LLC (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). We instituted trial on the challenged claims on all grounds in the Petition. Paper 14, 32 (“Dec.”).

Patent Owner subsequently filed a Response to the Petition (Paper 18, “Resp.”), Petitioner filed a Reply (Paper 20, “Reply”), and Patent Owner filed a Sur-reply (Paper 21, “Sur-reply”). We held a hearing on June 23, 2026, and a transcript is of record. Paper 31 (“Tr.”).

After considering the parties’ arguments and evidence, we find that Petitioner has shown by a preponderance of the evidence that all challenged claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of the ’164 patent are unpatentable. *See* 35 U.S.C. § 316(e). Our reasoning is explained below.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies Activision Blizzard, Inc., which is a wholly owned subsidiary of Microsoft Corporation, as the real party in interest for the Petitioner. Pet. 1–2. Patent Owner identifies Milestone Entertainment, LLC as the real party in interest for the Patent Owner. Paper 3 (Patent Owner’s Mandatory Notices), 1.

B. Related Matters

The parties identify the following related matter involving the '164 patent: *Milestone Entertainment, LLC v. Activision Blizzard, Inc.*, No. 2:24-cv-04056-AB-MRW (C.D. Cal.). Pet. 2; Paper 3, 1.

The parties also identify that Petitioner filed petitions for *inter partes* review against the following “related family members.” Pet. 2; Paper 3, 1.

U.S. Patent No.	IPR
8,529,336	IPR2025-00708
10,650,635	IPR2025-00709
10,825,294	IPR2025-00710
11,393,279	IPR2025-00712
11,501,607	IPR2025-00713 ¹

C. The '164 Patent

The '164 Patent is titled “Systems for Implementing Enhanced Gaming and Prizing Parameters in an Electronic Environment” and was issued May 17, 2022, based on an application filed November 8, 2021, that asserts the benefit of a series of provisional and nonprovisional applications, the earliest of which was filed September 1, 2004. Ex. 1001, codes (22), (45), (54), (63).

The '164 Patent discloses a system “for effecting user experience in an electronic game environment through use of virtual currency or vCoins.” Ex. 1001, Abstr. “A vCoin will typically be a multiplier times the

¹ The Board denied institution in IPR2025-00713. IPR2025-00713, Paper 15 (PTAB Oct. 16, 2015).

corresponding numeric monetary value, e.g., one dollar equals 500 vCoins.” *Id.* at 14:28–30. “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.” *Id.* at 14:38–40.

The system may receive a number of mandated parameters that must be achieved by the system as a whole. *Id.* at 5:24–26. These parameters “form the boundary constraints or boundary conditions for the game.” *Id.* at 5:28–30. For example, mandated 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.* at 5:30–34. Once the system receives the mandated parameters, it then “selects among dependent variable parameters to implement game play and prizing in a way that achieve[s] the mandated parameters.” *Id.* at 5:37–40. Examples of variable parameters include “the game selection itself” and “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.* at 6:1–9.

The ’164 patent describes that “[i]n certain games, the entertainment may be broadly divided into a first game play phase and a second prizing phase.” Ex. 1001, 7:20–22. “Game play in the first phase may be of any manner, whether predetermined, or where the player’s actions determine the game outcome, or a combination of the two, such as in a hybrid game.” *Id.* at 7:25–28. “The game play in the second phase may then apply the prizing parameters such that the correct prizing payouts are achieved, irrespective of the results from the first phase of game play.” *Id.* at 7:28–32.

Figure 1, reproduced below, is a diagrammatic block diagram of one implementation of the system. Ex. 1001, 16:7–8.

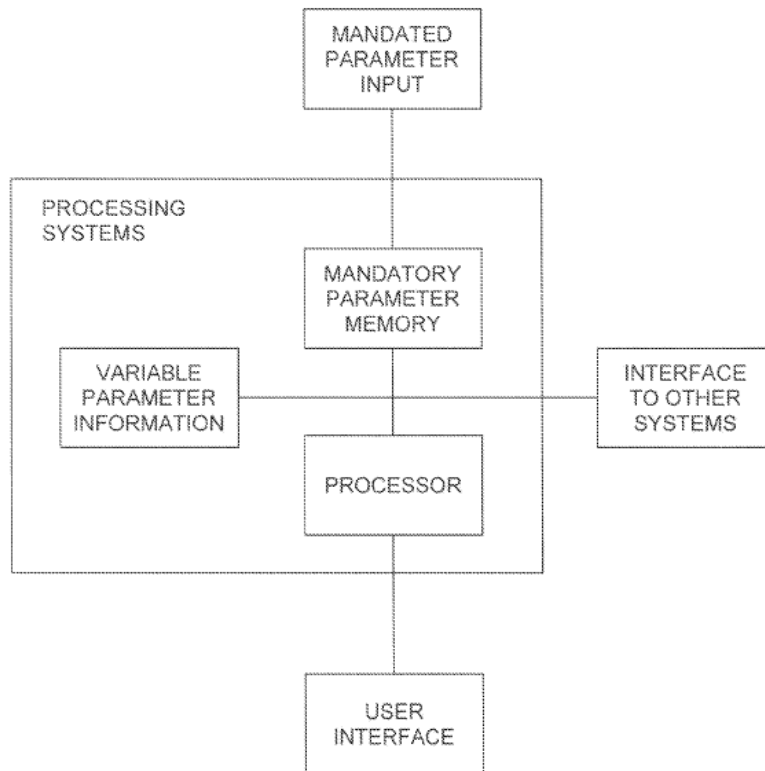


FIG. 1

Figure 1 shows inputs to and outputs from processing systems of the invention. Ex. 1001, 16:14–26. As shown, mandated parameters may be input into the processing system. *Id.* at 16:14–15. These mandated parameters are then stored within the processing system, such as in the mandated parameter memory. *Id.* at 16:15–17. The processor receives and implements the mandated parameters by selecting among the possible variable parameters, which are stored in variable parameter memory, for implementation. *Id.* at 16:17–21. The output of the processor is then provided to the user via the user interface. *Id.* at 16:21–23.

The system's memory may contain data elements including remote user registration information such as a player's citizenship information, email address, physical address, local bank account information, and social security number or other national identification number. Ex. 1001, 36:4–20, Fig. 20D. The system may also contain in memory additional data elements related to whether the person is a frequent player, and if so, the number of points they possess. *Id.* at 36:20–23. The system may also store payment information of the remote user, including the form of compensation, such as cash, airline miles, or further game play, and a player's vCoin amounts. *Id.* at 36:24–25, 46:49, Fig. 20E.

The system may also track data on game play, such as number of players and user specific play to use as inputs for a decision engine to optimize the prizing structure for a desired end goal, e.g., maximizing game play and therefore sales of game plays. *Id.* at 45:32–42.

The system may also contains a prizing system, such as a multilevel prizing system in which a player is presented with the opportunity to purchase, such as via the wager, a better prize level, such as a higher guaranteed prize. Ex. 1001, 44:52–53, 45:1–3, Fig. 26.

D. Challenged Claims

The Petition challenges claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29. Pet. 1. Of these, claim 1 is independent. Ex. 1001, 47:17–58. Claim 1 is reproduced below with the limitation identifiers referenced in the Petition (*see* Pet. 79–80).

1. 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:

[1.a] a server including memory to process and store:

[1.a.i] registration user information of the remote users,

[1.a.ii] payment information of the remote users, and

[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,

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

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

[1.c.i] the game play information including game play with virtual money (vCoins),

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

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

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

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

[1.d] memory storing account information which varies through game play,

[1.e] a decision engine for performing game analytics on the game play, and

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

Ex. 1001, 47:17–58.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable based on the following grounds (Pet. 4–5):

Ground	Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
1	1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	103(a)	Kelly ³
2	2, 4	103(a)	Kelly, Paulsen ⁴
3	1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	103(a)	Walker ⁵ , Schneier ⁶

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. Because the challenged patent has an effective filing date before March 16, 2013, we refer to the pre-AIA version of § 103.

³ Ex. 1005, US 8,172,683 B2, issued May 8, 2012, filed March 23, 2006 (“Kelly”). Petitioner asserts that Kelly qualifies as prior art under 35 U.S.C. §§ 102(a) and 102(e). Pet. 4 n.1.

⁴ Ex. 1007, US 2005/0153768 A1, published July 14, 2005, filed January 8, 2004 (“Paulsen”). Petitioner asserts that Paulsen qualifies as prior art under 35 U.S.C. § 102(e). Pet. 4 n.2.

⁵ Ex. 1006, US 2004/0002369 A1, published January 1, 2004, filed May 1, 2003 (“Walker”). Petitioner asserts that Walker qualifies as prior art under 35 U.S.C. §§ 102(a) and 102(e). Pet. 5 n.3. Walker qualifies as prior art on its face. *See* Dec. 30–31.

⁶ Ex. 1008, US 5,970,143, issued October 19, 1999, filed August 8, 1996 (“Schneier”). Petitioner asserts that Schneier qualifies as prior art under 35 U.S.C. §§ 102(a) and 102(e). Pet. 5 n.4.

Petitioner relies on the declaration testimony of Mr. Dwight Crevelt (Ex. 1003) in support of the asserted grounds. Patent Owner relies on the declaration testimony of Mr. John Szeder (Ex. 2013).

III. ANALYSIS OF THE ASSERTED GROUNDS

A. Legal Standards

Petitioner's asserted grounds of unpatentability are based on obviousness under 35 U.S.C. § 103(a). Section 103(a) forbids issuance of a patent when:

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 person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a) (2008); *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements,” but “must instead articulate

specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

B. Level of Ordinary Skill in the Art

There is no evidentiary dispute about the level of ordinary skill in the art.⁷ Based on the testimony of Mr. Crevelt, we determine that a person of ordinary skill in the art would have had at least a bachelor’s degree in computer science or computer engineering, with at least three years of experience in game development. Pet. 12 (citing Ex. 1003 ¶¶ 100–103). Additional experience could substitute for less education, and additional education could likewise substitute for less experience. *Id.*

We determine that the level of ordinary skill in the art adopted above is consistent with the level of technical understanding and competence reflected in the ’164 patent Specification and the asserted prior art references, based on our review of the record.

C. Claim Construction

In an *inter partes* review, claim terms “shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

⁷ “Patent Owner does not dispute Petitioners’ [*sic*] proposed level of skill.” Resp. 8.

Petitioner argues that it is not necessary for the Board to provide an express construction for any claim term because the Petition “establishes the prior art meets each claim limitation under any reasonable construction.” Pet. 13. Patent Owner similarly submits that “[t]he Board need not construe any terms at this stage, because under any reasonable construction of the claim terms, the prior art fails to disclose or suggest the claimed features.” Resp. 8–9. Patent Owner notes, however that “it has relied on the plain meaning of ‘frequency of play’ in Claim 7.” *Id.* at 9.

We agree that no explicit claim construction is necessary for this decision because, even were we to adopt Patent Owner’s proffered plain meaning of “frequency of play,” Petitioner has demonstrated that the prior art renders obvious this claim limitation. To the extent the parties’ arguments raise any implicit issues of claim construction, we address those issues within the context in which they are raised in our analysis below.

D. Ground 1: Obviousness over Kelly

Petitioner contends claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of the ’164 patent would have been obvious over Kelly. *See* Pet. 13–36. Patent Owner presents arguments in the Response addressing Petitioner’s challenges only to dependent claims 7 and 9. Resp. 9–14.

As explained below, Petitioner has shown by a preponderance of the evidence that the claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 would have been obvious over Kelly.

i. Kelly

Kelly discloses a prize redemption system and method for use with one or more game apparatuses. Ex. 1005, 4:12–13. Players may win “prize

credits” by playing a game on the game apparatus, preferably in exchange for monetary input, and may then select a prize from a prize menu offered on the game apparatus. *Id.* at 4:14–39. The number of prize credits provided to the player is based on an outcome of the game and optionally accumulated from previous games. *Id.* at 4:29–31.

The operator can provide cost and prize data and a desired level of profitability, and prize credit costs for prizes are automatically determined. *Id.* at 4:17–20; 5:5–19. For instance, the operator has the ability to adjust prizes and determine desired prize costs and win ratios. *Id.* at 5:4–5. The prize cost is determined in accordance with the operator’s desired amount of payout, which 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 return to players in the form of the prizes won using prize credits. *Id.* at 5:22–28. “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.” *Id.* at 5:58–62.

Figure 1 of Kelly is reproduced below.

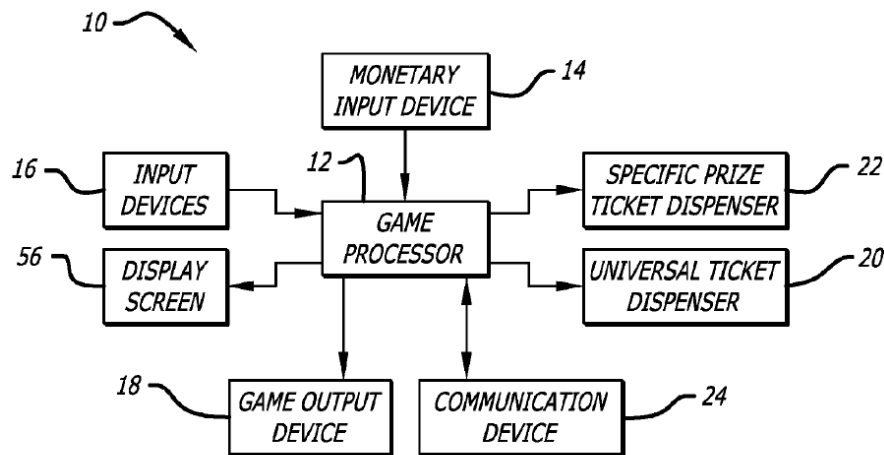


FIG. 1

Figure 1 is a diagrammatic illustration of a game apparatus. Ex. 1005, 7:20. Figure 1 shows that game unit 10 includes game processor 12, monetary input device 14, player input device(s) 16, game output device(s) 18, universal ticket dispenser 20, specific prize ticket dispenser 22, and communication device 24. *Id.* at 9:10–14. Game processor 12 implements (e.g., controls, influences, coordinates, monitors, calculates, and the like) the functions of game unit 10 during a game process and includes several input and output functions. *Id.* at 9:15–18. Game processor 12 controls the game apparatus by receiving inputs from a player, from other game apparatuses, from a server, from a progressive bonus apparatus, and from other sources. *Id.* at 9:18–22. Game processor 12 also controls output signals to update the game process when appropriate. *Id.* at 9:22–23.

In addition, game processor 12 controls a redemption system by calculating when prizes are awarded, calculating and updating prize lists and prize costs, and other functions. *Id.* at 9:23–27. Game processor 12 preferably includes a digital microprocessor or a similar controller device,

and other electronic components, which are described in further detail with respect to FIG. 1a. *Id.* at 9:27–30.

Figure 1a is reproduced below.

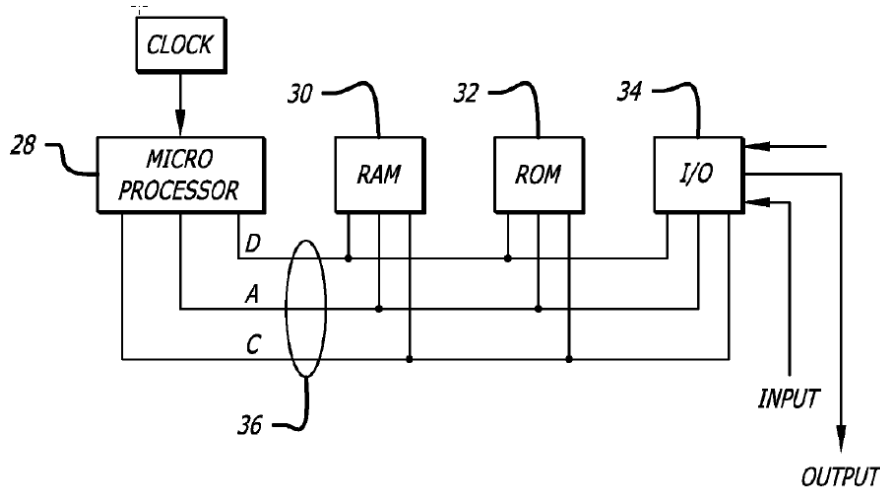


FIG. 1a

Figure 1a is a block diagram of a preferred game processor 12 of Figure 1. Ex. 1005, 15:34–35. 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. *Id.* at 15:35–38. Game processor 12 preferably includes a microprocessor 28, random access memory (RAM) 30, read only memory (ROM) 32, and input/output (I/O) 34. *Id.* at 15:38–40. In addition to the components of game processor 12, the control system can include operator-configurable controls to provide selectable game functions such as the amount the score is incremented for certain player actions or commands, the amount of prize credits awarded based on the score, the speed and/or difficulty of game play, the conditions required to add to the game score and/or receive universal or specific prize tickets, the conditions required for a player to win a progressive bonus award or enter a tournament, and the like. *Id.* at 16:13–21. These factors can affect

the difficulty of the game and the amount of tickets/vouchers received by players. *Id.* at 16:21–23.

Figure 4 of Kelly is reproduced below.

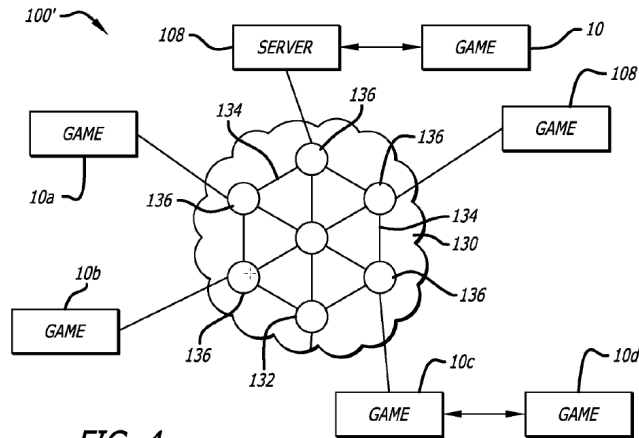


FIG. 4

Figure 4 shows networked game system 100 that includes a wide-area network, such as the Internet 130, and game units 10 coupled to the Internet 130 with a suitable communication device. *Id.* at 21:21–24, 21:41–43.

Figure 9a of Kelly is reproduced below.

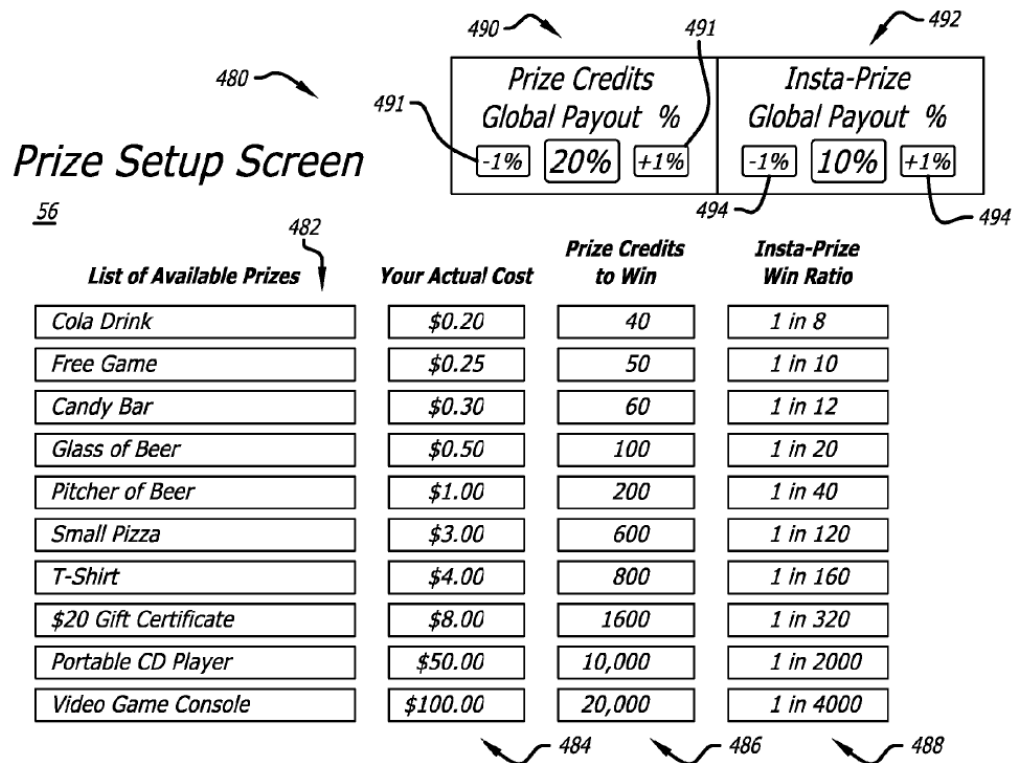


FIG. 9a

FIG. 9a is a diagram of an example of prize table 480 that is displayed to the operator. Ex. 1005, 34:64–66. Prize table 480 includes list of available prizes 482; actual cost 484 of each prize in list 482; prize value 486 for each prize in list 482 in terms of prize credits or tickets; specific prize win percentage 488 for each prize in list 482, prize credit global payout percentage 490; and specific prize win percentage 492. *Id.* at 35:9–14. The operator can use this interface to adjust prize characteristics for that game unit and any linked game units. *Id.* at 35:1–2.

ii. Claims 1, 2, 4–6, 11–13, 15, 19, 23, 24, and 29

Petitioner contends that Kelly discloses or renders obvious a gaming system, as recited in independent claim 1, comprising a server (108) including a storage device (memory) that processes and stores player registration information, payment information of the remote users, mandated parameters (global payout percent and win ratios) and variable parameters (game structure or prizing structure), a communication interface (24), a game processor coupled to memory (shown in Figure 1a) generating game play information including information on game play with virtual money (vCoins), implementing a first set of variable parameters to provide a first game play experience, and modifying the variable parameters to provide a second game play experience, memory (storage device of server 108), a decision engine (a process for providing statistical information), and a prizing system (prize award operation 1112 and redemption operation 1114). Pet. 14–30.

As to the dependent claims, Petitioner contends that Kelly further discloses: player's club information including information on non-cash amounts (player's account that tracks player credit) (claims 2 and 4), using a

threshold value to change from the first game play experience to the second game play experience (adjusting a “hit ratio”) (claim 5), a threshold that includes information on length of time played (modifying prizing structure based on game duration) (claim 6), a first set and a second set of variable parameters that are set based on a comparison of game play information across multiple users devices (modifying gaming structure based on average prize credits awarded across game units and/or modifying prizing structure based on frequency of players using game units to achieve a specific prize goal) (claim 11), game play information that includes: information on a loss (whether a player has been eliminated from a tournament) (claim 12), information on a series of outcomes (game credits and prize credits accrued from previous outcomes of game play) (claim 13), information on the first game play event (information on an initial game play event based on user input) (claim 15), and information tracking the user’s play (statistical information on player’s score and time it took to play a game) (claim 19), a prizing structure that is modified by: modifying bonus prizing (progressive bonus award) (claim 23) and awarding non-cash prizes (tickets, prize credits, and game credits) (claim 24), and a decision engine that tracks user specific play (the number of times a player has played) (claim 29). Pet. 30–36.

Patent Owner does not contest Petitioner’s showing that Kelly renders obvious the subject matter of claims 1, 2, 4–6, 11–13, 15, 19, 23, 24, and 29. Resp., *passim*; Tr. 50:4–13.⁸ We have reviewed Petitioner’s arguments and

⁸ Patent Owner argued in its Preliminary Response that Kelly does not disclose limitations [1.c.iii] and [1.c.v]. Prelim. Resp. 10–12. In our Institution Decision, we did not find these contentions persuasive based on the initial record. Dec. 20–24. Patent Owner has not presented these or any other arguments contesting Ground 1 as to claim 1 in its Response. Resp.,

the evidence and, based on that analysis, we find that Petitioner has shown by a preponderance of evidence that Kelly renders obvious the subject matter recited in these claims.

We now turn to the obviousness disputes regarding dependent claims 7 and 9.

iii. Claim 7

Claim 7 depends from claim 5, which depends from claim 1. Ex. 1001, 48:1–4, 8–10. Claim 5 recites “wherein the game processor utilizes a threshold value to change from the first game play experience to the second game play experience.” *Id.* at 48:1–4. Claim 7 recites “wherein the threshold value includes information on frequency of play.” *Id.* at 48:8–10.

1. Parties’ Contentions

As to claim 5, Petitioner submits that Kelly’s game processor can modify the gaming structure to make the game play more difficult by using the number of games played as a threshold value. Pet. 30 (citing Ex. 1003 ¶ 229; Ex. 1005, 40:19–39). Petitioner also submits that Kelly’s game processor can modify the prize structure to have game play reflect different play probabilities by using the duration of games or by tracking the

passim; Tr. 50:4–13. Patent Owner waived these arguments by not raising them in the Response. Paper 15 (Scheduling Order), 10 (cautioning that “any arguments not raised in the response may be deemed waived.”); *In re NuVasive*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016) (holding that patent owner’s failure to proffer an argument during the trial phase as instructed in the scheduling order constitutes waiver).

number of plays since a last win to achieve desired odds. *Id.* at 31 (citing Ex. 1003 ¶ 230; Ex. 1005, 11:16–27, 38:55–39:7, 36:63–37:9).

As to claim 7, Petitioner contends that Kelly “discloses modifying the gaming structure based on the number of times played (*information on frequency of play*).” Pet. 31 (citing Ex. 1003 ¶¶ 232–233; Ex. 1005, 40:19–39).

Patent Owner argues that claim 5 narrows limitation [1.c.v.] of claim 1 “by requiring that the determination to implement a second game play experience by providing a second, modified set of variable parameters is based on a threshold value, such as a ‘predefined number of wins of certain amounts per week’ — *i.e.*, a win rate or frequency.” Resp. 9–10 (citing Ex. 1001, 7:7–16). Claim 7 further specifies “that this threshold value ‘includes information on frequency of play.’” *Id.* at 10 (citing Ex. 2013 ¶ 64).

Patent Owner argues that “[c]laim 7 is not met by a disclosure of ‘the number of times played,’” because the plain meaning of “frequency” in claim 7 “requires that the threshold value include information on how often play occurred over some period of time or across a given sample, *i.e.*, a rate.” Resp. 11. Patent Owner relies on the ’164 patent’s description of “frequency of wins” as “(1:X),” and a dictionary definition of “frequency” to support this plain meaning of the term. *Id.* at 11–12 (citing Ex. 1001, 6:35–40; Ex. 2014). Patent Owner submits that the number of times a game has been played provides no information about the frequency of play because “a game could be played 100 times, over the course of a day, a week, a year, or ten years, with the specific period indicating a high frequency (100 times in one day) or very low frequency (100 times in ten years) of play.” *Id.* at 12 (citing Ex. 2013 ¶ 66); Sur-reply 9–10.

In reply, Petitioner argues that Kelly’s adjustable “hit ratio” is a threshold value used to indicate when a specific prize goal is met, and Kelly discloses adjusting the “hit ratio” to the actual win frequency determined from the players’ use of the game unit by storing the number of games played and the number of times the specific prize goal was met.

Reply 11–12 (citing Ex. 1005, 40:35–39). Petitioner argues that “[j]ust as in the ’164 Patent, the allocation of prizes in [Kelly] is based on the number of games played,” which “includes information on frequency of play.” *Id.* at 12.

Petitioner also contends that Kelly discloses the limitation of claim 7 under Patent Owner’s proffered plain meaning of “frequency of play” as “a rate” because “the number of times played is how often play occurred across a given sample — namely, the lifetime of a game.” Reply 12–13. Petitioner submits that the “hit ratio” itself “must be determined over a specific period of time or sample which a certain number of games have been played.” *Id.* at 13 (citing Ex. 1005, 40:26–30; Ex. 1003 ¶ 233; Ex. 2012 (Crevelt Deposition Transcript), 22:9–14) (equating “hit ratio” with “hit frequency”). Thus, the “hit ratio” includes information on the number of games played over that specific period of time. *Id.* at 13. Specifically, Petitioner explains that hit ratio is calculated using information on the frequency of play according to the following formula:

$$\text{hit frequency} = \frac{\frac{\text{number of wins}}{\text{sample (X)}}}{\frac{\text{number of games played}}{\text{sample (X)}}} = \frac{\text{frequency of wins (1:X)}}{\text{frequency of plays (1:X)}}$$

Id. at 13.

Patent Owner responds that this asserted rate “is pure attorney argument, unsupported by any evidence” because “Petitioner identifies no disclosure in Kelly that the ‘number of times played’ is a frequency because it is necessarily across the ‘life of the game,” or that this is how a POSITA would understand ‘frequency of play.’” Sur-reply 10.

Patent Owner further argues that Kelly’s “hit ratio” does not disclose a threshold value based on information on frequency of play because it discloses a “win frequency,” not a “frequency of play.” Sur-reply 10–11 (citing Ex. 1005, 40:19–39; Ex. 2013 ¶ 67). Patent Owner submits that “hit ratio” “measures only how many games were played, out of all games played, in which a specific prize was won” but “provides no information regarding how *frequent* the game play was.” *Id.*

Patent Owner further submits that because the “formula” for “hit ratio” presented in the Reply was not presented in the Petition, “it should be disregarded.” *Id.* at 11. Patent Owner contests the formula, arguing that Kelly’s 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” that is represented by a simple fraction of wins divided by games played. *Id.* (citing Ex. 1005, 40:19–21).

$$\frac{\textit{Wins}}{\textit{Games played}}$$

2. Analysis

We begin by examining the claim language itself, which recites the threshold value includes “information on a frequency of play.” The claim

does not require that the threshold value equals frequency of play, but that it merely includes *information on* a frequency of play.

We next look to the Specification of the '164 patent for a description of a threshold value including information on a frequency of play. The '164 patent describes a threshold including “a win rate or frequency” as follows:

In one implementation, prize structure may implement a prize structure which includes a predefined number of lower tier prizes. The allocation of prizes may be defined in various ways, such as by defined numbers and values of prizes for a given number of plays, system-wide for every Nth play, or based on the number of plays for a particular player, or groups of players, or based on the source of the play, such as a given retailer, or by the geographic region of the source of the play, or based on a time parameter, such as a predefined number of wins of certain amounts per week.

Ex. 1001, 7:7–16. This description does not use the term *frequency of play* or provide an explicit example of a threshold value that is a measure of how often play occurred over some period of time or across a given sample. *Id.* The passage discusses the number of plays for a particular player, which could refer to the number of plays for that player over the entire time the player has played the game, or the number of plays for a particular player over some other sample range (e.g., a day, a week, a month).

The '164 patent also describes “frequency of wins” as the ratio of “(1:X).” *Id.* at 6:35–39. We understand that X in the ratio of 1:X can be any measure (e.g., any sample) and is not limited to a period of time. Tr. 29:5–10 (describing that in talking about a frequency of wins, “what the patent says is a frequency is 1 over x, 1 over something, a rate.”). Thus, a frequency of wins is expressed as a ratio of one win out of a specific sample, and we do not interpret “frequency” in this context to necessarily be measured over a period of time. Patent Owner acknowledges this understanding in its own

proposed plain meaning of “frequency of play” to include information on how often play occurred “across a given sample.” Resp. 11.

We do not find informative Patent Owner’s reliance on a computer dictionary’s definition of “frequency,” i.e., “The measure of how often a periodic event occurs, such as a signal going through a complete cycle.” Resp. 12 (citing Ex. 2014 (Microsoft Computer Dictionary)). The claim term at issue here pertains to information on a frequency of *play*, and play is not necessarily a periodic event. Rather, game play can occur sporadically. Thus, Patent Owner’s proffered computer dictionary definition of “frequency” is not helpful in the context of gaming and game play described in the ’164 patent.

With this understanding of “information on a frequency of play,” and for the reasons provided below, we find that Kelly’s “hit ratio” includes information on a frequency of play. Kelly explains that the “hit ratio” can be adjusted based on, for example, the number of actual wins out of the total number of games played, as measured after the first 100 game plays. Kelly, 40:33–39 (describing the system storing the number of games played and the number of times the specific prize goal was hit and adjusting the hit ratio across the sample after the first 100 game plays); *see also* Ex. 1003 ¶ 233 (discussing Kelly’s disclosure of adjusting the “hit ratio”). Thus, Kelly’s “hit ratio” is the ratio of the number of wins that occurred across the sample (e.g., all time, or first 100 games, etc.) as compared to the total number of games played across the same sample. Kelly’s “hit ratio” includes information on a frequency of play by including in this calculation the total number of games played across the sample.

Specifically, we agree with Petitioner that Kelly’s disclosure of “hit ratio” is measured over a period of time or across a given sample.⁹ We credit Petitioner’s expert, who explains that Kelly’s “hit ratio” is also referred to as a “hit frequency” because it must be determined over a specific period of time or across a sample during which a certain number of games have been played. Reply 13 (citing Ex. 1003 ¶ 233 (discussing win frequency); Ex. 2012 (Crevelt deposition transcript), 22:9–14 (describing that win ratio is sometimes referred to as a hit frequency)).

Patent Owner’s expert agrees that Kelly’s “hit ratio” is calculated across a sample, in arguing that “hit ratio” measures “how many games were played, *out of all games played*, in which a specific prize was won.” Resp. 12–13 (citing Ex. 2013 ¶ 67) (emphasis added). It is implicit in a sample of “all games played” that the sample is taken over the life of the game (i.e., since the game was first played). Thus, for example, when the “hit ratio” is calculated over the life of the game, it includes information on a frequency of play, i.e., the number of games played across the life of the game.

For these reasons, Petitioner has met its burden to show by a preponderance of the evidence that Kelly discloses the threshold as recited in claim 7.

⁹ As such, we adopt the formulaic expression of “hit ratio” presented in Petitioner’s Reply. Reply 13. As to Patent Owner’s argument that the formula provided in the reply is a new argument (Sur-reply 11), we find that Petitioner’s arguments are simply a formulaic expression of Petitioner’s understanding of Kelly’s “hit ratio,” as discussed in Mr. Crevelt’s declaration (Ex. 1003 ¶ 233), and are responsive to Patent Owner’s arguments about how “hit ratio” is calculated, which were presented on pages 12–13 of the Response. Thus, these arguments are within the proper scope of reply.

iv. Claim 9

Claim 9, like claim 7, also depends from claim 5, which depends from claim 1. Ex. 1001, 48:1–4, 14–16. Claim 9 recites “wherein the threshold value includes information on the number of plays since a last win.” *Id.* at 48:14–16.

1. Parties’ Contentions

As to claim 9, Petitioner contends that Kelly “discloses modifying the prize structure by tracking the number of plays since a last win to achieve desired odds (*the number of plays since a last win*).” Pet. 31 (citing Ex. 1003 ¶¶ 234–235; Ex. 1005, 36:63–37:9).¹⁰

Patent Owner argues that Kelly’s disclosure in column 36, line 63 through column 37, line 9, “[a]t most . . . could be read to disclose that over the course of 2,999 games, leading up to the 3000th game, the system knows it has awarded two video consoles to players.” Resp. 14 (citing Ex. 2013 ¶ 70). Patent Owner submits that this passage “does not disclose the number of plays since a last win of a video console — *i.e.*, when the last video console was awarded as a prize — or the number of plays since a win of any other prize, as the claim requires.” *Id.*

In reply, Petitioner elaborates on the portions of Kelly’s disclosure discussed in paragraph 235 of Mr. Crevelt’s declaration, in which Mr. Crevelt explains that for prizes to be awarded according to the

¹⁰ Paragraph 234 of Mr. Crevelt’s declaration discusses the cited portion of Kelly. Ex. 1003 ¶ 234 (citing Ex. 1005, 36:63–37:9). Paragraph 235 of Mr. Crevelt’s declaration elaborates on this cited portion and also discusses additional portions of Kelly’s disclosure that precede the cited portion. Ex. 1003 ¶ 235 (discussing Ex. 1005, 36:22–23, 36:30–37, 36:50–53, 36:63–37:9).

operator's desired odds, Kelly's system tracks the number plays since a last win. Reply 14–15 (citing Ex. 1003 ¶ 235; Ex. 1005, 36:30–37).

Patent Owner responds that the “evidence and argument [presented in the Reply] was not presented in the Petition” and that Petitioner cannot incorporate by reference new arguments and evidence in a Reply based on a “bare citation to its expert's declaration (Ex1003, ¶235), which presents this contention.” Sur-reply 13 (citing 37 C.F.R. § 42.6(a)(3), which requires that “[a]rguments must not be incorporated by reference from one document into another document”). Patent Owner also argues that this passage of Kelly fails to disclose the claimed threshold value because “Kelly's system has no knowledge of the number of game plays that have occurred since a win.” *Id.* at 14 (“At most, this portion of Kelly could be read to disclose that over the course of 4,000 games, the system knows whether it has awarded a video console or not.”).

2. Analysis

We agree with Patent Owner that the example provided in column 37, lines 1–9 of Kelly, when read in a vacuum, does not demonstrate by a preponderance of the evidence that Kelly's threshold includes information on the number of plays since a last win. Specifically, Kelly's disclosure that “every 8,000 games, two video consoles are to be awarded” and that “[i]f 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” does not demonstrate that Kelly's system must track the number of plays since a last win. Ex. 1005, 37:1–6. Rather, to fulfill this example, Kelly's system simply needs to track the number of games in total (e.g., 3,000) and the number of prizes already awarded in total

(e.g., 2 consoles), but the system does not need to know information on the number of plays since the last win (e.g., the number plays since the second console was awarded). *See* Tr. 15:17–16:11 (Petitioner’s counsel agreeing that this example may not necessarily track the number of plays since a last win).

Thus, we must consider whether Petitioner may rely on the additional discussion of Kelly from paragraph 235 of Mr. Crevelt’s declaration that was explicitly included in the Reply and whether that portion of Kelly provides adequate evidence of the threshold of claim 9.

We agree with Petitioner that paragraph 235 of Mr. Crevelt’s declaration elaborates on the basis for the opinion set forth in paragraph 234. Tr. 16:1–8, 48:19–49:2. Specifically, in paragraph 234, Mr. Crevelt testifies that Kelly 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*).” This is all that is stated in paragraph 234, which cites to column 36, line 63 through column 7, line 9 of Kelly as support.¹¹ Paragraph 235 then provides the context for the opinion in paragraph 234, by describing the disclosure in Kelly immediately preceding the cited portion and elaborating on the cited portion of Kelly. Specifically, paragraph 235 describes Kelly teaches that higher-valued prizes are won less often than lower valued prizes and to ensure this, the system checks whether a sufficient number of games have occurred since the last award of the large prize prior to awarding another large prize. Ex. 1003 ¶ 235 (citing Ex. 1005, 36:22–23, 36:30–37). Paragraph 235 then discusses in detail the cited

¹¹ Paragraph 234 also cross-cites to Section X.A.1. of the Crevelt declaration, which addresses how Kelly discloses the preamble of claim 1, from which claim 7 depends.

portion from paragraph 234, explaining that Kelly describes a system that creates a “best fit” of prizes awarded according to the operator’s desired odds, and Kelly provides an example in which every 8,000 games, two video consoles are to be awarded. *Id.* (citing Ex. 1005, 36:63–37:9).

Petitioner cited to both paragraphs 234 and 235 in its Petition, although it cited only to column 36, line 63 through column 7, line 9 of Kelly specifically. Pet. 31. We find, however, that in this context in which the Petition clearly cited both paragraphs of the expert declaration for support, and paragraph 235 of the declaration provides elaboration on the opinion provided in the paragraph 234, Patent Owner was sufficiently put on notice of the basis of Petitioner’s position such that it was not outside the scope of a proper reply to further elaborate on Petitioner’s position relying on the specific portions of Kelly cited in paragraph 235. Patent Owner had an opportunity to cross-examine Mr. Crevelt on his declaration, including the content in paragraphs 234 and 235, and had an opportunity to respond to Petitioner’s reply arguments in Patent Owner’s Sur-reply. Sur-reply 14 (addressing the substantive arguments as to Kelly’s disclosure in column 36, lines 30–37).¹²

Turning to the disclosure in Kelly, we find that Petitioner has shown by a preponderance of evidence that Kelly discloses the threshold of claim 9. Kelly describes a system in which “a small pizza will be won every 120 games played, while a video game console will be won every 4000 games.” Ex. 1005, 36:23–25. To implement this prizing structure, “the system preferably examines each prize in turn, starting with the most valuable prize

¹² Patent Owner did not request any relief from the Board prior to filing its Sur-reply, such as requesting additional pages or requesting that a portion of the Reply be stricken from the record.

in the specific prize list 482.” *Id.* at 36:26–28. Kelly describes that “whenever a game is played on game unit 10, a game counter is incremented.” *Id.* at 36:29–30. Then, Kelly explains that the system checks how many games have been played since the last console was awarded:

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.

Id. at 36:30–37. Because Kelly’s system maintains a counter of the number of games played, and analyzes whether it is the 4,000th game since a console was awarded, Kelly’s system uses a threshold value that includes information on the number of plays since a last win to change from the first game play experience (i.e., winning the most valuable prize) to the second game play experience (i.e., winning a less valuable prize).

For these reasons, Petitioner has shown that Kelly discloses the threshold value of claim 9.

E. Ground 2: Obviousness over Kelly and Paulsen

In Ground 2, Petitioner contends that the combined teachings of Kelly and Paulsen render obvious claims 2 and 4. Pet. 36–40. Petitioner submits that to the extent Kelly’s player account is not player’s club information or information on non-cash amounts, a person having ordinary skill in the art would have been motivated to implement these features based on the teachings of Paulsen. *Id.* Specifically, Petitioner asserts that Paulsen teaches player tracking cards and player tracking programs including player tracking points. *Id.* at 38–40 (citing Ex. 1007 ¶¶ 8, 9, 49). Petitioner argues that a

person having ordinary skill in the art would have been led to add these features to Kelly's system to provide a more detailed view of tracking play, which would allow for rewarding patronage and engagement. *Id.* at 36–37, 39–40 (citing Ex. 1003 ¶ 264; Ex. 1007 ¶ 10).

Paulsen discloses a “gaming machine bonusing method utilizing a player tracking card.” Ex. 1007, code (54). Paulsen discloses that player tracking programs and player tracking cards were used in the art to provide rewards, or “comps,” to players based on 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.* ¶ 8. These rewards were intended to maintain a player's interest in additional game play during a visit and provide loyalty incentives to players. *Id.* at ¶ 9.

“In some instances, a wearable RFID ‘club card’ can automatically provide player tracking information to a gaming machine.” Ex. 1007, ¶ 48. “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 identified by the player tracking card.” *Id.*, ¶ 49. “The player tracking points generated by the player tracking server are stored in a memory of some type on the player tracking server.” *Id.*

Patent Owner does not contest Petitioner's showing that Kelly in view of Paulsen renders obvious the subject matter of claims 2 and 4 or Petitioner's motivation to combine. Resp., *passim*; Tr. 50:4–13. We have reviewed Petitioner's arguments and the evidence and, based on that

analysis, we find that Petitioner has shown by a preponderance of evidence that Kelly in view of Paulsen renders obvious the subject matter recited in claims 2 and 4.

F. Ground 3: Obviousness over Walker and Schneier

Petitioner contends that the combined teachings of Walker and Schneier render obvious claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of the '164 patent. *See* Pet. 40–77. Patent Owner presents arguments in its Response addressing Petitioner's challenges only as to dependent claims 7 and 9. Resp. 9–14.

As explained below, Petitioner has shown by a preponderance of the evidence that claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 would have been obvious over Walker in view of Schneier.

i. Walker

Walker describes a method and apparatus for modifying a game based on results of game plays. Ex. 1006, code (54). In Walker, a first set of game results obtained over a plurality of game plays is evaluated to determine whether the results satisfy one or more predetermined criteria, such as whether a calculated standard deviation is within a desired standard deviation range. *Id.*, Abstr. If the results do not meet the criteria, Walker discloses adjusting one or more parameters of the game such that a second set of results is expected to satisfy the predetermined criteria. *Id.*; *see also id.* ¶¶ 22, 188.

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). *Id.* ¶ 28. In one example, a

game parameter could be adjusted to allow a player to have a higher number of lives to increase the player's possibility that a novice or low skilled player will win a prize or achieve a high score. *Id.* Other examples of game parameter variables include parameters that affect the difficulty of a game, a number of points awarded for an event achieved, a player's ability to score points, rules of a game, duration of a game, etc. *Id.* ¶¶ 155–166.

Figure 2, reproduced below, shows an example embodiment of system 200.

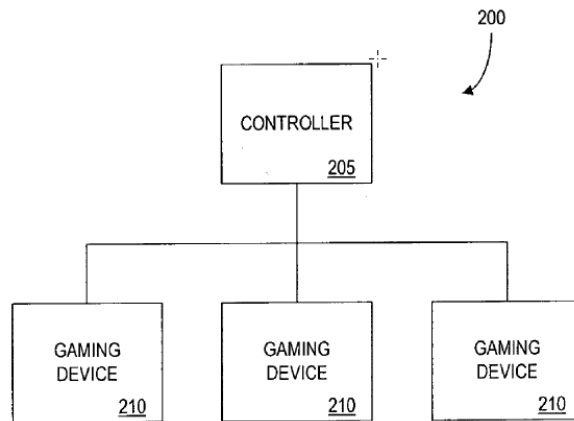


FIG. 2

Figure 2 is a block diagram of system 200 that includes controller 205 in one or two-way communication with gaming devices 210 via a network such as the Internet or another communications link. Ex. 1006 ¶ 51.

Figure 3, reproduced below, shows an example of controller 205. *Id.*

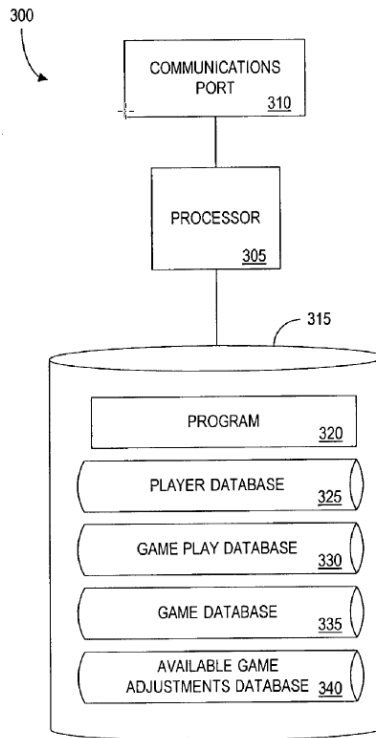


FIG. 3

Figure 3 depicts embodiment 300 of controller 205 comprising processor 305, communications port 310, and memory 315, which stores program 320 for controlling processor 305, player database 325, game play database 330, game database 335, and game adjustments database 340. Ex. 1006 ¶¶ 64–65, 67. Controller 205/300 may comprise a server computer operable to communicate with client devices, i.e., gaming devices 210, where controller 205/300 is operative to manage system 200 and execute the methods of the invention. *Id.* ¶ 62.

Walker discloses that exemplary methods of accepting payment by a payment system of gaming device 400 include: (1) “receiving hard currency” via a coin or bill acceptor; (2) “receiving alternate currency (e.g., a paper cashless gaming voucher, a coupon, a non-negotiable token)” via a bar code reader or other sensing means, and (3) “receiving a payment

identifier (e.g., a credit card number, a debit card number, a player tracking card number) and debiting the account identified by the payment identifier.” Ex. 1006 ¶ 89. Walker further discloses that payment can be accepted by “determining that a player has performed a value-added activity.” *Id.*; *see also id.* ¶ 197 (describing using “money and other currencies” to pay the entry fee for a game play).

Player database 325 may include fields to house player information, including player identifier 505, player name 510, player contact information 515, financial account identifier 520, and skill level 525. Ex. 1006 ¶ 98, Fig. 5. Game play database 330 records, *inter alia*, result achieved 630 during game play and the difficulty of the game played. *Id.* ¶¶ 110, 116, Fig. 6A. Game database 335 may include desired standard deviation 706 for a game and calculated standard deviation 712 of scores calculated at the last evaluation. *Id.* ¶ 141, Fig. 7A. Finally, game adjustments database 340 includes, *inter alia*, available adjustment 840 for a particular game and anticipated change in standard deviation 806 of results of game plays if the adjustment is made. *Id.* ¶ 177, Fig. 8. This variety of possible adjustments may be made by controller 205 to a particular game when, for example, controller 205 determines that one or more predetermined criteria associated with the particular game has not been satisfied by a set of results for the game. *Id.* ¶ 178.

ii. Schneier

Schneier relates generally to authentication of computer-generated game or test results. Ex. 1008, 1:13–14. Specifically, Schneier discloses game credits can be earned during game play. *Id.* at 63:23–29. Schneier also

discloses that players can use credits during game play to purchase items. *Id.* 63:12–19, 63:37–38, 63:8–11.

iii. Claims 1, 2, 4–6, 11–13, 15, 19, 23, 24, and 29

Petitioner contends that Walker discloses or renders obvious a gaming system, as recited in independent claim 1, comprising a server (controller 205/300) with a memory for processing and storing registration user information, payment information of the remote users, mandated parameters (predetermined criteria) and variable parameters (adjusting one or more game parameters or what prize is awarded), a communication interface (communication port), a game processor (processor 305) generating game play information including information on game play with virtual money (credits), implementing a first set of variable parameters to provide a first game play experience, and modifying the variable parameters to provide a second set of variable parameters providing a second game play experience, a memory (controller's memory storing multiple databases), a decision engine (software module for calculating statistics related to the game play), and a prizing system (using prize parameters to award prizes to players as a result of game play). Pet. 40–65. Petitioner asserts that to the extent Walker does not expressly disclose the use of credits during game play (i.e., virtual money), Schneier discloses this limitation of claim 1 (credits earned during game play that can be used to purchase items). *Id.* at 56–57. Petitioner submits that the use of virtual money credits during game play, as disclosed in Schneier, would have been a natural extension of the credits in Walker. *Id.* at 40–41, 56–57.

As to the dependent claims, Petitioner contends that Walker further discloses or renders obvious: player's club information including

information on non-cash amounts (frequent gamer account that tracks player points) (claims 2 and 4), using a threshold value to change from a first game play experience to the second game play experience (determining if predetermined criteria are met) (claim 5), threshold includes information on length of time played (comparing total time spent playing to predetermined criteria) (claim 6), a first set and a second set of variable parameters that are set based on a comparison of game play information across multiple users devices (calculating a variance or standard deviation of a selected set of results) (claim 11), game play information that includes: information on a loss (whether a specific game play resulted in no prize) (claim 12), information on a series of outcomes (series of game outcomes for various players, games, etc.) (claim 13), information on the first game play event (information collected on the first life/round of several lives/rounds) (claim 15), and information tracking the user's play (information on results of users' game plays) (claim 19), a prizing structure that is modified by: modifying bonus prizing (changing the number of bonus items available, changing the formula for bonus points awarded at the end of a round, or activating bonus features) (claim 23) and awarding non-cash prizes (products or services) (claim 24), and a decision engine that tracks user specific play (deciding which sets of game play information should be selected for analysis where the selected set of results comprises all game plays played by a particular player) (claim 29). Pet. 65–68, 70–77.

Patent Owner does not contest Petitioner's showing that Walker in view of Schneier renders obvious the subject matter of claims 1, 2, 4–6,

11–13, 15, 19, 23, 24, and 29. Resp., *passim*; Tr. 50:4–13.¹³ We have reviewed Petitioner’s arguments and the evidence and, based on that analysis, we find that Petitioner has shown by a preponderance of evidence that Walker in view of Schneier renders obvious the subject matter recited in these claims.

We now turn to the obviousness of dependent claims 7 and 9 in dispute.

iv. Claim 7

1. Parties’ Contentions

As to claim 7, Petitioner contends that Walker discloses the threshold value includes information on frequency of play because it “discloses that the threshold value may represent total time spent playing, which itself provides information on how often a game is played” and it “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.” Pet. 68 (citing Ex. 1006 ¶ 245; Ex. 1003 ¶¶ 339–341). Petitioner also submits that Walker discloses the threshold value includes information on

¹³ Patent Owner argued in its Preliminary Response that Walker was not prior art to the claimed invention. Prelim. Resp. 13–18. In our Institution Decision, we found that Patent Owner had not provided sufficient evidence to show that Walker is not prior art. Dec. 31. Patent Owner has not repeated these assertions in its Response and has not provided any further evidence to support an argument that Walker is not prior art to the claimed invention. Resp., *passim*; Tr. 50:4–13. Patent Owner waived these arguments by not raising them in the Response. Paper 15 (Scheduling Order), 10 (cautioning that “any arguments not raised in the response may be deemed waived.”); *In re NuVasive*, 842 F.3d at 1380–81 (holding that patent owner’s failure to proffer an argument at trial as instructed in the scheduling order constitutes waiver).

frequency of play based on Walker’s disclosure of a predetermined threshold that represents a desired variance or standard deviation of a selected set of results, where 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.” Pet. 68–69 (citing Ex. 1006 ¶ 236, 249, 251–258; Ex. 1003 ¶ 341).

Patent Owner argues that neither the total time spent playing nor the number of lives lost, nor questions answered correctly provides information about the frequency of play. Resp. 16–17 (citing Ex. 2013 ¶¶ 73–74).

Petitioner replies that Walker discloses a predetermined criteria may be a predetermined minimum threshold of 10 game plays in a one[-]week period, which is information on frequency of play. Reply 17–18 (citing Ex. 1006 ¶¶ 236, 248–249, 267; Ex. 1003 ¶ 341). In other words, Petitioner submits that “Walker describes a data set comprising ‘all game plays played during a specific period of time’” and “[s]uch a threshold value, then, would directly provide *information on the frequency of play*.” *Id.* at 21 (citing Ex. 1006 ¶¶ 236, 267; Ex. 1003 ¶ 341).

Patent Owner responds that a number is not equivalent to a rate, which is required by the plain meaning of the claim term “frequency of play.” Sur-reply 17–19 (citing Ex. 1001, 6:28–33). Patent Owner also argues that the passage in paragraph 236 of Walker relied on by Petitioner “describes how the tracked game play results that will be compared to a threshold value will be selected; it does not describe a threshold value that includes information on the frequency of play.” *Id.* at 17–18 (citing Ex. 2013 ¶ 75). Patent Owner also argues that Petitioner “misdescribes Walker’s disclosure” and there is “no discussion of ‘10 game plays in a one[-]week period’ in Walker, let alone a predetermined criteria.” Sur-reply 15. Patent

Owner submits that the relied-upon sections of Walker describe what period of time will be used to select a set of game results that will then be compared to some threshold value. *Id.* at 16–17.

2. Analysis

For the reasons that follow, we find that Petitioner has met its burden to show Walker discloses the threshold value of claim 7. Walker defines a set of results using selection criteria, such as all game plays played in the last week, and then compares aspects of those results (e.g., the number of lives lost, a total time spent playing, or a number of questions answered correctly) against gaming predetermined criteria and adjusts the game based on the determination of whether the predetermined criteria are satisfied. Walker ¶¶ 188, 236, 245, 249. Reading these paragraphs in combination, when the results selection criteria is all games played in the last week, as described in paragraph 236, then the total time spent playing across this sample of selected results as described in paragraph 245 of Walker is the total time spent playing over the last week. *See* Ex. 1003 ¶¶ 340–341 (describing that the set of results (e.g., defined by all game plays played in the last week) includes more elements (e.g., more total time spent playing) the more frequently the game is played). As such, the set of results that includes information on the total time spent playing over the last week is a threshold value that includes information on frequency of play.

For these reasons, Petitioner has met its burden to show that Walker discloses the threshold value of claim 7.

v. *Claim 9*

1. Parties' Contentions

As to claim 9, Petitioner contends, that Walker discloses the threshold value includes information on the number of plays since a last win because it discloses “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.’” Pet. 69 (citing Ex. 1006 ¶ 236). Petitioner submits that a person having ordinary skill in the art “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*).” *Id.* at 69–70 (citing Ex. 1003 ¶ 343; Ex. 1006 ¶¶ 245, 265); *see also* Reply 21–24 (citing Ex. 1006 ¶ 198 to show that Walker uses “advertisement” to describe marketing-related activities). Petitioner further asserts that Walker discloses the threshold value includes information on the number of plays since a last win because it discloses “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).’” Pet. 70 (citing Ex. 1006 ¶ 265); Reply 24.

Patent Owner acknowledges that paragraph 265 of Walker describes that “a player ‘achieves’ or ‘gets to’ a next game level,” and argues that “[g]etting to ‘level 3 of the game within two consecutive game plays’ does not disclose any information about the number of plays *since a last win*.” Resp. 20–21; Sur-reply 20–21. Patent Owner further contends that the disclosure in paragraph 265 “has nothing to do with any threshold value used to determine the selection of game play parameters” and that “[i]t merely discloses prizing conditions.” Sur-reply 22.

2. Analysis

For the reasons that follow, we find that Petitioner has met its burden to show Walker discloses the threshold value of claim 9. At the outset, we do not find adequate support in Walker to find by a preponderance of the evidence that “promotion” as used in the context of paragraph 236 refers to promotion to a next level, as opposed to promotion referring to marketing of a game. *See* Resp. 19–20 (“Walker never describes advancing to a next level of a game as a ‘promotion.’”).

Walker discloses, however, using a threshold value based on a number plays since a last win. Specifically, Walker describes that in one or more embodiments, each of the one or more predetermined criteria must be satisfied to avoid adjustment of the game. Walker ¶ 264. Walker also describes that a first prize may be awarded corresponding to a first range of scores, and a second prize may be awarded corresponding to a second range of scores. *Id.* ¶ 265. Walker then describes, “In another embodiment, a prize may be awarded if a player achieves a particular event or 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).” *Id.* Within this context, we understand Walker to describe changing the prizing structure based on a threshold value that contains information on the number of game plays since the player last achieved a particular level of the game, i.e., the player won the game. This disclosure is sufficient to show that Walker discloses the threshold value including information on the number of plays since a last win.

For these reasons, we find that Petitioner has met its burden of showing that Walker discloses the threshold value of claim 9.

IV. CONCLUSION

Petitioner has shown, by a preponderance of the evidence, that claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of the '164 patent are unpatentable.¹⁴

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	103	Kelly	1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	
2, 4	103	Kelly, Paulsen	2, 4	
1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	103	Walker, Schneier	1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	
Overall Outcome			1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, 29	

V. ORDER

Accordingly, it is:

ORDERED that Petitioner has shown that claims 1, 2, 4–7, 9, 11–13, 15, 19, 23, 24, and 29 of U.S. Patent 11,335,164 B2 are unpatentable; and

¹⁴ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

FURTHER ORDERED that, because this is a Final Written Decision, parties to this proceeding seeking judicial review of our Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2025-00711
Patent 11,335,164 B2

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