

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FANDUEL, INC. and DRAFTKINGS, INC.,
Petitioner,

v.

INTERACTIVE GAMES LLC,
Patent Owner.

Case IPR2017-01532
Patent 9,355,518 B2

Before KEN B. BARRETT, PATRICK R. SCANLON, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

FanDuel, Inc. and DraftKings, Inc. (collectively “Petitioner”) filed a Petition (Paper 3, “Petition” or “Pet.”) seeking an *inter partes* review of claims 9, 11–13, and 21 of U.S. Patent No. 9,355,518 B2 (“the ’518 patent”). We, initially, instituted a trial to determine whether claims 9, 11–13, and 21 are unpatentable on some but not all of the Petition’s challenges. Paper 11 (“Institution Decision” or “Inst. Dec.”).¹

Accordingly, Patent Owner filed a Response (Paper 16, “PO Resp.”), and Petitioner filed a Reply to the Response (Paper 23, “Pet. Reply”). These briefs address the initially instituted challenges.

During the trial, the U.S. Supreme Court decided *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018). In light of SAS and Office guidance², we modified the Institution Decision, to institute on all of the Petition’s challenges. See Paper 20. Petitioner then waived all of the initially non-instituted challenges and Patent Owner agreed to this waiver. See Paper 21, 3, 4–5; Paper 22.

¹ The Petition, as filed on June 8, 2017, was accompanied by Exhibits 1001–1025. Later, on June 20, 2017, Petitioner filed “updated” versions of Exhibits 1002, 1011, 1012, and 1013. As in the Institution Decision, we cite herein to the updated versions. See Inst. Dec. 2 n.1.

² “Guidance on the impact of SAS on AIA trial proceedings” (Apr. 26, 2018), accessible at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial> (last accessed Oct. 2, 2018) (“[a]t this time, if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition,” and “for pending trials . . . the panel may issue an order supplementing the institution decision to institute on all challenges raised in the petition”).

An oral hearing was held, for which the transcript was entered into the record (Paper 31, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 9, 11–13, and 21 of the ’518 patent. Based on the record before us, Petitioner has shown, by a preponderance of the evidence, that claims 9, 11–13, and 21 of the ’518 patent are unpatentable.

II. BACKGROUND

A. *Real Parties in Interest and Related Proceedings*

Petitioner identifies FanDuel, Inc., FanDuel Limited, and DraftKings, Inc. as the real parties in interest. Pet. 1; Paper 9, 1. Patent Owner identifies Interactive Games LLC as the real party in interest. Paper 6, 2. The parties identify several U.S. District Court litigations as matters that would affect, or be affected by, a decision in this proceeding. Pet. 1; Paper 6, 2; Paper 9, 1–2.

B. *The ’518 Patent*

The ’518 patent discloses a gaming system in which participants may use a mobile device to play games under the control of a central server. Figure 9 of the ’518 patent, for example, is reproduced below.

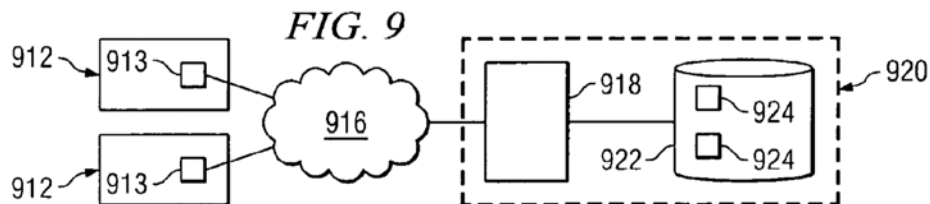


Figure 9 illustrates two users 912, 912 using respective gaming communication devices 913 to communicate wirelessly with server 918 of

gaming service provider 920, such as a casino. *Id.* at 1:35–37, 5:53–60, 6:61–7:8. Devices 913 may be mobile phones, personal data assistants, or computers. *Id.* at 5:40–45. Use of device 913 and server 918 permits user 912 to engage in (including wager on) traditional gambling activities such as slot machine games and poker. *Id.* at 3:31–49.

Server 918 maintains database 922 of user profiles 924. *Id.* at 7:10–16. Each user profile 924 corresponds to one user 912, and specifies “*user preferences, activities, habits, location, identity, etc.*” *Id.* at 7:26–34 (emphases added). The stored user preferences may concern the gaming services provided to the user, and “may be at least partially determinative of gaming presentation, gaming configuration, screen or display configuration,” and the like. *Id.* at 7:41–49. Thus, user profile 924 “may indicate the last type of game played by a user prior to a user logging off from the system,” so that “[w]hen the user logs back on, a query may indicate that the last game played by the user was blackjack.” *Id.* at 10:9–14. A user profile 924 may be updated in response to the occurrence of various events, such as for example an action by the user, including the user arriving at a location, the user selecting a gaming activity or service, and the like. *Id.* at 8:63–9:29, Fig. 10.

C. The Challenged Claims

The ’518 patent contains twenty-five claims. Petitioner challenges only claims 9, 11–13, and 21. Claim 9 illustratively recites:

9. An apparatus for supporting multiple users in electronic gaming, the apparatus comprising:
at least one processor; and

a memory electronically coupled to the at least processor and having software stored thereon that when executed by the at least one processor directs the at least one processor to:

establish for a user of the apparatus a user profile on a data storage device, wherein the user accesses the apparatus via an electronic device;

receive via a communications network from the electronic device location data of the electronic device, wherein:

- the electronic device comprises sensor for detecting location,

- the electronic device obtains the location data from the sensor, and

- the electronic device communicates the location data via the communications network;

recognize an occurrence of an event;

update the user profile in response to the event;

- wherein to recognize the occurrence of the event comprises to determine, based on the location data, an existence of the user in a particular location, and

- wherein to update the user profile in response to the event comprises to store the particular location; and

based on determining the existence of the user in the particular location, initiate a gaming session, wherein to initiate the gaming session includes to communicate via the communications network information to the electronic device, wherein the information causes the electronic device to present via a display of the electronic device a gaming environment to the user or to present via the display to the user a modified gaming environment that indicates to the user a last gaming activity of a plurality of gaming activities accessed by the user during a prior gaming session, a determination as to whether to display the gaming environment or the modified gaming environment being based on whether there is or is not a stored indication of a last

one of the plurality gaming activities accessed by the user during the prior gaming session.

Ex. 1001, 27:66–28:38. Claims 11–13 each depend directly or indirectly from claim 9. *Id.* at 28:44–61. Claim 21 is an independent claim, and recites an apparatus similar to the apparatus of claim 9. *Id.* at 29:61–30:38.

D. Asserted Grounds of Unpatentability

Following SAS, Petitioner asserts the challenges identified below, all under 35 U.S.C. § 103, to claims 9, 11–13, and 21 of the '518 patent. See Pet. 3–4; Inst. Dec. 6, 28; Paper 20; Paper 21, 3, 4–5; Paper 22.

References	Claim Challenged
Vuong ³ and Harkham ⁴	9
Vuong, Harkham, and LeMay ⁵	11
Vuong, Harkham, and the knowledge of a person of ordinary skill in the art	12
Vuong, Harkham, the knowledge of a person of ordinary skill in the art, and LeMay	13
Koza ⁶ and Harkham	21

³ Ex. 1003, U.S. Patent Pub. No. 2003/0003997 A1, pub. Jan. 2, 2003.

⁴ Ex. 1004, U.S. Patent Pub. No. 2002/0094869 A1, pub. July 18, 2002.

⁵ Ex. 1005, U.S. Patent No. 7,384,339 B2, iss. June 10, 2008.

⁶ Ex. 1006, WO 01/68207 A1, pub. Sept. 20, 2001.

III. ANALYSIS

A. *Claim Construction*

In this proceeding, when construing the claims of the '518 patent, we use the broadest reasonable construction in light of the '518 patent specification. *See* 37 C.F.R. § 42.100(b) (2016)⁷; *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the broadest reasonable construction standard); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764 (Aug. 14, 2012).

Neither party proposes any specific claim interpretations. Pet. 10; *see generally* PO Resp. We determine no explicit claim construction of any claim term is needed to resolve the issues presented by the arguments and evidence of record. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (*per curiam*) (claim terms need to be construed “only to the extent necessary to resolve the controversy”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

B. *Obviousness over Vuong and Harkham*

Petitioner asserts claim 9 of the '518 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Vuong and Harkham. Pet. 11–37. Petitioner cites the Declaration of Mr. Garry Kitchen in support. Ex. 1009. Patent Owner opposes Petitioner’s assertions. PO Resp. 3–5, 6–

⁷ A recent amendment to this rule does not apply here, because the Petition was filed before November 13, 2018. *See* “Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board,” 83 Fed. Reg. 51340, 51340 (“DATES”).

19. Patent Owner cites the Declaration of Dr. Robert Akl in support. Ex. 2002.

We have reviewed the arguments and evidence of record. We conclude a preponderance of the evidence establishes claim 9 is unpatentable as having been obvious over Vuong and Harkham. We begin our analysis with a brief statement of the law of obviousness, then consider the level of ordinary skill in the art, then briefly summarize Vuong and Harkham, and finally address Petitioner's and Patent Owner's contentions.

1. Law of Obviousness

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter 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. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (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) objective evidence of nonobviousness, if made available in the record, which is not the case here. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. Level of Ordinary Skill in the Art

Petitioner contends a person having ordinary skill in the art pertaining to the '518 patent would have “a Bachelor of Science Degree in Electrical Engineering or Computer Engineering or equivalent,” as well as “at least two years of experience in the design and development of video

game-related hardware and software.” Pet. 10 (citing Ex. 1009 ¶ 61). Patent Owner, by contrast, proposes “at least a B.S. degree in Electrical Engineering, Computer Engineering, Computer Science or similar field,” as well as “around two years’ experience in design, development, and/or analysis of hardware and software in the mobile gaming or telecommunications industries, or equivalent.” PO Resp. 2 (citing Ex. 2002 ¶ 15).

Thus, there is a substantial amount of overlap, but also some disagreement, between the parties on this point. A first disagreement is that Petitioner would require “video-game related” experience, which Patent Owner contends is ambiguous. *Id.* at 2–3 (citing Ex. 2001, 26:12–15 and Ex. 2002 ¶ 16). A second disagreement is that Patent Owner’s proposal would encompass non-gaming “telecommunications” experience without requiring gaming experience, whereas Petitioner asserts requiring “experience developing games . . . is appropriate for a patent directed to gaming.” *Id.* at 2; Pet. Reply 20–21.

We agree with Patent Owner that Petitioner’s reference to *video* game experience, as opposed to some other computer gaming experience, is not required to achieve ordinary skill in the art pertinent to the ’518 patent. The ’518 patent is concerned principally with “a user location determination feature to prevent users from conducting transactions from unauthorized areas” in a distributed communication environment, and “a user profile feature according to which certain information regarding users of the system may be maintained.” Ex. 1001, Abstract, 1:61–2:62. At the same time, the challenged claims refer to the “display” of a “gaming environment” and “a modified gaming environment.” *Id.* at 28:27–33, 30:28–33. Nonetheless,

given the high level of generality of those claim limitations, we conclude the specific technical implementation of presenting the game on a computer screen is only a secondary consideration. *See id.* However, even if we were to accept Petitioner's position on this point, it would not affect the bases for our decision set forth below.

We agree with Petitioner that ordinary skill here requires gaming experience, and does not encompass telecommunications experience without gaming experience. While location tracking is a component of the '518 patent's claimed invention, the specifics of how such tracking occurs are only a secondary consideration, especially in the context of the presently claimed invention. *See, e.g., id.* at 14:38–16:20, 28:9–15, 30:8–20. However, even if we were to accept Patent Owner's position on this point, it would not affect the bases for our decision set forth below.

We determine a person of ordinary skill in the art pertaining to the '518 patent would have a Bachelor of Science Degree in Electrical Engineering, Computer Engineering, or a similar field. Such a person, further, would have at least about two years of experience designing and developing computer hardware and software to be used for playing games.

3. *Vuong*

Vuong discloses a casino management system that manages networked interactive gaming systems in real-time. Ex. 1003, Title, ¶¶ 3–4. Figure 6 of Vuong illustrates one embodiment of such a system, and is reproduced below.

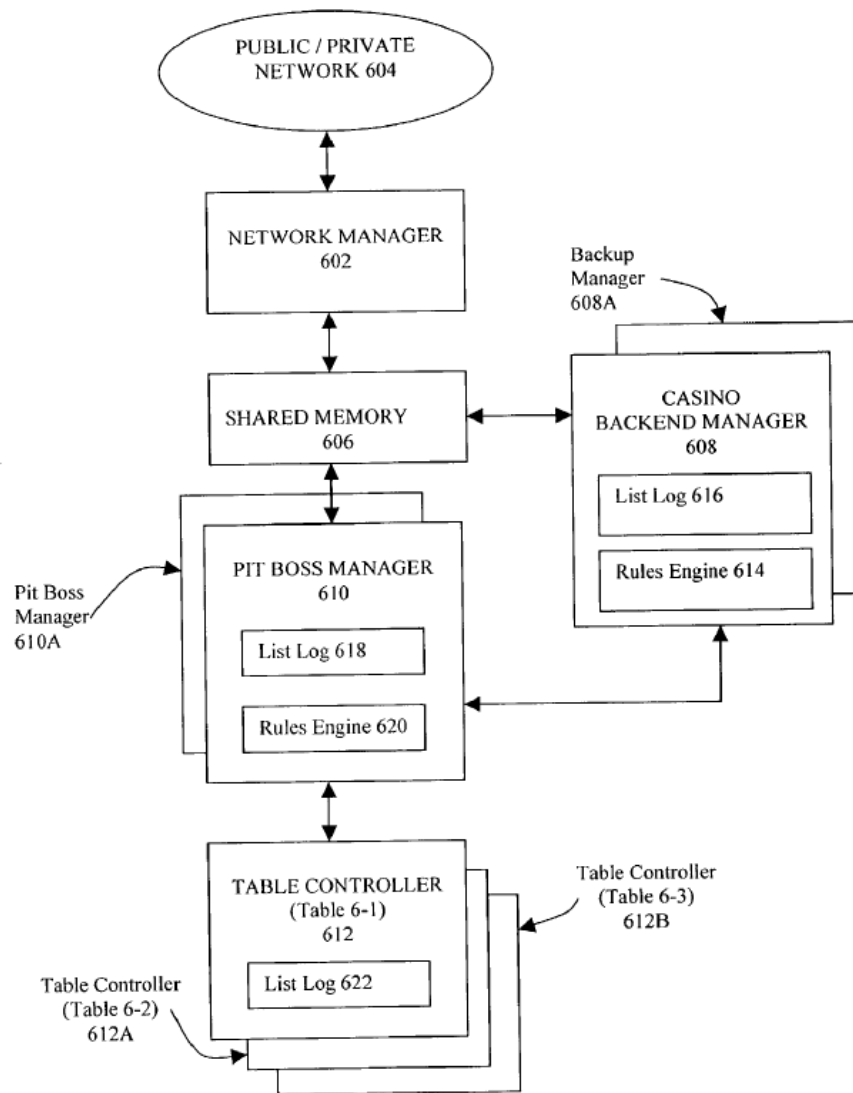


FIGURE 6

Figure 6 illustrates casino environment 600, which remote players may access via network 604, such as the Internet, using a gaming machine (not shown in Figure 6) such as a web-enabled cell phone or computer. *Id.* ¶¶ 10, 33, 54–55. Casino environment apparatus 600 includes network manager 602, shared memory 606, casino backend manager 608, pit manager 610, and table controller 612. *Id.* ¶¶ 56–58, 63. The remote player may use apparatus 600 to engage in (including wager on) traditional

gambling activities such as slot machine games. *Id.* ¶¶ 7, 10, 64. Because the remote player's gaming machine is "typically mobile," it is preferred to include "circuitry such as global positioning system (GPS)," so the casino may determine the location of the gaming machine and thereby "limit remote access to the casino to those jurisdictions where such play is legal." *Id.* ¶ 33.

The casino maintains a "personal account" for each remote player, to identify the remote player, establish a wagering stake for the player, and collect information regarding the player for marketing efforts. *Id.* ¶¶ 47–48, Fig. 5 (step 502). The player's personal account is maintained in "real-time . . . regarding his or her play." *Id.* ¶ 48. The casino also maintains a "log file" for each remote player, which lists the game(s) played by the player, the player's wagering history, statistical information regarding the player's location, and other information. *Id.* ¶ 49, Fig. 5 (step 508). Each time a remote player returns to the on-line casino for more game play, "the player's account may be re-opened so that new information may be added to the log file." *Id.* ¶ 49.

4. *Harkham*

Harkham discloses a system for providing real-time on-line casino games. Ex. 1004, Title. Figure 1 of Harkham illustrates client device 102 used by a remote player to connect to central gaming server 104 over a network, and thereby gain access to several real or virtual casinos 108, 110, 112, 114. *Id.* ¶¶ 25–26. Client device 102 may be a mobile phone or a computer. *Id.* ¶ 25. Game server 104 permits the remote player to identify a

game to be played (and wagered on) at a casino, including for example a slot machine game. *Id.* ¶¶ 27, 59–63.

Thus, game server 104 may “prompt[] the player to select a slot machine to play,” and “a record [may be] kept storing the identifier of a slot machine as the personal favorite slot machine of the player.” *Id.* ¶ 61. “For example, the *slot machine last played by the player on a previous visit to the game center* can be identified as the player’s favorite machine.” *Id.* (emphasis added).

Game server 104 may also present a “custom interface” on client device 102 “[b]ased on the [remote] player’s information.” *Id.* ¶ 64. For example, “based on the [remote] player’s previously played games at the game center, . . . one or more games can be identified as *the games mostly [sic] likely to be played* by the remote player.” *Id.* (emphasis added). “These games can be *displayed in prominent positions* in the interface presented to the player.” *Id.* (emphasis added).

5. Claim 9

a) “9. *An apparatus . . . wherein to update the user profile in response to the event comprises to store the particular location . . .*”

Petitioner contends Vuong’s gaming system incorporates each and every limitation of claim 9 preceding the final, “based on determining . . .” clause. Pet. 13–25. Petitioner maps the recited “apparatus for supporting multiple users in electronic gaming” (Ex. 1001, 27:66–67) to the combination of apparatus 600 components 602, 606, 608, 610, and 612 illustrated in Vuong’s Figure 6. Pet. 13–15 (citing Ex. 1003 ¶¶ 54, 56, 114). Petitioner maps the recited “electronic device” employed by a user to access the apparatus (Ex. 1001, 28:7–8) to Vuong’s gaming machine 134, which

may be a web-enabled cell phone or a portable computer.⁸ Pet. 18 (citing Ex. 1003 ¶¶ 33, 55).

Petitioner contends the claimed “memory” is expressly present in Vuong’s table controller 612, and inherently present in Vuong’s network manager 602, backend manager 608, and pit manager 610. Pet. 13–17 (citing Ex. 1003 ¶ 46); Ex. 1009 ¶¶ 63–68. Petitioner contends, alternatively, that it would have been obvious to include a memory in each of those components, so the components may perform their assigned tasks. Pet. 17; Ex. 1009 ¶ 69. Patent Owner does not dispute these contentions, which we find to be supported by a preponderance of the evidence.

In particular, we find Vuong discloses table controller 612 has a CPU and a memory to store instructions to be executed by the CPU. Ex. 1003 ¶¶ 46, 63–64. We find Vuong describes network manager 602, backend manager 608, and pit manager 610, as separate computer systems responsible for completing various tasks. *Id.* ¶ 54. Mr. Kitchen persuasively explains, based on that disclosure and Vuong’s description of the different tasks performed by each manager 602, 608, and 610, why a person of ordinary skill in the art would understand each manager necessarily has a memory to store instructions to be executed by a processor to perform the tasks. Ex. 1009 ¶¶ 64–68 (citing Ex. 1003 ¶¶ 54, 56, 58, 61, 77, claim 19). Further, in the alternative, and based on the same factual considerations, we determine it would have been obvious to a person of ordinary skill in the art to include a memory in each manager 602, 608, and 610, so that they can perform their disclosed tasks. *Id.* ¶ 69.

⁸ The “[a]dditional gaming machines 134” identified in Vuong’s paragraph 33 are not illustrated in Vuong’s Figures.

Petitioner next contends the claimed “user profile” corresponds to Vuong’s personal account (Ex. 1003 ¶¶ 47–48) and/or Vuong’s separately-described log file (*id.* ¶ 49). Pet. 17–21. According to Petitioner, Vuong’s personal account and log file may both be stored as part of a single player profile. *Id.* (citing Ex. 1003 ¶¶ 48–49, 58, 82–86 (describing player data 902 in Fig. 9A), 117). Patent Owner does not dispute these contentions, which we find to be supported by a preponderance of the evidence. *See, e.g.*, Ex. 1003 ¶¶ 47–49, 58, 82–85, Fig. 9A.

Petitioner contends the “event” of claim 9 corresponds in Vuong to the remote player accessing or re-accessing Vuong’s apparatus 600 using gaming machine 134, as part of which apparatus 600 recognizes that gaming machine 134 is accessing apparatus 600 from a jurisdiction where gaming is legal. Pet. 21–24 (citing Ex. 1003 ¶¶ 33, 55; Ex. 1001, 8:63–9:7, 9:18–20, 16:10–18); Pet. Reply 2. Petitioner asserts Vuong’s apparatus 600 stores the determined location of the remote player’s gaming machine 134 within the player’s log file. Pet. 24–25 (citing Ex. 1003 ¶¶ 49, 117, Fig. 5, claim 3).

Patent Owner contends in opposition that Vuong does not disclose that apparatus 600, as claimed, “update[s] the user profile in response to the event” by “determin[ing], based on the location data, an existence of the user in a particular location” and “updat[ing] the user profile in response to the event . . . to store the particular location.” Ex. 1001, 28:17–22; PO Resp. 1, 3–4, 6–13. According to Patent Owner, those claim limitations pertinently specify two requirements: “[i] storing the user’s particular location [ii] in response to a recognized event of an existence of the user in the particular location.” PO Resp. 1, 6, 7. Patent Owner contends Vuong fails to disclose storing the user’s particular location (PO Resp. 7–12), and even if Vuong

does disclose storing the user's particular location, such storage is not performed in response to Petitioner's alleged event of the user accessing apparatus 600 (*id.* at 12–13). We consider these two contentions in turn.

i) *Whether Vuong Discloses Storing the User's Particular Location in a User Profile*

Patent Owner asserts “Vuong says nothing about storing the locations of the gaming machines” of the users. PO Resp. 4; Ex. 2002 ¶¶ 29, 37. Patent Owner points out that claim 9 specifies “determin[ing] . . . an existence of the user *in a particular location*,” as well as “stor[ing] *the particular location*.” Ex. 1001, 28:17–22 (emphases added); PO Resp. 8; Ex. 2002 ¶ 37. Patent Owner contends those two limitations must refer to the *same* location, so that the second limitation has proper antecedent basis in the first limitation. PO Resp. 8. According to Patent Owner, Petitioner mistakenly “identifies *different* items in Vuong as corresponding to the ‘particular location’ in the different steps” of claim 9. *Id.* Patent Owner asserts Petitioner relies, for the first step, on Vuong's apparatus 600 determining the GPS location of the user's gaming machine 134, as disclosed in Vuong's paragraph 33. *Id.* (citing Pet. 23–24). Patent Owner asserts Petitioner then improperly relies, for the second step, on Vuong's apparatus storing different “statistical information regarding the location of the player,” as disclosed in Vuong's paragraph 49. *Id.* at 9–10 (citing Pet. 24–25). Patent Owner's view is that this “inconsistent application” by Petitioner “dooms” Petitioner's proposed obviousness. *Id.* at 10.

Further concerning Vuong's paragraph 49 disclosure that the player log file “collects *statistical information* regarding the *location* of the player” (emphases added), Patent Owner contends “the log file does not store any

particular location” as required by claim 9. PO Resp. 10 (emphasis added), 11–12; Ex. 2002 ¶ 37. According to Patent Owner, the “particular location” term in claim 9 “requires particularity of a user’s location,” which is different from “statistical information regarding the location” as disclosed in Vuong, “which would be information resulting from the processing of one or more locations and/or other data.” PO Resp. 11–12 (citing descriptions of the term “statistic” in Exs. 2008, 2009, and 2010); Ex. 2002 ¶ 37. In support of Patent Owner’s position, Dr. Akl testifies that “[s]tatistical information merely describes some characteristics of an original data set,” and Vuong’s statistical information regarding player location “could be something like the average age of players in a certain state.” Ex. 2002 ¶ 37.

In reply, Petitioner contends Vuong discloses that a player’s user profile, including the player’s log file, is opened when the player accesses the system and begins a gaming session, and the player’s profile is updated in real-time. Pet. Reply 2 (citing Ex. 1003 ¶¶ 49, 117). Petitioner’s view is Vuong therefore discloses that the statistical player location information of the log file is updated in real-time, which would involve storing each particular location from which the player accesses apparatus 600 using gaming machine 134. *Id.* at 2–3. Petitioner contends this conclusion is further supported by Vuong’s disclosures that “[t]he log files and the statistical information may be mined for information for calculating casino profit or loss information in real time,” and “[t]he accumulated statistical

information provides a comprehensive database that is useful in determining game odds and strategy simulations.” Ex. 1003 ¶¶ 50, 52; Pet. Reply 3–4.⁹

Upon consideration of the foregoing, we find Vuong discloses “the casino [i.e., apparatus 600] *may interrogate gaming machines 134 to determine the location of the gaming machine.*” Ex. 1003 ¶¶ 33 (emphasis added), 55; see Ex. 1009 ¶ 72; Ex. 2002 ¶ 29. A person of ordinary skill in the art would understand that, in order to make that determination, apparatus 600 stores the location data interrogated from gaming machine 134. We acknowledge Dr. Akl’s contrary opinion that “Vuong does not say anything about storing the locations of the gaming machines.” Ex. 2002 ¶¶ 29, 37. However, that conclusory opinion is inconsistent with the express disclosure in Vuong’s paragraph 33, and is not supported by any technical analysis of how apparatus 600 can make the disclosed determination without storing the location data interrogated from gaming machine 134. Thus, although we recognize it is Petitioner’s burden to prove unpatentability rather than Patent Owner’s burden to prove patentability (35 U.S.C. § 316(e)), we do not find Dr. Akl’s testimony to be a persuasive reading of the Vuong disclosure in paragraph 33.

⁹ Patent Owner asserts this portion of the Reply Brief improperly “rais[es] new invalidity arguments for the first time.” See Paper 26 (item #1). We, however, agree with Petitioner that this portion of the Reply Brief is not improper under 37 C.F.R. § 42.23(b). See Paper 28, 1. The Petition asserted Vuong’s disclosure of storing statistical information regarding player location supports Petitioner’s contention that Vuong stores the player’s particular location. Pet. 24–25 (citing Ex. 1003 ¶ 49). That assertion was disputed in the Patent Owner Response. PO Resp. 3–4, 11–12. Therefore, it is proper for Petitioner’s Reply to cite further disclosures of Vuong concerning Vuong’s statistical information, such as paragraphs 50 and 52, in support of the contention made originally in the Petition.

We further find Vuong discloses apparatus 600 “collects statistical information regarding the location of the player,” as part of a “log file” maintained for each remote player. Ex. 1003 ¶ 49. The log file information — including the statistical information regarding the remote player’s location — “is updated while the player plays at [apparatus 600] by logging the information to the log file.” *Id.* A person of ordinary skill in the art would understand from these disclosures that apparatus 600 updates the location data interrogated from gaming machine 134, and stores the updated data as part of the remote player’s log file, while the player plays games. A person of ordinary skill would appreciate, and Dr. Akl acknowledges, that statistical information regarding the remote player’s location is generated from a data set reflecting particular location(s) at which the remote player has been found. *See, e.g.*, Ex. 2002 ¶ 37. Dr. Akl’s speculation that the statistical information stored in the player’s log file “could be something like the average age of players in a certain state” (*id.*) is not grounded in the disclosure of Vuong. Indeed, Dr. Akl’s speculation is inconsistent with Vuong’s disclosure that apparatus 600 maintains a separate log file for each remote player, as opposed to a group of players defined by their being located in the same state. Ex. 1003 ¶¶ 49–51, Fig. 5 (step 508).

The foregoing findings, further, are consistent with Vuong’s disclosure that apparatus 600 “mine[s]” the information in a remote player’s log file “for information for calculating casino profit or loss information in real time.” Ex. 1003 ¶ 50; *see also id.* ¶ 52 (“The accumulated statistical information provides a comprehensive database that is useful in determining game odds and strategy simulations.”). These disclosures do not pertain to the remote player’s particular location(s). Nonetheless, they are consistent

with our findings above that a person of ordinary skill in the art would understand, from Vuong's paragraphs 33 and 49, that Vuong stores a remote player's particular locations as part of the player's log file, and generates statistical information from that particular location data.

For the foregoing reasons, we find a preponderance of the evidence establishes that Vuong discloses storing particular locations from which a player's gaming machine 134 accesses apparatus 600, as part of the remote player's log file.

ii) *Whether Vuong Discloses Storing the User's Location in Response to a Recognized Event*

Patent Owner contends that, even if Vuong discloses storing a user's particular location(s) in a user profile, Vuong does not disclose such storing being performed "in response to" Petitioner's alleged "event" of the player using gaming machine 134 to access or re-access apparatus 600, as required by claim 9. PO Resp. 4, 6, 7, 12–13 (citing Ex. 1003 ¶ 49); Ex. 2002 ¶¶ 30, 38–39. According to Patent Owner, Vuong instead "only discloses saving the log file as each player terminates play," or "at selected intervals throughout the day," neither of which corresponds to the player using gaming machine 134 to access or re-access apparatus 600. PO Resp. 4, 7, 12–13 (citing Ex. 1003 ¶ 49, Fig. 5 (steps 508–510)); Ex. 2002 ¶¶ 30, 38–39.

In reply, Petitioner contends Patent Owner's rebuttal improperly assumes claim 9 requires storing the user's location "*immediately* in response to recognizing the event, which [in Vuong] is the player accessing or re-accessing the system." Pet. Reply 4. According to Petitioner, claim 9 is not so limited in reciting "to update the user profile in response to the event comprises to store the particular location." *Id.* at 4–5. In Petitioner's

view, storing the player's location either at selected intervals, or at the player's termination of play, would satisfy claim 9. *Id.* Petitioner further contends "Vuong does not only save the log file (including the statistical information) when the player terminates play or at selected intervals," but rather "Vuong also updates/logs this information *while the player plays the game*," which likewise satisfies claim 9. *Id.* at 5–6 (citing Ex. 1003 ¶¶ 48, 49, 53, 117).¹⁰

We find a preponderance of the evidence establishes that Vuong discloses storing the remote player's particular locations in response to the event of the player accessing or re-accessing Vuong's apparatus 600. As already discussed above, Vuong discloses storing each particular location from which a player's gaming machine 134 accesses apparatus 600, as part of the remote player's log file. One disclosed purpose of performing that storage is "so that the casino[] [i.e., apparatus 600] may *limit remote access to the casino to those jurisdictions where such play is legal*." Ex. 1003 ¶ 33 (emphasis added). A person of ordinary skill in the art would understand that disclosure to reflect that, if a remote player attempts to access apparatus 600 to play games from a location where the requested gaming is

¹⁰ Patent Owner asserts the Reply Brief's citation of Vuong paragraphs 48, 53, and 117 improperly "rais[es] new invalidity arguments for the first time." See Paper 26 (item #2). We, however, agree with Petitioner that this portion of the Reply Brief is not improper under 37 C.F.R. § 42.23(b). See Paper 28, 1. The Petition asserted Vuong discloses storing the player's location in response to the event of the player accessing or re-accessing apparatus 600. Pet. 24–25 (citing Ex. 1003 ¶¶ 49, 117). That assertion was disputed in the Patent Owner Response. PO Resp. 12–13. Therefore, it is proper for Petitioner's Reply to cite further disclosures of Vuong, such as paragraphs 48 and 53, in support of the contention made originally in the Petition.

not legal, apparatus 600 will prevent the remote player from participating in the requested gaming. Such disclosure reflects storing the remote player's particular location in response to the remote player accessing or re-accessing apparatus 600, as Petitioner contends.

For the foregoing reasons, we find a preponderance of the evidence establishes Vuong discloses storing the remote player's particular locations in response to the player accessing or re-accessing Vuong's apparatus 600.

b) “ . . . based on determining the existence of the user in the particular location, initiate a gaming session, wherein to initiate the gaming session includes to communicate via the communications network information to the electronic device, . . . ”

Petitioner contends Vuong's apparatus 600 determines whether the remote player's gaming machine 134 is located in a jurisdiction where gambling is legal, prior to allowing access to the gaming functionality of apparatus 600, so Vuong discloses initiating a gaming session “based on” determining the remote player's location as claimed. Pet. 25–26 (citing Ex. 1003 ¶¶ 33, 55); Ex. 1009 ¶¶ 70–72. Petitioner states: “Vuong does not provide express details on what information is communicated by the network manager [602] to the gaming machine [134] when initiating a gaming session.” Pet. 26; Ex. 1009 ¶ 73.

Petitioner asserts Harkham's gaming server 104, similarly to Vuong's network manager 602, initiates a gaming session after determining the remote player's device is located in a jurisdiction where online gaming is permitted. Pet. 26–29 (citing Ex. 1004, Fig. 1, ¶¶ 25, 30–32 (describing Fig. 3, blocks 314 & 318), 64 (describing Fig. 7A, blocks 704 & 706)); Ex. 1009 ¶ 73. Petitioner contends Harkham's gaming server 104 “initiates

the gaming session by sending information including display images of the game center to the client device.” Pet. 27 (citing Ex. 1004 ¶ 64); Ex. 1009 ¶ 73. Such display images include, according to Petitioner, a “custom interface” including a listing of “games mostly likely to be played by the remote player” being “displayed in prominent positions in the interface presented to the player.” Pet. 28 (citing Ex. 1004 ¶ 64). According to Petitioner, based on Harkham, it would have been obvious to enable Vuong’s network manager 602 “to initiate a gaming session by transmitting display information to” the remote user’s gaming machine 134, including “a listing of games available in the casino environment.” Pet. 29–30 (citing Ex. 1003 ¶ 33); Ex. 1009 ¶¶ 74–76.

Patent Owner does not dispute the foregoing contentions, which we find to be supported by a preponderance of the evidence, as cited by Petitioner and summarized above.

c) “ . . . wherein the information causes the electronic device to present via a display of the electronic device a gaming environment to the user or to present via the display to the user a modified gaming environment that indicates to the user a last gaming activity of a plurality of gaming activities accessed by the user during a prior gaming session, a determination as to whether to display the gaming environment or the modified gaming environment being based on whether there is or is not a stored indication of a last one of the plurality gaming activities accessed by the user during the prior gaming session.”

In considering these final limitations of claim 9, we first summarize Petitioner’s contentions, then we summarize Patent Owner’s rebuttal, next we summarize Petitioner’s reply, and finally we analyze the parties’ arguments and evidence to reach a decision.

i) Petitioner's Contentions

Petitioner contends Vuong's apparatus 600 causes the remote player's gaming machine 134 to display a casino environment to the remote player, whereby the "remote player must select a game by selecting a table associated with the game." Pet. 30–31 (citing Ex. 1003 ¶¶ 33, 55, 75); Ex. 1009 ¶¶ 77–79. Petitioner states: "Vuong does not disclose what casino environment information is transmitted to the gaming machine [134] after initiating a gaming session." Pet. 31; Ex. 1009 ¶ 79.

According to Petitioner, it would have been obvious, based on Harkham, to enable Vuong's network manager 602 to cause gaming machine 134 to display a modified gaming environment indicating a last gaming activity of a plurality of gaming activities accessed by the remote player during a prior gaming session. Pet. 31–35; Ex. 1009 ¶¶ 80–89. Petitioner asserts Harkham's gaming server 104, similarly to Vuong's apparatus 600, causes the remote player's electronic device to display a gaming environment comprising a game center interface including a representation of games available for play by the remote player. Pet. 31–32 (citing Ex. 1004 ¶¶ 27, 64 (describing Fig. 7A, block 706)); Pet. Reply 7; Ex. 1009 ¶ 80. Petitioner contends Harkham's display, unlike Vuong's display, "is customized based on stored user information." Pet. 32 (citing Ex. 1004 ¶¶ 61, 64); Pet. Reply 7; Ex. 1009 ¶ 82. Such display customization includes, according to Petitioner, identifying the last game played by the remote player on a previous visit to the game center (citing Ex. 1004 ¶ 61), and identifying previously played games in a prominent manner (citing *id.* ¶ 64). Pet. 32–33; Pet. Reply 7–8; Ex. 1009 ¶ 82. Petitioner asserts these disclosures in Harkham would have motivated a

person of ordinary skill in the art to cause Vuong's remote gaming machine 134 "to display a modified gaming environment prominently displaying the last game[s] previously played by the user during a prior gaming session in order to improve [Vuong's] networked gaming systems in the same way." Pet. 33–34; Ex. 1009 ¶¶ 83–84.

Petitioner further relies on Mr. Kitchen's testimony that "[it] was well known in the art for many years prior to the '518 [p]atent that players often play the same game across multiple gaming sessions." Pet. 34; Pet. Reply 13; Ex. 1009 ¶ 85. Petitioner cites Mr. Kitchen's testimony that "personalizing gaming interface displays with stored player-tracking information was known since . . . the 1980s." Pet. 34; Pet. Reply 13; Ex. 1009 ¶¶ 34, 38, 85 (citing Exs. 1011, 1012, and 1017). Petitioner contends this knowledge is reflected in Vuong's collecting of remote player information in a user profile "so that the casino will know the player's preferences in terms of promotional interests *or in the particular games of chance that he or she likes to play.*" Pet. 34 (quoting Ex. 1003 ¶ 83 (emphasis added)); Ex. 1009 ¶ 83. In Petitioner's view, "the known benefits of personalized user interfaces in gaming environments," such as "increasing player satisfaction," provides an additional motivation to customize the interface of Vuong's gaming machine 134 as proposed, to permit easy access to the player's favorite game. Pet. 34–35; Pet. Reply 14; Ex. 1009 ¶ 85.

Petitioner finally contends Harkham's "decision to display a modified gaming environment is 'based on' whether or not there is prior game data in the [remote] player's profile." Pet. 35–36 (citing Ex. 1004 ¶¶ 61, 64, 74); Pet. Reply 8; Ex. 1009 ¶¶ 86–87. Petitioner asserts "Vuong teaches storing a

log file associated with the player that is updated with information from each gaming session,” including a list of specific games previously played by the player. Pet. 36 (citing Ex. 1003 ¶¶ 7, 49); Ex. 1009 ¶ 88. According to Petitioner, it would have been obvious, when modifying Vuong as described above, further “to enable Vuong’s network manager [602] to determine whether or not to modify the casino environment interface based on the presence of a log file identifying” the last game played by the remote player during a prior gaming session. Pet. 36–37; Pet. Reply 13; Ex. 1009 ¶ 89. This is so, in Petitioner’s view, because Vuong’s log file “already stores the information required to determine whether or not to present a customized casino environment to the [remote] player.” Pet. 37; Ex. 1009 ¶ 89. Petitioner reasons “if the [remote] player is new and has never played a game on the system, the log file will not include any stored indication of the game[s] last played by the player and a default representation of available casino games/tables could be displayed instead.” Pet. 37; Ex. 1009 ¶ 89.

ii) *Patent Owner’s Rebuttal*

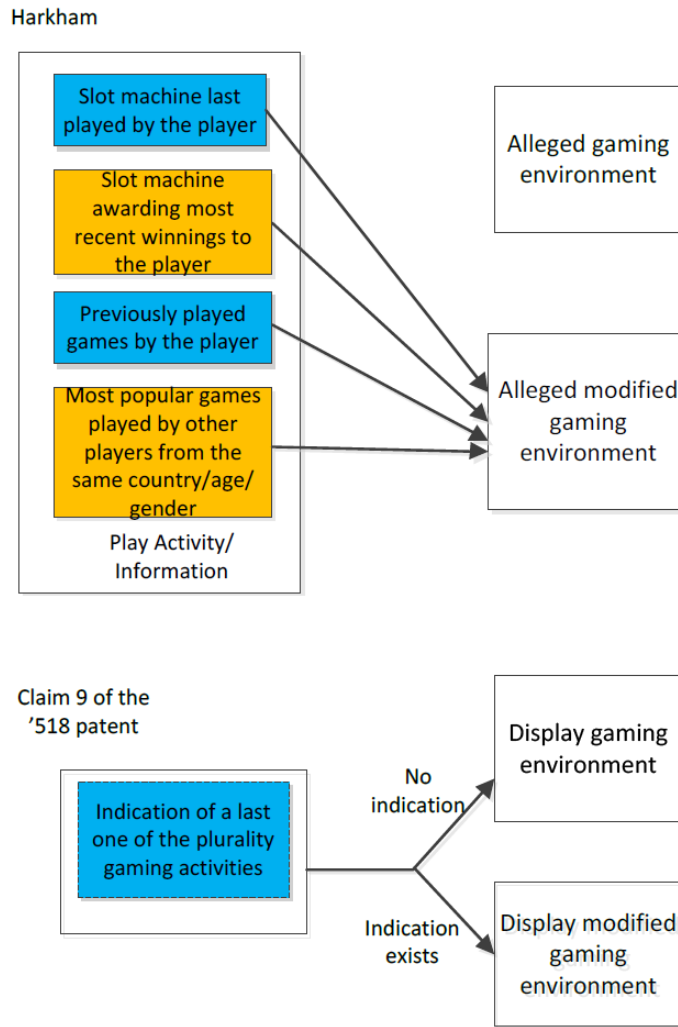
Patent Owner contends the combination of Vuong and Harkham does not render claim 9 obvious. PO Resp. 1, 6–7, 13–19. According to Patent Owner, “Harkham does not teach unmodified *and* modified environments or the need to determine which is displayed.” *Id.* at 15. Patent Owner contends Petitioner improperly relies on hindsight in alleging obviousness, by hypothesizing about what *could* have been done based on Vuong and Harkham, rather than whether a skilled artisan *would have been motivated* to make the combination at issue. *Id.* at 15 (citing Pet. 35–37), 19.

In Patent Owner’s view, Harkham would not have motivated a person of ordinary skill in the art to modify Vuong in the manner proposed by Petitioner, because Harkham discloses using the *modified* gaming environment (i.e., indicating the player’s last gaming activity during a prior gaming session) “*regardless of whether* there is or is not a stored indication of a last gaming activity accessed by a user.” PO Resp. 15–17; Ex. 2002

¶ 33. Patent Owner points out that Harkham’s paragraph 61 discloses identifying “the personal favorite slot machine of the player” as “the slot machine last played by the player on a previous visit” (the disclosure cited by Petitioner) and, in addition, as the “slot machine that awarded the most recent winnings to the player on a previous visit.” PO Resp. 16; Ex. 2002

¶ 40. Patent Owner also points out that Harkham’s paragraph 64 discloses identifying “the games mostly likely to be played by the remote player” as “based on the player’s previously played games” (the disclosure cited by Petitioner) and, in addition, as “based on the most popular games played by other players from the same country and/or of the same age and gender.” PO Resp. 17; Ex. 2002 ¶ 41.

Patent Owner provides the following illustration of Patent Owner’s views, comparing the Harkham disclosure with the scope of claim 9:



PO Resp. 17–18; Ex. 2002 ¶ 42. As described by Patent Owner, the top portion of the illustration shows “all of the ways in which the alleged modified gaming environment operates” in Harkham, which do not include displaying a (non-modified) gaming environment. PO Resp. 17; Ex. 2002 ¶¶ 42–43; *see also* Ex. 1032, 13:9–14:2 (Dr. Akl describing the illustration above as showing “Harkham has different scenarios that I color coded in blue and in orange, and all of the scenarios in Harkham would cause an alleged modifying gaming environment to be displayed” and “there is no non-modified gaming environment in Harkham”). The bottom portion of the

illustration, in comparison, shows Patent Owner’s view of “the single way in which the claimed display determination operates” to determine whether to display a (non-modified) gaming environment or a modified gaming environment. PO Resp. 17; Ex. 2002 ¶ 42.

Patent Owner contends Harkham’s two orange-colored ways of operation do not require a stored indication of a last gaming activity accessed by a user during a prior gaming session, so they can be used regardless of whether there is such an indication. PO Resp. 18; Ex. 2002 ¶ 43. Therefore, in Patent Owner’s view, Harkham would not have motivated modifying Vuong to incorporate the claimed display determination. PO Resp. 18; Ex. 2002 ¶ 43. Indeed, according to Patent Owner, one “would have avoided using the claimed determination because doing so would have unnecessarily deprived certain players of the benefits of the alleged modified gaming environment (e.g., ‘predictably enabl[ing] the player to more easily access his or her favorite game, thereby increasing player satisfaction’).” PO Resp. 18–19 (quoting Pet. 34); Ex. 2002 ¶ 44.

iii) Petitioner’s Reply

In reply, Petitioner contends Patent Owner’s argument misconstrues claim 9. Pet. Reply 9–10. In Petitioner’s view, claim 9 “do[es] not specify any requirements on what is displayed in the gaming environment if there is no stored indication of a last gaming activity played by the user during a previous gaming session.” *Id.* at 10. Petitioner asserts claim 9 simply requires that “when there is a ‘stored indication of a last one of the plurality gaming activities accessed by the user during the prior gaming session,’ then the display is modified to reflect such information.” *Id.*

iv) *Analysis*

We find Harkham discloses the display of a (non-modified) gaming environment, as well as the display of a modified gaming environment.

Claim 9 defines the difference between those two environments, as follows:

the information causes the electronic device to present via a display of the electronic device *a gaming environment* to the user or to present via the display to the user *a modified gaming environment that indicates to the user a last gaming activity of a plurality of gaming activities accessed by the user during a prior gaming session.*

Ex. 1001, 28:27–33 (emphases added). Thus, indicating a user’s last gaming activity from a prior gaming session modifies the display from a (non-modified) gaming environment to a modified gaming environment. See, e.g., Tr. 18:12–20, 46:20–47:5.

Harkham discloses the remote player’s device may display a gaming environment that indicates the remote player’s last gaming activity from a prior gaming session. See Ex. 1004 ¶ 61, Fig. 6 (remote player’s device may display “the slot machine last played by the player on a previous visit”); *id.* ¶ 64, Fig. 7A (remote player’s device may display “the games mostly likely to be played by the remote player,” “based on the player’s previously played games”). Therefore, Harkham discloses the display of a modified gaming environment.

Harkham also discloses the remote player’s device may display a gaming environment that does not indicate the remote player’s last gaming activity from a prior gaming session. See *id.* ¶ 61 (display of “the slot machine last played by the player on a previous visit” is only an “example” of “prompt[ing] the player to select a slot machine to play,” with another

example being the “slot machine that awarded the most recent winnings to the player on a previous visit”); *id.* ¶ 64 (customizing the display “based on the player’s previously played games” is only an “example” of presenting a custom interface, with another customization example being “based on the most popular games played by other players from the same country and/or of the same age and gender”). Therefore, Harkham discloses the display of a (non-modified) gaming environment.

Patent Owner’s and Dr. Akl’s characterization of Harkham as disclosing the display only of a modified gaming environment is not persuasive, because it is inconsistent with claim 9. As indicated above, claim 9 defines the “modified gaming environment” as an environment “that indicates to the user a last gaming activity . . . accessed by the user during a prior gaming session.” Ex. 1001, 28:30–33. Therefore, Patent Owner and Dr. Akl are wrong to suggest Harkham discloses display of a modified gaming environment by displaying a slot machine awarding the most recent winnings to the remote player, and/or the most popular games played by other players from a similar population demographic as the remote player, without also displaying the remote player’s last gaming activity. See PO Resp. 17–18; Ex. 2002 ¶¶ 42–43; Ex. 1032, 13:9–14:2. Instead, given how claim 9 differentiates between a (non-modified) gaming environment and a modified gaming environment, such displays in Harkham correspond to a (non-modified) gaming environment, as indicated above.

We further determine that the cited disclosures in Harkham establish a rational underpinning sufficient to support the legal conclusion of obviousness. See *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *cited with approval in KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In

particular, Harkham indicates that, in connection with “prompt[ing] the player to select a slot machine to play,” a record is kept to identify “the slot machine last played by the player on a previous visit to the game center” for display to and selection by the player. Ex. 1004 ¶ 61, Fig. 6 (step 606). This disclosure concerns the specific context of a slot machine game selection by the remote player. Nonetheless, displaying one of a plurality of slot machine games as available to be played is one example of displaying a “gaming activity” in claim 9. See Ex. 1001, 16:50–53, 17:6–15.

Moreover, Harkham also more generally indicates the remote player’s device may present a “custom interface” based on the remote player’s information. Ex. 1004 ¶ 64. Thus, “based on the [remote] player’s previously played games,” the interface presented to the remote player may prominently display “the games mostly likely to be played by the remote player.” *Id.* That disclosure ties in with the description in paragraph 61 of the last-played slot machine being chosen as an example of the player’s “favorite” slot machine. *Id.* ¶ 61.

Thus, the combined disclosures of Harkham’s paragraphs 61 and 64 suggest modifying Vuong to cause the remote player’s gaming machine 134 to display a modified gaming environment indicating a last gaming activity of a plurality of gaming activities accessed by the remote player, even outside of the slot machine context. This disclosure in Harkham, alone, provides a sufficient motivation to support Petitioner’s case for obviousness based on Vuong and Harkham.

We are further persuaded by Mr. Kitchen’s un rebutted testimony that a person of ordinary skill in the art would have been aware that players often play the same game across multiple gaming sessions, and would have been

generally aware of personalizing gaming interface displays with stored player-tracking information. Ex. 1009 ¶¶ 34, 38, 85 (citing Exs. 1011, 1012, and 1017). This background knowledge provides additional motivation for modifying Vuong as proposed by Petitioner, in light of Harkham.

Claim 9, finally, recites “a determination” whether to display the gaming environment or the modified gaming environment “being based on” whether there is “a stored indication of” the user’s last gaming activity. Ex. 1001, 28:33–38. We find a person of ordinary skill in the art would appreciate that in some instances — such as, for example, the first time a remote player accesses apparatus 600 using gaming machine 134 — apparatus 600 will not have the information necessary to customize the interface by displaying the remote player’s last gaming activity. Ex. 1009 ¶ 89. In such instances, an interface will be presented to the player lacking the customization desired by Harkham. *Id.* Such an interface would permit the player to play games and thereby generate the information necessary for later customization.

In this way, it would have been obvious to include the claimed determination, when modifying Vuong in light of Harkham to display the remote player’s last gaming activity. That is, the modified Vuong apparatus 600 would determine to display the (non-modified) gaming environment, without indicating the remote player’s last gaming activity, when there is no indication of the remote player’s last gaming activity in the remote player’s log file. Conversely, the modified Vuong apparatus 600 would determine to display the modified gaming environment, indicating the remote player’s last gaming activity, when there is an indication of the remote player’s last gaming activity in the remote player’s log file.

d) Conclusion

A preponderance of the evidence establishes claim 9 of the '518 patent would have been obvious to a person of ordinary skill in the art, in view of Vuong and Harkham, at the time the invention was made. Therefore, claim 9 is unpatentable under 35 U.S.C. § 103(a).

C. Obviousness over Vuong, Harkham, and LeMay

Petitioner asserts claim 11 of the '518 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Vuong, Harkham, and LeMay. Pet. 39–42. Petitioner cites the Declaration of Mr. Garry Kitchen in support. Ex. 1009. Patent Owner opposes Petitioner's assertions. PO Resp. 20. Patent Owner cites the Declaration of Dr. Robert Akl in support. Ex. 2002.

We have reviewed the arguments and evidence of record. We conclude a preponderance of the evidence establishes claim 11 is unpatentable as having been obvious over Vuong, Harkham, and LeMay. We begin our analysis with a brief summary of LeMay, then we address Petitioner's and Patent Owner's contentions.

1. LeMay

LeMay discloses methods “for capturing a game history.” Ex. 1005, Abstract. Thus, game history information is recorded, including “the location 62 where the gaming machine 2 resides,” “the date 64 when the game was played,” and “the time 66 when the game was played.” *Id.* at 7:60–8:7, Fig. 1B.

2. *Claim 11*

Claim 11 depends from claim 9, and specifies the software directs the processor to “store for the particular location at least one of a date and a time of day when the user is at the particular location.” Ex. 1001, 28:44–48.

Petitioner contends the subject matter of claim 9 would have been obvious in view of Vuong and Harkham, as already set forth above. Pet. 40 (“Vuong in view of Harkham teaches Claim 9.”). Patent Owner responds that Petitioner is mistaken in that regard, based on arguments we have already considered above. PO Resp. 20; Ex. 2002 ¶ 46. For the reasons provided above, Petitioner’s contentions in this regard are supported by a preponderance of the evidence.

Concerning claim 11, Petitioner additionally contends Vuong’s log file stores the location of the remote player for every gaming session. Pet. 40 (citing Ex. 1003 ¶ 49); Ex. 1009 ¶¶ 90–91. Petitioner states “Vuong is silent with regard to whether or not the log file includes time or date stamp with the location information.” Pet. 41; Ex. 1009 ¶ 91. Petitioner asserts LeMay discloses “storing a game history record associated with a user’s gaming session including the location of the player, date, and time when the user was playing the game at the particular location.” Pet. 41 (citing Ex. 1005, 7:60–8:12, Fig. 1B); Ex. 1009 ¶ 92. Petitioner contends it would have been obvious, based on LeMay, “to store a date and a time with the location information stored in Vuong’s log file,” “for purposes of auditing and security.” Pet. 41–42; Ex. 1009 ¶¶ 93–94.

We find Petitioner’s foregoing contentions as to obviousness, which Patent Owner does not dispute, are supported by a preponderance of the evidence as cited by Petitioner and summarized above. Thus, we determine

claim 11 of the '518 patent is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Vuong, Harkham, and LeMay.

D. Obviousness over Vuong, Harkham, and the Knowledge of a Person of Ordinary Skill in the Art

Petitioner asserts claim 12 of the '518 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Vuong, Harkham, and the knowledge of a person of ordinary skill in the art. Pet. 38–39. Petitioner cites the Declaration of Mr. Garry Kitchen in support. Ex. 1009. Patent Owner opposes Petitioner's assertions. PO Resp. 20. Patent Owner cites the Declaration of Dr. Robert Akl in support. Ex. 2002.

Claim 12 depends from claim 9, and specifies the software directs the processor to “determine an existence of the user in a *plurality* of locations in response to recognizing an occurrence of a *plurality* of respective events, and update the user profile to include the *plurality* of locations.” Ex. 1001, 28:49–55 (emphases added).

Petitioner contends the subject matter of claim 9 would have been obvious in view of Vuong and Harkham, as already set forth above. Pet. 38 (“Vuong in view of Harkham teaches Claim 9.”). Patent Owner responds that Petitioner is mistaken in that regard, based on arguments we have already considered above. PO Resp. 20; Ex. 2002 ¶ 45. For the reasons provided above, Petitioner's contentions in this regard are supported by a preponderance of the evidence.

Concerning claim 12, Petitioner additionally contends Vuong's remote player gaming machine 134 may be a web-enabled cell phone, and Vuong's apparatus 600 may advantageously interrogate gaming machine 134 to determine it is at a jurisdictional location where gaming is

legal. Pet. 38 (citing Ex. 1003 ¶ 33); Ex. 1009 ¶¶ 95–96. Based on the disclosed portability of Vuong’s gaming machine 134, Petitioner contends it would have been obvious to determine the location of the user in a plurality of locations as the user moves from jurisdictional location to jurisdictional location with gaming machine 134, and update Vuong’s log file accordingly. Pet. 38–39; Ex. 1009 ¶¶ 95–99.

We find Petitioner’s foregoing contentions as to obviousness, which Patent Owner does not dispute, are supported by a preponderance of the evidence as cited by Petitioner. *See, e.g.*, Ex. 1003 ¶ 33; Ex. 1009 ¶¶ 95–99 (reflecting how a person of ordinary skill in the art would implement the location tracking already disclosed in Vuong, to take account of the fact that Vuong’s remote player gaming machines are mobile devices which may be easily taken to a plurality of jurisdictional locations). Thus, we determine claim 12 of the ’518 patent is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Vuong, Harkham, and the knowledge of a person of ordinary skill in the art.

E. Obviousness over Vuong, Harkham, the Knowledge of a Person of Ordinary Skill in the Art, and LeMay

Petitioner asserts claim 13 of the ’518 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Vuong, Harkham, the knowledge of a person of ordinary skill in the art, and LeMay. Pet. 42–43. Petitioner cites the Declaration of Mr. Garry Kitchen in support. Ex. 1009. Patent Owner opposes Petitioner’s assertions. PO Resp. 21. Patent Owner cites the Declaration of Dr. Robert Akl in support. Ex. 2002.

Claim 13 depends from claim 12, and specifies the software directs the processor to “store for the respective plurality of locations at least one of

a date and a time of day when the user is at the respective location.”

Ex. 1001, 28:56–61. Petitioner’s case for the obviousness of claim 13 is essentially a combination of the cases for claims 11 and 12, discussed in Sections III.C and III.D above, recognizing that claim 13 depends from claim 12. Pet. 42–43; Ex. 1009 ¶ 100.

Patent Owner responds that Petitioner’s case for obviousness fails, based on arguments we have already considered above in connection with parent claim 9. PO Resp. 21; Ex. 2002 ¶ 47. For the reasons provided above, Petitioner’s contentions in this regard are supported by a preponderance of the evidence.

We find Petitioner’s additional contentions as to the obviousness of claim 13, which Patent Owner does not dispute, are supported by a preponderance of the evidence as cited by Petitioner. Thus, we determine claim 13 of the ’518 patent is unpatentable under 35 U.S.C. § 103(a) as having been obvious over Vuong, Harkham, the knowledge of a person of ordinary skill in the art, and LeMay.

F. Obviousness over Koza and Harkham

Petitioner asserts claim 21 of the ’518 patent is unpatentable under 35 U.S.C. § 103 as having been obvious over Koza and Harkham. Pet. 43–67. Petitioner cites the Declaration of Mr. Garry Kitchen in support. Ex. 1009. Patent Owner opposes Petitioner’s assertions. PO Resp. 1–2, 21–28. Patent Owner cites the Declaration of Dr. Robert Akl in support. Ex. 2002.

We have reviewed the arguments and evidence of record. We conclude a preponderance of the evidence establishes claim 21 is

unpatentable as having been obvious over Koza and Harkham. We begin our analysis with a brief summary of Koza, then we address Petitioner's and Patent Owner's contentions.

1. *Koza*

Koza concerns computer games implemented using network communications. Ex. 1006, 1:3–6, 9:31–10:16. Players use a client computer to log on to a server computer over a network and participate in the games. *Id.* at 14:5–15:12 (Fig. 2), 46:5–47:9 (Fig. 20). Access to the server computer is “restricted to persons who have . . . opened an account,” which records the person's name, physical address, and other information. *Id.* at 10:22–11:3. The server computer verifies that the player's physical address and IP address are both located in a jurisdiction where the game being offered is legal. *Id.* at 11:4–25, 12:9–18 (Fig. 1, steps 110 & 140). As part of each log on process, the server computer may verify that the client's IP address corresponds to a permitted jurisdictional location. *Id.* at 14:16–15:9 (Fig. 2), 24:14–26:4. The server computer additionally records the time of each log on by the player. *Id.* at 15:10–12.

2. *Claim 21*

- a) “21. An apparatus . . . store in the profile of the user at least one of a date and a time of day when the user is at the particular location . . . ”

Petitioner contends Koza's gaming system incorporates each and every limitation of claim 21 preceding the final, “based on determining . . . ” clause. Pet. 43–57 (citing various disclosures in Exhibit 1006); Ex. 1009 ¶¶ 101–102. Patent Owner does not dispute these contentions, which we find to be supported by a preponderance of the evidence.

In particular, we find Koza's server computer 2000 includes processor 2112 and memory 2104, 2106, 2107 having software with instructions for execution by processor 2112. Ex. 1006, 9:31–10:7, 46:5–47:9 (Fig. 20), 47:14–32 (Fig. 21). Koza's server computer 2000 establishes a profile for a user of server computer 2000, and the user accesses server computer 2000 via client computer 2050. *Id.* at 10:22–11:9, 13:9–21, 15:24–28, 46:30–47:9, Figs. 1 and 20. Koza's server computer 2000 determines that the user's client computer 2050 is located within a particular location in which the user is permitted to engage in gaming activities provided by server computer 2000. *Id.* at 5:24–28, 14:16–22, 24:26–25:2.

We find Koza's location determining comprises server computer 2000 receiving an identifier that indicates a portion of a network, or a network component, to which client computer 2050 is connected to communicate with server computer 2000 — namely, the client computer's IP address. *Id.* at 12:9–18, 14:16–22, 24:14–26:1 (Table 1). The client computer's IP address is mapped via a database to a geographic area, and a determination is made that the geographic area is within a particular location in which the user is permitted to engage in gaming activities. *Id.* at 12:9–18, 14:16–22 (Fig. 2, step 230), 24:26–25:2. Koza's server computer stores in the user's profile at least one of a date and a time of day when the user is at the particular location. *Id.* at 15:10–12.

b) “ . . . based on determining that the user is located in the particular location, initiate a gaming session, wherein to initiate the gaming session includes to communicate via the communications network information to the electronic device, . . . ”

Petitioner contends Koza initiates a gaming session after determining the remote player is in a jurisdiction where the proposed gaming is legal, so Koza discloses initiating a gaming session “based on” determining the remote player’s location as claimed. Pet. 57–60 (citing Ex. 1006, 14:16–22, 15:7–16, Fig. 2 (steps 230–250), 40:18–19, 46:30–47:9). Patent Owner does not dispute this contention, which we find to be supported by a preponderance of the evidence. See, e.g., Ex. 1006, 14:16–22, 15:7–16, Fig. 2 (steps 230–250); *id.* at 40:18–19.

c) “ . . . wherein the information causes the electronic device to present via a display of the electronic device a gaming environment to the user or to present via the display to the user a modified gaming environment that indicates to the user a last one of the gaming activities accessed by the user during a prior gaming session, a determination as to whether to display the gaming environment or the modified gaming environment being based on whether there is or is not a stored indication of a last one of the gaming activities accessed by the user during the prior gaming session.”

Petitioner’s case for the obviousness of modifying Koza to incorporate the remaining steps recited in the final clause of claim 21, based on Harkham, is substantially the same as the case for modifying Vuong in light of Harkham in relation to similar subject matter in claim 9, and discussed in detail above. Pet. 60–67; Pet. Reply 18–20; Ex. 1009 ¶¶ 103–110. A portion of the opposition set forth in Patent Owner’s Response, likewise, is substantially the same. PO Resp. 1–2, 22–26; Ex. 2002 ¶¶ 26, 34, 48–51.

Patent Owner, additionally, contends Koza teaches away from Petitioner's proposed combination with Harkham. PO Resp. 5, 26–28; Ex. 2002 ¶¶ 34, 52–54. Patent Owner contends Koza distinguishes between games of skill such as crossword puzzles, and games of chance such as casino games. PO Resp. 5, 27 (citing Ex. 1006, 1:17–24, 5:10–14); Ex. 2002 ¶¶ 34, 52; *see also* Ex. 2001, 21:18–21 (Mr. Kitchen describing games of skill as “games that required you to have some skill, not random games, games that the more you played and the more you learned the interface theoretically the better you got at it”).

Patent Owner cites Koza's “emphasi[s] that the subject matter of the present invention concerns games of skill that are clearly legal, under current law, in most states of the United States” (Ex. 1006, 8:32–9:2), and Koza's indication that “games offered by [off-shore] internet casinos . . . *would be clearly illegal* if conducted inside the United States” and “most observers believe . . . internet casinos are *probably illegal in the United States* under existing state and federal laws” (*id.* at 5:8–14 (emphases added)). PO Resp. 27; Ex. 2002 ¶¶ 34, 52.

According to Patent Owner, Harkham “is directed to the exact type of games that Koza deems illegal,” such as casino games. PO Resp. 27–28 (citing Ex. 1004, Title, Abstract); Ex. 2002 ¶ 53. Indeed, Patent Owner points out that the specific Harkham disclosures cited by Petitioner concern casino games of chance such as slot machines, Black Jack, and a Wheel of Fortune wheel. PO Resp. 27–28 (citing Ex. 1004 ¶¶ 60–61, 64, 68); Ex. 2002 ¶ 53. In Patent Owner's view, “[a]ll of these are internet casino games that Koza considers illegal,” so Koza teaches away from the combination with Harkham. PO Resp. 28; Ex. 2002 ¶¶ 53–54.

In reply, Petitioner contends Koza does not discourage online casino games of chance, but rather “expresses a general preference for games of skill because they are legal in most jurisdictions,” so “Koza does not teach away from games of chance when legal in a jurisdiction in which a player is located.” Pet. Reply 15–16 (citing Ex. 1006, 2:23–3:1, 3:33–4:8, 23:20–22).¹¹ Petitioner also contends Harkham is not limited to online casino games of chance, but rather discloses some embodiments in which players play the same games of skill disclosed by Koza, such as trivia games and chess. *Id.* at 17–18 (citing Ex. 1004 ¶¶ 28, 83, 87; Ex. 1006, 1:22–24, 3:29–31). Petitioner finally contends Patent Owner’s teaching away position is irrelevant to claim 21, which “does not include any limitations requiring games of chance or casino games,” so “even if Koza did teach away from online casino games (which it does not), it still would not teach away from the *claimed invention* of claim 21.” *Id.* at 18.

We find Koza does not teach away from using a computer network to implement games of chance for remote players. Instead, at most, Koza teaches away from using a computer network to implement games of chance for remote players who are located within a jurisdiction where such an implementation is illegal. *See* Ex. 1006, 5:1–14, 8:31–9:2. Indeed, Koza

¹¹ Patent Owner asserts the Reply Brief’s discussion of the disclosures of Koza and Harkham concerning teaching away improperly “rais[es] new invalidity arguments for the first time.” *See* Paper 26 (items #4, 5). We, however, agree with Petitioner that this portion of the Reply Brief is not improper under 37 C.F.R. § 42.23(b). *See* Paper 28, 2. The suggestion of teaching away was raised for the first time in this proceeding in the Patent Owner Response. Therefore, it is proper for Petitioner’s Reply to cite disclosures of Koza and Harkham that, in Petitioner’s view, demonstrate there is no teaching away.

contemplates that its games of skill “may include a chance component in addition to the skill component,” even though such games would be legal in fewer jurisdictions than games of “pure skill.” *Id.* at 23:20–24, 4:6–8.

Koza, moreover, recognizes that legal requirements governing games of chance vary by jurisdiction (different states in the United States, or different countries), and in some cases have not yet been adjudicated. *Id.* at 4:3–14, 5:1–14.

Viewed most favorably to Patent Owner’s position, Koza’s disclosure simply urges caution when using a computer network to implement games of chance for remote players, to avoid violating the laws of jurisdictions where the remote player will be located. As already discussed above, Koza and Harkham provide the same solution to alleviate that concern: track the location of the remote player’s game playing device, and restrict the games available to be played accordingly. *See* Ex. 1006, 11:4–25, 12:9–18, Fig. 1 (steps 110 & 140); *id.* at 14:16–15:9 (Fig. 2, step 230), 24:14–26:4; Ex. 1004 ¶¶ 25, 30–32 (Fig. 3, blocks 314 & 318), 64 (Fig. 7A, blocks 704 & 706).

Moreover, even if Koza does teach away from using a computer network to implement games of chance for remote players, such a teaching is irrelevant to Petitioner’s proposed combination of Koza and Harkham. Petitioner starts with Koza’s computer-networked games of skill as satisfying all claim limitations, except for the determination of whether to display a gaming environment or a modified gaming environment (indicating a last gaming activity accessed by the remote player during a prior gaming session). *See supra* Section III.F.2.a–b. Patent Owner does not dispute that Koza’s games of skill are “gaming activities” as recited in claim 21. *See* Ex. 1001, 1:41–53, 3:31–51, 5:67–6:4. Petitioner cites

Harkham as support for the obviousness of implementing the claimed display determination in Koza. *See supra* Section III.F.2.b. We reject the notion that a person of ordinary skill in the art would not look to Harkham for ways to improve upon Koza's computer network for implementing games of skill, which Koza recognizes as being legal in some jurisdictions, simply because Harkham's computer network implements games of skill and of chance. *See, e.g.*, Ex. 1004 ¶¶ 28, 83, 87.

Having fully considered Petitioner's case for obviousness, and Patent Owner's various rebuttals (the rebuttals applying to both claims 9 and 21, and the teaching away argument for claim 21), we conclude a preponderance of the evidence establishes a rational underpinning sufficient to support the legal conclusion of obviousness of modifying Koza in the manner proposed by Petitioner. Patent Owner's position on teaching away is unpersuasive, and when considered in connection with the analysis set forth above in Section III.B.5.c in connection with claim 9 concerning the Harkham disclosure and Mr. Kitchen's testimony, a preponderance of the evidence supports Petitioner's contentions.

d) Conclusion

A preponderance of the evidence establishes claim 21 of the '518 patent would have been obvious to a person of ordinary skill in the art, in view of Koza and Harkham, at the time the invention was made. Therefore, claim 21 is unpatentable under 35 U.S.C. § 103(a).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED claim 9 of the '518 patent has been shown to be unpatentable under 35 U.S.C. § 103 based on Vuong and Harkham;

FURTHER ORDERED claim 11 of the '518 patent has been shown to be unpatentable under 35 U.S.C. § 103 based on Vuong, Harkham, and LeMay;

FURTHER ORDERED claim 12 of the '518 patent has been shown to be unpatentable under 35 U.S.C. § 103 based on Vuong, Harkham, and the knowledge of a person of ordinary skill in the art;

FURTHER ORDERED claim 13 of the '518 patent has been shown to be unpatentable under 35 U.S.C. § 103 based on Vuong, Harkham, the knowledge of a person of ordinary skill in the art, and LeMay; and

FURTHER ORDERED, because this is a final written decision, the 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.

IPR2017-01532
Patent 9,355,518 B2

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