

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DRAFTKINGS INC., A DELAWARE CORPORATION,
Petitioner,

v.

AG 18, LLC,
Patent Owner.

IPR2022-01447
Patent 9,613,498 B2

Before JOSIAH C. COCKS, GEORGE R. HOSKINS, and
FRANCES L. IPPOLITO, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

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

ORDER
Denying Petitioner's Motion to Exclude Evidence
37 C.F.R. § 42.64(c)

I. INTRODUCTION

DraftKings Inc., a Delaware corporation (“Petitioner”) filed a Petition (Paper 1, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 for *inter partes* review of U.S. Patent No. 9,613,498 B2 (Ex. 1001, “the ’498 patent”), claims 1–20. We issued an Institution Decision (Paper 12, “Inst. Dec.”) instituting the petitioned review.

AG 18, LLC d/b/a Arrow Gaming (“Patent Owner”) then filed a Patent Owner Response (Paper 19, “PO Resp.”) to the Petition. Petitioner filed a Reply (Paper 23, “Pet. Reply”) to the Patent Owner Response. Patent Owner filed a Sur-reply (Paper 24, “PO Sur-reply”) to the Reply.

An oral hearing was held on December 13, 2023, for which the transcript was entered into the record (Paper 32, “Tr.”).

Petitioner filed a Motion to Exclude Evidence proffered by Patent Owner (Paper 28). Patent Owner filed an Opposition (Paper 29), and Petitioner filed a Reply (Paper 30). We *deny* Petitioner’s Motion to Exclude Evidence, for reasons provided below.

We have jurisdiction under 35 U.S.C. § 6(b)(4) and § 318(a). This Decision is a final written decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of claims 1–20 of the ’498 patent. We determine Petitioner has shown by a preponderance of the evidence that claims 1–20 are unpatentable.

II. BACKGROUND

A. *Real Parties-in-Interest and Related Proceedings*

Petitioner identifies itself (i.e., DraftKings Inc., a Delaware corporation) as well as DraftKings Inc., a Nevada corporation, and Crown

Gaming Inc., as real parties-in-interest. *See* Pet. 4. Patent Owner identifies itself (i.e., AG 18, LLC d/b/a Arrow Gaming) as a real party-in-interest. *See* Paper 3, 1.

There are four other IPR proceedings challenging patents related to the '498 patent. They are IPR2022-01442 (U.S. Patent No. 10,497,220 B2); IPR2022-01445 (U.S. Patent No. 11,024,131 B2); IPR2022-01446 (U.S. Patent No. 9,978,205 B2); and IPR2022-01448 (U.S. Patent No. 10,614,657 B2).

There is a U.S. District Court litigation in which Patent Owner has asserted the five related patents against Petitioner. *See AG 18, LLC d/b/a Arrow Gaming v. DraftKings Inc.*, Case No. 2:21-cv-15737 (D. N.J.) (“District Court Litigation”); Pet. 4; Paper 3, 1. The District Court Litigation has been stayed pending the outcome of the five related IPR proceedings. *See AG 18 v. DraftKings*, Doc. No. 79.

B. The '498 Patent Specification

The '498 patent is directed to systems and methods for peer-to-peer gaming, including wagers placed by the players on game results. *See* Ex. 1001, 1:11–17, 2:25–38. Figure 1 of the '498 patent is reproduced below.

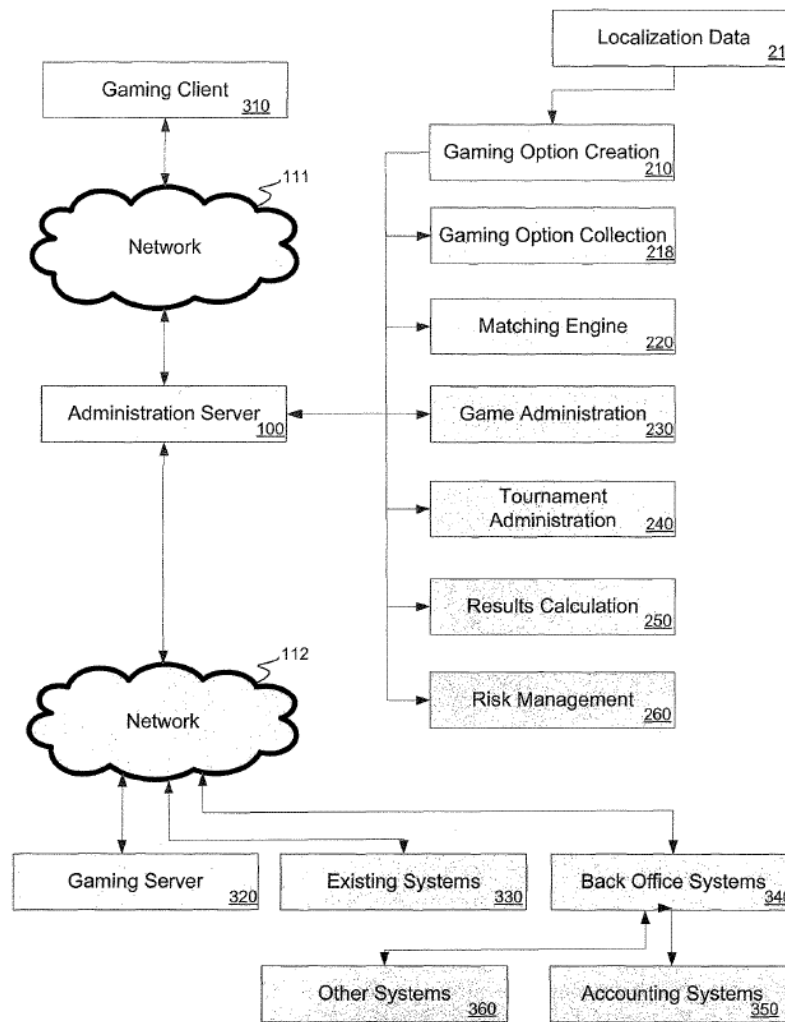


Figure 1

The '498 Patent, Figure 1.

Figure 1 illustrates a high level network architecture of a peer-to-peer gaming system. *See id.* at 3:3–4. Each player utilizes a respective gaming client 310 to access administration server 100 via network 111 to play games. *See id.* at 3:46–52, 4:6–7. Exemplary gaming clients 310 include kiosks, PDAs, and wireless tablets. *See id.* at 3:52–55. Thus, gaming client 310 may be a mobile device that the player can carry between various legal jurisdictions, having different limitations on game play. *See id.* at 4:48–56, 6:43–55.

Administration server 100 is connected to gaming server 320, which contains the games that are played by the players. *See id.* at 4:40–43.

Administration server 100 also is connected to various other systems 330, 340, 350, and 360 to perform other tasks, such as the transfer of funds involved in accepting game wagers and paying out winnings. *See id.* at 4:35–40, 5:20–23. Administration server 100 accordingly includes a number of modules 210, 215, 218, 220, 230, 240, 250, and 260, to perform these tasks. *See id.* at 5:32–40.

Gaming option creation module 210 takes information from localization data module 215 to determine which games are available on administration server 100. *See id.* at 5:37–40. Module 210 creates a list of available game options, “us[ing] information about the location of the user, such as legal jurisdiction and casino location, to determine which game options are presented to the player.” *Id.* at 6:43–48. The “list may include which games are available, such as Poker or 9-Ball,” as well as “the wager amounts available for each game.” *Id.* at 6:51–55, 8:23–31 (Fig. 3 shows exemplary user-interface screens for a player to select a game to be played within a specific betting range), 10:24–30, 11:7–19. In one embodiment: “Before presenting a player with gaming options, the system determines which gaming options are available to the player,” for example which options are “legal” based on “limits on wagers or types of games allowed.” *Id.* at 9:15–30. The system then “remove[s] [from the list] any gaming options that are not available” so “the player will not be able to select” unavailable gaming options. *Id.*

Gaming option collection module 218 collects a selection of gaming options by the player, from the list of gaming options presented to the player. *See id.* at 5:40–42, 6:56–59.

Matching engine module 220 matches players for playing games together, using information obtained from the players, including the list of gaming options selected by each player. *See id.* at 5:42–43, 6:65–7:3, 10:34–48.

The remaining modules 230, 240, 250, and 260 administer the games being played, calculate the results of the games, and distribute winnings. *See id.* at 5:43–49, 8:44–53.

C. The Challenged Claims of the '498 Patent

The Petition challenges claims 1–20 of the '498 patent, which include independent claims 1, 12, and 13. *See* Pet. 1; Ex. 1001, 15:48–18:64. We reproduce illustrative claim 1 here, adding Petitioner's limitation identification scheme, which Patent Owner also uses. *See* Pet. 5–6; *e.g.*, PO Resp. 2 (referring to “limitation 1[k]”).

[pre] 1. A computer-server-based method for peer-to-peer gaming, comprising:

[a] creating a list of player gaming options for a player in a current location,

[b] wherein the list of player gaming options is automatically created at an administration server based on the current location of the player,

[c] wherein the list of player gaming options is limited to legal gaming options in the current location of the player; and

[d] wherein the legal gaming options include limits on wagering amounts or types of games to prevent the player from unlawful play in the current location of the player[;]

- [e] presenting a player with the list of player gaming options, wherein the list of player gaming options is presented to the player at a player gaming client;
- [f] collecting a selection of player gaming options from the player,
 - wherein the selection of player gaming options includes a betting range;
- [g] determining a game type that the player selected, wherein the game type is based on the selection of player gaming options;
- [h] matching the player with an at least one competitor,
 - wherein matching the player with the at least one competitor is based at least in part on the betting range, and
 - wherein matching the player with the at least one competitor is performed by the administration server;
- [i] collecting a bet from the player,
 - wherein the bet is within the betting range identified in the selection of player gaming options;
- [j] initiating a game for the player, wherein the game is based on the selection of player gaming options;
- [k] collecting results of the game, wherein the results of the game are received at the administration server; and
- [l] compensating the player with player winnings, wherein the player winnings are based on the results of the game.

Ex. 1001, 15:49–16:22.

D. Asserted Prior Art

Petitioner relies principally on the following references. *See* Pet. 13.

Name	Reference	Pub. Date	Exhibit No.
Frenkel	US 2007/0015584 A1	Jan. 18, 2007	1007
Amaitis	US 2007/0054739 A1	Mar. 8, 2007	1005
Schlottmann	US 2007/0298857 A1	Dec. 27, 2007	1006

Name	Reference	Pub. Date	Exhibit No.
Oberberger	US 2009/0088253 A1	Apr. 2, 2009	1009
Bryson	US 8,460,109 B2	June 11, 2013	1004

Petitioner asserts these references are prior art to the '498 patent because each was published or filed prior to the '498 patent's earliest claimed priority date of June 20, 2008. *See* Pet. 18 (priority date), 22 (Amaitis), 24 (Bryson), 26 (Oberberger and Frenkel), 27 (Schlottmann). Patent Owner does not dispute this assertion, and we find it is supported by the evidence. *See* Ex. 1001, code (60); Ex. 1004, code (22) (Bryson filed Apr. 24, 2007); Ex. 1005, code (43) (Amaitis published Mar. 8, 2007); Ex. 1007, code (43) (Frenkel published Jan. 18, 2007); Ex. 1006, code (22) (Schlottmann filed June 8, 2007); Ex. 1009, code (22) (Oberberger filed Sept. 28, 2007).

E. Asserted Grounds

Petitioner asserts the following six grounds of unpatentability against the challenged claims, all under 35 U.S.C. § 103(a).¹ *See* Pet. 13.

Ground	Claims Challenged	References
1	1, 4–17	Amaitis, Bryson
2	1, 4–17	Amaitis, Bryson, Oberberger
3	2, 3	Amaitis, Bryson, Frenkel
4	2, 3	Amaitis, Bryson, Oberberger, Frenkel
5	18–20	Amaitis, Bryson, Frenkel, Schlottmann
6	18–20	Amaitis, Bryson, Oberberger, Frenkel, Schlottmann

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective in March 2013. The '498 patent was filed on June 19, 2009. *See* Ex. 1001, code (22). Therefore we apply the pre-AIA version of § 103 here.

F. Testimonial Evidence

Petitioner relies on the testimony of Mark C. Nicely (Exhibit 1003) as a proffered expert witness. Patent Owner relies on the testimony of Stephen H. Lane, Ph.D. (Exhibits 1068 and 2005) as a proffered expert witness.

III. ANALYSIS OF PETITIONER'S GROUNDS

A. Statement of Law

1. Petitioner's Burden of Proof

Petitioner bears the burden of proving unpatentability of the challenged claims, and this burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

2. Law of Obviousness

A patent claim is unpatentable under 35 U.S.C. § 103(a) 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. *See 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) secondary considerations of

nonobviousness, if placed at issue which has not happened here. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Person of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (citing *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999)). “This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.* at 1355. “The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant art” at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In finding the level of ordinary skill in the art, we may consider various factors, including: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Best Med. Int’l, Inc. v. Elekta Inc.*, 46 F.4th 1346, 1353 (Fed. Cir. 2022) (citations omitted). “The patent’s purpose can also be informative.” *Id.* (citation omitted).

Petitioner contends a person having ordinary skill in the art pertaining to the ’498 patent “would be a person with a bachelor’s degree in computer engineering, electrical engineering, computer science, applied mathematics, or a similar field and at least two years of experience in the development of gambling game hardware or software functionality.” Pet. 19 (citing

Ex. 1003 ¶ 46). Further: “A person with less education but more relevant practical experience may also meet this standard.” *Id.*

Prior to institution, Patent Owner argued a person having ordinary skill in the art would have a “Bachelor of Science degree in an engineering discipline, and at least two years of programming experience developing games and game-related software and systems.” Paper 10, 22 n.2. In the Institution Decision, we noted “[t]he parties’ positions appear to be substantively equivalent” and we “adopt[ed] Petitioner’s assessment as reasonable and consistent with the prior art and the ’498 patent.”

Inst. Dec. 17. The post-institution Patent Owner Response does not address the level of ordinary skill in the art.

Based on the record presented, we find Petitioner’s undisputed formulation of ordinary skill in the art reflects the appropriate level of skill, as demonstrated by the ’498 patent and the prior art of record. Therefore, we adopt and apply Petitioner’s formulation here. We note further that the outcome of this Decision would not change, even if we were to apply Patent Owner’s pre-institution formulation of ordinary skill.

C. Petitioner’s Motion to Exclude Evidence

Petitioner moves to exclude Exhibit 2005, the declaration testimony of Dr. Lane submitted with the Patent Owner Response, from evidence. *See* Paper 28, 1. Petitioner asserts: (1) Dr. Lane is not qualified as a person of ordinary skill in the art, on the alleged basis that he has inadequate gambling knowledge and inadequate experience in developing gambling technology (*see id.* at 1, 3–7); (2) Dr. Lane’s testimony is unsupported by evidence and is unreliable (*see id.* at 1, 7–10); and (3) Dr. Lane’s testimony assesses

obviousness at the wrong time frame (*see id.* at 1, 10–11). Petitioner also, in its Reply, asks that we give Dr. Lane’s testimony “no weight” due to his alleged lack of expert qualifications. *See* Pet. Reply 20–22.

Patent Owner disputes each of Petitioner’s assertions in the Motion (*see* Paper 29), and opposes Petitioner’s request to give Dr. Lane’s testimony no weight even if it is admitted (*see* PO Sur-reply 23–24). Petitioner replies in support of the Motion (*see* Paper 30).

We have considered Petitioner’s arguments, and we determine they go to the weight we should give Dr. Lane’s testimony, not its admissibility. *See Microfinancial, Inc. v. Premier Holidays Int’l*, 385 F.3d 72, 81 (1st Cir. 2004) (“When the factual underpinning of an expert’s opinion is weak, it is a matter affecting the weight and credibility of the testimony—a question to be resolved by the [factfinder].”). As Petitioner notes, we have adopted Petitioner’s proffered level of ordinary skill in the art, which is a “bachelor’s degree in computer engineering, electrical engineering, computer science, applied mathematics, or a similar field, and at least two years of experience in the development of gambling game hardware or software functionality.” Pet. 19 (citing Ex. 1003 ¶ 46). Further, we have agreed “[a] person with less education but more relevant practical experience may also meet this standard.” *Id.*

We note Dr. Lane has several years of education and experience in game design and development. *See* Ex. 2002. This includes his over two decades as a professor at the University of Pennsylvania and his current role as Professor of Practice and the Director of the Computer Graphics and Game Technology (CGGT) Masters Program. *Id.* at 1. Although Dr. Lane does not have experience in gambling games per se, we note that there need

not be a perfect match between the expert's qualifications and the patent at issue. *See SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360, 1373 (Fed. Cir. 2010). It is not necessary for Dr. Lane to demonstrate that he is an expert in poker or any specific wager-based games. Indeed, to testify as an expert under Fed. Rule Evid. 702, a person need not be one of ordinary skill, but may be "qualified in the pertinent art." *B/E Aerospace, Inc. v. MAG Aerospace Indus. LLC*, IPR2014-01511, Paper 104 at 13–14 (Final Written Decision) (declining to exclude the testimony of expert witness that lacked hands-on experience with the claimed subject matter).

We agree with Patent Owner that Dr. Lane's education, his experience as a "professor who teaches gaming at the University of Pennsylvania," and his "25-years of experience researching, developing and commercializing technology for use in Interactive Entertainment" provide him sufficient experience and knowledge of the claimed subject matter for his opinion to remain of record. Paper 29, 1–3 (citing Ex. 2001 ¶ 17; Ex. 2005 ¶¶ 5–7, 12; Ex. 1068, 21:22–26:8). As Dr. Lane explains, he is familiar "with the knowledge, skill and experience of those skilled in the art of developing game software and systems" and has been involved in the development of many games including:

[the] development of an Olympics Decathlon PC game developed for AT&T to be played in conjunction with the 1996 Olympics that was held in Atlanta, GA. This project involved development not only of the game software, but also a network interface that enabled players to compete in various events concurrently with those being held at the Olympics and upload their scores to a server to determine the winner in each event.

Ex. 2005 ¶ 12.

Moreover, we take into account the qualifications of an expert witness — and any shortcomings revealed through cross-examination — when evaluating the weight to be given that witness’s testimony. To the extent Dr. Lane’s testimony lacks reliability or applies the wrong invalidity analysis, we have afforded that testimony little to no weight. Conclusory and/or unsupported testimony is entitled to little weight. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”); *Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000) (“Lack of factual support for expert opinion to factual determinations, however, may render the testimony of little probative value in a validity determination.”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)). However, the wholesale exclusion of a witness’s declarations is rarely called for in a proceeding before the Board. For the instant proceeding, we have considered Dr. Lane’s qualifications and the underlying bases for his statements in determining the weight to be given his testimony. Instead of disregarding Dr. Lane’s testimony in its entirety, we evaluate each of his assertions on their own, in light of the explanation offered, his answers on the specific topics under cross-examination, and the other evidence of record.

Thus, we *deny* Petitioner’s Motion to Exclude Dr. Lane’s testimony.

D. Claim Construction

We interpret the ’498 patent claims “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).” 37 C.F.R. § 42.100(b). This “includ[es]

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.” *Id.*

We consider several “module” limitations in claims 17–20 below in Section III.E.7(a) (claim 17) and Section III.G.1 (claims 18–20).

We conclude no other explicit construction of any claim term is needed to resolve the issues presented by the arguments and evidence of record. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and 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)).

E. Ground One — Obviousness over Amaitis and Bryson

In Ground One, Petitioner argues claims 1 and 4–17 of the ’498 patent are unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 13, 22–26, 27–66. Patent Owner opposes. *See* PO Resp. 2–19.

We conclude a preponderance of the evidence supports Petitioner’s assertions as to all challenged claims. We begin our analysis with brief summaries of Amaitis and Bryson, then we consider the parties’ contentions as to obviousness.

I. Amaitis

Amaitis provides a gaming system incorporating a wireless network to permit users to participate in games, including casino-type gambling games, using a mobile communication device. *See* Ex. 1005 ¶¶ 1–3, 22. This includes peer-to-peer gaming, in which multiple users interactively compete

in the same gaming activity at the same time from disparate locations using remote gaming devices, such as cell phones or PDAs. *Id.* ¶¶ 8, 24. Figure 9 is reproduced below.

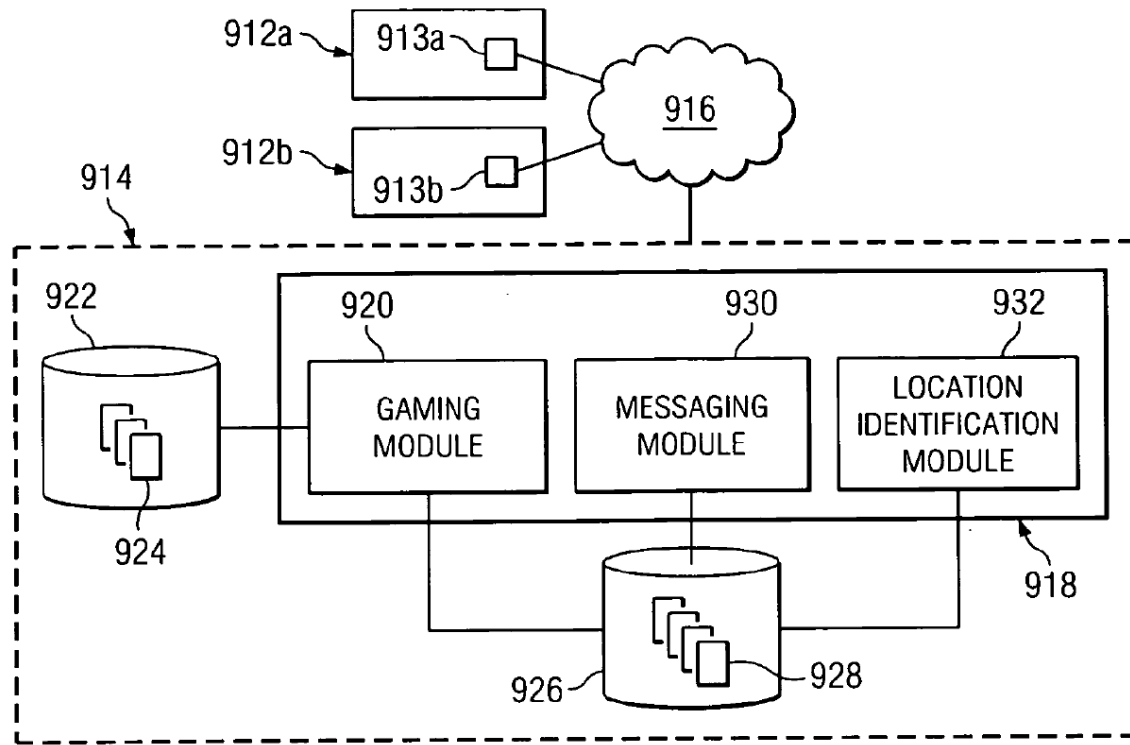


FIG. 9
Amaitis, Figure 9.

Figure 9 illustrates peer-to-peer gaming system 910 accessed by users 912a and 912b by way of respective mobile gaming devices 913a and 913b. *See id.* ¶ 31. Gaming devices 913 utilize data network 916 to transmit and receive gaming information to and from gaming service provider 914 so that users 912 may participate interactively in a single gaming activity. *See id.* ¶¶ 31–32.

Gaming service provider 914 includes processor 918 which has gaming module 920 that operates as a gaming server for gaming devices 913 to participate in games, using database 922 of gaming applications 924. *See*

id. ¶¶ 34–36. Each user 912 may enter various parameters corresponding to gaming characteristics that interest the user, such as betting minimums or limits, and gaming module 920 uses these parameters as search criteria to identify a menu of gaming activities to be displayed to the user for selection. *See id.* ¶ 47. Gaming module 920 may store these user-specified gaming characteristics and other data concerning the user in database 926 of customer profiles 928. *Id.* ¶¶ 48–49. Gaming module 920 may “identify additional players that may be willing to play with a first user 912a” by querying the data in customer profiles 928 to identify a second user 912b who might be “interested in . . . games of the type initiated by” first user 912a, and “send an invite to second user 912b that invites second user 912b to join in the gaming activity.” *Id.* ¶ 50.

When users 912a and 912b are gambling from remote locations utilizing data network 916, “the system has a location verification or determination feature, which is operable to permit or disallow gaming from the remote location depending upon whether or not the location meets one or more criteria.” *Id.* ¶¶ 23, 91. For example, “only gaming devices 913 located within a jurisdiction allowing casino-style gaming may be enabled for casino-style gaming activities,” and “only gaming devices 913 located within a jurisdiction allowing sports wagering or pari-mutuel betting may be enabled for these types of activities.” *Id.* ¶¶ 33, 68. To implement this feature, processor 918 may include location identification module 932 “to identify gaming services that may be made accessible to users 912 based on the location of their respective gaming devices 913.” *Id.* ¶ 56. For example, “where applicable state and federal law and/or regulations prohibit gaming activity at a user’s location, location information associated with the user’s

gaming device 913 may be used to limit the gaming services available to the user 912.” *Id.*; *see also id.* ¶ 23 (indicating location verification may be used to determine “whether the location is within a pre-defined area in which gaming is permitted by law”).

Location verification may also be used modify various aspects of the gaming experience provided by gaming service provider 914. *See id.* ¶ 23 (“the type of network topology”), ¶ 41 (whether “double gaming” is provided), ¶ 53 (“distinguishing between permissible and impermissible communications”), ¶ 59 (enforcing a “minimum distance requirement” maintained between mobile users 912).

2. *Bryson*

Bryson discloses devices and methods for providing networked wagering games. *See Ex. 1004*, 1:6–7. Bryson discusses “controlling many aspects of a player’s gaming experience, including game themes presented, game denomination, pay models, content and promotions.” *Id.* at 1:30–36. In “[s]ome implementations,” this involves “creat[ing] subsets of customers, often referred to . . . as ‘communities’” of “players having similar characteristics and preferences.” *Id.* at 1:36–45. Thus, Bryson provides apparatuses configured for: “determining a player community”; “selecting wagering games and wagering game characteristics according to the player community”; and “provid[ing] selected wagering games having selected wagering game characteristics.” *Id.* at 1:46–52.

Bryson contemplates implementing its methods on mobile gaming devices such as laptop computers, cellular telephones, or PDAs. *See id.* at 1:56–60, 12:42–47. Therefore, Bryson’s system may include an

“apparatus for determining a device location” so “[t]he selecting apparatus may be configured for selecting wagering games and/or wagering game characteristics according to the device location.” *Id.* at 2:16–19, 2:59–62. In particular: “Determining the device’s location allows an online casino to identify the corresponding jurisdiction and to comply with the regulations of that jurisdiction.” *Id.* at 6:9–14. As one example, “[t]he operator (and/or the central system) may provide wagering games, wagering game attributes, etc., according to a player’s community, location and/or device type.” *Id.* at 5:45–47; *see also id.* at 7:49–56 (describing step 125 in Figure 1). As another example, “the presentation may depend on device location” such that “wagering games and/or wagering game attributes may be provided according to the legal requirements of a device’s jurisdiction” including “[w]agering limits.” *Id.* at 8:24–29.

3. *Independent Claim 1*

Petitioner argues and Mr. Nicely testifies that independent claim 1 is unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 22–26, 27–46; Ex. 1003 ¶¶ 151–165, 172–218. Patent Owner and Dr. Lane disagree. *See* PO Resp. 2–10; Ex. 2005 ¶¶ 45–57. We discuss the parties’ opposing contentions on an element-by-element basis; Patent Owner opposes only as to limitation 1[k].

a) *1[pre]* — “*A computer-server-based method for peer-to-peer gaming, comprising:*”

Petitioner contends that, to the extent the preamble of claim 1 is limiting, Amaitis discloses a computer-server-based method for peer-to-peer gaming. *See* Pet. 31–32 (citing Ex. 1005, Fig. 9, ¶¶ 5, 20, 27, 34); Ex. 1003

¶¶ 184–185. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. In particular, Amaitis describes how gaming service provider 914 employs gaming module 920 to provide “peer-to-peer gaming” between two users 912a and 912b by way of respective gaming devices 913a and 913b via data network 916, allowing the users “to interactively participate in a single gaming activity.” Ex. 1005 ¶ 5; *see id.* at Fig. 9, ¶¶ 31, 34.

b) *1[a] — “creating a list of player gaming options for a player in a current location”*

Petitioner contends Amaitis discloses creating a list of player gaming options for a player in a current location. *See* Pet. 32–35 (citing Ex. 1005, Fig. 9, ¶¶ 2, 41, 46–50, 56, 102; Ex. 1001, 8:63–66); Ex. 1003 ¶¶ 186–192. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. In particular, Amaitis indicates gaming service provider 914 permits users 912 to participate in a variety of gaming activities, such as slot machine games, blackjack, poker, and sports wagering. *See* Ex. 1005 ¶¶ 2, 46. Provider 914 “provide[s] assistance to a user 912 in finding a particular activity in which the user 912 wishes to participate.” *Id.* ¶ 46. Thus, each user 912 may enter various parameters corresponding to gaming characteristics that interest the user, such as betting minimums or limits, and gaming module 920 uses these parameters as search criteria to identify a menu of gaming activities to be displayed to the user for selection. *See id.* ¶¶ 47–48, 102. Amaitis further provides that gaming service provider 914 may determine the current location of gaming devices 913, “to identify gaming services that may be made accessible” on

the devices as provided by “applicable state and federal law and/or regulations.” *Id.* ¶ 56.

- c) 1[b] — “*wherein the list of player gaming options is automatically created at an administration server based on the current location of the player*”

Petitioner contends Amaitis discloses that its list of player gaming options is automatically created at an administration server, and Amaitis also “recognizes the importance of determining player location, particularly in the context of ‘peer-to-peer gaming between multiple users at disparate locations.’” Pet. 35 (quoting Ex. 1005 ¶ 8) (citing Ex. 1005 ¶¶ 47, 102); Ex. 1003 ¶ 193. Petitioner asserts Amaitis “restrict[s] user **access** to games based on the user’s location in compliance with jurisdictional regulations,” but “Amaitis does not expressly disclose creating a list of player gaming options **based on** the current location of a player.” Pet. 28, 30, 35 (citing Ex. 1005 ¶¶ 22, 33); Ex. 1003 ¶¶ 177, 181, 193.

Petitioner then argues Bryson discloses an administration server that automatically creates a list of player gaming options based on the current location of a player. *See* Pet. 28–29, 30, 35–36 (citing Ex. 1004, 1:11–36, 5:40–47, 6:11–13, 6:30–39, 7:9–16, 7:49–67, 8:24–39, 8:57–60, 23:4–8); Ex. 1003 ¶¶ 178, 181, 193–196. Petitioner contends Bryson particularly “teaches first creating a list of gaming options according to a player community and [then] removing options from the list *based on the player’s location*.” Pet. 36 (citing Ex. 1004, 5:40–47, 8:31–39); *id.* at 29 (citing Ex. 1004, 6:30–39, 7:9–16, 7:49–67, 8:24–25, 8:57–60); Ex. 1003 ¶¶ 178, 195–196.

Petitioner asserts Bryson also “provides an express motivation to combine with Amaitis,” so that Amaitis will create its list of player gaming options based on the current location of a player like Bryson does. Pet. 35–36; Ex. 1003 ¶ 198. In particular, according to Petitioner, “Bryson teaches that doing [this] will ‘provide more versatile and exciting’ gaming experiences and thereby ‘attract and retain players,’ while also ensuring compliance with jurisdictional regulations.” Pet. 29, 31, 36, 37–38 (citing Ex. 1004, 1:26–45, 5:40–47, 23:4–18; Ex. 1005 ¶¶ 23–25, 33, 97); Ex. 1003 ¶¶ 179, 183, 194, 198. In the latter regard, Petitioner asserts Bryson “teaches customizing gaming options based on location on an ‘ongoing basis’ as a player moves about,” thereby providing “the predictable results of creating a more ‘exciting’ and ‘innovative’ gaming experience that would ‘increase player patronage and profits.’” Pet. 29–30 (quoting Ex. 1004, 1:11–29, 8:30–39); Ex. 1003 ¶ 179. Petitioner finds further motivation in the need “to prevent selection of illegal gaming options ‘where the parameters of the gaming application [] or applicable state and federal laws and/or regulations do not allow’ providing games with such options where the player is located.” Pet. 30 (quoting Ex. 1005 ¶ 41) (alteration in original); Ex. 1003 ¶ 182.

Prior to institution, Patent Owner had argued that: (1) Petitioner erroneously relies on Bryson as disclosing creating a list of player gaming options based on the current location of the player; (2) Petitioner erroneously relies on Bryson as disclosing an administration server that automatically creates a list of player gaming options based on the player’s current location; and (3) there is no motivation to combine Amaitis and Bryson in the fashion proposed by Petitioner. *See* Inst. Dec. 34–42 (discussing Patent Owner’s

pre-institution arguments). However, Patent Owner did not carry these arguments forward into the post-institution Patent Owner Response, so they have been waived. *See, e.g.*, Paper 13, 10 (Scheduling Order cautioning “that any arguments for patentability not raised in the [Patent Owner Response] may be deemed waived”).

We find Petitioner’s contentions in relation to this claim limitation, which Patent Owner does not now oppose, are supported by a preponderance of the evidence, as set forth in the summary above including citations to the evidence of record.

d) 1[c] — “wherein the list of player gaming options is limited to legal gaming options in the current location of the player”

Petitioner contends “the combination of Amaitis and Bryson teaches creating a custom list of games based on the location of the player in compliance with the legal requirements of the player’s jurisdiction,” and Bryson teaches “limiting the ‘presentation’ of gaming options” according to those legal requirements. Pet. 38 (citing Ex. 1004, 8:24–29, 23:4–8); Ex. 1003 ¶ 199. Petitioner also relies on the Petition’s previous obviousness analysis, discussed above in Section III.E.3(c), in relation to this claim limitation. *See* Pet. 38 (“As discussed above in § IX.B.2(c) . . .”).

We find these contentions, which Patent Owner does not oppose, are supported by a preponderance of the evidence, as discussed above in Section III.E.3(c). For example, Bryson discloses the gaming presentation “may depend on device location,” including the provision of “wagering games and/or wagering game attributes . . . according to the legal requirements of a device’s jurisdiction.” Ex. 1004, 8:18–29; *see also id.* at 23:4–8 (“To play a wager-based game on a client, jurisdictional rules,

such as . . . types of games that can be played and wagering rules that are established by a gaming jurisdiction may need to be enforced.”).

e) 1[d] — “*wherein the legal gaming options include limits on wagering amounts or types of games to prevent the player from unlawful play in the current location of the player*”

Petitioner contends “Amaitis teaches controlling *access* to the types of gaming activities permitted in the player’s jurisdiction,” and “Bryson teaches compliance with these and other similar laws through a location-specific restriction on the *gaming options* presented to players” including “***types of games***” and “***wagering rules***” such as “[w]agering ***limits***,” as established by each gaming jurisdiction. Pet. 38–39 (citing Ex. 1004, 8:24–29, 23:4–8; Ex. 1005 ¶ 33); Ex. 1003 ¶¶ 201–202. Petitioner also relies on the Petition’s previous obviousness analysis, discussed above in Section III.E.3(c), in relation to this claim limitation. *See* Pet. 39; Ex. 1003 ¶ 203.

We find these contentions, which Patent Owner does not oppose, are supported by a preponderance of the evidence, as discussed above in Sections III.E.3(c) and III.E.3(d). In particular, we find Amaitis and Bryson both recognize the need to limit the player’s options for *types* of games to be played to games permitted to be played by the local jurisdiction of the player’s gaming device location. *See* Ex. 1005 ¶ 33 (stating “only gaming devices 913 located within a jurisdiction allowing *casino-style gaming* may be enabled for casino-style gaming activities” and “only gaming devices 913 located within a jurisdiction allowing *sports wagering* or *pari-mutuel betting* may be enabled for these types of activities” (emphases added)); Ex. 1004, 8:24–27 (stating “the presentation may depend on device location” such that

“wagering games and/or wagering game attributes may be provided according to the legal requirements of a device’s jurisdiction” (emphasis added)), 23:4–8 (stating “jurisdictional rules, such as . . . *types of games that can be played* and wagering rules that are established by a gaming jurisdiction may need to be enforced” (emphasis added)).

f) 1[e] — *“presenting a player with the list of player gaming options, wherein the list of player gaming options is presented to the player at a player gaming client”*

Petitioner contends Amaitis discloses or at least suggests presenting a player with the list of player gaming options, at a player gaming client. *See* Pet. 39–40 & n.5 (citing Ex. 1005, Figs. 6 and 9, ¶¶ 34, 47, 75, 100, 102, 110); Ex. 1003 ¶¶ 204–205. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. In particular, Amaitis describes how gaming module 920 provides gaming services on gaming devices 913 of users 912, and “identif[ies] a menu of gaming activities that may be . . . offered” to each user 912. Ex. 1005 ¶¶ 34, 47; *id.* ¶ 102 (“[T]he gaming environment may comprise a casino lobby where the user is presented with certain gaming options including, for example, table games, slots, . . .”).

g) 1[f] — *“collecting a selection of player gaming options from the player, wherein the selection of player gaming options includes a betting range”*

Petitioner contends Amaitis discloses collecting a selection of player gaming options from the player, wherein the selection includes a betting range. *See* Pet. 40–42 (citing Ex. 1005, Fig. 6, ¶¶ 47, 102–103; Ex. 1001, 11:15–19); Ex. 1003 ¶¶ 206–207. In particular, according to Petitioner,

Amaitis permits each player to select particular games to play, as well as “particular betting minimums or limits.” Pet. 40–41 (quoting Ex. 1005 ¶ 47); Ex. 1003 ¶ 207. Petitioner asserts “Amaitis’s ‘betting minimums or limits’ disclose the claimed ‘betting ranges’” of claim 1. Pet. 41–42 (citing Ex. 1001, 11:15–19); Ex. 1003 ¶ 207).

Prior to institution, Patent Owner had opposed Petitioner’s foregoing contentions. *See* Inst. Dec. 19–22, 44–45 (discussing Patent Owner’s pre-institution arguments). However, Patent Owner did not carry these arguments forward into the post-institution Patent Owner Response, so they have been waived. *See, e.g.*, Paper 13, 10 (Scheduling Order cautioning “that any arguments for patentability not raised in the [Patent Owner Response] may be deemed waived”).

We find Petitioner’s contentions in relation to this claim limitation, which Patent Owner does not now oppose, are supported by a preponderance of the evidence. In particular, we find Amaitis discloses user-selected parameters may “specify particular betting minimums or limits that the user 912 would like to play.” Ex. 1005 ¶ 47. This selection corresponds to a “betting range” as recited in claim 1, particularly given the breadth of that term as contemplated by the ’498 patent specification. *See* Ex. 1001, 11:16–19 (“One skilled in the art will realize that betting ranges could vary and a betting range could be single value rather than a range of values (e.g., players willing to bet \$10, players willing to bet \$20, etc.)”); Pet. 41 (line 6) – 42 (line 3); Ex. 1003 ¶ 207.

h) 1[g] — “determining a game type that the player selected, wherein the game type is based on the selection of player gaming options”

Petitioner contends Amaitis discloses determining a game type that the player selected, wherein the game type is based on the selection of player gaming options. *See* Pet. 42 (citing Ex. 1005 ¶¶ 46–50, 102); Ex. 1003 ¶ 208. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. In particular, Amaitis discloses that gaming service provider 914 determines a game type via “a user 912 [entering] one or more user-parameters corresponding to gaming characteristics in which the user 912 is interested.” Ex. 1005, Fig. 9, ¶¶ 46–47, 102–103.

i) 1[h] — “matching the player with an at least one competitor, wherein matching the player with the at least one competitor is based at least in part on the betting range, and wherein matching the player with the at least one competitor is performed by the administration server”

Petitioner contends Amaitis discloses matching the player with a competitor, based at least in part on the betting range, wherein the matching is performed by the administration server. *See* Pet. 42–43 (citing Ex. 1005 ¶¶ 34, 47, 50); Ex. 1003 ¶¶ 209–210. According to Petitioner, “Amaitis discloses matching players based on a selected betting range because Amaitis teaches that the ‘user-specified parameters’ which are used for competitor matching ‘may [] specify particular betting minimums or limits.’” Pet. 43 (quoting Ex. 1005 ¶ 47) (alteration in original); Ex. 1003 ¶ 210. Petitioner also cites Amaitis’s indication that “first user 912a may specify that the user only wishes to play with other high rollers” as part of Amaitis’s player matching process (Ex. 1005 ¶ 50), which Petitioner asserts

a person of ordinary skill in the art “would have understood to be another type of betting range.” Pet. 43; Ex. 1003 ¶ 210.

Prior to institution, Patent Owner had opposed Petitioner’s foregoing contentions. *See* Inst. Dec. 46–48 (discussing Patent Owner’s pre-institution arguments). However, Patent Owner did not carry these arguments forward into the post-institution Patent Owner Response, so they have been waived. *See, e.g.*, Paper 13, 10 (Scheduling Order cautioning “that any arguments for patentability not raised in the [Patent Owner Response] may be deemed waived”).

We find Petitioner’s contention that Amaitis discloses an administration server that matches the player with a competitor based at least in part on the betting range, which Patent Owner does not now oppose, is supported by a preponderance of the evidence. In particular, we find Amaitis correspondingly provides that “a user 912 may enter one or more user-parameters corresponding to gaming characteristics in which the user 912 is interested,” including “particular betting minimums or limits that the user 912 would like to play.” Ex. 1005, Fig. 9, ¶ 47. Then, gaming module 920 of gaming service provider 914 “use[s] these and other user-specified parameters as search criteria when identifying potential gaming activities that may be displayed to the user 912 on a gaming device 913.” *Id.* ¶ 47. Further, “[a]s an additional feature, gaming module 920 may query customer profiles 928 to identify additional players that may be willing to play with a first user 912a,” such as “other high rollers.” *Id.* ¶ 50. Taken together, these disclosures indicate that gaming module 920 matches user 912 with potential competitors based on similar

interests in the type of game to be played, as well as the betting range for placing wagers on the game.

j) I[i] — “collecting a bet from the player, wherein the bet is within the betting range identified in the selection of player gaming options”

Petitioner contends Amaitis discloses collecting a bet from the player, wherein the bet is within the betting range identified in the selection of player gaming options. *See* Pet. 43–44 (citing Ex. 1005 ¶¶ 50, 103, 110, 140); Ex. 1003 ¶¶ 211–212. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. *See, e.g.*, Ex. 1005 ¶ 47 (user selects “particular betting minimums or limits . . . to play), ¶ 103 (“the user might place a wager”).

k) I[j] — “initiating a game for the player, wherein the game is based on the selection of player gaming options”

Petitioner contends Amaitis discloses initiating a game for the player, wherein the game is based on the selection of player gaming options. *See* Pet. 44 (citing Ex. 1005 ¶¶ 50, 72); Ex. 1003 ¶ 213. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. *See, e.g.*, Ex. 1005 ¶¶ 72–73.

l) I[k] — “collecting results of the game, wherein the results of the game are received at the administration server”

Petitioner contends the combination of Amaitis and Bryson leads to collecting results of the game, received at an administration server. *See* Pet. 44–46; Ex. 1003 ¶¶ 214–217. Patent Owner disagrees. *See* PO Resp. 2–10; Ex. 2005 ¶¶ 45–57.

Petitioner maps the “administration server” of claim 1 to Amaitis’s gaming service provider, shown in Figure 3 (#36) and in Figure 9 (#914). See Pet. 31–32 (preamble 1[pre]), 33 (limitation 1[a]), 37 (limitation 1[b]), 44–45 (limitation 1[k]). Accordingly, to provide context for the parties’ arguments, we initially summarize Amaitis’s description of its gaming service provider. Then we summarize the parties’ arguments, before resolving them in Petitioner’s favor.

(i) *Amaitis’s Gaming Service Provider*

Figure 9 of Amaitis is reproduced below.

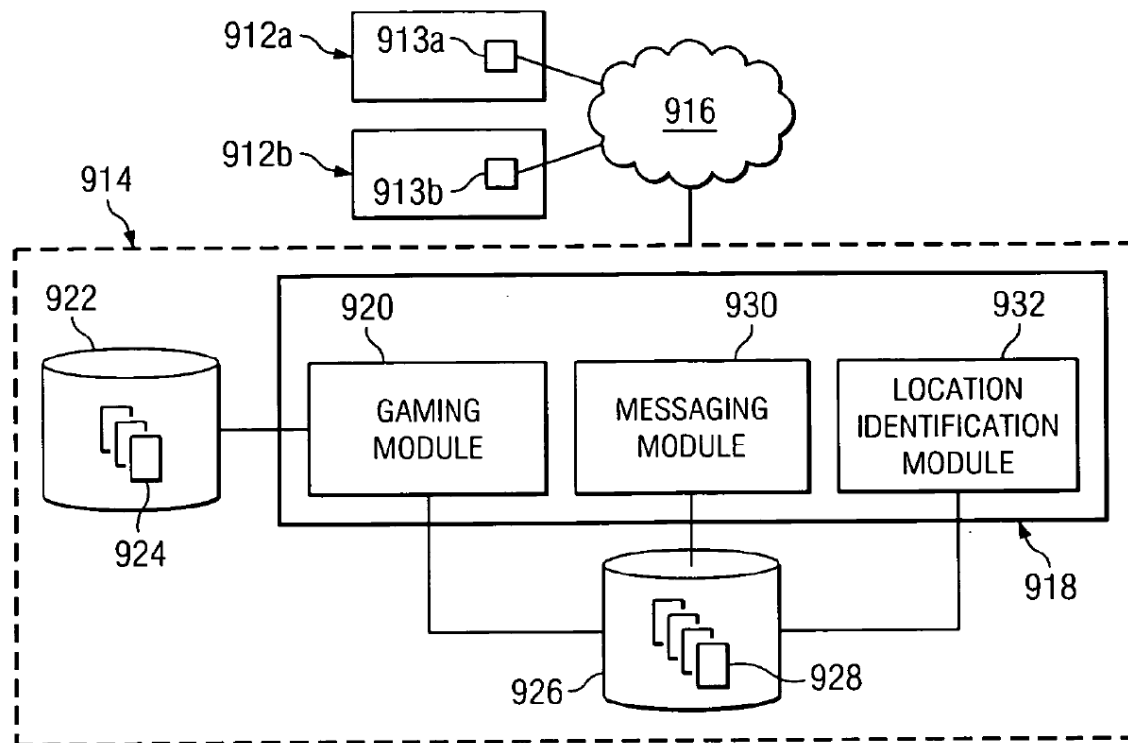


FIG. 9
Amaitis, Figure 9.

Figure 9 illustrates gaming system 910, in which gaming service provider 914 provides a single gaming activity played interactively by multiple users 912 via mobile gaming devices 913 and data network 916. See

Ex. 1005 ¶¶ 31–32. Gaming service provider 914 includes processor 918 “such as a computer or server,” with gaming module 920 “that operates as a gaming server” for devices 913, using database 922 of gaming applications 924. *Id.* ¶¶ 34–35. “Gaming applications 924 may include an information, in any format, which is necessary or desirable to the operation of the gaming experience in which users 912 participate.” *Id.* ¶ 34.

Figure 3 of Amaitis is reproduced below.

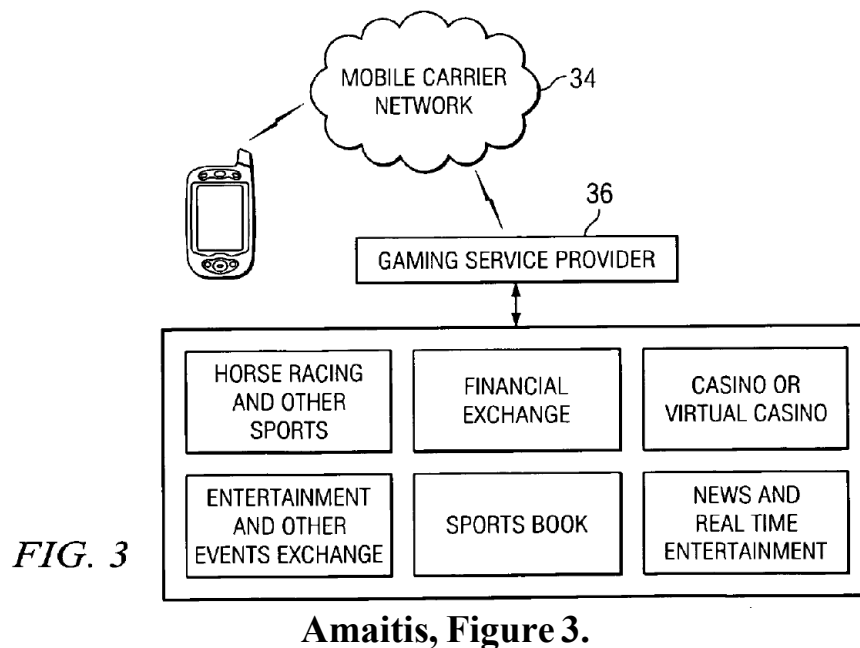


Figure 3 is a block diagram showing an embodiment of Amaitis’s gaming system. *See id.* ¶¶ 14, 75. Figure 3 illustrates gaming device 32 (unnumbered in the figure) in communication with gaming service provider 36 over network 34. *See id.* ¶ 80. Provider 36 “has one or more servers, on which are resident various gaming and other applications,” wherein exemplary gaming applications are for “horse racing and other sports” and “casino and/or virtual casino.” *Id.* “Each of these applications may be embodied in one or more software modules” and “[t]he applications may be combined in any possible combination.” *Id.*

(ii) *The Parties' Arguments*

Addressing limitation 1[k], Petitioner contends “Amaitis discloses that, during gameplay, the ‘gaming server acts on [] input data’ received from the gaming client, including by ‘determining an outcome’ of the game being played” and “[t]he gaming server then ‘determine[s] an amount won or lost based on the amount wagered.’” Pet. 44 (citing Ex. 1005 ¶ 104) (first alteration in original); Ex. 1003 ¶ 214. Petitioner cites Figure 3 of Amaitis as “teach[ing] that separate ‘servers’ may host ‘horse racing and other sports,’ ‘casino and/or virtual casino,’ and other ‘gaming applications,’ and that these servers or modules may be separate from the central ‘gaming service provider’ such that *the gaming service provider receives results of gaming transactions* therefrom” per claim 1. Pet. 44–45 (emphasis added) (citing Ex. 1005 ¶ 80); Ex. 1003 ¶¶ 215–216.

Petitioner further contends, “[t]o the extent that Amaitis does not disclose” *separate* administration and gaming servers, Bryson does so (e.g., player management servers 602, 603 and game outcome server 601 in Figure 6), and it would have been obvious to incorporate this feature into Amaitis to obtain “the benefits of expanding the list of available games and game options from the natively hosted applications of Amaitis.” Pet. 45–46 (citing Ex. 1004, 13:20–37, 13:43–50, 15:1–20, 15:61–16:2, 21:23–42); Ex. 1003 ¶¶ 216–217.

Patent Owner responds that the combination of Amaitis and Bryson does not teach or suggestion limitation 1[k]. See PO Resp. 2. As to Amaitis, Patent Owner asserts “Petitioner points to Amaitis’[s] disclosures that the gaming server ‘determin[es] an outcome’ of the game.” *Id.* (citing Pet. 44–45). Patent Owner objects that “**determining** the result of the game

by an administration server is not the same as ‘*receiving* the results of the game at the administration server’ as claimed.” *Id.*; Ex. 2005 ¶ 46. That is because “[t]he term ‘receiving’ indicates that the results are determined elsewhere and transmitted to the administration server.” PO Resp. 2–3; Ex. 2005 ¶ 46. Patent Owner also argues “the mere fact that [Amaitis’s] gaming service provider can include multiple servers does not necessitate that any of those servers *receives the results of a game*,” as “[e]ach of the gaming service provider servers could determine the results of the games that run on that server, for example.” PO Resp. 3 (citing Pet. 44–45); Ex. 2005 ¶ 47.

Turning to Bryson, Patent Owner asserts “Petitioner does not clearly articulate how it is proposing to modify Amaitis based on Bryson,” particularly “how Bryson’s player management servers (*i.e.*, the servers that allegedly receive the game results) figure into the proposed combination,” which “dooms Petitioner’s argument.” PO Resp. 3–4 (citing Pet. 45–46); Ex. 2005 ¶ 48.

Further: “Patent Owner’s best guess is that Petitioner’s argument is that Amaitis’[s] gaming servers are *analogous* to Bryson’s player management servers and thus it would have been obvious to add a separate game outcome server that interacts with them in the way that Bryson’s game outcome server interacts with Bryson’s player management servers.”² PO Resp. 4; Ex. 2005

² Patent Owner also posits Petitioner may be “proposing to actually incorporate Bryson’s player management servers into Amaitis’s system.” PO Resp. 8. However, Petitioner in its Reply states “Petitioner’s obviousness theory did *not* rely on incorporating Bryson’s *player management server* into the combined system.” Pet. Reply 4–5. Therefore,

¶ 49. Patent Owner opposes that alleged contention on the basis that Petitioner’s proffered motivation for the combination is to expand the list of available games in Amaitis per Bryson’s teachings, yet “in contrast to Bryson . . . *Amaitis* never indicates that its own gaming servers run an ‘integrated casino software platform’ that restricts the games they can run.” PO Resp. 4–5 (citing Pet. 46; Ex. 1004, 14:44–64); Ex. 2005 ¶ 50. Indeed, according to Patent Owner, “Amaitis suggests that its gaming server(s) support a wide variety of casino and non-casino games.” PO Resp. 5 (citing Ex. 1005, Fig. 3, ¶¶ 34, 80); Ex. 2005 ¶ 50. Patent Owner asserts Bryson provides a separate game outcome server 601 to solve the “problem” that Bryson’s player management servers 602, 603 “are limited by the integrated casino software platforms they execute,” whereas “Amaitis’[s] gaming servers do not have this ‘problem,’” thereby negating Petitioner’s motivation for the combination. PO Resp. 5–6 (citing Ex. 1004, 14:65–15:20); Ex. 2005 ¶ 51.

Patent Owner thus asserts Petitioner’s reference to “the natively hosted applications of Amaitis” (Pet. 46) erroneously “impl[ies] that Amaitis’[s] gaming servers are limited by the same types of compatibility issues as Bryson’s player management servers.” PO Resp. 6. Patent Owner argues Amaitis never “suggests its gaming servers are limited with respect to the games they can run . . . such that they would need Bryson’s separate game outcome server to support other games.” *Id.*; Ex. 2005 ¶ 51. Patent Owner adds that although “[i]t is generally true” that Amaitis’s gaming applications “would have to be compatible with the gaming servers’

we do not consider Patent Owner’s argument (PO Resp. 8 (line 3) – 10 (line 11)) or Dr. Lane’s testimony (Ex. 2005 ¶¶ 54–56) opposing this argument that Petitioner does not make.

hardware and software,” “this is equally true of Bryson’s game outcome server 601” and “Bryson does not describe the game outcome server as some magical server that can run any and all games regardless of the platform for which the games were developed.” PO Resp. 6; Ex. 2005 ¶ 51.

In the same vein, Patent Owner asserts “Amaitis suggests that the gaming service provider can include multiple servers and execute a wide variety of games.” PO Resp. 7 (citing Ex. 1005 ¶¶ 27, 34, 80). Dr. Lane correspondingly testifies that a person of ordinary skill in the art would have known Amaitis’s existing system could support additional games by using its existing gaming servers or by adding additional gaming servers, “without re-architecting Amaitis’[s] system into a two-tier system with player management servers in one tier and a separate game outcome server in another.” Ex. 2005 ¶ 52; *see* PO Resp. 7–8.

Petitioner replies, as to Amaitis’s disclosure, that “the Petition did not rely *solely* on Amaitis’s disclosure of ‘multiple servers,’” and instead the Petition shows a person of ordinary skill in the art “would have understood Amaitis’s disclosure of a ‘gaming server’ and separate game application modules/servers to disclose an administration server that receives game results as claimed.” Pet. Reply 2 (citing Pet. 44–45). Petitioner here cites Mr. Nicely’s testimony that “segregating [a] game play server from administration such that game results are received at an administration server that manages player accounts would have been a very common architecture that was well known.” *Id.* (quoting Ex. 1003 ¶¶ 215–216). For example, according to Petitioner, “Amaitis discloses a ‘gaming service provider’ that includes “a ***gaming server*** [that] ha[s] access to a service application database 922 or other memory that stores a library of ***gaming***

applications 924” which “can be ‘embodied in one or more software modules’ or as ‘one or more servers’ as shown in” Figure 3. *Id.* at 2–3 (citing Pet. 31–32, 45; Ex. 1005 ¶¶ 80, 111; Ex. 1003 ¶ 215) (alterations in original).

Petitioner further contends:

Critically, while individual game services are provided by the game application servers/modules, Amaitis discloses that the “**gaming server**” alone — and not the game application servers/modules — “determine[s] the amount won or lost based on the amount wagered,” and prepares a response to the user such as indicating that the user “won a hand of blackjack.” The “gaming server” also facilitates compensating the player based on the results.

Pet. Reply 3–4 (citing Ex. 1005 ¶¶ 104–105, 112) (alteration in original).

Petitioner concludes “Amaitis teaches that the ‘gaming server’ is responsible for administrative functionality, while game functionality is hosted on the separate game application servers/modules,” as confirmed by Mr. Nicely’s testimony. *Id.* at 4 (citing Ex. 1003 ¶¶ 215–216).

Turning to Bryson, Petitioner asserts it teaches “to host game services on separate game application servers/modules and/or that additional games can be accommodated by hosting platform-independent games on a game outcome server,” which a person of ordinary skill in the art would have been motivated to “incorporat[e] into Amaitis’s disclosed system.” Pet. Reply 4–5. According to Petitioner: “[I]t would have been obvious to combine Bryson’s teaching to conduct gaming on a separate **game outcome server** in Amaitis’s system such that results are received at an administrative server because Bryson teaches that doing so can expand the list of available games

and game options from the natively hosted applications of Amaitis's system." *Id.* at 5 (citing Pet. 46; Ex. 1003 ¶ 217).

In response to Patent Owner's argument and Dr. Lane's testimony that "*Amaitis* never indicates that its own gaming servers run an 'integrated casino software platform' that restricts the games they can run" (PO Resp. 5; Ex. 2005 ¶¶ 50–51), Petitioner asserts this "misapplies the law of obviousness." Pet. Reply 5. Petitioner argues obviousness does not require "that the claimed invention must be expressly suggested in any one or all of the references," but rather assesses "what the combined teachings of the references would have suggested to those of ordinary skill in the art." *Id.* (citation omitted). Petitioner's view is that "[t]he Petition was not required to show that Amaitis *expressly discloses* only a limited number of available games," and instead it is sufficient that:

[T]he Petition . . . demonstrates that a [person of ordinary skill in the art] would have recognized Amaitis's offerings as inherently limited to those currently provided by the gaming service provider and understood that Amaitis's system could have benefited from expanding the list of available games as expressly taught by Bryson.

Id. at 5–6 (citing Ex. 1003 ¶ 217).

As to the Petition's description of Amaitis as having "natively hosted applications" (Pet. 46), Petitioner maintains "Amaitis makes clear that the game application servers/modules shown in Fig. 3 are 'resident on,' or hosted by servers controlled by the 'gaming service provider,' and that they include a 'casino, or virtual casino' platform." Pet. Reply 6 (citing Ex. 1005 ¶ 80). Petitioner concludes "Amaitis's games are . . . natively hosted and integrated into Amaitis's gaming service provider architecture," and argues Dr. Lane's opposing testimony "does not elaborate on the alleged distinction

he is attempting to draw between Bryson’s ‘integrated casino platform’ and the natively hosted casino (and other) platforms disclosed by Amaitis.” *Id.* (citing Ex. 2005 ¶ 51). Petitioner further contends “Mr. Nicely’s testimony on this point is more persuasive because Dr. Lane admittedly has no experience with . . . ‘casino gaming platforms.”” *Id.* at 6–7 (citing Ex. 1003 ¶ 7; Ex. 1068, 23:12–15).

Patent Owner responds that Petitioner’s reliance on Amaitis without Bryson “fails because while Amaitis discloses the possibility of multiple gaming servers, it does not disclose that any of those servers receive the results of a game from another server.” PO Sur-reply 1 (citing PO Resp. 2–3). Patent Owner argues “Petitioner’s attempt to distinguish between Amaitis’[s] ‘gaming server’ and ‘*separate* game application modules/servers’ is a fiction.” *Id.* (citing Pet. Reply 2–4; Ex. 1005, Figs. 1, 3, and 9, ¶¶ 27, 34, 80). In particular: “[N]one of Figures 1, 3, or 9 show multiple servers, let alone an administration server and a separate gaming server.” *Id.* at 2. Further according to Patent Owner, Petitioner’s reliance on Amaitis’s disclosure of the “*method*” illustrated in Figure 6 is unavailing, because nothing therein “supports Petitioner’s position that *this ‘gaming server’* that determines the amount of winnings is ‘separate’ from the ‘gaming server’ described in connection with Figures 1, 3, and 9.” *Id.* at 2–3 (citing Pet. Reply 3; Ex. 1005, Fig. 6, ¶ 101). Indeed, Patent Owner’s view is that these are the same gaming server. *See id.* at 3 (citing Ex. 1005 ¶¶ 103–104).

Concerning the combination of Amaitis and Bryson, Patent Owner reiterates its previous argument that Petitioner fails to demonstrate a sufficient motivation. *See id.* at 3–4 (citing PO Resp. 4–7; Ex. 2005

¶¶ 50–52). For example, Patent Owner asserts: “In contrast to Bryson’s description of the game-limiting integrated casino software platforms running on the player management servers, Amaitis never states that the gaming servers can only run games developed for a particular casino software platform.” *Id.* at 4–5 (citing Ex. 1004, 14:44–64; Ex. 1005 ¶ 24).

(iii) *Discussion and Conclusion*

We determine the combination of Amaitis and Bryson would have led a person of ordinary skill in the art to employ an administration server in Amaitis’s gaming system to receive game results, per limitation 1[k], for the following reasons.

First considering Amaitis without Bryson, Amaitis describes gaming service provider 914 as providing a gaming activity on gaming devices 913 using gaming module 920 that operates as a gaming server for the gaming devices. Ex. 1005, Fig. 9, ¶¶ 31, 34. Amaitis also describes how “[g]aming module 920 *may include or have access to*” gaming applications 924 (*id.* ¶ 34 (emphasis added)), with the latter “*access*” illustrated in Figure 9 as a horizontal line connecting gaming applications 924 (on the left) to gaming module 920 (on the right). Figure 3 of Amaitis similarly illustrates gaming service provider 36 as a separate block from the gaming application block, with communication between them shown by a vertical double-headed arrow. *See id.* at Fig. 3. Based on these disclosures in Amaitis, we determine Amaitis at least suggests an embodiment in which gaming module 920 is an *administration* server that *collects* game results by *receiving* game results from various gaming applications (gaming

applications 924 in Figure 9, or the horse racing and casino applications in Figure 3), per limitation 1[k].

This is supported by Mr. Nicely's testimony. *See* Ex. 1003 ¶¶ 214–217. The thrust of Dr. Lane's opposition is that Amaitis does not disclose or suggest a server that *receives* game results from some other source. *See* Ex. 2005 ¶¶ 45–46. We disagree, for the reasons just provided.

Next considering the combination of Amaitis and Bryson, we further and alternatively determine a person of ordinary skill in the art would have been motivated to employ separate administration and gaming servers in the context of Amaitis's system. In particular, we are persuaded by Mr. Nicely's testimony that this architecture would have allowed the administration server (e.g., Bryson's player management servers 602, 603) to focus on updating player accounts as a result of gaming activities, and each gaming server (e.g., Bryson's game outcome server 601) to implement the game playing activities. *See* Ex. 1003 ¶ 216 (citing Ex. 1004, Fig. 6, 13:20–37, 13:43–50, 13:66–14:10, 19:1–4, 21:5–7, 21:21–42). It also, as Mr. Nicely testifies, would have permitted expanding Amaitis's list of available games and game options to include services that are compatible with different integrated casino platforms. *See id.* ¶ 217 (citing Ex. 1004, 15:1–20, 15:61–16:2).

We have considered Dr. Lane's opposing testimony, but we do not find it persuasive. *See* Ex. 2005 ¶¶ 48–53. It is true that Amaitis already provides a central administration *server* (i.e., gaming module 920 of gaming service provider 914) that communicates with separate gaming *applications* (gaming applications 924 in Figure 9, or the horse racing and casino applications in Figure 3). *See* Ex. 1005 ¶¶ 31, 34, 80. However, instead of

negating the obviousness of utilizing separate administration and gaming *servers* in Amaitis, as Dr. Lane would have it, we conclude this disclosure in Amaitis is consistent with implementing Amaitis's separate gaming applications on separate servers.

Moreover, we are persuaded by Mr. Nicely's testimony that using gaming *servers* per Bryson to implement the gaming *applications* of Amaitis would have achieved Bryson's disclosed "benefits of expanding the list of available games and game options" that are available in Amaitis's existing system, "to include 'game services that are compatible with different integrated casino platforms'" than Amaitis's platform. Ex. 1003 ¶¶ 216–217. Dr. Lane's opposing testimony does not persuade us otherwise. *See* Ex. 2005 ¶¶ 48–53. In particular, the fact that Amaitis does not identify a *problem* with its existing structure does not detract from Mr. Nicely's testimony that using separate gaming servers per Bryson's teachings will achieve the benefits Mr. Nicely ascribes to such servers.

Thus, we conclude Petitioner's contentions concerning limitation 1 [k] are supported by a preponderance of the evidence, under either of Petitioner's two obviousness theories, despite Patent Owner's opposition.

m) 1[l] — "compensating the player with player winnings, wherein the player winnings are based on the results of the game"

Petitioner contends Amaitis discloses compensating the player with player winnings, based on the results of the game. *See* Pet. 46 (citing Ex. 1005 ¶¶ 104, 112); Ex. 1003 ¶ 218. We find this contention, which Patent Owner does not oppose, is supported by a preponderance of the evidence. *See* Ex. 1005 ¶ 104 (indicating that Amaitis's system determines a

game outcome and an amount won or lost based on a wager), ¶ 112 (describing one approach for receipt of winnings).

n) Conclusion Regarding Claim 1

Based on the record presented, we conclude Petitioner has shown by a preponderance of the evidence that claim 1 is unpatentable as having been obvious over Amaitis and Bryson.

4. Dependent Claim 10

Claim 10 depends from claim 1, and adds “wherein compensating the player with the player winnings is compensating the player with no monetary winnings.” Ex. 1001, 17:13–15.

Petitioner argues and Mr. Nicely testifies that claim 10 is unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 55; Ex. 1003 ¶ 238. Patent Owner and Dr. Lane disagree. *See* PO Resp. 10–11; Ex. 2005 ¶¶ 58–59. We conclude a preponderance of the evidence supports Petitioner’s assertions as to claim 10, for the following reasons.

First, as Patent Owner points out, claim 10 requires “*collecting a bet from the player*” and “*compensating the player with player winnings*” (per its parent claim 1) but “*no monetary winnings*” (per the limitation added by claim 10). Ex. 1001, 16:13, 16:20, 17:13–15 (emphases added); *see* PO Resp. 10–11; PO Sur-reply 5.

In the Petition, Petitioner contends “Amaitis discloses that ‘[g]aming can also include non-wagering games and events,’” for example “gaming can include prize contests.” Pet. 55 (quoting Ex. 1005 ¶ 22) (alteration in original); Ex. 1003 ¶ 238. Mr. Nicely testifies a person of ordinary skill in the art would have understood “Amaitis’[s] disclosure of non-wagering

games and prize contests would teach compensating the player with no monetary winnings” per claim 10. Ex. 1003 ¶ 238; *see* Pet. 55.

Patent Owner responds that claim 10 does not recite a “non-wagering” game such as Amaitis describes. PO Resp. 10–11. Patent Owner urges that “Amaitis’[s] passing reference to ‘non-wagering’ games merely suggests games that do not involve wagering” and “it does not teach or suggest compensating a player who *has wagered* (*i.e.*, by making a bet) with non-monetary winnings.” *Id.*; Ex. 2005 ¶¶ 58–59. Patent Owner asserts Amaitis’s description of “prize contests” does not apply to claim 10 for the same reason. PO Resp. 11; Ex. 2005 ¶ 59.

Petitioner replies that a person of ordinary skill in the art “would understand that ‘prizes,’ as disclosed by Amaitis, would include *non-monetary* prizes,” and would not understand prizes to be “*exclusively* monetary.” Pet. Reply 7–8 (citing Ex. 1003 ¶¶ 129, 238; Ex. 1013³, 13:57–66). Petitioner further argues Amaitis includes prize contests in various listings of game types that also include games where users compete and wager, thereby demonstrating Amaitis “discloses prize contests *in connection with* invention embodiments where users compete and wager.” *Id.* at 8 (emphasis added) (citing Ex. 1005 ¶¶ 2, 22, 35, 73, and claims 10, 34, and 57).

Petitioner moreover argues “the evidence of record shows that prize contests include either a monetary or non-monetary *bet*.” Pet. Reply 8. Petitioner asserts Mr. Nicely correspondingly explains that “the term ‘gambling’ is commonly defined as ‘any activity with three elements:

³ Exhibit 1013 is US Patent No. 6,758,755 B2 to Kelly et al.

consideration, chance, and *prize*” and “[g]enerally, *payment for a chance to win a thing of value* sums up the transaction required.” *Id.* (citing Ex. 1003 ¶ 71; Ex. 1018⁴, 7–8). Petitioner equates such “*gambling*” with Amaitis’s description that “*gaming* can include prize contests,” and concludes a person of ordinary skill in the art would have understood “Amaitis’s ‘prize contests’ are ‘gambling’ and would therefore require *some* ‘consideration,’ which may be monetary or non-monetary ‘payment,’ or bet, ‘for a chance to win.’” *Id.* at 8–9 (citing Ex. 1003 ¶¶ 71, 238; Ex. 1005 ¶ 22). Petitioner contends Patent Owner’s opposition “rel[ies] solely on a single paragraph of unsupported allegations from” Dr. Lane, which “is less persuasive than Petitioner’s evidence from a qualified expert in wager-based gaming.” *Id.* at 9 (citing Ex. 2005 ¶ 59).

Patent Owner responds that “Amaitis simply does not disclose collecting a bet from a player and then compensating the player with no monetary winnings as claimed.” PO Sur-reply 5. For example, Patent Owner asserts “Amaitis never describes prizes as non-monetary, let alone compensating *a player that placed a bet* with a non-monetary prize.” *Id.* Patent Owner argues “Petitioner resorts to a severely strained argument based on the elements of ‘gambling’ from a *legal* book (*Champion and Rose’s Gaming Law in a Nutshell*).” *Id.* at 5–6 (citing Ex. 1003 ¶ 71 (citing Ex. 1018)). Patent Owner adds that Amaitis does not “refer to ‘pretend money’ or any of the synonyms for it identified by Mr. Nicely.” *Id.* at 6 (citing Ex. 1003 ¶ 73).

⁴ The Petitioner Reply actually refers to Exhibit 1022 here, but in context we understand Exhibit 1018 was meant. *See, e.g.*, Ex. 1003 ¶ 71. Exhibit 1018 is Champion & Rose, *Gaming Law in a Nutshell* (2018).

We conclude Petitioner has the better position. The Petition cites paragraph 22 of Amaitis for claim 10, which we reproduce here in full, with our emphases added:

A gaming system enables participants to engage in gaming activities from remote and/or mobile locations. The possible gaming activities include gambling, such as that provided by casinos. Gambling activities may include any casino-type gambling activities including, but not limited to, slot machines, video poker, table games (e.g., craps, roulette, blackjack, pai gow poker, Caribbean stud poker, baccarat, etc), the wheel of fortune game, keno, sports betting, horse racing, dog racing, jai alai, and other gambling activities. The gaming activities can also include wagering on any type of event. Events can include, for example, sporting events, such as horse or auto racing, and athletic competitions such as football, basketball, baseball, boxing, golf, etc. Events can also include such things that do not normally involve wagering. Such events may include, without limitation, political elections, entertainment industry awards, and box office performance of movies. *Gaming can also include non-wagering games and events. For example, gaming can include prize contests or lotteries or lottery-type activities such as state and interstate lotteries. These can include all forms of number-selection lotteries, “scratch-off” lotteries, and other lottery contests.*

Ex. 1005 ¶ 22 (emphases added). We agree with Petitioner’s position that the emphasized portion of this paragraph reflects *collecting a bet* to participate in a *prize context*. In particular, although Amaitis categorizes prize contests as “non-wagering” games, Amaitis also includes “state and interstate lotteries” in the same “non-wagering” category. *See id.* We find a person of ordinary skill in the art would have known that such lotteries require a small bet, as the requisite consideration to have a chance to win the lottery jackpot. So too with the prize contests that Amaitis places in the same non-wagering category with lotteries. *See also id.* ¶ 35 (describing

“gaming activities” as including “poker, sporting event wagering, athletic competition wagering, lottery and prize contests, and keno”).

Our foregoing findings are based on a person of ordinary skill in the art’s understanding of Amaitis’s paragraph 22. They do not require recourse to Mr. Nicely’s tertiary discussion of the term “gambling” as that term is defined in *Black’s Law Dictionary* and *Champion and Rose’s Gaming Law in a Nutshell*. See Ex. 1003 ¶ 71. We note, however, that this testimony is not inconsistent with our findings.

We acknowledge Dr. Lane’s testimony that Amaitis “does not teach or suggest compensating a player who has wagered (*i.e.*, made a bet) with non-monetary winnings as part of playing the game.” Ex. 2005 ¶ 59. However, this attempt to equate Amaitis’s identification of “non-wagering” games (Ex. 1005 ¶ 22) with games that do not require collecting a “bet” (as that term is used in claim 10) is not persuasive, because Amaitis places lotteries which require making a bet in the same “non-wagering” category, as discussed above. Dr. Lane does not persuasively explain his understanding of the claim term “bet” so as to exclude the entry fee normally associated with participation in a lottery.

We next find a person of ordinary skill in the art would readily understand that Amaitis’s disclosure of “prize contests” encompasses both monetary prizes and non-monetary prizes, as Mr. Nicely testifies. Ex. 1005 ¶ 22; see Ex. 1003 ¶ 238. Dr. Lane in opposition merely states that “Amaitis’[s] passing reference to ‘prize contests’ is vague.” Ex. 2005 ¶ 59. For example, Dr. Lane does not dispute that the term “prize” would normally be understood to include non-monetary prizes, and therefore

involve “compensating the player with no monetary winnings” per claim 10. *See id.* We are persuaded by Mr. Nicely’s testimony on this point.

Based on the record presented, we conclude a preponderance of the evidence establishes claim 10 of the ’498 patent is unpatentable as having been obvious over Amaitis and Bryson.

5. *Independent Claim 12*

Petitioner argues and Mr. Nicely testifies that independent claim 12 is unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 56–59; Ex. 1003 ¶¶ 243–249. Patent Owner and Dr. Lane disagree. *See* PO Resp. 11–17; Ex. 2005 ¶¶ 60–67. We conclude a preponderance of the evidence supports Petitioner’s assertions as to claim 12, for the following reasons.

We reproduce claim 12 here, adding Petitioner’s limitation identification scheme (*see* Pet. 9–10), with our emphases added.

[pre] 12. A system for peer-to-peer gaming, the system comprising:

[a] at least one processor;

[b] *at least one communication interface*; and

[c] a memory containing a plurality of program instructions configured to cause the at least one processor to:

[d] create a list of player gaming options for a player at a current location,

[e] wherein the list of player gaming options restricts limits on wagers or types of games allowed in the current location of the player;

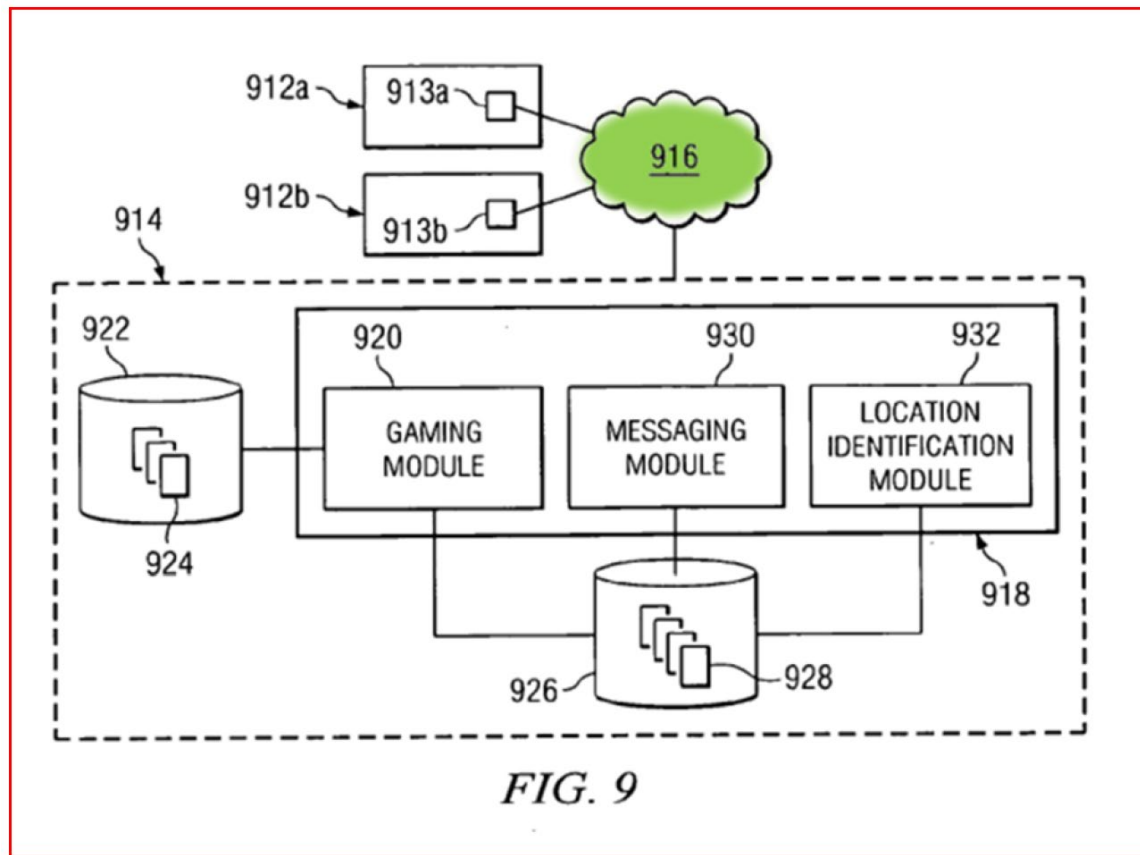
[f] *transfer the list of player gaming options to a player gaming client through the communication interface*;

- [g] *receive a selection of player gaming options from the player gaming client through the communication interface,*
- [h] wherein the selection of player gaming options includes a betting range;
- [i] match a player using the player gaming client with a competitor using a competitor gaming client,
- [j] wherein the player and the competitor are matched based at least in part on the betting range;
- [k] receive a bet within the betting range;
- [l] initiate a game based on the selection of player gaming options, wherein the game is executed on a gaming server;
- [m] *receive data about the game from the gaming server through the communications interface, and*
- [n] compensate the player with player winnings, wherein the player winnings are based on data about the game.

Ex. 1001, 17:24–54 (emphases added). We refer to limitations 12[b], 12[f], 12[g], and 12[m] collectively as the Communication Interface Limitations.

a) The Communication Interface Limitations of Claim 12

Petitioner relies on Amaitis as disclosing the Communication Interface Limitations of claim 12. *See* Pet. 57–58 (limitation 12[b]), 59 (limitations 12[f], 12[g], and 12[m]). Petitioner annotates Amaitis’s Figure 9 to illustrate Petitioner’s argument, as reproduced below. *See id.* at 58.



Amaitis, Figure 9 (Annotated at Pet. 58).

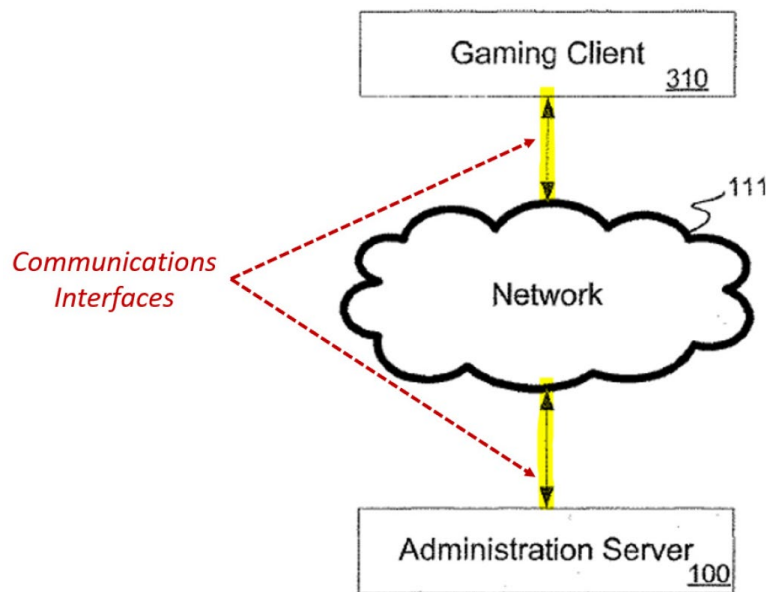
Figure 9 illustrates peer-to-peer gaming system 910, including gaming service provider 914 accessed by users 912 with mobile gaming devices 913 via data network 916. *See* Ex. 1005 ¶ 31. For limitation 12[b], Petitioner argues “Amaitis discloses that ‘gaming information is communicated by way of a data network 916 [colored green above] that forms at least a portion of the communication path between gaming devices 913 and gaming service provider 914,’ which is a communication interface for components of Amaitis’s system.” Pet. 57–58 (citing Ex. 1005 ¶ 31); Ex. 1003 ¶ 245.

For limitations 12[f] and 12[g], Petitioner argues “Amaitis teaches transferring ‘gaming options’ from a ‘gaming server’ to a ‘gaming communication device,’ or a client, and receiving the player’s selection of options.” Pet. 59 (citing Ex. 1005 ¶¶ 23, 100); Ex. 1003 ¶ 247. Further

according to Petitioner: “This ‘data is transmitted back and forth . . . between the gaming communication device and a server controlled by the gaming service provider’ via a network interface, such as network 116 [sic ‘916’].” Pet. 59 (citing Ex. 1005 ¶ 110) (first alteration in original); Ex. 1003 ¶ 247.

For limitation 12[m], Petitioner argues “Amaitis discloses ‘the gaming server software prepares a response’ that is transmitted to the gaming client over the network interface and that the ‘response’ includes data about the game.” Pet. 59 (citing Ex. 1005 ¶ 105); Ex. 1003 ¶ 248.

Patent Owner responds that Petitioner misconstrues the “communication interface” term of claim 12. *See* PO Resp. 11–12. Patent Owner argues a person of ordinary skill in the art would have understood this term as referring to an interface for the gaming system (recited in the claim preamble) to communicate with the player gaming client and the gaming server (both recited in the claim body). *See id.* at 12 (citing Ex. 1001, 4:15–19); Ex. 2005 ¶ 61. In particular, according to Patent Owner, the ’498 patent “indicates that gaming client 310 and administration server 100 *each has its own communications interface (e.g., network interface)* through which they *connect to the network*” between them. PO Resp. 12–13 (citing Ex. 1001, Fig. 1); Ex. 2005 ¶ 61. To illustrate this contention, Patent Owner annotates an excerpt of Figure 1 of the ’498 patent, as reproduced below.



The '498 Patent, Figure 1 (Excerpt, Annotated at PO Resp. 13).

Figure 1 shows a high level network architecture of a peer-to-peer gaming system. *See* Ex. 1001, 3:3–4. Patent Owner annotates the figure in yellow to identify two double-headed arrows, which illustrate data communication between gaming client 310 and administration server 100 via network 111, and Patent Owner equates the arrows to “Communications Interfaces” as recited in claim 12. *See id.* at 3:46–52, 4:6–23; PO Resp. 12–13; Ex. 2005 ¶ 61. Patent Owner also asserts that the '498 patent further describes how administration server 100 “separately” communicates with gaming server 320 via network 112 to receive game data from gaming server 320. *See* PO Resp. 15–16 (citing Ex. 1001, Fig. 1, 5:45–47, 7:17–27, 12:37–40); Ex. 2005 ¶ 65.

According to Patent Owner: “Petitioner takes the unreasonable position that the recited ‘communication interface’ can be a *network itself*, as opposed to a network interface.” PO Resp. 13 (citing Pet. 57–58; Ex. 1003 ¶ 245). Patent Owner asserts a person of ordinary skill in the art “would not interpret the recited ‘communication interface’ to cover a

network,” in part because the ’498 patent “never describes a *network* (e.g., network 111) as a communication interface” and instead “is clear that communication interfaces *connect devices (e.g., clients and servers) to a network.*” *Id.* at 13–14; Ex. 2005 ¶¶ 62–63. Patent Owner further argues: “In the context of distributed computing systems, the term ‘interface’ is generally used to describe a device such as a *network interface card* (NIC) or modem that allows a system to connect to and communicate over a network.” PO Resp. 14 (citing Ex. 1001, 4:15–19; Ex. 2006, 900–901); Ex. 2005 ¶ 63.

Patent Owner then focuses on limitation 12[m], as illustrating why Petitioner’s reliance on Amaitis fails. *See* PO Resp. 14 (section title). According to Patent Owner, “Petitioner points to Amaitis’[s] *gaming server* as performing the first two steps that utilize the communication interface to (1) transfer the list of player gaming options to a player gaming client [per limitation 12[f]] and (2) receive a selection of player gaming options from the player gaming client [per limitation 12[g]].” *Id.* (citing Pet. 59). Patent Owner asserts “Amaitis’[s] gaming server does not, however, use its communication interface to (3) receive data about the game from the gaming server as required by limitation 12[m],” because “Amaitis’[s] gaming server does not receive game data from itself.” *Id.*; Ex. 2005 ¶ 64.

Patent Owner argues this deficiency leads to Petitioner’s argument for limitation 12[m] “that Amaitis’[s] *gaming client* receives data about the game from the gaming server.” PO Resp. 15 (citing Pet. 59). Patent Owner asserts: “Because Amaitis’[s] gaming client and gaming server would each have its own communication interface (like the ’498 patent describes at 4:15–19), the three steps are not performed using the *same communication*

interface as the claim requires.” *Id.*; Ex. 2005 ¶ 64. Patent Owner concludes that Petitioner’s improper reliance on Amaitis’s network as the “communication interface” permits Petitioner to “pretend that Amaitis discloses all three steps being performed using the *same communication interface*.” PO Resp. 15; Ex. 2005 ¶ 64.

Petitioner replies that claim 12 does not recite an “administration server” as Patent Owner would have it. *See* Pet. Reply 9–10. Petitioner argues the Petition sufficiently maps the “gaming server” of claim 12 to Amaitis’s gaming service provider 914, and the “player gaming client” of claim 12 to Amaitis’s gaming device 913, and demonstrates they satisfy the limitations of claim 12. *Id.* (citing Pet. 56–59). In particular, according to Petitioner: “The Petition maps Amaitis’s network ‘communication path between gaming devices 913 and gaming service provider 914’ to the claimed ‘communication interface’ and demonstrates that it meets” the Communication Interface Limitations. *Id.* at 10–11 (quoting Pet. 57) (citing Pet. 59). Petitioner elaborates: “Critically, the network interface of Amaitis’s ‘gaming server’—which is part of the ‘communication path’ identified in the Petition—would satisfy each” of the Communication Interface Limitations. *Id.* at 11. Concerning limitation 12[m] in this regard, Petitioner asserts the network interface of Amaitis’s gaming server “facilitates the gaming client’s reception of data about the game from the gaming server” and “[i]n other words, the gaming server’s transmission of ‘data about the game’ to the gaming client satisfies limitation 12[m] because that data is transmitted ‘through the communication[] interface’ of Amaitis’s gaming server.” *Id.* (second alteration in original).

Petitioner argues Patent Owner “admits that Amaitis discloses ‘communication interfaces,’” and Dr. Lane “admitted that communication interfaces are ‘*necessarily*’ part of *any network*” and “network-connected servers, which Amaitis also discloses, *must also* include communication interfaces.” *Id.* at 10 & n.2 (citing PO Resp. 15; Ex. 1068, 53:21–54:5, 54:12–14).

Patent Owner asserts “Petitioner tries to rewrite the Petition to rely not specifically on data network 916” as the claimed communication interface, “but instead on the more amorphous ‘communication path between gaming devices 913 and gaming service provider 914.’” PO Sur-reply 7 (quoting Pet. Reply 10 (quoting Pet. 57)). Patent Owner argues “[t]he record belies this revisionist history” because “Petitioner specifically highlighted data network 916 and nothing else in Amaitis’ Fig. 9” as corresponding to the claimed communication interface. *Id.* (citing Pet. 58; Ex. 1003 ¶ 245 (pg. 198)). In particular, according to Patent Owner: “The ‘communication path’ language only appeared in the Petition as part of a quoted description of [Amaitis’s] data network 916,” and the Petition later “specifically pointed to ‘network 916’ and said nothing about any ‘communication path.’” *Id.* (citing Pet. 57–58, 59). Patent Owner similarly concludes Petitioner’s “blatant shift to a new argument” relying on the network interface of Amaitis’s gaming server as the claimed communication interface is improper because it “was not disclosed in the Petition.” *Id.* at 7–8 (citing Pet. Reply 10–11).

On the merits, Patent Owner argues Petitioner’s reliance on the network interface of the gaming server as the claimed communication interface is “dubious.” *Id.* at 8 n.2. Patent Owner asserts “[t]he gaming

server's network interface (*e.g.*, network interface card) would be part of the server" and this "interface would connect the server to any number of other computers over any number of different communication paths." *Id.*

Further according to Patent Owner, in limitation 12[m] "the phrase 'through the communications interface' plainly describes how the data about the game is 'received,'" and "Amaitis' gaming clients do not *receive data* about the game from the gaming server *through the gaming server's network interface*." *Id.* at 8–9.

We find a preponderance of the evidence supports Petitioner's reliance on Amaitis as disclosing the Communication Interface Limitations.

Although in its Response (*see* PO Resp. 11), Patent Owner asserts Petitioner "misconstrues" the term "communication interface," we discern that in actuality there is no apparent dispute between the parties as to the term's meaning. In particular, the parties seemingly agree it is composed of components that connect devices, such as the player gaming client and the gaming server of claim 12, to a network. *See* PO Resp. 11–13; Pet. Reply 10–11. Amaitis correspondingly discloses, as Petitioner points out, that its data network 916 allows gaming devices 913 and gaming service provider 914 to communicate with one another. *See* Ex. 1005, Fig. 9, ¶¶ 31–32; Pet. 57–58, 59; Pet. Reply 10–11. In our view, there is nothing unreasonable or ambiguous in Petitioner's identification of this communication path as including "communication interfaces" for gaming service provider 914 and gaming devices 913 to connect to network 916. Patent Owner's contention that Petitioner relies on a "network itself" as the communication interface is not an accurate characterization of Petitioner's actual position. In particular, Petitioner's citation to Amaitis's

“communication path” (Pet. 57) is more general than relying solely on Amaitis’s data network 916 to the exclusion of how gaming service provider 914 and gaming devices 913 connect to the network, as Patent Owner would have it.

Furthermore, Dr. Lane’s testimony is consistent with our reading of Amaitis. Dr. Lane testified under cross-examination that a person of ordinary skill in the art would generally understand communication interfaces to be part of any network. *See* Ex. 1068, 53:21–54:5, 54:12–14.

We moreover disagree with Patent Owner’s position that the Petitioner Reply improperly adds new argument on this issue. We conclude the Petitioner Reply is a proper response to arguments raised in the Patent Owner Response, by arguing how Amaitis’s Figure 9 embodiment (which was cited in the Petition) satisfies the Communication Interface Limitations even applying Patent Owner’s construction of those limitations. For example, in *ParkerVision, Inc. v. Vidal*, 88 F.4th 969 (Fed. Cir. 2023), the Court held the Board permissibly relied on a petitioner’s reply argument as to how a prior art reference disclosed a claim element, because the Administrative Procedure Act “required the Board to give” the petitioner “adequate notice and an opportunity to respond under the new construction” first proposed in [the patent owner’s] response.” *Id.* at 979 (quoting *Axonics, Inc. v. Medtronic, Inc.*, 75 F.4th 1374, 1383 (Fed. Cir. 2023)).

We therefore turn to the issue of whether Amaitis’s gaming system utilizes the communication interface of gaming service provider 914 to implement each of the limitations 12[f], 12[g], and 12[m]. *See* Pet. 59; Pet. Reply 10–11. As to limitation 12[f], we find Amaitis’s gaming system utilizes this interface to transfer a list of player gaming options from gaming

service provider 914 to gaming devices 913. *See* Ex. 1005, Fig. 9, ¶¶ 34, 46–48, 56; Ex. 1003 ¶ 247. As to limitation 12[g], we find Amaitis’s gaming system also utilizes this interface to allow gaming service provider 914 to receive a selection of player gaming options from gaming devices 913. *See* Ex. 1005, Fig. 9, ¶¶ 46–47, 72–73; Ex. 1003 ¶ 247. Indeed, Patent Owner does not dispute these findings. *See* PO Resp. 14–15.

Limitation 12[m] requires *receiving* data about the game *from* the gaming server through the communication interface. *See* Ex. 1001, 17:50–51. We find a preponderance of the evidence supports Petitioner’s contention that Amaitis’s gaming system correspondingly utilizes the communication interface of Amaitis’s gaming service provider 914 in order for gaming devices 913 to receive data about the game from provider 914. *See* Ex. 1005, Fig. 9, ¶¶ 34, 46–48, 56, 105; Ex. 1003 ¶ 248; Pet. 59; Pet. Reply 11.

Patent Owner asserts and Dr. Lane testifies that Amaitis’s gaming system does not perform limitation 12[m] because gaming service provider 914 cannot receive gaming data from itself. *See* PO Resp. 14 (“Amaitis’[s] gaming server does not receive game data from itself.”); Ex. 2005 ¶¶ 64–65. However, we agree with Petitioner’s contention that this position relies on an unclaimed limitation. *See* Pet. Reply 9–10 (arguing claim 12 does not recite an “administration server”). In particular, claim 12 does not specify which component of the recited “system for peer-to-peer gaming” (Ex. 1001, 17:24–25 (preamble)) is required to “receive data about the game from the gaming server” (*id.* at 17:50–51 (limitation 12[m])). By contrast, as discussed above, limitation 1[k] of claim 1 specifies “the results of the game are *received at the administration server.*” *Id.* at 16:18–19

(emphasis added). Patent Owner could have included a similar limitation in claim 12, but did not.

The overall structure of claim 12 requires the recited system for peer-to-peer gaming to comprise “at least one processor”; “at least one communication interface”; and “a memory containing a plurality of program instructions configured to cause the at least one processor to” perform limitations 12[f], 12[g], and 12[m]. Ex. 1001, 17:24–29. In this regard, we acknowledge Dr. Lane’s testimony that a person of ordinary skill in the art “would not interpret the claim in a way that covers steps performed by separate computing devices with separate communication interfaces,” and Patent Owner’s similar argument that “[t]he ’498 Patent does not describe (or suggest that) the administration server 100 and the separate gaming client 310 execute program instructions that are contained in the same memory.” Ex. 2005 ¶ 66; PO Resp. 16–17. However, this testimony and argument are belied by the breadth of claim 12, which as discussed above does not specify which component of the recited system must “receive” data per limitation 12[m]. We further find Amaitis’s gaming service provider 914 includes processor 918 and a memory containing instructions for processor 918 to utilize the communication interface of provider 914 to communicate with gaming devices 913, thereby performing limitations 12[f], 12[g], and 12[m] as discussed above. *See* Ex. 1005, Fig. 9, ¶¶ 34, 80; Pet. 56–59.

Accordingly, we find a preponderance of the evidence shows Amaitis discloses the Communication Interface Limitations of claim 12.

b) Other Limitation of Claim 12

Patent Owner's opposition to Petitioner's contentions concerning the obviousness of claim 12 over Amaitis and Bryson are limited to the Communications Interface Limitations. *See* PO Resp. 11–17. In its Sur-reply, Patent Owner suggests its arguments concerning limitation 1[k] also apply to claim 12. *See* PO Sur-reply 5 (“Petitioner’s Ground 1 and 2 arguments fail for Claims 1–11. For the same reasons, these Grounds also fail for claims 12–17.”). However, the Patent Owner Response does not tie claims 1 and 12 together in this fashion (*see* PO Resp. 11–17), and Patent Owner does not explain how limitation 1[k] has an analog in claim 12 to support such a relationship. As noted above, unlike claim 12, limitation 1[k] recites “the results of the game are *received at the administration server*.” Ex. 1001, 16:18–19 (emphasis added).

Based on the record presented, we conclude a preponderance of the evidence supports Petitioner's unopposed contentions regarding how the combination of Amaitis and Bryson discloses or suggests the subject matter of claim 12 apart from the Communication Interface Limitations, and we adopt these contentions as our own in this Decision. *See* Pet. 56–59 (largely relying on Ground One arguments presented for claim 1 as also applying to claim 12).

c) Conclusion Regarding Claim 12

Based on the record presented, we conclude Petitioner has shown by a preponderance of the evidence that claim 12 is unpatentable as having been obvious over Amaitis and Bryson.

6. *Independent Claim 13*

Petitioner argues and Mr. Nicely testifies that independent claim 13 is unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 59–64; Ex. 1003 ¶¶ 250–259.

Patent Owner and Dr. Lane disagree, based on arguments we have already considered above in the context of limitation 1[k] which Patent Owner analogizes to limitation 13[k]⁵ in claim 13, concerning Petitioner’s combination of Amaitis and Bryson to employ an administration server that collects and receives results of a game. *See* PO Resp. 17–19; PO Sur-reply 5; Ex. 2005 ¶¶ 68–72. Petitioner replies by likewise relying on its arguments presented in the context of limitation 1[k]. *See* Pet. Reply 12. For the reasons provided above in Section III.E.3(l) in the context of limitation 1[k], we have resolved this dispute in Petitioner’s favor.

We further conclude a preponderance of the evidence supports Petitioner’s otherwise unopposed contentions regarding how the combination of Amaitis and Bryson discloses or suggests the subject matter of claim 13, and we adopt these contentions as our own in this Decision. *See* Pet. 59–64.

Based on the record presented, we conclude a preponderance of the evidence establishes independent claim 13 of the ’498 patent is unpatentable as having been obvious over Amaitis and Bryson.

⁵ Limitation 13[k] recites “at least one gaming server is configured to . . . transmit data about the game to the administration server.” Pet. 10–11.

7. *Dependent Claim 17*

Petitioner argues and Mr. Nicely testifies that dependent claim 17 is unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 19–22, 65–66; Ex. 1003 ¶¶ 145–149, 264–271. Patent Owner and Dr. Lane disagree.⁶ *See* PO Resp. 22–33.

We conclude a preponderance of the evidence supports Petitioner’s assertions as to claim 17, for the following reasons. We first address claim construction of claim 17, then we turn to obviousness of claim 17 over Amaitis and Bryson.

a) Claim Construction — “Module” Limitations of Claim 17

Claim 17 recites:

17. The system of claim 13, wherein the administration server comprises:

a gaming option collection module, the module configured to collect the selection of the at least one gaming option;

a matching engine module, the module configured to match the player with a competitor based on the selection of the at least one gaming option received by the gaming option collection module;

a game administration module, the module configured to initiate the game, and further configured to receive the data about the game from the gaming server; and

a results calculation module, the module configured to calculate results of the game, wherein the results are based on the data about the game received from the gaming server through the game administration module.

⁶ This argument is presented in the context of Ground Five against claims 18–20 which depend from claim 17, but it clearly also applies to Ground One against claim 17, so we consider it here.

Ex. 1001, 18:26–42. We refer to these limitations collectively as the “Module Terms” of claim 17.

(i) *The Module Terms Generally*

Petitioner asserts the Module Terms of claim 17 are recited as being “‘configured to’ perform certain recited functionality, without reciting sufficient structure for performing those functions.”⁷ Pet. 19. Petitioner contends the Module Terms therefore “are nonce terms subject to Section 112 ¶ 6.” *Id.* (citing *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015)); Ex. 1003 ¶ 146. Petitioner provides a table “identifying what Petitioner infers Patent Owner’s construction to be for each of” the Module Terms, including the “Claimed Function” and citations to where the claimed “Function [is] Described in Specification.” Pet. 19–21. Petitioner argues the ’498 patent specification “shows a ‘server’ (i.e., administration server) as including all of the above recited modules,” and Petitioner concludes “a server performs each of the above modules’ functionalities.” *Id.* at 21–22 (citing Ex. 1001, Fig. 1, 5:32–55); Ex. 1003 ¶ 147.

Patent Owner argues “Petitioner carefully avoids addressing ‘corresponding structure’ for” the Module Terms, because “identifying the corresponding structure . . . would make it harder to argue they are indefinite for lack of corresponding structure later” in the District Court Litigation. PO Resp. 22 (citing Pet. 19–22). Patent Owner points out that “Petitioner

⁷ The Petition at page 19 misidentifies the Module Terms of claim 17, but the analysis at pages 19–22 discusses all of the Module Terms of claim 17.

never even uses the word ‘structure’ in setting forth its proposed constructions for the” Module Terms. *Id.*

Patent Owner also argues the Institution Decision erred in its claim construction of the Module Terms, when concluding a “server” is the corresponding structure in the ’498 patent specification, for two reasons. *See id.* at 24 (citing Inst. Dec. 23, 25). First, Patent Owner asserts Petitioner did not take this position in the Petition, although Mr. Nicely “does suggest the corresponding structure includes the administration server.” *Id.* at 23 & n.4 (citing Pet. 20–22; Ex. 1003 ¶ 147). Patent Owner contends Mr. Nicely “then plays coy on the issue of *algorithmic* structure” in the ’498 patent specification, and Mr. Nicely’s declaration is “deliberately opaque” in this regard. *Id.* at 23–24 (emphasis added) (citing Ex. 1003 ¶¶ 148–149).

Second, Patent Owner asserts a server alone cannot be the corresponding structure in a means-plus-function claim construction, as a matter of law. *See id.* at 24–27 (citing and discussing several Federal Circuit and Board decisions). Patent Owner argues: “A server is a general-purpose computer, and it is well-established that a general-purpose computer by itself is not sufficient corresponding structure for a computer-implemented means term.” *Id.* at 24. Patent Owner emphasizes the corresponding structure must be “***the special purpose computer programmed to perform the disclosed algorithm.***” *Id.* at 24–25. Patent Owner also asserts that if the only corresponding structure for the Module Terms in the ’498 patent specification is a server, then the subject claims may be indefinite under 35 U.S.C. § 112, but “the claims cannot be applied to the prior art in this proceeding so as to render them obvious under § 103.” *Id.* at 25–27.

Next, Patent Owner selects one of the Module Terms — the “results calculation module” — and identifies disclosures in the ’498 patent specification that Patent Owner asserts provide a corresponding algorithm. *See id.* at 27–29 (citing Ex. 1001, Fig. 6, 12:58–66). Patent Owner does not discuss any allegedly corresponding algorithm(s) of the ’498 patent specification for any of the other Module Terms. *See, e.g., id.* at 27 (“Although Petitioner’s constructions for all the ‘module’ terms exhibit this failing [of not identifying an algorithm], Patent Owner discusses the ‘results calculation module’ term . . . as an example.”).

Petitioner replies that the “the Petition identifies the *distinct corresponding algorithmic structure*, to the extent it exists, *for each Module Term* as a server implementing the functionality disclosed in the specification as identified in *each corresponding row* of the table on pages 20–21 of the Petition.” Pet. Reply 16 (also citing Ex. 1003 ¶¶ 147–149). Petitioner asserts “[t]his is all that is required for claim construction of such terms.” *Id.* at 16 (citation omitted). Petitioner additionally opposes Patent Owner’s identification of an algorithm for the “results calculation module.” *See id.* at 18–19.

Patent Owner responds by reiterating arguments from the Patent Owner Response. *See* PO Sur-reply 14–17. Patent Owner also asserts that the fourth column of Petitioner’s table “is deliberately vague,” because the title of the column (“Function Described”) “is equally consistent with (a) the ‘functionality’ being disclosed only in functional terms and (b) the functionality being described with the kind of algorithmic structure the law requires for computer-implemented means terms.” *Id.* at 14–16 (citing *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328,

1333 (Fed. Cir. 2008); *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1317 (Fed. Cir. 2012)).

Upon review of the foregoing, we note as an overarching consideration that the parties' competing arguments concerning construction of the Module Terms are not a model of clarity. As we noted in the Institution Decision, the lack of clarity on Petitioner's behalf arises at least in part from Petitioner's attempt to have its cake in this proceeding by asserting the claims are unpatentable under 35 U.S.C. § 103, and to eat its cake in the District Court Litigation by asserting the claims are invalid under 35 U.S.C. § 112 due to indefiniteness of the Module Terms. *See* Inst. Dec. 24–25; Pet. 19–20 (“Without conceding that the claim limitations reciting these terms satisfy 35 U.S.C. § 112, Petitioner provides the claim chart below identifying what Petitioner infers Patent Owner's construction to be for each of these limitations.”). Yet, as we also noted in the Institution Decision: “Whether Petitioner's equivocation . . . successfully preserves an indefiniteness defense in District Court, despite Petitioner's demonstrated ability to proffer a means-plus-function construction in the Petition, is a potential issue to be decided later by a different tribunal.” Inst. Dec. 25. Now, we conclude based on the record presented in this proceeding that the Petition proffers a complete means-plus-function construction of the Module Terms, as follows. *See* Pet. 19–22.

First, because claim 17 does not use the word “means,” we apply a rebuttable presumption that § 112 ¶ 6 does not apply. *See Williamson*, 792 F.3d at 1348–49. Nonetheless, as Petitioner argues, the Module Terms each recite a “module” that is configured to perform certain recited functionality, without reciting sufficient structure for performing that

functionality. *See* Pet. 19. Further, as in *Williamson*, the word “module” in the context of the ’498 patent claims and specification is a “nonce” word, used “in a manner that is tantamount to using the word ‘means.’”

Williamson, 792 F.3d at 1350–51. We therefore agree with Petitioner’s position that the rebuttable presumption against application of § 112 ¶ 6 is overcome in this case, because the Module Terms are not understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. *See Williamson*, 792 F.2d at 1349 (“The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.”).

Second, the Petition identifies the claimed function of each of the Module Terms, which Patent Owner does not dispute. *See* Pet. 19–21 (“Claimed Function” column); PO Resp. 22–33 (arguments concerning the Module Terms). We are persuaded by Petitioner’s contentions in these regards.

Third, Petitioner and Mr. Nicely identify portions of the ’498 patent specification that provide *algorithms* corresponding to the claimed functions, with the potential exception of the results calculation module which we discuss in the next section below. *See* Pet. 19–20 (“Function Described in Specification” column); Ex. 1003 ¶ 148. Patent Owner disagrees with this conclusion, on the basis that the fourth column in Petitioner’s table is entitled “Function” rather than “Algorithm” or “Structure.” *See, e.g.*, PO Sur-reply 14–17. However, during oral argument, Petitioner indicated the “intent” of this column was to identify the corresponding structure for the Module Terms in the ’498 patent specification. *See* Tr. 22:6–25:5. Therefore, we maintain our initial reading of the Petition as set forth in the

Institution Decision — that is, the fourth column in the table “describes the structure [i.e., the algorithm to be applied by a processor] corresponding to [the] claimed function.” Inst. Dec. 24–25; *see also* Ex. 1003 ¶ 148 (Mr. Nicely testifying that the “*structure*” of each Module Term “must include an *algorithm* that performs the corresponding function described in” Petitioner’s table (emphases added)). Mr. Nicely’s testimony provides further support for this conclusion, where he spells out the ’498 patent specification’s “algorithm[s]” that correspond to the various Module Terms, as cited in the fourth column of the table in the Petition. Ex. 1003 ¶ 148; *compare id.*, with Pet. 19–21.

Fourth, we conclude the corresponding *structure* of the ’498 patent specification for the Module Terms is a general purpose processor, such as a server, that is programmed to perform the disclosed algorithm(s).⁸ *See* Pet. 21–22 (citing Ex. 1001, Fig. 1, 5:32–55); Ex. 1003 ¶ 147; *Qualcomm Inc. v. Intel Corp.*, 6 F.4th 1256, 1266 (Fed. Cir. 2021) (holding that when “the corresponding structure amounts to nothing more than a general-purpose computer” and “a recited function requires special programming, then the specification must disclose the algorithm that the computer performs to accomplish that function”).

Patent Owner’s reliance on the decision in *Cochlear Bone Anchored Sols. AB v. Oticon Med. AB*, 958 F.3d 1348 (Fed. Cir. 2020), does not persuade us otherwise. *See* PO Resp. 25–27. In *Cochlear*, the meaning of

⁸ In the related IPR2022-01442 proceeding, Petitioner challenged U.S. Patent No. 10,497,220 B2 (“the ’220 patent”), a continuation-in-part of the ’498 patent at issue here. We note that the specifications of these two patents differ somewhat in their descriptions of corresponding structure. *Compare* Ex. 1001, 6:28–36, with IPR2022-01442, Ex. 1001, 8:55–9:57.

the means-plus-function limitations at issue was “*entirely unknown*” because the challenged patent’s specification “fail[ed] to recite a corresponding structure,” so it was “*impossible* to conduct a prior-art analysis.” *Cochlear*, 958 F.3d at 1358–59 (emphases added); *see also id.* at 1361 (J. Newman “concur[red] in the court’s decision” in this regard). The present case is not such a case. In particular, as discussed above, the fourth column of Petitioner’s table identifies where each corresponding algorithm is found in the ’498 patent specification. Furthermore, even assuming there is a question of indefiniteness in Petitioner’s various identifications of corresponding algorithms, our reviewing court has instructed “it is not always impossible to adjudicate a prior-art challenge, one way or the other, just because some aspect of a claim renders the claim indefinite.” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 813 (Fed. Cir. 2021) (citing *Samsung Electronics America, Inc. v. Prisia Eng’g Corp.*, 948 F.3d 1342, 1355 (Fed. Cir. 2020)). In other words, indefiniteness or the potential indefiniteness of a term does not always preclude a prior-art analysis.

Our foregoing conclusions suffice to resolve the claim construction disputes presented in the record. Patent Owner argues only that Petitioner’s construction is deficient for failing to identify an algorithm *at all*. *See* PO Resp. 22–27. Patent Owner does not raise the issue of whether the ’498 patent specification disclosures listed in the fourth column of Petitioner’s table might be an inadequate algorithm to satisfy the definiteness requirement. *See id.* Patent Owner touches upon the edges of such an argument in its Sur-reply. *See* PO Sur-reply 15–16. However, the argument there is premised solely on the title of the fourth column being

problematic, as opposed to a meaningful effort to grapple with the '498 patent specification disclosures cited in that column. *See id.*

In summary, we conclude the Module Terms of claim 17 are means-plus function limitations. The claimed functions are identified in the third column of Petitioner's table ("Claimed Function"), and the corresponding structure of the '498 patent specification is a general purpose processor, such as a server, that is programmed to perform the algorithms identified in the fourth column of Petitioner's and Mr. Nicely's table, with the exception of the "results calculation module" which we discuss in the next section below.

(ii) *The "Results Calculation Module"*

As briefly noted above, Patent Owner argues the "results calculation module" of claim 17 has a corresponding algorithm in the '498 patent specification as "a sequence of steps . . . perform[ed] in order to calculate the results of a game." PO Resp. 28–29 (citing Ex. 1001, Fig. 6, 12:58–66). Patent Owner faults Petitioner's claim construction position for this term (*see* Pet. 20) as failing to include this sequence of steps. *See* PO Resp. 29.

Petitioner replies that Patent Owner's identification of an allegedly corresponding algorithm in the '498 patent specification for the results calculation module fails for the following three reasons. *See* Pet. Reply 18–20. First, Patent Owner's construction improperly imports functions that are unnecessary to perform the claimed function of calculating results, namely, "determining player and competitor 'objectives' and 'initiat[ing] payout.'" *Id.* at 18–19 (alteration in original). According to Petitioner, the results calculation module simply "calculates results from games and how to

distribute winnings.” *Id.* at 17 (citing Ex. 1001, 5:45–47). Second, Patent Owner’s construction includes steps that are recited in different limitations of claim 17, thereby improperly rendering those other limitations superfluous. *See id.* at 19. Third, Patent Owner’s construction “fails to demonstrate any ‘link’ between the claimed functions and the disclosed algorithm.” *Id.* (citing *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005)).

Patent Owner replies to Petitioner’s three arguments as follows. First, “Petitioner reads the claim language too narrowly,” in part because “[t]hat the results must be ‘based on the data about the game received from the gaming server’ does not mean that the results must be based *exclusively* on that data.” PO Sur-reply 18–19. Second, it is unclear what claim limitations are allegedly rendered superfluous by Patent Owner’s argument, and “nothing would preclude the results calculation module from using the game data received by the game administration module.” *Id.* at 19–20. Third, there is a clear link between the claimed functions and the algorithm identified by Patent Owner. *See id.* at 20.

We find the claimed function of the results calculation module is “to calculate results of the game, wherein the results are based on the data about the game received from the gaming server through the game administration module.” Ex. 1001, 18:38–42. Patent Owner does not argue otherwise. *See, e.g.*, PO Resp. 27–29 (arguing only the algorithm disclosed in the ’498 patent specification).

As to the corresponding structure of the ’498 patent specification, Patent Owner relies on the illustration in Figure 6 of “one method of determining and paying a player’s winnings after a game has been played,”

specifically steps 1610, 1620, and 1630 shown therein. Ex. 1001, 3:16–17; *see* PO Resp. 28–29; PO Sur-reply 18–19. In step 1610, “to compensate the player, the system first determines which objectives the player achieved in the game.” Ex. 1001, 12:58–60. In step 1620, the system “determines which objectives any competitors achieved in the game.” *Id.* at 12:60–61. In step 1630, the system “calculates any winnings for the player . . . based on objectives achieved and other information, including but not limited to: the rules of the game, and any selected gaming options.” *Id.* at 12:61–65.

Upon our review of the foregoing disputes, we first conclude that the algorithm corresponding to the claimed function of the results calculation module includes *at least* calculating results of the game, and how to distribute winnings, per Petitioner’s contentions. *See* Pet. 20 (“17[d]”) (citing Ex. 1001, 5:45–47, 7:20–21); Pet. Reply 18–20; Ex. 1003 ¶ 148 (table row “17[d]”). The ’498 patent specification correspondingly states: “The Results Calculation module 250 calculates results from games and how to distribute winnings.” Ex. 1001, 5:45–47. The specification further states: “In some embodiments, the Results Calculation module 250 will receive the final result” whereas “[i]n other embodiments, the Results Calculations module 250 will have to calculate the winner based on received game information.” *Id.* at 7:24–27. Thus, we conclude that the module may calculate results of the game either by receiving the results, or by calculating the results based on received game information. *See id.*; Ex. 1003 ¶ 148 (table row “17[d]”).

To the extent we are able to discern any meaningful difference between the foregoing algorithmic steps and Patent Owner’s algorithmic claim construction, it is that Patent Owner would additionally require the

algorithm to *determine objectives achieved* by a player and the player's competitors, as part of calculating the results of the game.⁹ See PO Resp. 28–29 (citing Ex. 1001, Fig. 6, 12:58–66); PO Sur-reply 18–21. We agree with this additional component of the algorithm. That is, the '498 patent specification correspondingly states, right after introducing results calculation module 250: “At the end of a game, the system must determine which objectives each player achieved.” Ex. 1001, 7:17–19; *see also id.* at 12:58–63 (“Now referring to FIG. 6, to compensate the player, the system first determines which objectives the player achieved in the game 1610. Then it determines which objectives any competitors achieved in the game 1620. The system then calculates any winnings for the player 1630 based on objectives achieved and other information.”).

In summary, for the reasons provided above in Section III.E.7(a)(i), we conclude the results calculation module of claim 17 is a means-plus function limitation, with the claimed function as set forth above in this section III.E.7(a)(ii), and with the corresponding structure of the '498 patent specification being a general purpose processor, such as a server, that is programmed to perform an algorithm. That algorithm is: (1) calculating results of the game, including objectives achieved by a player and the

⁹ Petitioner suggests Patent Owner's construction additionally includes *initiating payout*. See Pet. Reply 18–19. We disagree. Patent Owner's discussion of the corresponding '498 patent specification disclosures expressly omits the final step 1640 of Figure 6, which is to initiate payout. See PO Resp. 28 (citing Ex. 1001, 12:58–66); Ex. 1001, Fig. 6, 12:66 (ending the discussion of step 1630, and beginning the discussion of step 1640). Moreover, Patent Owner does not rely on initiating payout as being an algorithmic step that might be missing in Amaitis and Bryson. See PO Resp. 29–32.

player's competitors; and (2) calculating how to distribute winnings. Further, the first calculation step may be performed either by receiving the results, or by calculating the results based on received game information.

b) Combination of Amaitis and Bryson

Petitioner relies on the combination of Amaitis and Bryson as rendering obvious claim 17's parent claim 13, as discussed above in Section III.E.6. For the reasons provided above, we conclude Petitioner's contentions in this regard are supported by a preponderance of the evidence.

Petitioner then applies a means-plus-function analysis for the Module Terms of claim 17, relying on Amaitis as disclosing the claimed subject matter. *See* Pet. 65–66. Petitioner asserts Amaitis's administration server (i.e., gaming service provider 914) both: (1) performs the claimed functions of all four Module Terms; and (2) provides the corresponding structure of the '498 patent specification for the Module Terms, because it is a server programmed to perform the corresponding algorithms of the '498 patent specification. *See id.* (various "Function" and "Structure" sections) (citing Ex. 1005 ¶¶ 34, 47); Ex. 1003 ¶¶ 264–261.

Patent Owner contends Petitioner fails to show how Amaitis "discloses the same or equivalent structure to the algorithmic structure" of the '498 patent specification for the Module Terms of claim 17. PO Resp. 29–30. Patent Owner asserts "the Petition does not *meaningfully* address corresponding structure at all" for these terms. *Id.* at 30 (citing Pet. 65–66).

We conclude Petitioner provides a meaningful analysis that addresses both the claimed function, and the corresponding structure, of the Module Terms of claim 17, which is supported by Mr. Nicely's testimony. *See*

Pet. 65–66 (separately addressing the “Function” and “Structure” aspects of the terms); Ex. 1003 ¶¶ 148, 264–271. Particularly concerning structure, we are persuaded by Petitioner’s contention and Mr. Nicely’s testimony that a person of ordinary skill in the art would have implemented the algorithms of the ’498 patent in Amaitis as part of gaming service provider 914, which includes a server. *See* Ex. 1005 ¶ 34; Pet. 65–66; Ex. 1003 ¶¶ 265, 267, 269.

Specifically concerning the results calculation module, Patent Owner argues “the Petition provides only [a] short excerpt . . . to address” the corresponding structure. PO Resp. 30–32 (citing Pet. 65–66; Ex. 1003 ¶¶ 270–271, 214–217). Petitioner maintains in reply that Amaitis discloses the corresponding structure of the ’498 patent specification. *See* Pet. Reply 17–18. We conclude Petitioner has the better argument. In particular, as discussed above, a person of ordinary skill in the art would have implemented the results calculation module of claim 17 in Amaitis as part of gaming service provider 914, which includes a server. *See* Ex. 1005 ¶ 34.

Thus, based on the record presented, we conclude Petitioner has shown by a preponderance of the evidence that claim 17 of the ’498 patent is unpatentable as having been obvious over Amaitis and Bryson.

8. *Dependent Claims 4–9, 11, and 14–16*

Petitioner provides arguments and evidence in support of contending dependent claims 4–9, 11, and 14–16 are each unpatentable as having been obvious over Amaitis and Bryson. *See* Pet. 46–47 (claim 4), 47–52 (claim 5), 52–53 (claim 6), 53–54 (claim 7), 54 (claim 8), 54–55 (claim 9), 55–56 (claim 11), 64 (claims 14–16). Patent Owner does not oppose Petitioner’s contentions as to these claims, apart from arguments we have

already considered above in relation to their respective parent independent claims. *See* PO Resp. 10 (claims 4–9 and 11 grouped with independent claim 1), 19 (claims 14–16 grouped with independent claim 13).

We conclude a preponderance of the evidence establishes claims 4–9, 11, and 14–16 of the ’498 patent are unpatentable as having been obvious over Amaitis and Bryson, for the reasons set forth above in Sections III.E.3 and III.E.6 in relation to the parent independent claims 1 and 13, and based further on Petitioner’s unopposed contentions concerning the subject matter added by these dependent claims which we adopt as our own in this Decision. *See* Pet. 46–56, 64.

F. Ground Three — Obviousness over Amaitis, Bryson, and Frenkel

In Ground Three, Petitioner argues claims 2 and 3 of the ’498 patent are unpatentable as having been obvious over Amaitis, Bryson, and Frenkel. *See* Pet. 13, 22–27, 71–75. Patent Owner opposes. *See* PO Resp. 19–22.

We conclude a preponderance of the evidence supports Petitioner’s assertions as to both challenged claims. We begin our analysis with a brief summary of Frenkel, then we address the parties’ contentions as to obviousness.

1. Frenkel

Frenkel discloses a system for interactive gaming among several players, implemented with a host computer system and a plurality of remote player terminals. *See* Ex. 1007, code (57), ¶ 6. Frenkel’s system can “monitor[] actions taken by one or more of the plurality of players to thereby detect collusion among the players,” and also inhibit such collusion by employing countermeasures. *Id.* ¶¶ 10, 35, 44.

2. *Claim 2*

Claim 2 recites: “The computer-server-based method of claim 1, further comprising: performing risk management based on player information, wherein risk management is performed by the administration server.” Ex. 1001, 16:23–27.

Petitioner argues the parent independent claim 1 would have been obvious over the combination of Amaitis and Bryson, as discussed above in Section III.E.3. For the reasons provided above, we conclude Petitioner’s contentions in this regard are supported by a preponderance of the evidence.

Petitioner then argues a person of ordinary skill in the art “would have been intimately familiar with the concept of and need for risk management in casino environments.” Pet. 71; Ex. 1003 ¶¶ 284–285. Petitioner contends Frenkel correspondingly implements “the well-known concept of risk management for a gaming operator in the context of networked gaming systems for peer-to-peer gaming.” Pet. 71–72 (citing Ex. 1007 ¶ 35); Ex. 1003 ¶ 286. Petitioner asserts a person of ordinary skill in the art would have been motivated “to combine Frenkel’s teaching that a gaming network operator may employ collusion detection software that monitors player actions for the multi-player games specifically disclosed by [Amaitis and Bryson], such as poker, and blackjack.” Pet. 72; Ex. 1003 ¶ 287. Petitioner contends this would have been done to “increas[e] player-trust and overall usage of the combined system” and to “prevent cheating and satisfy regulatory requirements.” Pet. 72 (citing Ex. 1056, 6, 11; Ex. 1004, 25:55–60); Ex. 1003 ¶ 287. Frenkel’s risk management method, according to Petitioner, would have been implemented in Bryson’s administration server (i.e., gaming service provider 914) based on player information, per claim 2,

by detecting collusion among players. *See* Pet. 72–74 (citing Ex. 1007, Fig. 3, ¶¶ 7, 23, 43–44; Ex. 1001, 7:46–50); Ex. 1003 ¶¶ 288–289.

Patent Owner argues Petitioner fails to establish a motivation to combine the Amaitis-Bryson gaming system with Frenkel, to perform the risk management method of claim 2, with a reasonable expectation of success. *See* PO Resp. 19–22. In particular, according to Patent Owner, “Ppetitioner makes no effort to square its proposal to incorporate Frenkel’s collusion detection software into *Amaitis’ gaming service provider* with its separate proposal to modify Amaitis by adding *Bryson’s separate game outcome server*.” *Id.* at 20–22 (citing Pet. 44–46); Ex. 2005 ¶¶ 75–76.

Petitioner replies that “the Petition set forth two theories to meet limitation 1[k]” in the parent claim 1, and argues Patent Owner “fails to identify any issue precluding the Amaitis-Bryson-Frenkel combination under” the first theory relying on Amaitis without Bryson. *See* Pet. Reply 12–13. Petitioner also defends its second theory, which “involv[es] a combination of Bryson’s ‘game outcome server’ with Amaitis” to satisfy limitation 1[k]. *See id.* at 13–14.

The Patent Owner Sur-reply principally addresses Petitioner’s second theory for obviousness of the parent claim 1 relying on Bryson. *See* PO Sur-reply 9–11. As to Petitioner’s first theory, Patent Owner asserts only that it fails due to arguments presented in connection with limitation 1[k]. *See id.* at 11.

Based on the record presented, we find Petitioner provides sufficient reasoning as to why and how a person of ordinary skill in the art would have combined the teachings of Amaitis and Frenkel so as to arrive at the method of claim 2. *See* Pet. 71–72. In particular, Petitioner proposes that “Frenkel

discloses implementing the well-known concept of risk management for a gaming operator in the context of networked gaming system for peer-to-peer gaming.” *Id.* at 71 (citing Ex. 1007 ¶ 35); Ex. 1003 ¶ 286. Petitioner also reasons:

It would have been obvious to a [person of ordinary skill in the art] to combine Frenkel’s teaching that a gaming network operator may employ collusion detection software that monitors player actions for the multi-player games specifically disclosed by Amaitis . . . such as poker, and blackjack. EX[1003] ¶ 287. This would have yielded the predictable result of enabling Bryson’s system to perform risk management of the players and their client devices in the gaming network, thereby increasing player-trust and overall usage of the combined system. *Id.* (citing EX[1056] 6, 11). Moreover, Frenkel’s collusion monitoring teachings would further one of Bryson’s stated goals to “prevent cheating and satisfy regulatory requirements.” *Id.* (citing EX[1004] 25:55–60). Amaitis also teaches processes for “track[ing]” cheaters and “using location verification technology (e.g., geo-fencing) to conform the gaming activities to legal parameters.” *Id.* (citing EX[1005] ¶¶ 60, 137).

Id. at 72 (last alteration in original).

Patent Owner’s opposing arguments are unpersuasive. In particular, as discussed above in Section III.E.3(1) above in connection with limitation 1[k], we have adopted both of Petitioner’s two theories of obviousness addressing that claim limitation. Patent Owner’s arguments concerning the combination of Amaitis and Bryson in the context of claim 2 are inapposite to the first theory.

Further, regardless of which of Petitioner’s two theories for limitation 1[k] is applied, Petitioner relies on components or aspects of Frenkel’s gaming system to simply operate as they are intended, in conjunction with Amaitis’s gaming system. Although during oral argument

Patent Owner expressed that it was not making a “bodily incorporation argument” (*see, e.g.*, Tr. 93:4–6), that is seemingly the thrust of Patent Owner’s position in condemning the Petition for not specifically identifying where particular components would be situated in a system based on the combined teachings of the prior art. There is no requirement, however, in an obviousness inquiry of a showing of how any particular feature may be directly or bodily incorporated into any particular system or device. *See Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (quoting *Keller*, 642 F.2d at 425). Moreover, it makes sense to utilize Amaitis’s gaming module server 920 to implement Frenkel’s collusion detection, because this server controls the gaming activities provided on devices 913. *See* Ex. 1005, Fig. 9, ¶¶ 34–35; Ex. 1003 ¶¶ 286–289.

In a similar vein, claim 2 specifies that the risk management “is performed by the administration server” of parent claim 1, which Petitioner maps to Amaitis’s gaming module 920 under both of its two obviousness theories for limitation 1[k]. Ex. 1001, 16:25–27; *see supra* Section III.E.3(1). We correspondingly find that implementing Frenkel’s collusion detection at Amaitis’s gaming module 920 would enable collusion to be detected among Amaitis’s players 912 using gaming devices 913 being served by gaming module 920. *See* Ex. 1005, Fig. 9. Patent Owner does not explain credibly why a person of ordinary skill in the art would have been unable to address routine implementation issues or technical difficulties that may arise in combining the teachings of the pertinent prior art, all of which are directed to similar matters of network based interactive gaming. Patent Owner’s arguments made in challenging the propriety of combining the

teachings of Amaitis and Frenkel, and the declaration testimony of Dr. Lane on which Patent Owner relies, do not adequately account for the teachings of the prior art or of the level of ordinary skill in the art. *See* PO Resp. 19–20; Ex. 2005 ¶¶ 74–76. We find more persuasive Petitioner’s contentions (*see* Pet. 71–74) and credit Mr. Nicely’s supporting testimony (Ex. 1003 ¶¶ 284–289), as Petitioner and Mr. Nicely’s positions are more consistent with what a person of ordinary skill in the art, who is also a person of ordinary creativity (*see KSR*, 550 U.S. at 421) would have understood from the teachings of the prior art and how to amalgamate those teachings. Specifically, we determine Petitioner has established a skilled artisan would have had adequate reason to combine the teachings of Amaitis and Frenkel, and a reasonable expectation of doing so, to arrive at the method set forth in claim 2.

Thus, based on the record presented, we conclude Petitioner has shown by a preponderance of the evidence that claim 2 of the ’498 patent is unpatentable as having been obvious over Amaitis, Bryson, and Frenkel.

3. *Claim 3*

Claim 3 recites:

3. The computer-server-based method of claim 2, wherein performing risk management based on player information comprises:
 - collecting player information, wherein the player information comprises player gaming behavior;
 - evaluating player gaming behavior for prohibited activity;
 - and
 - eliminating the player based on the prohibited activity.

Ex. 1001, 16:28–35.

Petitioner relies on its obviousness analysis for the parent claim 2. *See* Pet. 71–74; *supra* Section III.F.2. Petitioner then argues Frenkel’s risk management method collects player gaming behavior, evaluates the behavior for prohibited collusion activity, and eliminates the player based on the prohibited activity, all per claim 3. *See* Pet. 74–75 (citing Ex. 1007 ¶ 35); Ex. 1003 ¶¶ 290–292.

Patent Owner does not oppose Petitioner’s contentions as to claim 3, apart from arguments we have already considered above in relation to its parent claims 1 and 2. *See* PO Resp. 19–22.

We conclude a preponderance of the evidence establishes claim 3 of the ’498 patent is unpatentable as having been obvious over Amaitis, Bryson, and Frenkel, for the reasons set forth above in Sections III.E.3 and III.F.2 in relation to its parent claims 1 and 2, and based further on Petitioner’s unopposed contentions concerning the subject matter added by claim 3 which we adopt as our own in this Decision. *See* Pet. 74–75.

G. Ground Five — Obviousness over Amaitis, Bryson, Frenkel, and Schlottmann

In Ground Five, Petitioner argues claims 18–20 of the ’498 patent are unpatentable as having been obvious over Amaitis, Bryson, Frenkel, and Schlottmann. *See* Pet. 13, 22–27, 75–83. Patent Owner opposes. *See* PO Resp. 22–35.

We conclude a preponderance of the evidence supports Petitioner’s assertions as to all challenged claims, for the following reasons. We first address claim construction of claims 18–20, then we provide a brief summary of Schlottmann, before turning to obviousness of claims 18–20 over Amaitis, Bryson, Frenkel, and Schlottmann.

1. *Claim Construction — “Module” Limitations of Claim 18–20*

Claim 18 depends from claim 17, and adds that the administration server comprises four more Module Terms: a gaming option creation module, a tournament administration module, a payment initiation module, and a risk management module. *See* Ex. 1001, 18:43–57. Claim 19 depends from claim 18, and adds “the tournament administration module is configured to oversee a delayed tournament.” *Id.* at 18:58–60. Claim 20 also depends from claim 18, and adds “the gaming option creation module is configured to include or exclude certain gaming options from the list of gaming options based on a licensing status of the certain gaming options.” *Id.* at 18:61–64.

For substantially the same reasons provided above in Section III.E.7(a) in the context of the parent claim 17, we conclude the Module Terms of claims 18–20 are means-plus-function limitations. Also, the Petition identifies the claimed function of each of these Module Terms, which Patent Owner does not dispute. *See* Pet. 19–21 (“Claimed Function” column); PO Resp. 22–33 (arguments concerning the Module Terms). Further, the corresponding structure of the ’498 patent specification for these Module Terms is a general purpose processor, such as a server, that is programmed to perform the disclosed algorithm(s). *See* Pet. 19–21 (“Function Described in Specification” column); Ex. 1003 ¶ 148 (spelling out the ’498 patent specification’s “algorithm[s]” that correspond to the various Module Terms).

2. *Schlottmann*

Schlottmann discloses a gaming system implemented by a central server which provides tournament game play on a plurality of gaming machines over the Internet. *See* Ex. 1006, code (57), ¶¶ 12–13. In one embodiment, the tournament is “self-scheduled” whereby “multiple players compete in the tournament at overlapping or different times” of their own choosing, “during a designated time period (such as a day, a week, or a month).” *Id.* ¶¶ 34, 69. “At the end of the designated time period . . . the gaming system determines a winner based [on] the determined game parameters, such as the winner is the player with the highest combined point total.” *Id.* ¶ 34.

3. *Combination of Amaitis, Bryson, Frenkel, and Schlottmann*

In addressing dependent claims 18–20, Petitioner argues the parent independent claim 17 would have been obvious over the combination of Amaitis and Bryson per Ground One, as discussed above in Section III.E.7. For the reasons provided above, we conclude Petitioner’s contentions in this regard are supported by a preponderance of the evidence.

Petitioner then discusses the tournament administration module of claims 18 and 19, citing Schlottmann as demonstrating that brick-and-mortar and online casinos had “long conducted tournaments where players are required to play games within a certain period of time and the scores or outcomes of those games are compared to determine a winner” — that is, a “delayed tournament” as recited in claim 19. Pet. 75–76, 80–81 (citing Ex. 1006, code (57), ¶¶ 5–9, 34, 69, 121; Ex. 1001, 14:35–36); Ex. 1003 ¶ 293–296, 302–304, 310–313. Petitioner contends a person of ordinary

skill in the art “would have been motivated to apply combine Schlottmann’s disclosure of delayed tournaments to the combined [Amaitis-Bryson] system which includes games that are well-suited for the delayed tournament structure, such as solitaire, blackjack, and other similar games that involve . . . trying to get the best score possible.” Pet. 76–77, 81–82 (internal quotations omitted); Ex. 1003 ¶¶ 297.

Petitioner also discusses the risk management module of claim 18, relying on Frenkel for obviousness, as discussed above in Section III.F.2 in relation to Ground Three and claim 2. *See* Pet. 79–80; Ex. 1003 ¶¶ 307–309. For the reasons provided above, we conclude Petitioner’s contentions in this regard are supported by a preponderance of the evidence.

Petitioner further applies a means-plus-function analysis to all of the Module Terms recited in claims 18–20. *See* Pet. 77–83; Ex. 1003 ¶¶ 299–315. Patent Owner opposes, with the same arguments we have already considered above in Section III.E.7 in the context of parent claim 17. For substantially the same reasons provided above, we conclude Petitioner’s means-plus-function analysis of claims 18–20 is sufficient to establish obviousness.

Patent Owner also argues that Petitioner’s combination of the Amaitis-Bryson-Frenkel system with Schottmann is “unclear” as to why and how “Schlottmann’s central server would be integrated into *Amaitis’ gaming server*,” so Petitioner has failed to establish a reasonable expectation of success in the combination. PO Resp. 33–35 (citing Pet. 79, 81). Patent Owner asserts “Petitioner makes no effort to square this argument [for combining Schlottmann] with its separate proposal to modify Amaitis by adding Bryson’s separate game outcome server” for limitation 13[k] of the

parent claim 13. *Id.* at 34 (citing Pet. 63–64); Ex. 2005 ¶ 78. In particular, Patent Owner argues Petitioner does not explain how to combine using *separate* servers per Amaitis-Bryson with Schlottmann’s “single tier with a central server that runs the games.” PO Resp. 34–35 (citing Ex. 1006 ¶ 13); Ex. 2005 ¶ 79.

Petitioner replies that, as with Ground Three discussed above, Patent Owner again overlooks Petitioner’s first theory for obviousness of the parent claim, relying on Amaitis without Bryson. *See* Pet. Reply 15. Petitioner also defends its second theory, explaining Petitioner’s view that Schlottmann does not preclude separate servers. *See id.* at 15–16.

In the Patent Owner Sur-reply, Patent Owner argues that while the Petition provides alternative obviousness theories for limitation 1[k] (Amaitis without Bryson, and Amaitis with Bryson), the Petition advances only the second theory for limitation 13[k]. *See* PO Sur-reply 12 (citing Pet. 63–64). Patent Owner then addresses the second theory. *See id.* at 12–13.

We firstly agree with Patent Owner that Petitioner’s argument for claim 13 relies solely on Petitioner’s second theory of obviousness from limitation 1[k], wherein Amaitis and Bryson are combined to utilize separate gaming and administration servers. *See* Pet. 63–64. Nonetheless, we conclude Petitioner has established a motivation and a reasonable expectation of success in the proposed combination of Amaitis, Bryson, and Schlottmann. The “amount of explanation needed [to support motivation and reasonable expectation of success for obviousness] will vary from case to case, depending on the complexity of the matter and the issues raised in

the record.” *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 991–92 & 993–94 (Fed. Cir. 2017)).

In particular, we are persuaded by Mr. Nicely’s testimony that the similar server-based environments of the Amaitis-Bryson gaming system and Schlottmann’s gaming system would have enabled their predictable combination by implementing Schlottmann’s delayed tournament play in the *administration server* of the Amaitis-Bryson gaming system. *See, e.g.*, Ex. 1003 ¶¶ 293–298, 302–303. As noted above, Petitioner’s case for obviousness of the parent claim 13 posits combining Amaitis and Bryson to utilize separate gaming and administration servers. Mr. Nicely correspondingly testifies that a person of ordinary skill in the art would have implemented Schlottmann’s delayed tournament game play in the *administration server*, which in Petitioner’s Amaitis-Bryson combination is Amaitis’s gaming module server 920. *See supra* Section III.E.3 (discussing the combination of Amaitis and Bryson in the context of limitation 1[k]); Ex. 1003 ¶¶ 302–304.

It is true that the Petition states it would have been obvious to “include the central server of Schlottmann in *the gaming server of Amaitis*” Pet. 79 (emphasis added). However, that statement must be read in the context of Mr. Nicely’s underlying testimony, which focuses on implementing Schlottmann’s delay tournaments with the administration server of claim 18 rather than the gaming server of claim 18. *See* Ex. 1003 ¶¶ 302–304. Moreover, the Petition often uses the term “gaming server” to refer to Amaitis’s gaming service provider 914 (akin to the administration server of claim 18) rather than Amaitis’s gaming applications 924 (akin to the gaming server of claim 18). *See, e.g.*, Pet. 31–32, 40, 44, 47, 50, 58.

Moreover, it makes sense to utilize Amaitis's gaming module server 920 to implement Schlottmann's tournament game play, because this server controls the gaming activities provided on devices 913. *See* Ex. 1005, Fig. 9, ¶¶ 34–35; Ex. 1003 ¶¶ 293–298, 302–304.

Patent Owner and Dr. Lane do not explain credibly why a person of ordinary skill in the art would have been unable to address routine implementation issues or technical difficulties that may arise in combining the teachings of the pertinent prior art, all of which are directed to similar matters of network based interactive gaming. Patent Owner's arguments made in challenging the propriety of combining the teachings of Amaitis and Bryson with Schlottmann, and the declaration testimony of Dr. Lane on which Patent Owner relies, do not adequately account for the teachings of the prior art or of the level of ordinary skill in the art. *See* PO Resp. 33–35; Ex. 2005 ¶¶ 77–79. We find more persuasive Mr. Nicely's testimony (Ex. 1003 ¶¶ 293–298, 302–304), as it is more consistent with what a person of ordinary skill in the art, who is also a person of ordinary creativity (*see KSR*, 550 U.S. at 421), would have understood from the teachings of the prior art and how to amalgamate those teachings. Specifically, we determine Petitioner has established a skilled artisan would have had adequate reason to combine the teachings of Amaitis and Bryson with Schlottmann, and a reasonable expectation of doing so, to arrive at the system set forth in claims 18–20.

Further, Petitioner relies on components or aspects of Schlottmann's gaming system to simply operate as they are intended, in conjunction with the Amaitis-Bryson gaming system. Dr. Lane does not identify any reasons why a person of ordinary skill in the art would not have been motivated to

implement delayed tournament games using the administration server of the Amaitis-Bryson gaming system. *See* Ex. 2005 ¶¶ 78–79.

Moreover, Patent Owner’s and Dr. Lane’s focus on implementing “Schlottmann’s central server” in the Amaitis-Bryson gaming system misses the mark. *See* PO Resp. 33–35; Ex. 2005 ¶¶ 78–79. The test for obviousness is not whether the features of one reference (such as Schlottmann) may be bodily incorporated into the structure of the other reference (such as the Amaitis-Bryson gaming system), but rather is “what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Further, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton,” and “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *KSR*, 550 U.S. at 420–421. Applying these principles as discussed above leads to the obviousness of claims 18–20.

Based on the record presented, we conclude Petitioner has shown by a preponderance of the evidence that claims 18–20 of the ’498 patent are unpatentable as having been obvious over Amaitis, Bryson, Frenkel, and Schlottmann.

H. Grounds Two, Four, and Six

1. Ground Two — Obviousness over Amaitis, Bryson, and Oberberger

In Ground Two, Petitioner argues claims 1 and 4–17 of the ’498 patent are unpatentable as having been obvious over Amaitis, Bryson, and Oberberger. *See* Pet. 13, 22–26, 67–71. Ground Two relies on Ground One, and adds additional argument to consider in the event Amaitis

and Bryson are found not to “disclose or suggest the limitations involving matching players for gaming based on a selected ‘betting range’ as recited in” claims 1, 12, and 13, relying on Oberberger. *Id.* at 67; *id.* at 67–71 (supporting argument).

Patent Owner opposes Ground Two based solely on arguments against Petitioner’s combination of Amaitis and Bryson in Ground One that we have already considered above in Section III.E. *See* PO Resp. 19.

For the reasons set forth above in Section III.E, we conclude claims 1 and 4–17 are unpatentable based on Ground One (obviousness over Amaitis and Bryson). On the present record, we discern no need to address Ground Two separately from Ground One, so we decline to do so in this Decision. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (recognizing the “Board need not address issues that are not necessary to the resolution of the proceeding,” and agreeing the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

2. *Grounds Four and Six — Obviousness over Amaitis, Bryson, Oberberger, and Frenkel and/or Schlottmann*

Similarly to the foregoing relationship between Grounds One and Two, Grounds Four and Six rely respectively on Grounds Three and Five, and add argument relying on Oberberger to consider in the event Amaitis and Bryson are found not to disclose or suggest the limitations involving matching players for gaming based on a selected “betting range” as recited in claims 1, 12, and 13. *See* Pet. 13 (listing of Grounds), 67 (Ground Two),

71 (Grounds Three and Four), 75 (Grounds Five and Six). We decline to address Grounds Four and Six in this Decision. *See SAS*, 138 S. Ct. at 1359; *Bos. Sci. Scimed*, 809 F. App'x at 990.

IV. SUMMARY OF CONCLUSIONS

In summary, we determine a preponderance of the evidence establishes claims 1–20 of the '498 patent are unpatentable, as shown in the following table:¹⁰

Claims	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1, 4–17	103(a)	Amaitis, Bryson	1, 4–17	
1, 4–17	103(a)	Amaitis, Bryson, Oberberger ¹¹		
2, 3	103(a)	Amaitis, Bryson, Frenkel	2, 3	
2, 3	103(a)	Amaitis, Bryson, Oberberger, Frenkel ¹¹		

¹⁰ 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).

¹¹ As discussed above in Section III.H, we do not reach these grounds.

18–20	103(a)	Amaitis, Bryson, Frenkel, Schlottmann	18–20	
18–20	103(a)	Amaitis, Bryson, Oberberger, Frenkel, Schlottmann ¹¹		
Overall Outcome			1–20	

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner’s Motion to Exclude Evidence (Paper 28)
is denied;

FURTHER ORDERED that claims 1–20 of the ’498 patent have been
proven by a preponderance of the evidence to be unpatentable;

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.

IPR2022-01447
Patent 9,613,498 B2

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