

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ENTAIN CORPORATE SERVICES LTD.,
MGM RESORTS INTERNATIONAL, and BETMGM LLC,
Petitioner,

v.

GAN (UK) LIMITED,
Patent Owner.

IPR2023-00027
Patent 8,821,296 B1

Before JAMES P. CALVE, JEREMY M. PLENZLER, and
CARL M. DEFRANCO, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining All Claims Unpatentable

Denying Patent Owner's Revised Motion to Amend

35 U.S.C. § 318(a)

Dismissing Petitioner's Motion to Strike

37 C.F.R. § 42.5

I. INTRODUCTION

Entain Corporate Services Ltd., MGM Resorts International, and BetMGM, LLC (collectively “Petitioner”) filed a petition to institute *inter partes* review of claims 1, 3–18, 21, and 22 (“the challenged claims”) of U.S. Patent No. 8,821,296 B1 (“the ’296 patent”) (Ex. 1001) as reexamined (Ex. 1002). Paper 1 (“Pet.”). GAN (UK) Limited (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Applying the standard in 35 U.S.C. § 314(a), we instituted an *inter partes* review of all challenged claims on all grounds asserted in the Petition. Paper 11 (“Inst. Dec.”).

After we instituted trial, Patent Owner filed a Patent Owner Response. Paper 14 (“PO Resp.”). Petitioner filed a Reply to Patent Owner’s Response. Paper 20 (“Pet. Reply”). Patent Owner filed a Sur-reply (Paper 25) and a Corrected Sur-reply (Paper 28 (“PO Sur-reply”)) to Petitioner’s Reply.

Patent Owner also filed a Motion to Amend claims 1 and 3–10 non-contingently and claims 12–14, 16–18, 21, and 22 contingently and requested Preliminary Guidance. Paper 15 (“MTA”) 1–2. Petitioner opposed the Motion to Amend. Paper 21 (“Opp. MTA”). We provided Preliminary Guidance. Paper 22 (“PG”). Patent Owner filed a Revised Motion to Amend claims 1 and 3–10 non-contingently and claims 12–14, 16–18, 21, and 22 contingently. Paper 24 (“RMTA”) 1. Petitioner opposed the RMTA. Paper 33 (“Opp. RMTA”). Patent Owner filed a Reply. Paper 38 (“Reply RMTA” or “PO Reply”). Petitioner filed a Sur-reply. Paper 47 (“Sur-reply RMTA” or “Pet. Sur-reply”).

Petitioner filed a motion to strike portions of Patent Owner’s expert declaration (Ex. 2008). Paper 29 (“Mot. Strike”). Patent Owner filed an opposition to Petitioner’s Motion to Strike. Paper 34 (“Opp. Mot. Strike”).

An oral hearing was held on January 5, 2024, and a copy of the transcript was entered into the record. Paper 51 (“Tr.”).

We have jurisdiction pursuant to 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) (2018) and 37 C.F.R. § 42.73 (2020) as to the patentability of the claims on which we instituted trial. Petitioner bears the burden of proving unpatentability of the challenged claims. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

For reasons discussed below, we grant in-part Patent Owner’s RMTA and cancel original claims 1 and 3–10. We otherwise deny Patent Owner’s RMTA to enter revised substitute claims 23–31, which non-contingently amend original claims 1 and 3–10, and we deny Patent Owner’s RMTA to enter revised substitute claims 32–39, which contingently amend original claims 12–14, 16–18, 21, and 22.

Having reviewed the arguments and evidence, we determine Petitioner has shown, by a preponderance of the evidence, that original claims 11–18, 21, and 22 of the challenged claims of the ’296 patent are unpatentable.

We determine that Petitioner has shown, by a preponderance of the evidence, that revised substitute claims 23–39 are unpatentable. Specifically, we determine that Petitioner has shown, by a preponderance of the evidence, that revised substitute claims 23–39 are not eligible for patenting under 35 U.S.C. §§ 101, and claims 23–39 are unpatentable under prior art asserted under 35 U.S.C. § 103 as discussed below. *See* Opp. RMTA 4–6, 8–28.

We deny Petitioner’s motion to strike as moot.

II. BACKGROUND

A. *Related Proceedings*

The parties identify the following matters involving the '296 patent: *GAN (UK) Limited (F/K/A GameAccount Network, PLC, GAN PLC, and GAN (UK) PLC) v. MGM Resorts International and BetMGM, LLC*, Case No. 1:22-cv-00361-CJB (D. Del.). Pet. 85; Paper 8, 2; Paper 6, 2. This case is stayed pending issuance of a Final Written Decision in this proceeding or conclusion of this *inter partes* review. Ex. 1029; Opp. MTA 5 & n.5.

B. *Real Parties in Interest*

Petitioner identifies Entain Corporate Services Ltd., MGM Resorts International, and BetMGM, LLC as the real parties in interest. Pet. 85. Patent Owner identifies GAN (UK) Limited as the real party in interest. Paper 8, 2; Paper 6, 2.

C. *The '296 Patent (Ex. 1001, Ex. 1002)*

The '296 patent's technology connects an online gaming system with a land-based casino system to manage patron and loyalty account data.

The present technology connects a network (e.g., Internet) based gaming system and one or more casino management systems (CMS) for managing patron data, loyalty programs, and other data. *The connection may be implemented as an abstracted integration.* As such, the connection mechanism may be used to connect the network based gaming system to a variety of proprietary and other CMS types. The connection mechanism may be synchronous, such as for example via a web service using XML over SOAP or asynchronous, such as for example using a message sender/listener system such as system-2-system (S2S).

Ex. 1001, 1:39–49 (emphasis added); *id.* at 2:29–39.

Figure 1, reproduced below, shows a linking system that connects a network-based gaming system to one or more land-based CMSs.

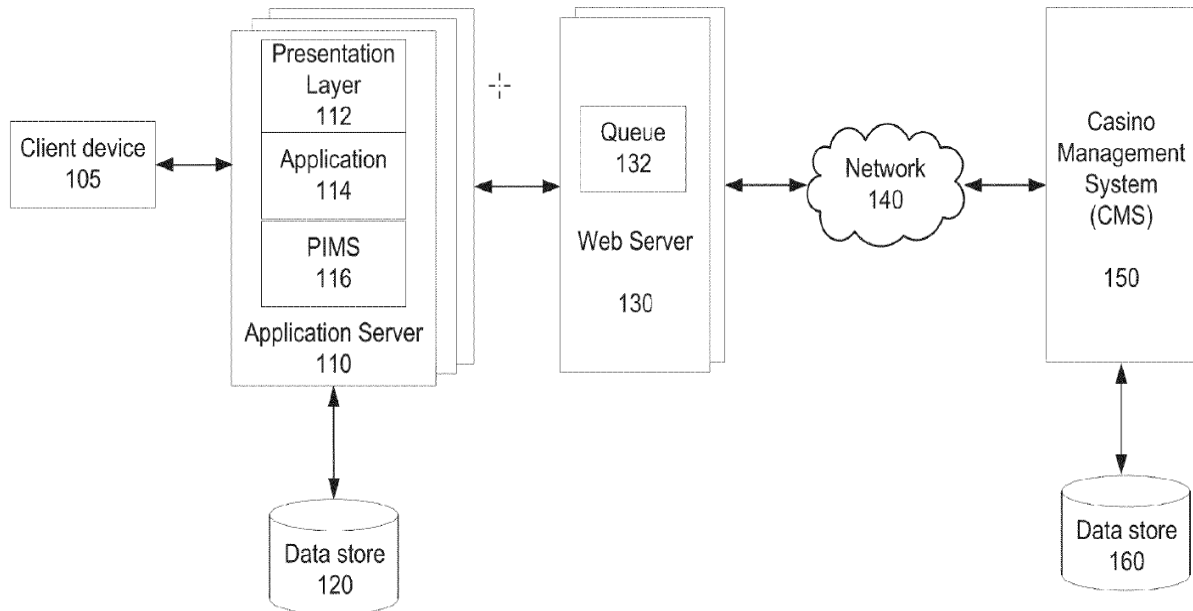


FIGURE 1

Figure 1 shows a system comprising application servers 110, data store 120, web server 130, network 140, CMS 150, and data store 160. Ex. 1001, 2:51–55. Application server 110 may include executable modules that implement presentation layer 112, applications 114, and partner integration management system (PIMS) 116. *Id.* at 2:55–58. Presentation layer 112 provides web pages and content over the Internet or other network to a user at client device 105 via a web browser. *Id.* at 2:59–65. Application server 110, data stores 120, 160, web server 130, and machines of CMS 150 may be computing systems 800 that include one or more processors 810, memory 820 to store executable code, mass storage 300, and input/output devices 850, 860. *Id.* at 7:17–36, Fig. 8. Network 140 may be implemented as the Internet or one or more private networks, public networks, local area networks, wide area networks, an intranet, and a cellular network. *Id.* at 3:38–43.

Data store 120 may store data for users who have accounts with the web service provided by application servers 110. Ex. 1001, 2:66–67. The data may comprise user account fields that include username, email, login information such as password, first and last name, birth data, address, city, and state, phone number, marketing and promotional code information, loyalty credit information, and other data. *Id.* at 2:67–3:5. The user account may include a user identifier for use by the web service, and it may include a patron account identifier for referencing a corresponding patron account for the same individual with CMS 150. *Id.* at 3:5–8.

Applications 114 include modules that implement logic for connecting web-based network services of application server 110 to a land-based system of CMS 150, and for accessing, managing, and modifying a user account associated with the web-based service or a patron account associated with the land-based service provided by CMS 150. Ex. 1001, 3:9–15. PIMS 116 sends requests to a particular CMS associated with a user. *Id.* at 3:16–17. Application server 114 may request that PIMS 116 retrieve patron account information, access loyalty credits, or perform other actions with respect to CMS 150 for a particular user. *Id.* at 3:17–20. PIMS 116 determines a communication preference of the CMS and instructs web server 130 to submit a request to the CMS associated with that user. *Id.* at 3:20–25.

CMS 150 may implement a management system for a land-based casino or other gaming facility and provide communications between aspects of the casino such as gaming machines, accounting, patron account creation and management, and other casino operations. Ex. 1001, 3:44–49.

Appellant's Figure 4 is reproduced below to illustrate a method of accessing an offline loyalty program from an online gaming account.

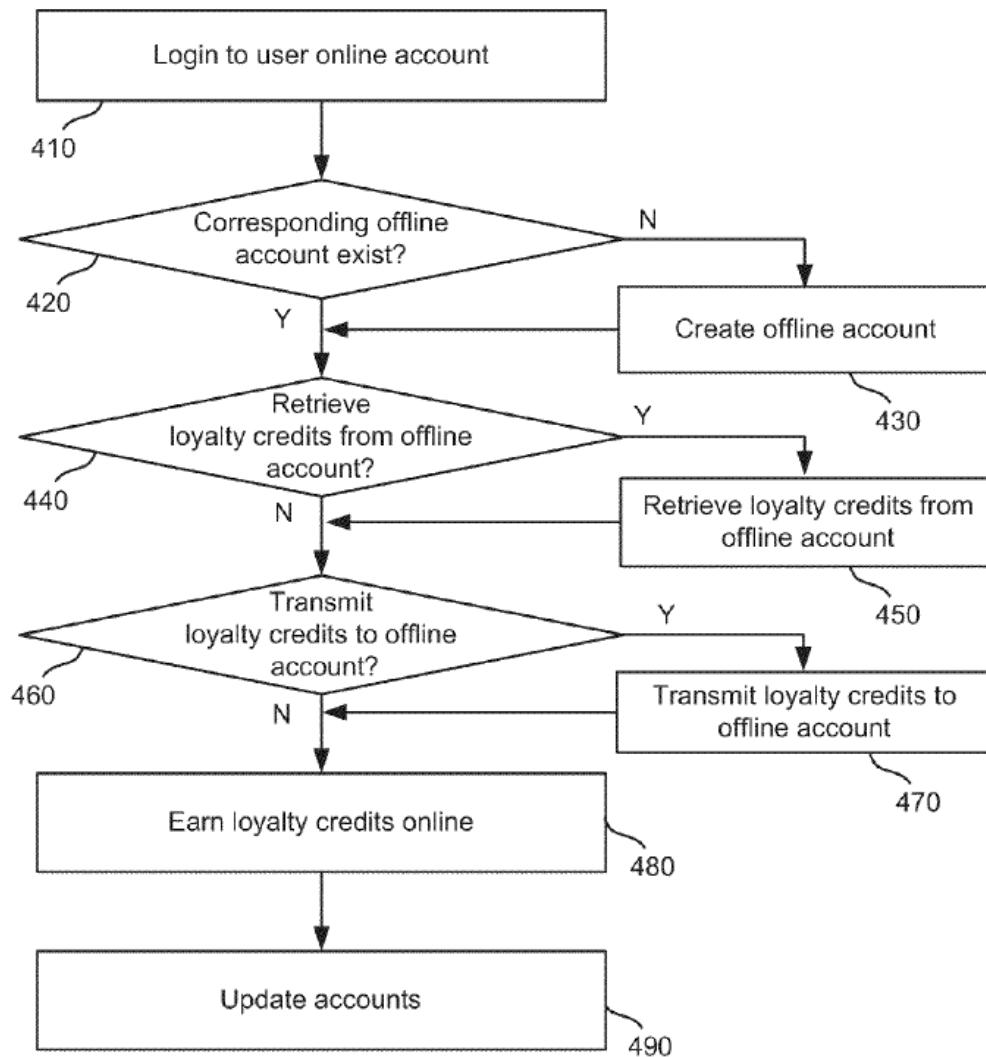


FIGURE 4

Figure 4 shows a method that allows a user with an online account to access an existing offline loyalty program by providing login information and create a patron account with an offline casino if one does not exist. Ex. 1001, 4:60–5:15. A determination may be made whether loyalty credits from the offline account should be retrieved for use with the online account or transferred from the online account to the offline account. *Id.* at 5:16–45.

The '296 patent describes different types of asynchronous and synchronous communications in Figures 2 and 3, as reproduced below.

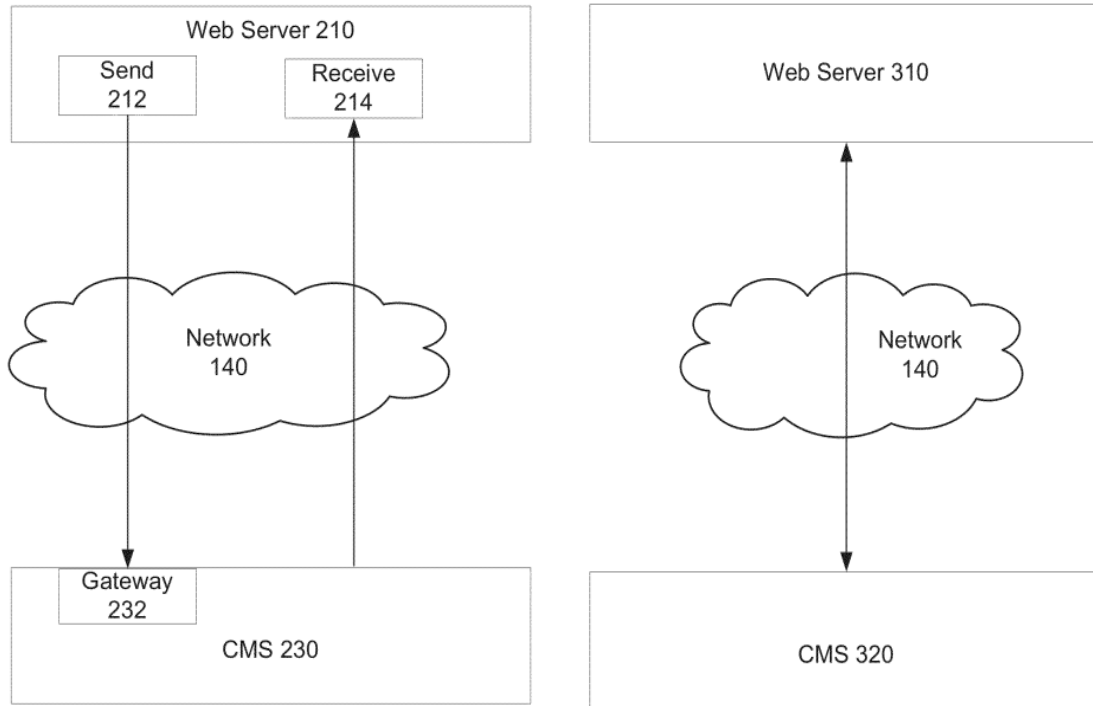


Figure 2 (above left) illustrates a system for asynchronous communication between a network gaming system and a CMS using web server 210, which may be part of the web-based gaming system of Fig. 1 (e.g., web server 130) and includes send module 212 to transmit to gateway 232 of CMS 230 over network 140, which may be the Internet, and receive module 214 to receive messages from CMS 230 without reference to the message sent to CMS 230. Ex. 1001, 4:26–48. Figure 3 (above right) shows synchronous communications between a network gaming system and CMS 320 using web server 310 to transmit messages to CMS 320 in synchronized fashion so for each request transmitted a corresponding response is sent in return. *Id.* at 4:49–59. The '296 patent does not describe how PIMS 116 determines whether a CMS has a synchronous, asynchronous, or other communication preference, however.

D. Prosecution History of the '296 Patent

The '296 patent issued with claims 1–20 and independent claims 1, 11, and 18 (Ex. 1001, 9:47–12:50) from U.S. Application No. 13/973,910, which was filed August 22, 2013, with claims 1–19 and independent claims 1, 9, and 17 (*id.* at code (22)); Ex. 1005, 104–106. Claims 1–20 of the '296 patent issued from original claims 1, 3–9, and 11–19 with claims 20–22 added in prosecution to depend from claim 1. Ex. 1005, 14 (Notice of Allowability), 32–43 (amending original claims 1, 3–9, and 11–19, cancelling claims 2 and 10, and adding new claims 20–22 that issued as claims 5, 9, and 10).

To overcome the rejection of claims 1–19 under 35 U.S.C. § 102(a)(2) as anticipated by Lutnick (US 2009/0029766 A1) (Ex. 1005, 51–52), Patent Owner amended independent claims 1, 9, and 17 to recite accessing account information of a user's first account with an online gaming service associated with first loyalty credits, accessing account information for the user's second account with a casino management system associated with second loyalty credits, determining whether the first loyalty credits from the user's first account are transferrable to the casino management system, and transmitting a number of first loyalty credits from the user's first account with the online gaming service to the user's second account with the casino management system if they are determined to be transferrable, wherein the number of first loyalty credits transmitted is based on available first loyalty credits in the user's first account and user input. *Id.* at 33–38. Patent Owner argued that Lutnick did not disclose these features in claims 1, 9, and 17. *Id.* at 42–43.

After an interview, (Ex. 1005, 30), the Examiner issued a Notice of Allowability indicating that claims 1, 3–9, and 11–22 were allowed without providing a statement of reasons for allowance (*id.* at 14).

E. Reexamination History of the '296 Patent

In reexamination, Patent Owner cancelled claims 2, 19, and 20. Claims 1, 3–18, 21, and 22 were found to be patentable because “Muskin teaches accessing an account created by a user and does not teach that an application server automatically creates an account upon determining that a user does not have a second account with the casino management system.” Ex. 1006, 7 (Statement of Reasons for Patentability and/or Confirmation).

The Examiner determined that claims 11–17 were patentable because “Muskin does not disclose determining, by a partner integration management system, a communication preference of the particular casino management system based on an identity of the user” and “neither Block nor Niblett teach this feature [because] Niblett teaches determining a communication preference [but] the communication preference is not based on an identity of the user.” Ex. 1006, 7–8. The Examiner also determined that independent claim 18 was patentable for the same reasons as claims 11–17. *Id.* at 8.

The Examiner also found that

Niblett discloses determining a communication preference in teaching bringing asynchronous processing to computing resources which are adapted for synchronous communication.

Enabling interoperability between resources based on an asynchronous model of communications and resources based on a synchronous model requires determining a communication preference of a system.

Ex. 1006, 50–51 (citing Niblett, 3:62–4:4) (emphasis added), *id.* at 56.

The Examiner found that an entity must determine a communication preference of a system to establish communications based on a synchronous or asynchronous model of communications in Niblett. Ex. 1006, 50, 56.

F. Challenged Claims

Petitioner challenged claims 1, 3–18, 21, and 22 of the '296 patent, which are all the claims of the '296 patent. Pet. 1. After we instituted *inter partes* review on all challenged claims (Paper 11, 35), Patent Owner filed a revised motion to amend that cancelled claims 1 and 3–10 and contingently cancelled claims 12–14 and 16–22 (Paper 24, 1, App. A, A-1). Claims 11 and 15 were not amended. *Id.* Claims 12–17 depend from claim 11, and claims 19–22 depend from claim 18. Claim 11 is illustrative of the claimed subject matter and is reproduced below with Petitioner's annotations.

11[pre] A non-transitory computer readable storage medium having embodied thereon a program, the program being executable by a processor to perform a method for communicating loyalty credit information, the method comprising:

- 11[a] accessing account information for a user's first account with an online gaming service, the user's first account associated with first loyalty credits;
- 11[b] accessing account information for a user's second account with a *particular* casino management system, the user's second account associated with second loyalty credits;
- 11[c] *determining, by a partner integration management system, a communication preference of the particular casino management system based on an identity of the user; and*
- 11[d] communicating loyalty credit information for the user between a server providing the online gaming service and machines providing the *particular* casino management system *according to the communication preference of the particular casino management system*, wherein communicating loyalty credit information includes:
- 11[e] determining whether first loyalty credits from the user's first account are transferrable to the *particular* casino management system, and

11[f] transmitting a number of first loyalty credits from the user's first account with the online gaming service to the user's second account with the *particular* casino management system when it is determined that the first loyalty credits are transferrable to the *particular* casino management system, wherein the number of first loyalty credits transmitted is based on available first loyalty credits in the user's first account and user input.

G. Asserted Grounds of Unpatentability

Petitioner asserted the following grounds of unpatentability.

Claim(s) Challenged	35 U.S.C. §	References
1, 3–6, 8–10	103 ¹	Muskin, ² Allen ³
7	103	Muskin, Allen, Ellis ⁴
1, 3–6, 8–15, 17	103	Muskin, Herrmann ⁵
18, 21, 22	103	Muskin, Allen, Herrmann
16	103	Muskin, Herrmann, Ellis
1, 6, 9, 10	103	Pascal, ⁶ Allen

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. Because the '296 patent has an effective filing date after March 16, 2013, we refer to the AIA version of 35 U.S.C. § 103.

² US 2005/0170883 A1, published August 4, 2005 (Ex. 1010, “Muskin”).

³ US 9,318,000 B1, issued April 19, 2016 (Ex. 1007, “Allen”).

⁴ US 9,711,004 B1, issued July 18, 2017 (Ex. 1012, “Ellis”).

⁵ US 2011/0014972 A1, published January 20, 2011 (Ex. 1011, “Herrmann”).

⁶ US 10,163,303 B1, issued December 25, 2018 (Ex. 1008, “Pascal”).

7	103	Pascal, Allen, Ellis
1, 6, 9–12, 15	103	Pascal, Herrmann
18, 21, 22	103	Pascal, Allen, Herrmann
16	103	Pascal, Herrmann, Ellis

Petitioner also relies on a Declaration of Mr. David Crane. Ex. 1003. Patent Owner relies on a Declaration of Dr. Michael Shamos. Ex. 2005.

III. DISCUSSION

A. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art “would have had a bachelor’s degree in computer or electrical engineering, computer science, or a similar field and two years of experience in computer system and data communication design.” Pet. 6 (citing Ex. 1003 ¶ 28). Petitioner’s declarant, Mr. Crane, testifies a skilled artisan “would have had a bachelor’s degree in computer or electrical engineering, or related field of study, and at least two years of professional computer system and data communication design experience or equivalent” as of the August 22, 2013, filing date of the ’296 patent. Ex. 1003 ¶ 28. Mr. Crane testifies that this level would not be different if the invention date of the ’296 patent was the April 25, 2013, filing date of provisional application No. 61/816,125. *See id.*; Ex. 1001, code (60).

Patent Owner does not dispute Petitioner’s contention as to the level of skill of ordinary skill in the art. PO. Resp. 17 (citing Pet. 6; Ex. 2005 ¶ 29).

We adopt Petitioner’s contentions as to the level of ordinary skill in the art as it is consistent with the prior art and the skill reflected in ’296 patent. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Construction

We interpret a claim “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 standard construes a 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 construe claims only to the extent necessary to reach our Decision. *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)).

Petitioner contends that “[n]o formal claim constructions are necessary in this proceeding because ‘claim terms need only be construed to the extent necessary to resolve the controversy.’” Pet. 6 (citation omitted).

Patent Owner “believes that the controversy may be resolved without providing any formal claim constructions.” PO Resp. 17.

We construed the following limitation in claims 11 and 18 to institute *inter partes* review. *See* Dec. Inst. 9–10. *Neither party has challenged that construction*, which we rely on to reach our Final Written Decision because claim 11 is not amended, and substitute claim 37 (for claim 18) contains a similar limitation. RMTA, App. A-2, A-9; *see* Paper 51, 83:12–24.

“a communication preference of the particular casino management system based on an identity of the user”

Claims 11 and 37 recite “a partner integration system configured to determine a communication preference of the particular casino management system based on an identity of the user.” Ex. 1002, 2:1–4; RMTA, A-9.

We construed this limitation to mean the communication preference is for the casino where the user's second account is maintained and to which the loyalty credits are transmitted. This interpretation is consistent with the '296 patent, which describes user loyalty credit information being communicated between an online gaming service server and machines providing a particular CMS "according to the communication preference of the particular casino management system." Ex. 1001, 2:5–10; RMTA, A-9.

The '296 patent makes clear that the communication preference is for the CMS where the user has a loyalty account that the user wants to access, i.e., the CMS associated with the user requesting access to a CMS account.

PIMS 116 may generate *requests to be sent to a particular CMS associated with a particular user*. For example, applications 114 may request that PIMS 116 retrieve patron account information, access loyalty credits, or perform other actions with respect to CMS 150. PIMS 116 may receive the abstract request from application 114, *determine the communication preference of the particular CMS associated with the user associated with the request*, and instruct web server 130 to submit a request to the CMS associated with the user of the web service.

Ex. 1001, 3:16–25 (emphasis added).

Applications 114 request PIMS 116 to retrieve patron account data or access loyalty credits. When PIMS 116 receives a request, it determines the communication preference of the CMS where the user has the account that is requested by applications 114. Ex. 1001, 3:16–25. There is no description of how PIMS 116 uses a user's identity to determine the CMS's communication preference, or how PIMS 116 determines the communication preference. A user's online account may reference an account at CMS 150 (*id.* at 3:5–8) but the CMS's communication preference is not provided in the online account.

C. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103 if 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. 35 U.S.C. § 103; *KSR*, 550 U.S. at 406. The issue of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when available, evidence such as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” *Graham*, 383 U.S. at 18. In addition, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416. Similarly, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 417.

Neither party provides any evidence of secondary considerations for our consideration. *See generally* Pet.; PO Resp.

D. Ground 3: Alleged Obviousness Over Muskin and Herrmann

Petitioner asserts that original claims 11–15 and 17 are unpatentable under § 103 over Muskin and Herrmann. Pet. 2, 40–44.

1. Prior Art

a. Muskin (Ex. 1010)

Muskin links accounts of land-based and online casinos to transfer comps and data between accounts as shown in Figure 1, reproduced below.

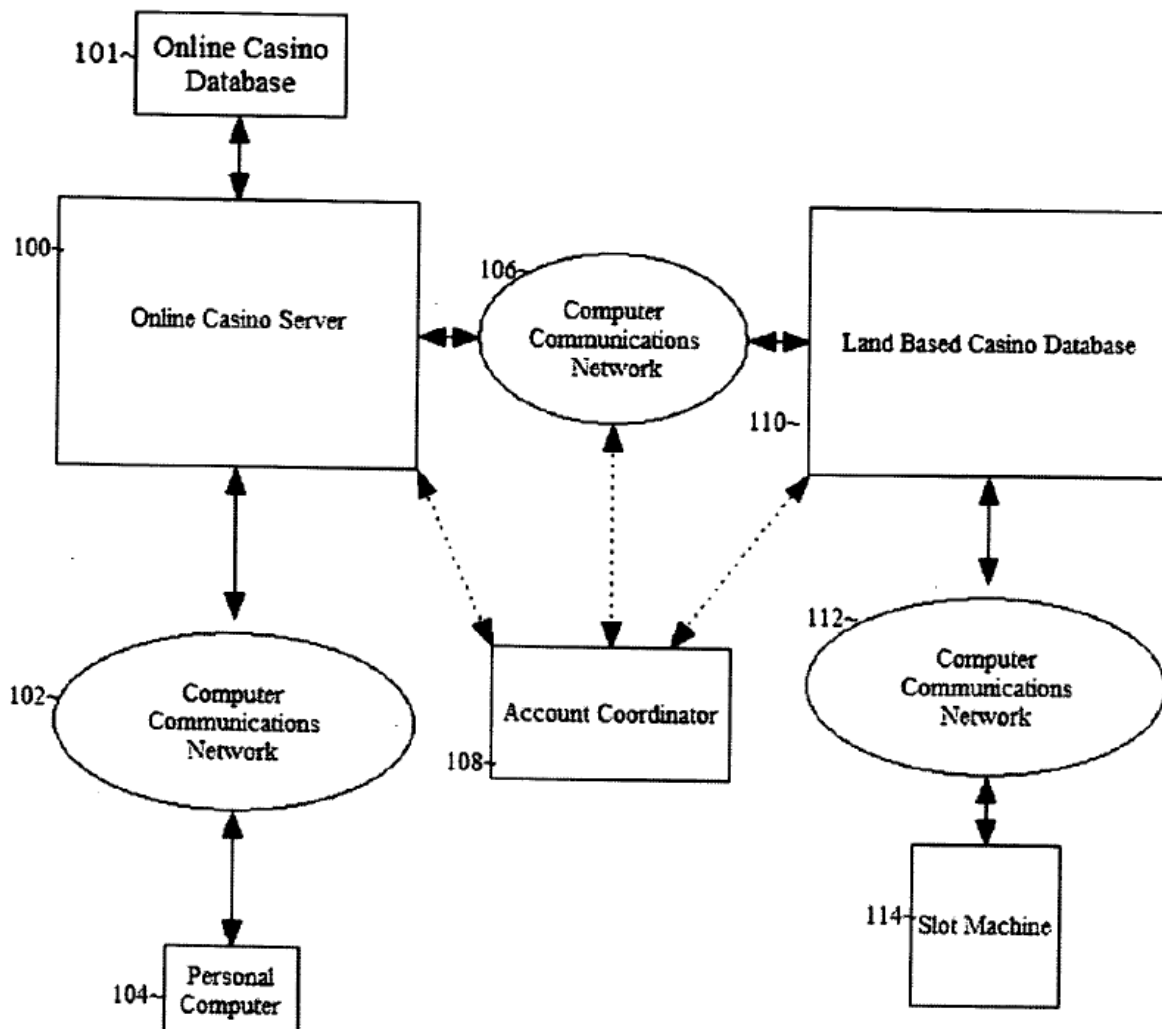


Figure 1

Figure 1 depicts online casino server 100 connected to land-based casino database 110 by computer communications network 106, which may be the Internet. Ex. 1010 ¶¶ 27, 28. Online casino server 100 connects to computer communications network 102 (typically the Internet) and a player's personal computer 104. *Id.* ¶ 28. Online casino database 101 stores player information such as player name, address, playing history, and loyalty points earned playing online games. *Id.*

Slot machine 114 in a land-based casino connects to land based casino database 110 via computer communications network 112 (e.g., a local area network (LAN)). Ex. 1010 ¶ 29. A players may insert a loyalty card into slot machine 114 (or adjacent loyalty card reader), which reads the player's account number and records any game play including comp points earned by the player on slot machine 114 in land-based casino database 110. *Id.*

Loyalty points or comp points are earned based on amounts wagered and then stored in a player's loyalty account where they can be exchanged for cash, purchases, free or discounted rooms, food, or beverages, free trips to a casino, and other incentive casino awards. Ex. 1010 ¶¶ 20–22. For online casinos, comp points may be exchanged for cash for wagering. *Id.* ¶ 22.

Linking online and land-based accounts allows players to share comp points and other data between online loyalty accounts and land-based casino accounts by, for example, applying comp points earned by gambling online at a land-based casino. Ex. 1010 ¶¶ 23, 24. This linkage encourages players to play at an online casino at their homes knowing that the points they earn by playing online can be applied to complimentary things at a “real live casino” for improved marketing such as by offering a free or discounted casino trip if a player loses a lot of money online. *Id.* ¶ 25.

Account coordinator 108 links players' online and land-based casino accounts to allow the transfer of comp points and loyalty data over computer communications network 106, which may be the Internet. Ex. 1010 ¶¶ 11, 31–38, 40, 54–56, 72–74. Account coordinator 108 may be located at online casino server 100 or land-based casino database 110, or linked to online casino server 100 and/or land-based casino database 110 by a computer communications network. *Id.* ¶ 33. Online and land-based casinos may be owned by the same party or have some type of business affiliation. *Id.* ¶ 30.

To link a player's online and land-based casino accounts, account coordinator 108 at online casino server 100 transmits the player's name and address to land-based casino database 110, which identifies the player's record (if one exists) and responds that a player record was found so online casino database 100 can associate the player's online account with the account found in land-based casino database 110. Ex. 1010 ¶ 35. Account coordinator 108 links (associates) the online and casino accounts so comp points can be transferred from one account to the other. *Id.* ¶¶ 35–38, 56.

Account coordinator 108 can use a look up to determine an associated account that can be affected by a player's online play. Ex. 1010 ¶ 41. If the player earns points at one entity, some or all of the points can be transferred from one account to the linked account. *Id.* ¶ 56. Points can be transferred between accounts automatically or periodically. *Id.* If a player earns 100 points playing on land and 50 points playing online and visits the land-based casino to redeem the points, the player can be able to redeem all 150 points. *Id.* Comp points may be transferred after a predetermined number of points accrue, after a session ends, or at an exchange rate. *Id.* ¶¶ 71, 74. The player's ID information can be transmitted with the comp points. *Id.* ¶ 71

Before transferring comp points, the system queries land-based casino database 110 with the land based account number and *player identification information* to confirm that the player owns the land-based casino account. Ex. 1010 ¶ 74. Transfers may be allowed in either direction or one way from an online account to a land account or at an exchange rate. *Id.* ¶¶ 74, 75.

Figure 2 of Muskin is reproduced below to depict this linkage.

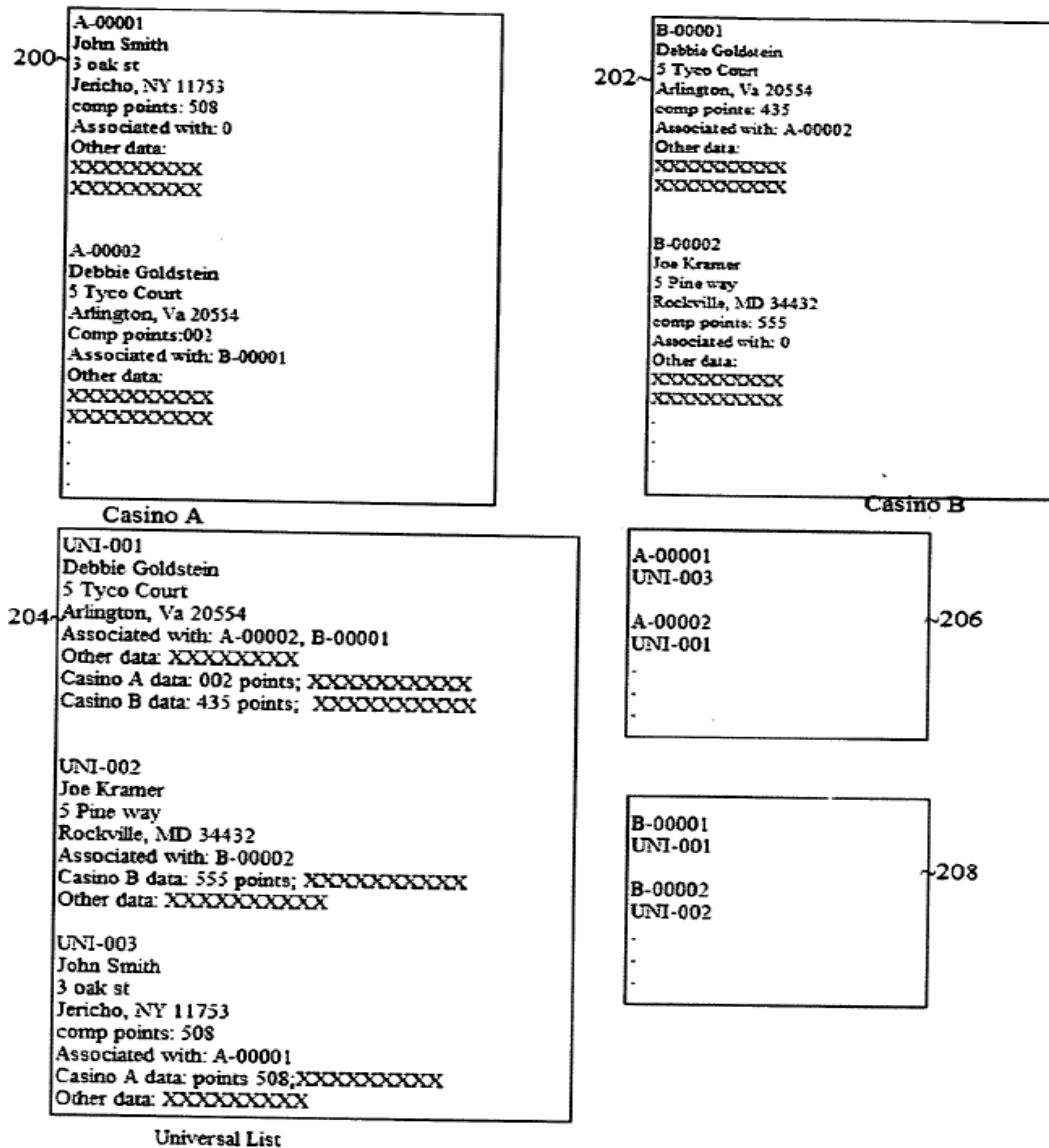


Figure 2

Figure 2 shows account records linking accounts of online and land-based casinos. Universal list 204 stores players in affiliated casinos and lists their associated accounts. Ex. 1010 ¶ 46. List 200 identifies players for casino A and List 202 identifies players for casino B. Universal List 204 identifies “Debbie Goldstein” as having accounts at Casino A with 2 points and at Casino B with 435 points. *Id.* ¶¶ 44, 45, 49. Tables 206, 208 identify the linked accounts such as Debbie Goldstein’s accounts at Casinos A and B. *Id.* ¶¶ 48, 49. A universal record can store accounts at both casinos by a player’s identity and universal account number tied thereto. *Id.* ¶¶ 43–49.

Muskin also associates player’s online gaming accounts with their land-based casino (CMS) accounts using the player’s identity in order to communicate loyalty credits and information credits between the accounts, i.e., “based on an identity of the user” as claimed. Account coordinator 108 can identify an identical player account at a land-based CMS based on the player’s information in the online casino account at server 100 using the player’s name. Ex. 1010 ¶¶ 34, 35. Online casino database 100 can associate the player’s online account with the land-based casino account by identifying the land-based account in a player’s online account. *Id.* ¶ 35. An association points one account to the other or both to each other, e.g., by using an index of each player’s affiliated accounts, so comp points can be transferred from one account to the other account. *Id.* ¶ 38. Account coordinator 108 can look up and identify an associated account. *Id.* ¶ 41. Online and land-based casino accounts can be associated at registration by a user providing the account number and a personal identification number or the system can match accounts by using a user’s *name*, address, and other identification information so points can be transferred. *Id.* ¶¶ 54–56.

Players can identify themselves by identification information such as name, address, phone number, or account information of a first account. Ex. 1010 ¶ 60. This personal identification information can be used and comp points can be transferred between accounts using the comp account number or other user identification personal information that is stored in the online database 101 or another database. *Id.* ¶ 61. An associated comp account can be designated and associated with a player's online account, which a player can access using their player identification to retrieve an associated comp point account number so comp points can be retrieved from the associated account. *Id.* ¶¶ 68–70. The player's identification information can be transmitted for security or other purposes. *Id.* ¶ 71.

Before effectuating such a transfer, the system may query the remote land based casino database with the land based account number and player identification information, so that the land casino database can confirm or provide information to confirm that the player is the same player that owns the land based casino account. Transfers may be allowed either way or one way. For example, the system may be set up to allow transfer only from an online account to a land account, but not the other way around. Or transfers can be allowed in either direction.

Id. ¶ 74.

b. Herrmann (Ex. 1011)

Herrmann's system links player accounts at online casino system 350 with external accounts at CMS 302 to include creating accounts at a CMS if an account does not exist already. Figure 3 is reproduced below to depict a system that links a user's account (e.g., loyalty account) at online casino system 350 with accounts at CMS 302 through interface 306 over different networks, applications, and platforms. Ex. 1011 ¶¶ 2, 9, 10, 15, 30, 62, 79.

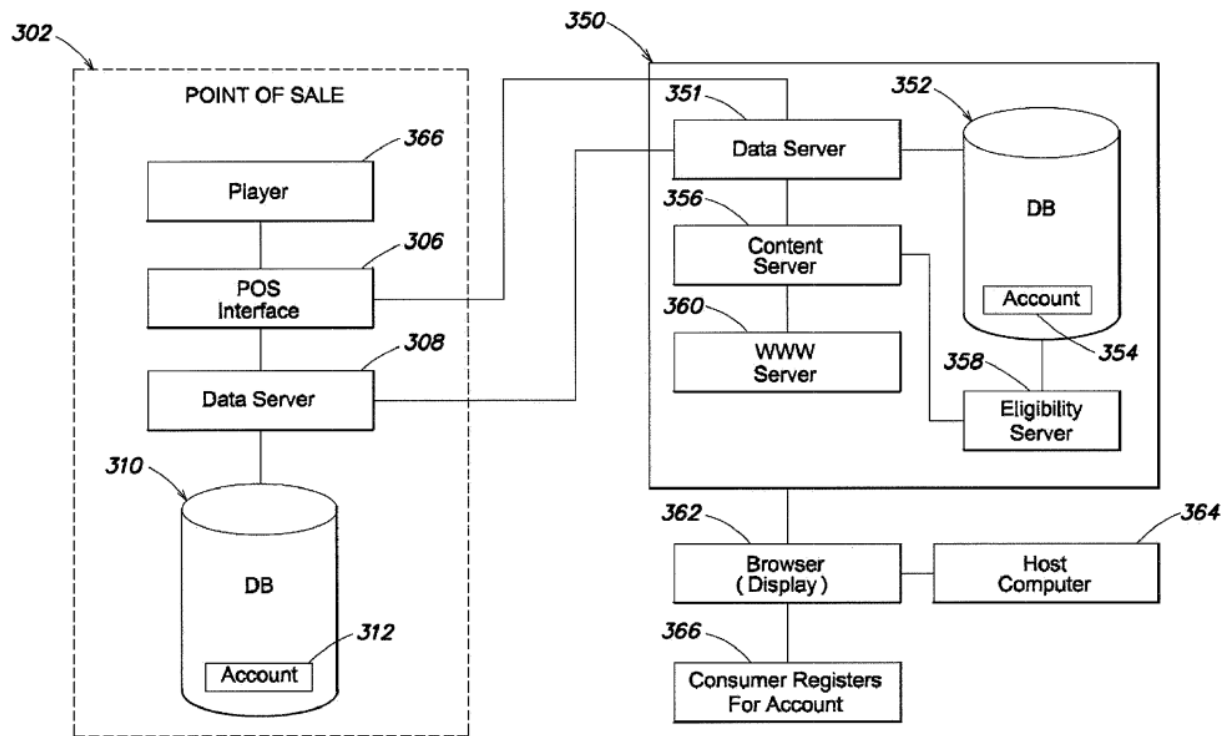


FIG. 3

Figure 3 shows POS interface 306 linking accounts at land-based CMS 302 to accounts at online gaming service 350. Ex. 1011 ¶¶ 9, 10, 15, 30, 62, 79.

When a user registers an online account, interface or process 306 can

- a) determine the existence of an account within the casino management system for the user that is initiating the [online] registration
- b) *if an account does not exist*, [create] a new player club account in the casino management system [and]
- c) communicat[e] *the id of that player account*, as identified by the casino management system, to the online system.

Id. ¶¶ 79–84 (emphasis added), Fig. 3. Once accounts are associated, data can be transferred between systems 302, 350 for a seamless user experience.

Id. ¶¶ 62, 63. *Casino delivery preferences* are used to transfer account data.

Id. ¶¶ 258–289, 302–306. An online system identifies CMS account delivery preferences based on user account identifiers. *Id.* ¶¶ 129–135, 191, 320.

Account information can be transferred using different protocols.

For example, casino management system “A” may only allow data to be loaded, processed and updated by it initiating a connection to the online system’s FTP component and it transferring that data in a “batch” format. In another example, casino management system “B” may prefer data to be transferred in real time, using a SOAP protocol, with requests for data being initiated by the online system.

Ex. 1011 ¶ 304. Account data may be transferred from an online account to a CMS account using such protocols (*id.* ¶ 305) a SOAP interface (*id.* ¶ 261) or FTP and other interfaces (e.g., XML, HTTP) (*id.* ¶¶ 263–271).

Users define preferred delivery channels to receive offers, vouchers, coupons, and rewards points at CMS *loyalty accounts* and *gaming locations* to drive revenue and optimize return on investment. Ex. 1011 ¶¶ 3, 6, 8, 13, 21, 30, 65, 66, 71, 132, 223–248, 332, 374, 375. User-defined delivery channels include slot machines as shown in Figure 6, reproduced below.

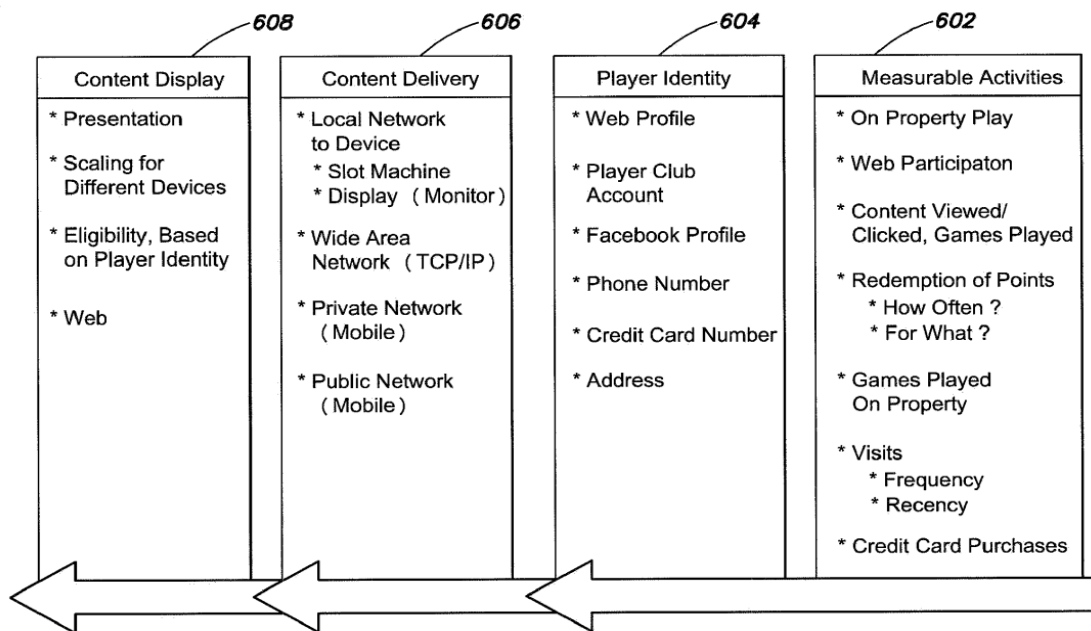


FIG. 6

Figure 6 above shows a player-defined delivery channel used by a CMS to deliver rewards and comps to a user at slot machine 606. Ex. 1011 ¶ 320.

When a user registers an account at a casino player club desk, interface or process 206 that exists between the CMS external account system 202 and the online system creates a user account with online system 250 and links the accounts using the player's identification, which is recognized by the CMS and tied to the online system shown in Figure 2 above. Ex. 1011 ¶¶ 76, 77.

This association allows loyalty points, rewards, and loyalty credits to be delivered to players at a CMS gambling location during casino visit 108E as shown in Figure 1 of Herrmann, reproduced below. Ex. 1011 ¶¶ 66, 71.

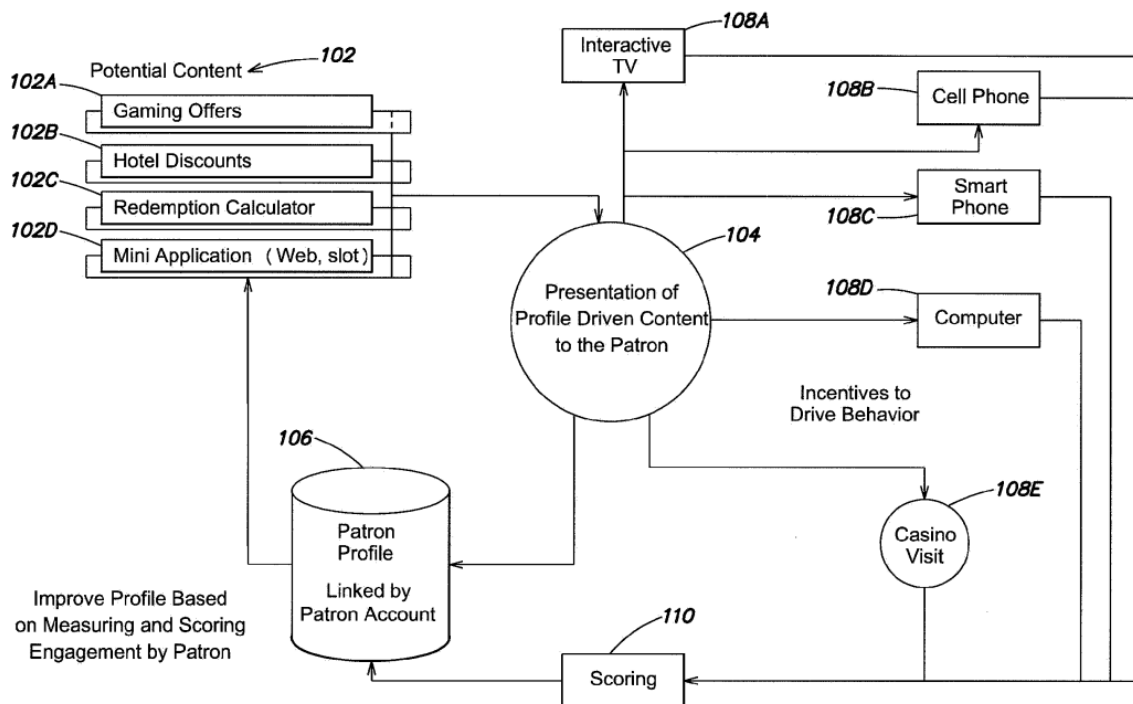


FIG. 1

Figure 1 illustrates *loyalty points* delivered to a player during casino visit 108E using delivery channels based on a *user identify profile* that the CMS uses to deliver loyalty points during casino visit 108E. Ex. 1011 ¶¶ 65–71.

2. *Motivation to Combine and Expectation of Success*

Petitioner contends that a skilled artisan would have been motivated to combine Herrmann's interface with Muskin so users can create and associate online and casino accounts seamlessly. Pet. 35–36 (citing Ex. 1010, Abstr.; Ex. 1011, Abstr. ¶¶ 76, 77, Fig. 2; Ex. 1003 ¶¶ 181–189, 184). Petitioner asserts that the modification merely combines prior art elements according to their known functions for predictable results by using Herrmann's method to associate or create external accounts so data can be shared between accounts “to create a much more seamless user experience.” *Id.* at 36 (citing Ex. 1011 ¶ 62). Petitioner asserts that Herrmann's method would improve Muskin's content delivery to “effectively drive revenue and deliver the best return on investment” so a skilled artisan would have recognized financial incentives to associate user accounts and create new user accounts to increase the number of players frequenting casinos. *Id.* (citing Ex. 1011 ¶ 8; Ex. 1003 ¶ 185). Petitioner asserts that a skilled artisan would have combined Herrmann's content delivery with Muskin to improve the offering of complimentaries. *Id.* at 36. Petitioner argues that because it is increasingly difficult to deliver content to players and because targeted marketing has become more costly, modifying Muskin by using a user's preferred delivery channels, as taught by Herrmann, would improve targeted marketing. *Id.* at 36–37. According to Petitioner, a skilled artisan would have had a reasonable expectation of success of modifying Muskin without changing its fundamental operation by using this straightforward modification of creating an account if one did not exist for improved content delivery. *Id.* at 37. Petitioner argues that such a modification would have combined prior art elements according to their known functions for predictable results. *Id.* (citing *KSR*, 550 U.S. at 416).

3. *Independent Claim 11*

a. *Element 11[pre]*

Petitioner contends that Muskin discloses a computer readable storage medium for implementing wagering games and sharing player account and loyalty credit information between affiliated establishments. Pet. 40 (citing Ex. 1010 ¶¶ 20, 40, Abstr., claim 2; Ex. 1003 ¶¶ 210–212).

Patent Owner does not challenge these contentions. *See generally* PO Resp.; PO Sur-reply. We find that Petitioner’s contentions are persuasive and supported by a preponderance of the evidence.

b. *Elements 11[a] and 11[b]*

Petitioner contends that Muskin discloses or suggests accessing account information for a user’s first account with an online gaming service and second account with a particular CMS in elements 11[a] and 11[b] for the reasons asserted in §§ VII.A.4.b and VII.A.4.c of the Petition for similar elements 1[a] and 1[b]. Pet. 40 (citing Ex. 1003 ¶¶ 108–114, 213–214).

Patent Owner does not challenge these contentions. *See generally* PO Resp.; PO Sur-reply. We find that Petitioner’s contentions are persuasive and supported by a preponderance of the evidence.

c. *Element 11[c]*

Petitioner asserts that Herrmann discloses a system that operates as part of another system to allow a user to define a preference for a delivery channel to receive content at a CMS, and it would have been obvious for that CMS to use that delivery channel to deliver content to the user at that CMS based on the user’s identity to best engage users on their preferred channels for casino marketing. Pet. 40–43 (citing Pet. § VII.C.2; Ex. 1011 ¶¶ 8, 10, 11, 15, 18, 63, 74, Abstr., Fig. 5; Ex. 1003 ¶¶ 215–221); Opp. to RMTA 1–6.

d. Element 11[d]

Petitioner asserts that Muskin communicates loyalty credit information for a user between a server providing an online gaming service and machines providing a CMS, and Herrmann determines a communication preference of a CMS to communicate content based on the user's identity by identifying a delivery channel to deliver content to the user at the CMS. Pet. 43–44 (citing Pet. §§ VII.A.4.f, VII.C.5.c; Ex. 1011 ¶ 67, Fig. 5; Ex. 1003 ¶¶ 222–223).

i. Patent Owner's arguments for 11[c] and 11[d]

Patent Owner argues that Muskin and Herrmann do not determine by a PIMS a communication preference of a particular CMS in element 11[c] or communicate loyalty information in element 11[d]. PO Resp. 18–19. Patent Owner argues that Petitioner relies on Herrmann for elements 11[c] and 11[d] and Herrmann's delivery channels are channels through which a user receives content rather than loyalty credits received by a machine of a CMS according to a communication preference of that particular CMS as claimed. *Id.* at 19–23, 29. Patent Owner asserts that Herrmann provides player engagement by using multiple marketing channels without any disclosure of loyalty credits moved from one account to another account. *Id.* at 23–24. Patent Owner argues that the delivery channel preferences are based on a user profile rather than a communication preference of a particular CMS as claimed and users can define different preferences for different gaming establishments rather than a preference for a single delivery channel. *Id.* at 24–26. Patent Owner asserts that Petitioner has not explained why a user's preference to receive marketing content would be used by a server of an online gaming service to communicate anything—let alone loyalty credit information—to machines providing a particular CMS as claimed. *Id.* at 26–28.

ii. Attacking reference teachings individually

Patent Owner's arguments that Herrmann does not transfer loyalty credits does not address Petitioner's reliance on Muskin's transfer of loyalty credits between a user's online and land-based account at a CMS. Pet. 43 (asserting that Muskin "communicat[es] loyalty credit information for the user between a server providing the online gaming service and machines providing the particular casino management system" in element 11[d], and Herrmann determines by a PIMS a communication preference of a particular CMS based on an identity of a user in element 11[c] and communicating content based on that communication preference in element 11[d]); *see In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references."); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (the test for obviousness is what the combined teachings of the references would suggest to a skilled artisan); *see also KSR*, 550 U.S. at 417 ("[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill."); Pet. Reply 1–2, 4.

iii. Muskin transfers loyalty credits between accounts

Patent Owner does not dispute that Muskin provides users accounts for loyalty credits at an online gaming service and a CMS in elements 11[a] and 11[b] or that Muskin's system permits a transfer of loyalty credits between such accounts in element 11[d]. *See generally* PO Resp.; PO Sur-reply; Pet. 40 (citing Pet. §§ VII.A.4.b., VII.A.4.c.; Ex. 1003 ¶¶ 108–114, 213–214), 43 (citing Pet. § VII.A.4.f.).

iv. Herrmann transfers rewards and loyalty points

Herrmann's transfer of loyalty points and rewards via delivery channel (communication) preferences also teaches a transfer of "loyalty credits" as claimed. Ex. 1011 ¶¶ 3, 13, 24, 30, 66, 116, 235–248; Pet. Reply 4 (citing Ex. 1011 ¶¶ 223, 235, 243, 248; Ex. 1019 (Crane Declaration) ¶¶ 15–16). Mr. Crane testifies that rewards, vouchers, and coupons are "loyalty credits." Ex. 1019 ¶¶ 15–16; *cf.* PO Resp. 23–24. Herrmann sends loyalty points and redemption awards for players to use at gambling locations. Ex. 1011 ¶ 66.

The '296 patent equates rewards and loyalty programs as "casinos may offer a *reward or loyalty* program to patrons." Ex. 1001, 1:18–19 (emphasis added). "As a patron spends more money at a casino, that casino may offer points, perks, or other credits to the patron." *Id.* at 1:19–21.

Herrmann links users' online accounts 250 with their external CMS accounts including *loyalty and reward* accounts that contain gaming offers, discounts, vouchers, coupons, and rewards to manage player engagement and "incent the users to visit a gambling location." Ex. 1011 ¶¶ 10–13, 15, 62, 69, 223, Figs. 1–3. Players receive credits, *loyalty points*, and redemption awards. *Id.* ¶¶ 66, 69, 223, 243, 248. Users may define the delivery channels used to *receive loyalty credits and rewards at machines of a CMS*, e.g., slot machine, when gambling at a CMS. Ex. 1011 ¶¶ 71, 326, Fig. 6 (block 606); Pet. Reply 3; Ex. 1010 ¶ 29 (slot machine 114). Thus, the *CMS uses this user communication preference* to deliver loyalty credits to the user at that CMS.

Petitioner contends that a skilled artisan would have been motivated to communicate loyalty credits in Muskin using a communication preference as taught in Herrmann, and the communication preference would be used by the particular CMS where the user plays. Pet. 35–37, 41–43; Pet. Reply 4–5.

v. *CMS's delivery preference based on a user's identity*

A skilled artisan would have used a user-defined delivery preference of Herrmann as a CMS's delivery preference in Muskin because those delivery channel preferences drive revenue, provide the best return on investment, and create a seamless user experience by reaching players on preferred channels, as Herrmann teaches, for predictable results that do not change Muskin's operations fundamentally. Ex. 1011 ¶¶ 8, 62; Pet. 35–37, 41; Ex. 1003 ¶ 217.

Herrmann delivers content “to a player while they are at the gaming establishment.” Ex. 1011 ¶ 6. The system can operate as a part of an online gaming system that determines content to present *to players at a slot machine or a display at CMS 302* during a casino visit 108E. *Id.* ¶¶ 71, 74, 79, 80–84, 304, 305, 320, Figs. 1–3, 6 (block 606). Content is delivered to a user at a particular CMS using a delivery channel preference “based on an identity of the user” as claimed. Pet. Reply 3; *cf.* PO Resp. 27–29; PO Sur-reply 7–8.

The user's preference to receive reward and loyalty credit at a CMS slot machine would be the CMS's communication preference to ensure the content is delivered to the user at the slot machine “based on the identity of the user” as claimed. The CMS would deliver content to a user at that CMS via the user's preferred channel to optimize engagement and revenue as Herrmann teaches. Pet. 41–43; Pet. Reply 5–6; Ex. 1011 ¶¶ 7–11, 28–30, 61–66. Claim 11 does not limit a CMS to a single communication preference for all users, and Herrmann teaches the advantages of transmitting loyalty credits for users depending on the delivery channels that each user prefers to optimize user engagement at a particular CMS and drive revenue. Pet. 40–41 (citing Ex. 1011 ¶¶ 15, 18, 74; Ex. 1003 ¶¶ 215–217; Pet. Reply 5–6 (citing Ex. 1019 ¶¶ 23, 26, 27); *cf.* PO Resp. 24–27).

vi. Users receive loyalty credits at CMS machines

Users in Herrmann can receive rewards at a machine of a CMS as a delivery channel. PO Resp. 20–23. A CMS would use the user’s preferred delivery channel to deliver rewards to the user at CMS machines as its own communication preference based on that user’s identity to ensure that loyalty credits and rewards are delivered to the user at the CMS to optimize user engagement and revenues as Herrmann teaches. Pet. 35–36, 41–44; Pet. Reply 4–5; Ex. 1003 ¶ 217; Ex. 1019 ¶ 23; Ex. 1011 ¶¶ 7–11, 28–30, 61–66.

Herrmann also associates external CMS accounts with accounts at online system 350. Ex. 1011 ¶¶ 11, 15, 32, 46, 61, 62, 76–80, 258–293, 306. External accounts may be generated as part of the association and include casino player club accounts, email accounts, *loyalty accounts*, and *reward accounts* associated with a delivery channel. *Id.* ¶¶ 3, 13, 21, 30, 66, 116. After external accounts are associated with an account at online system 350, content is delivered to create a more seamless user experience. *Id.* ¶ 62.

vii. Other user-defined delivery channels for CMSs

Herrmann describes other user-defined delivery channels that a CMS would use to transfer loyalty credits and rewards from online system 350 to CMS 302. Pet. Reply 6–7. Herrmann can deliver content by text message, HTML message, email, and SMS message, personal webpage, and web applications that protect user confidentiality. Ex. 1011 ¶¶ 136–187, 199–227; Pet. Reply 6–7; Ex. 1019 ¶¶ 18–20; Ex. 1020, 23:12–14 (citing testimony of Dr. Shamos that a personal web page that requires login by a user is not a public communication means). These user-defined delivery channels are suitable for a CMS to use as its communication preference to receive user’s loyalty credits transferred from an online account. *See* Pet. Reply 6–7.

Patent Owner argues that “[t]he fact that Herrmann identifies ‘both slot machines and computer monitors as modes to receive content’ is of no moment [because] both monitors display content *to the user*, and Herrmann is silent as to how the slot machines and computer monitors communicate with *each other*.” Sur-reply 7–8. However, claim 11 does not require the CMS machines to communicate with each other. Herrmann delivers rewards to a user at a slot machine via a delivery preference that the CMS uses based on the user’s identity. Ex. 1011 ¶¶ 24, 200–227, 261–271; *cf.*, Ex. 1001, 1:39–49 (SOAP, XML), 2:29–39 (same), 4:26–59 (XML, HTTP, SOAP).

viii. Communication evidences a CMS preference

The parties agree that communication between online and land-based casinos *evidences* that the online casino had to determine a communication preference of the CMS to communicate with it. Ex. 1031 ¶ 63 (for systems to communicate, they must know how to do so); Ex. 2009 ¶ 32 (“I agree that for server A to communicate with server B, server A must know a communication preference of server B and I so testified in deposition.”); Ex. 1035, 58:12–18 (in the ‘296 patent, web server 130 communicates over a network with CMS 150 and “to communicate over a network, it’s well-known that the two parties need to have agreed on a communication protocol, otherwise their bits will go into nowhere and there will be no communication.”); *id.* at 61:5–10 (element 23[c] does not place limits on how the determination is made); *see* Sur-reply 1–2 (PIMS 116 determines a communication preference of a particular CMS to connect network-based and land-based systems to enable system-to-system communications); Ex. 1006, 50 (enabling communications “requires determining a communication preference of a system”), 56 (same); *see* PO Reply RMTA 2 (citing Ex. 1031 ¶ 63 in support of element 23[d]).

Muskin's communication of loyalty credits between an online casino and land-based CMS means Muskin determines a communication preference of that CMS "based on the identity of the user" who has the loyalty account at that particular CMS. *See* Ex. 1010 ¶¶ 43–50, Fig. 2. This is so because "based on an identity of the user" means that the communication preference is for the CMS where the user has an account. *See* § III.B. *supra*; Inst. Dec. 9–10. *Patent Owner has not disputed our claim construction.* PO Resp. 17.

Herrmann delivers content to users at a CMS *based on a user's identity* and delivery channel preference, e.g., at *slot machines and displays during casino visit 108E*. Pet. Reply 2–3 (citing Ex. 1011 ¶¶ 71, 82, 320, Figs. 3, 6; Ex. 1019 ¶¶ 8–12); Pet. 40–43; Ex. 1011 ¶¶ 6, 71, Figs. 1, 3, 6 (block 606); *cf.* PO Resp. 23. As Petitioner asserts, Muskin communicates loyalty credits between accounts at an online gaming system and a CMS, and Herrmann also communicates such credits between online and machines at a CMS according to a communication preference of a user (i.e., "based on an identity of the user" that a CMS would use as its preferred channel for that user). *See* Pet. 40–43; Pet. Reply 1–7; Ex. 1010 ¶ 29 (*CMS slot machine*); *cf.* PO Resp. 19.

Patent Owner argues that a user in Herrmann can define different preferences for different types of games/gaming establishments so no single delivery channel is preferred or representative of the entire group of users. PO Resp. 25–26. This argument is not commensurate with the scope of claim 11, which does not require a CMS to have a single communication preference to receive loyalty credit information for all users. Rather, the communication preference is "based on an identity of the user" of that CMS. Nor does claim 11 require a user to have the same communication preference to receive loyalty credits at every CMS.

Petitioner has provided detailed contentions and evidence to show that a CMS would use the delivery preference of the user at that casino to receive loyalty credits from an online gaming service to a machine at the CMS where the user is playing wagering games. Pet. 40–44; Pet. Reply 1–8. These contentions are supported by a preponderance of the evidence and we adopt them in our findings and determination as to elements 11[c] and 11[d].

ix. Conclusion

Based on the parties’ contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin and Herrmann disclose and suggest elements 11[c] and 11[d].

e. Elements 11[e] and 11[f]

Petitioner contends that elements 11[e] and 11[f] are substantially similar to elements 1[f] and 1[g], and Muskin discloses elements 11[e] and 11[f] for the reasons asserted in §§ VII.A.4.g and VII.A.4.h of the Petition for elements 1[f] and 1[g]. Pet. 44 (citing Ex. 1003 ¶¶ 200, 201, 224, 225). In particular, Petitioner contends that Muskin determines the transferability of loyalty credits to a CMS and transmits loyalty credits that are determined to be transferrable by determining that “some or all of the [comp] points” may be transferred in one or both directions and by verifying account information is verified before transferring comp points. Pet. 23 (§§ VII.A.4.g, VII.A.4.h.) (citing Ex. 1010 ¶¶ 38, 73, 74; Ex. 1003 ¶¶ 136–142).

Patent Owner argues that Muskin does not determine whether credits are transferrable from a first account to a second account. PO Resp. 30–32. Patent Owner asserts that Muskin’s description of processes that transfer points between accounts does not teach or suggest *making a determination* of whether credits are transferrable. *Id.* at 31.

Elements 11[e] and 11[f] do not recite how a determination is made that loyalty credits are transferrable to a CMS. The '296 patent states only that “[a] determination may be made as to whether loyalty credits should be transferred from the online account to the offline account at step 450.”

Ex. 1001, 5:34–36. “To transfer the loyalty credits, the online service may contact the CMS system with the patron identifier and any required login information.” *Id.* at 5:40–43.

Muskin determines the transferability of comp points between an account at an online gaming service and an account at a particular CMS by *confirming or verifying the CMS account number and player identification* before allowing a transfer. Ex. 1010 ¶ 74. Muskin also determines whether a certain *predetermined number of comp points are earned* before transferring the points. *Id.* ¶ 71. Muskin further determines whether a transfer is allowed *in a requested direction* from an online account to a particular land account or *in both directions*. *Id.* ¶ 74. Muskin also can determine whether comp points are *transferrable at a conversion rate* and makes a determination to multiply comp points by a conversion constant to reflect the value of the points after the transfer. *Id.* ¶ 75. Muskin *determines how many points are available to support a transfer* before transferring points (Ex. 1010 ¶ 56) just as the '296 patent describes online service determining how many credits are available and transmitting a number of available credits (Ex. 1001, 5:43–45).

Petitioner contends persuasively that a skilled artisan would understand these transfers to require a determination to transfer comps in different ways for online and land-based casinos and for different games. Pet. Reply 8–9 (citing Pet. 23, 44; Ex. 1003 ¶¶ 136–142, 200–201, 224–225; Ex. 1010 ¶¶ 39, 73, 74; Ex. 1019 ¶ 30; PO Resp. 31–32).

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin and Herrmann teach and/or suggest elements 11[e] and 11[f].

f. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that claim 11 is unpatentable based on Muskin and Herrmann.

4. Claims 12–15 and 17

a. Claim 12

i. Parties' Contentions

Petitioner asserts that the elements of claim 12 are substantially similar to elements 1[b]–1[d], and Muskin alone or in combination with Herrmann discloses or suggests determining the user does not have a second account with the CMS, creating a second account with the CMS that is associated with second loyalty credits, and accessing the user's second account for the same reasons asserted in §§ VII.A.4.c., VII.C.3.a, and VII.C.3.b of the Petition. Pet. 44 (citing Ex. 1003 ¶¶ 112–130, 193–198, 226–227).

Patent Owner argues paragraph 79 of Herrmann does not disclose that an account is created by an application server but instead creates an account in response to the user requesting an account be created. PO Resp. 35–36. Patent Owner argues that Herrmann's process is distinct from *automatically* creating an account with a CMS based on account information for the user's first account because, in Herrmann, the user inputs the specific registration information into the registration form to create the account. *Id.* at 37 (citing Ex. 2005 ¶¶ 106, 107); Sur-reply 17. Dr. Shamos provides supporting testimony to the same effect. Ex. 2005 ¶¶ 106, 107.

ii. Analysis

Claim 12 requires accessing account information for a user's second account with a CMS to include determining the user does not have a second account with the CMS and creating a second account with the CMS and associated with a second loyalty credit. Ex. 1001, 11:20–29.

Herrmann's interface or process 306 of an application server (*see* Pet. 37–38) determines if a player has a CMS account and creates a new account at a CMS if one does not exist. Ex. 1011 ¶ 79. When player 366 creates an account at online gaming system 350 by using internet registration forms displayed on browser 362, *interface or process 306* (1) determines if the user has an existing account in the CMS, (2) creates a new player club account in the CMS if one does not exist, and (3) communicates the identity of that new CMS account to online system 350. *Id.* ¶ 79, Fig. 3. Interface or process 306 performs these steps automatically without any user action. *Id.* Thus, when a user creates an online account, *interface 306 creates a CMS account* after determining one does not exist without any user action, i.e., “automatically,” without the user requesting that an account be created. *Id.*; *cf.* PO Resp. 36–37; Reply 13–14.

The '296 patent describes an online service prompting a user for login information for an offline service when the user logs into the online service. If the user does not have an offline account, one is created. Ex. 1001, 5:3–12, Fig. 4. User action precedes creation of a CMS account when a user logs into the online account and indicates there is no login information to input for an offline account. *Id.*; *cf.* Sur-reply 18. In Herrmann, when a user accesses an account at online system 350, interface or process 306 creates a CMS account after determining one does not exist. Ex. 1011 ¶ 79; *cf.* PO Resp. 35–36.

Claim 12 does not require the second account at a CMS to be created based on information from a first account as Patent Owner asserts. PO Resp. 36–37. Claim 12 does not specify how the second CMS account is created. Ex. 1001, 11:20–29. The '296 patent indicates “[t]he offline account *may* be created based on the user contact information stored with the online account.” Ex. 1001, 5:12–14 (emphasis added). We do not read this embodiment into claim 12’s broad language. *See Unwired Planet, LLC v. Apple Inc.*, 829 F.3d 1353, 1359 (Fed. Cir. 2016) (“[I]t is not enough that the only embodiments, or all of the embodiments, contain a particular limitation to limit claims beyond their plain meaning.”); *cf.* Sur-reply 17–18. Even so, Herrmann uses registration data to create an online account *and* then a CMS account so that POS interface 306 uses online account data to determine the existence of a CMS account *and* to establish offline accounts. *See* Ex. 1011 ¶¶ 79–84.

iii. Conclusion

Based on the parties’ contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that claim 12 is unpatentable based on Muskin and Herrmann.

b. Claims 13 and 14

i. Parties’ Contentions

Petitioner contends that claims 13 and 14 are substantially similar to claims 3 and 4, and Muskin discloses these claims as asserted in §§ VII.A.5 and VII.A.6 of the Petition for claims 3 and 4 in Ground 1. Pet. 44.

Patent Owner argues that Muskin does not determine if second loyalty credits are retrievable by the online gaming system and retrieve the credits from the second account with the CMS in claim 13 or retrieve second loyalty credits that are usable at the online gaming service in claim 14. PO Resp. 39.

Patent Owner asserts that paragraph 71 of Muskin discloses that comp points earned by playing an online game are redeemable at a land-based casino rather than credits earned at the land-based casino are redeemable with the online gaming system as claimed. PO Resp. 39–41. Patent Owner argues that the earned credits are redeemable, and a skilled artisan would understand there is no need to determine whether the second loyalty credits are usable in the user’s first account with the online gaming service as claimed. *Id.* at 41.

Patent Owner argues that paragraph 74 of Muskin discloses that credits are transferred in both directions or a single direction, and a skilled artisan would understand there is no need to determine whether the second loyalty credits are retrievable or usable in the user’s first account with the online gaming service as recited in claims 13 and 14. PO Resp. 41.

ii. Analysis

The claim language does not specify how a determination is made. The ’296 patent’s description is equally unhelpful. Ex. 1001, 5:16–19, Fig. 4 (step 440). “A user may have loyalty credits for use as a patron of the casino that the user may use with the online account.” *Id.* at 5:17–19. If no loyalty credits should be retrieved, the method continues; if loyalty credits should be retrieved, they are retrieved. *Id.* at 5:19–22. To retrieve credits, the online service contacts the CMS system, determines how many credits are available, and retrieves *available credits*. *Id.* at 5:24–29. The service determines how many credits are available and then retrieves some or all of them. *See id.*

Muskin determines whether points can be transferred in a requested direction, whether some or all points can be transferred, and/or whether a predetermined number of points are earned. Ex. 1010 ¶¶ 56, 71, 74. Muskin thus determines whether comp points are transferrable to an online account.

Muskin's system determines whether comp points are retrievable from a land-based account to an online account based on how the system is set up. Ex. 1010 ¶ 74. Muskin determines whether comp points are retrievable from one account to another account in one direction or in either direction. *Id.*

Muskin's system thus determines whether comp points at a land-based casino are retrievable at an online casino as recited broadly in claims 13 and 14. Like the '296 patent, Muskin may obtain a land-based account number and player identification to determine whether comp points are retrievable and transferrable between a land-based casino account and an online gaming account. Ex. 1010 ¶ 74; Ex. 1001, 5:24–26.

“[I]f a player earns points in the second entity, *some or all* of the points can be transferred from the second account to the first account” in Muskin (Ex. 1010 ¶ 56 (emphasis added)) just as the '296 patent determines how many credits are available and retrieves *some or all* of the available credits (Ex. 1001, 5:24–26). Reply 15–16; *cf.* Sur-reply 18 (asserting that Muskin and Herrmann always deem all credits as transferrable between accounts).

Claims 13 and 14 do not preclude accounts from being configured to allow all/some points in a CMS account to be transferred to an online account so the system determines which loyalty points may be retrieved from a CMS account and used in an online gaming account. *Cf.* PO Resp. 41. Points are determined to be redeemable and are transferred in amounts determined to be retrievable and usable. Ex. 1010 ¶¶ 56, 71, 74; *cf.* PO Resp. 40–41.

iii. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that claims 13 and 14 are unpatentable based on Muskin and Herrmann.

c. Claim 15

i. Parties' Contentions

Petitioner contends that claim 15, which recites that the first loyalty credits are transferrable to the CMS when they are usable by the user's second account with the CMS, is substantially similar to claim 6, and Muskin discloses these limitations as asserted in § VII.A.8 of the Petition for claim 6 in Ground 1. Pet. 44. For claim 6, Petitioner contends that Muskin teaches that the transfer of loyalty credits can be allowed in either direction. Pet. 26 (citing Ex. 1010 ¶ 71 and quoting ¶ 74; Ex. 1003 ¶¶ 147, 148, 153).

Patent Owner argues that Petitioner's cited paragraphs do not teach the determination recited in claim 11, and claim 15 requires first loyalty credits to be transferrable to the CMS when the credits are usable by the user in the user's second account with the CMS. PO Resp. 41–42. Patent Owner argues that paragraph 22 of Muskin only describes how comp points are used, and paragraph 71 indicates that comp points from playing online games are redeemable at a land-based casino not that a determination is made that the comp points are transferrable and usable in a CMS account. *Id.* at 42–43.

ii. Analysis

As discussed for claims 13 and 14, Muskin determines whether comp points in an online gaming account are retrievable and usable at a land-based casino and vice versa based on how the accounts are configured. Ex. 1010 ¶¶ 56, 71, 74. Some or all comp points may be transferred from one account to the other and used in the system associated with that receiving account. *Id.* ¶¶ 56, 74. For example, the system determines whether the player requesting the transfer owns the land-based casino account and whether a predetermined number of comp points are earned before transferring them. *Id.* ¶¶ 71, 74.

Muskin's system allows transfers in only one way or "[t]ransfers may be allowed either way." Ex. 1010 ¶ 74. Thus, before allowing a transfer, the system must determine whether it is allowed in the requested direction from an account with an online gaming service to the player's second account with the CMS and/or whether transfers are allowed in either direction, e.g., from an online gaming account to a player's CMS account. *Id.* Muskin's system transfers comp points "after a predetermined number of comp points" are accumulated in an online account from only play to use at a CMS. *Id.* ¶ 71.

Like Muskin, the '296 patent's system is configured to transfer loyalty credits between an online account and a CMS account and to determine how many credits are available to transfer and retrieve some or all of the available credits. Ex. 1001, 5:16–29, 6:13–17. This description confirms the broad scope of claim 15 and the fact that Muskin's system performs the claimed determination of transferability and usability of loyalty credits the same way.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established by a preponderance of the evidence that claim 15 is unpatentable over Muskin and Herrmann.

d. Claim 17

i. Parties' Contentions

Petitioner contends that Muskin displays loyalty credits of the user's CMS account in an interface provided by the online gaming system for claim 17 for the same reasons as claim 8 as discussed in § VII.A.9 of the Petition for Ground 1. Pet. 44. Petitioner asserts that Muskin discloses, "[w]hen the player plays online or in the land-based casino [the player can] view[] his or her current comp points." *Id.* at 27 (quoting Ex. 1010 ¶ 39).

Patent Owner argues claim 17's patentability based only on its dependency from claim 11. PO Resp. 39; Reply 17. This argument is not persuasive in view of our determination that claim 11 is unpatentable.

ii. Analysis

Muskin discloses that when players play at an online or a land-based casino, they can view their comp points, and the system displays the second loyalty credits from a second account at a CMS so the players can request a transfer of points from one account to the other as Muskin teaches. Ex. 1010 ¶¶ 38, 39. Mr. Crane testifies that it was well known to inform players of the available balance of points for transfer between accounts. Ex. 1003 ¶ 156; *see also* Ex. 1011 ¶¶ 71, 78–82, 320, 374–377, Figs. 1, 6 (606).

Neither the language of claim 17 nor the description of this process in the '296 patent requires a particular interface to display loyalty credits for a user. The interface may provide a content page that confirms a user account with an online gaming service and an offline CMS and display loyalty points that the user has with a particular casino that are accessible from the online service. Ex. 1001, 7:16–23, Fig. 7.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established by a preponderance of the evidence that claim 17 is unpatentable over Muskin and Herrmann.

e. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established by a preponderance of the evidence that claims 12–15 and 17 are unpatentable over Muskin and Herrmann.

E. Ground 4: Alleged Obviousness Over Muskin, Allen, and Herrmann

Petitioner contends that claims 18, 21, and 22 are unpatentable under 35 U.S.C. § 103 over Muskin, Allen, and Herrmann. Pet. 2, 44–54.

1. Allen (Ex. 1007)

Allen creates and links accounts at online and offline wagering game sites (i.e., casinos). Ex. 1007, 2:35–3:29. When a player creates an account for a wagering game establishment, a casino player identity is created based on a username and a security credential of the user. *Id.* at 2:60–62. Players use their casino player identity to log into the casino account on wagering game machines so account information (game progress, wagering statistics, rewards) can be collected and stored. *Id.* at 3:1–4. An online account also is created based on an online player identity so players can use the online player identity to log into the online account and play games. *Id.* at 3:12–21.

When a player tries to sign into an online account, the account server determines if the online player identity is associated with a casino account. *Id.* at 9:1–15. If so, the account server determines if the user’s security credential is correct for that account (block 403) and allows access to the casino account if the credential is correct (block 409). *Id.* at 9:20–26, 10:1–2. If the player lacks a casino account and the account server determines that the online player identity is not linked with a casino account, the account server creates a new casino player identity and security credential for a *new* casino account so the player can log into games in a casino. *Id.* at 10:19–35, Fig. 5 block 503 (“Create a casino account based on the casino player identity and security credential”). The account server links the online player identity with the casino player identity for the new casino account. *Id.* at 10:45–47.

Figure 1 is reproduced below to illustrate this system.

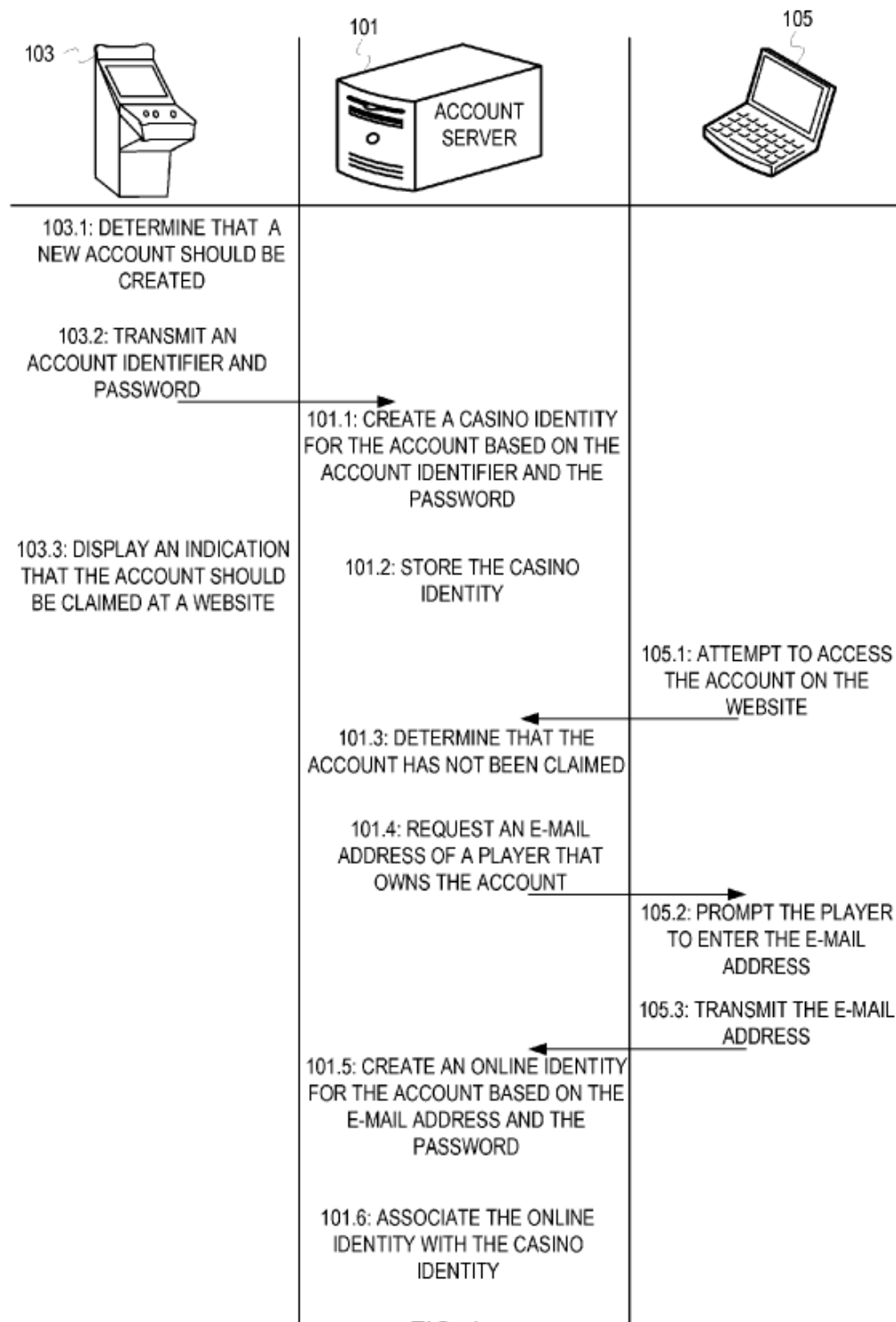


FIG. 1

Figure 1 depicts account server 101 that is configured to link online player identities and accounts with casino player identities and accounts. Ex. 1007, 3:45–4:56.

2. *Independent Claim 18*

a. *Element 18[pre]*

Petitioner contends that Muskin discloses a system for implementing wagering games and sharing player account information between affiliated establishments such as loyalty credit information. Pet. 45 (citing Ex. 1010 ¶¶ 23, 40; Ex. 1003 ¶¶ 225, 226).

Patent Owner does not challenge these contentions. See PO Resp. 51–55; PO Sur-reply. We find Petitioner’s contentions to be persuasive and supported by a preponderance of the evidence.

b. *Element 18[a]*

Petitioner contends that Muskin’s online casino server 100 connects to network 102 and to a personal computer to provide online wagering games. Pet. 45–46 (citing Ex. 1010 ¶¶ 24, 28, Abstr., Fig. 1; Ex. 1003 ¶¶ 237–241).

Petitioner contends that online casino server 100 is a first server that provides a web-based gaming service in element 18[a], and players access their online playing account by entering a username and password at personal computer 104 for transmission to server 100, which verifies this data and can access players’ accounts, which are associated with loyalty credits. Pet. 46–47 (citing Pet. § VII.A.4.b; Ex. 1010 ¶¶ 24, 28, Fig. 1).

Patent Owner does not challenge these contentions. See PO Resp. 51–55; PO Sur-reply. We find Petitioner’s contentions to be persuasive and supported by a preponderance of the evidence.

c. Element 18[b]

Petitioner contends that Muskin connects slot machine 114 to casino database 110 that manages comp points a player earns playing slot machine 114. Petitioner asserts that this land-based casino affiliates with an online casino that can access the user's CMS account and loyalty credits. Pet. 47–48 (citing Pet. § VII.A.4.c; Ex. 1010 ¶¶ 29, 31, 73, 74; Ex. 1003 ¶¶ 242–246).

Patent Owner does not challenge these contentions. *See* PO Resp. 51–55; PO Sur-reply. We find Petitioner's contentions to be persuasive and supported by a preponderance of the evidence.

d. Elements 18[c] and 18[d]

i. Parties' Contentions

Petitioner contends that Muskin and Herrmann disclose a PIMS that determines a communication preference of a CMS in element 18[c] for the same reasons as element 11[c] in Ground 3. Pet. 48 (citing Pet. § VII.C.5.c; Ex. 1003 ¶ 247). Petitioner contends that Muskin, Allen, and Herrmann use modules on a second server to communicate loyalty credits between the first server and a CMS according to a communication preference of the CMS in element 18[d]. Petitioner asserts that Allen's wagering game machine uses wagering game module 232, account module 246, network communication module 235, and credential output module 237 on a second server executed by central processor unit 226. Petitioner asserts that a skilled artisan would combine Muskin's system to communicate loyalty credits with Herrmann's content delivery system that uses a communication preference, and Allen's wagering game machine architecture to arrive at element 18[d]. Pet. 48–50 (citing Ex. 1007, 2:1–2, 6:6–7, 6:10–49, Fig. 2; Ex. 1003 ¶¶ 248–251).

Figure 2 of Allen is reproduced below to illustrate the modules.

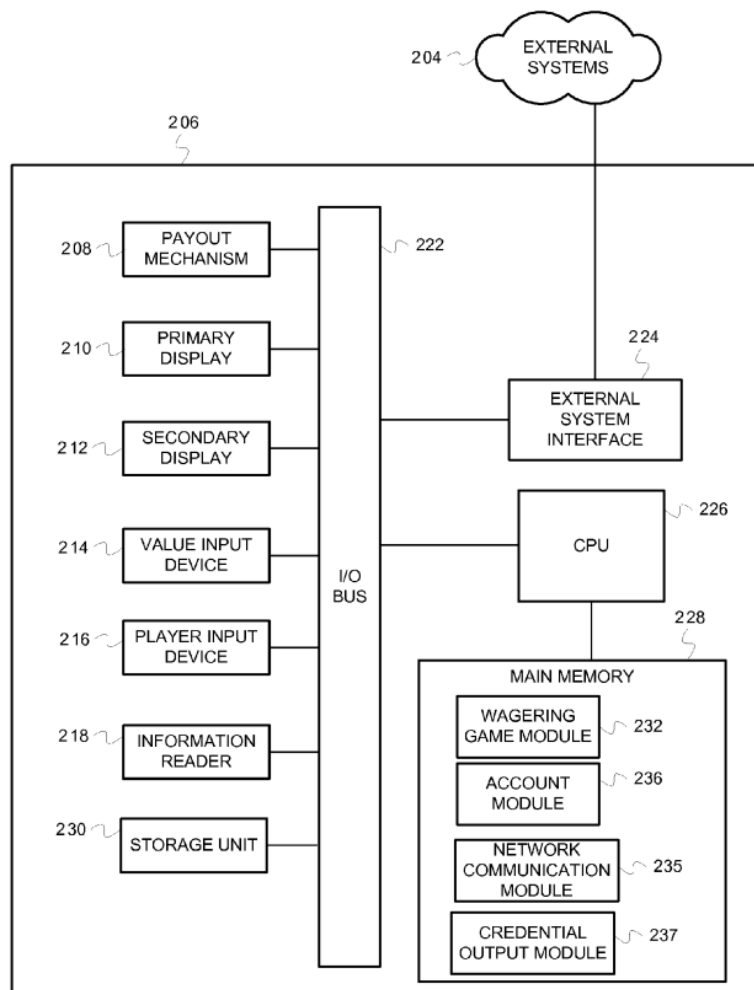


Figure 2 discloses modules of wagering machine 206. Ex. 1007, 6:6–7:12.

Patent Owner argues that Muskin and Herrmann do not determine a communication preference of a particular CMS based on an identity of the user or communicate loyalty credits for the user as discussed for elements 11[c] and 11[d] in Ground 3, and Allen does not cure these deficiencies or disclose modules stored on a second server in element 18[d] because modules are part of a wagering game machine. Patent Owner argues that a wagering game machine is managed by a CMS and is not a server that communicates loyalty information between a first server providing a web-based gaming service and a particular CMS as claimed. PO Resp. 52–54.

ii. Muskin and Herrmann's communication preference

As discussed above for elements 11[c] and 11[d] in Ground 3, Muskin and Herrmann disclose and suggest determining a communication preference of a particular CMS based on an identity of the user and communicating loyalty credit information between a server of a web-based/online gaming service and a CMS because (1) communicating loyalty credits between these entities evidences that the web-based gaming service does so according to a communication preference determined for a particular CMS and (2) a skilled artisan would have communicated loyalty credits to a user at a CMS gaming machine according to a delivery channel preference of that user to optimize engagement and revenues as Herrmann teaches. Pet. §§ VII.C.5.c, VII.C.5.d. We incorporate that analysis herein and determine that Muskin and Herrmann teach and suggest elements 18[c] and 18[d] for the same reasons and do so by using Allen's modules to perform such functions in a gaming architecture. See §§ III.D.3.c., III.D.3.d., *supra.*; Pet. 11–13, 44.

iii. Allen discloses a "server"

Petitioner and its declarant Mr. Crane rely on Allen's disclosure that wagering game machine ("WGM") 206 can operate as a *thin client* with *modules 232, 235, 236, 237 residing on wagering game server 306* that communicates with servers 320, 322 of the online gaming system and CMS. Pet. Reply 21–22 (citing Ex. 1019 ¶¶ 86–90; Ex. 2007, 6:18–49, Fig. 2). Mr. Crane's testimony is supported by Allen's teachings that WGM 206 can operate as a thin client in wagering game network 300 with a display and user interface performed by the thin-client WGM, and all other operations and their modules are placed on wagering game server 306 that connects to online servers 320, 322. Ex. 1019 ¶¶ 86–90; Ex. 2007, 7:46–8:23, Figs. 2, 3.

Mr. Crane's testimony that it was well known as of the priority date of the '296 patent that server functionality could be combined in a single server or separated over multiple servers communicating over a network as routine design choices of well-known, routine hardware and software to implement a server architecture (Ex. 1019 ¶ 87) is supported by Allen's teachings that WGM 206 includes additional peripheral devices, multiple external interfaces 224 and/or multiple CPUs 226, integrated or subdivided components, and components that include hardware, firmware, and/or any machine-readable media suitable for transmitting software over a network (*id.* ¶ 88), *and can operate as a thin, thick, or intermediate client of wagering game server 306 in a client-server architecture* (*id.* ¶ 89). Ex. 1007, 6:61–67, 7:46–8:23.

When WGM 206, 302 operates a thin client in wagering game network 300, *modules 232, 235, 236, 237 reside on server 306* that communicates with a server of an online gaming system and a CMS server. Ex. 1019 ¶ 90. Modules for game play elements of executable game code, lookup tables, configuration files, audio or visual representations of a game, outcomes of a game, and gaming assets are controlled by wagering game server 306, which determines game outcomes and manages assets. Ex. 2007, 7:46–8:3. WGM 302 presents graphical depictions of outcomes and asset modification to a player. *Id.* These teachings support Petitioner's contentions and Mr. Crane's testimony that *Allen discloses the claimed modules in wagering game server 306 that communicates with online gaming servers 320, 322 and servers of a CMS* such as account servers that create casino identities for player accounts and other computer systems and machines and WGMs 302 of a particular CMS as claimed. *Id.* at 6:6–7:45, Fig. 3.

Patent Owner does not contest these assertions of Petitioner except to argue that they “highlight[] the failure of the Petition.” PO Sur-reply 21.

Petitioner has shown that WGM 206 can be a server and its modules can be located on *server 306* to manage accounts and loyalty credits and communicate with online server 320, 322 and a CMS as claimed. *See* PO Resp. 53–54; Pet. Reply 21–22; Ex. 1019 ¶¶ 86–91; Ex. 2007, 6:6–7:45.

iv. Conclusion

Based on the parties’ contentions and record evidence, we determine that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann teach and suggest elements 18[c] and 18[d].

e. Elements 18[e] and 18[f]

i. Parties’ Contentions

Petitioner contends that elements 18[e] and 18[f] are substantially similar to elements 1[f] and 1[g] and Muskin discloses or suggests these elements for the reasons asserted in §§ VII.A.4.g and VII.A.4.h for elements 1[f] and 1[g] in Ground 1. Pet. 50 (citing Ex. 1003 ¶¶ 136–142, 252–253).

Patent Owner argues that the Petition relies on its analysis of elements 1[f] and 1[g] without setting forth any additional analysis and therefore fails to demonstrate that Muskin, Allen, and Herrmann teach or suggest features of elements 18[e] and 18[f] for the reasons set forth in § V.A.1.b for similar elements 11[e] and 11[f]. PO Resp. 54–55 (citing Ex. 2005 ¶¶ 92–98, 144).

ii. Analysis

Petitioner cites Muskin to disclose determining whether first loyalty credits are transferrable to a particular CMS and transmitting first loyalty credits when they are transferrable and available based on user input in elements 1[f] and 1[g] just like elements 18[e] and 18[f]. Pet. 23–24, 50.

Petitioner contends that in Muskin, a player can request a transfer of “some or all of the points” to an account, and Muskin’s system may query the casino databases to verify account information before transferring loyalty credits. Pet. 23 (citing Ex. 1010 ¶¶ 73–74). Petitioner also contends that Muskin states that rules may govern transferability by “allow[ing] transfer only from an online account to a land account, but not the other way around” or that “transfers can be allowed in either direction.” *Id.*

As discussed *supra* at § III.D.3.e., we find that Muskin determines whether points are transferrable in a requested direction, whether some or all points can be transferred, and/or whether a predetermined number of points are earned to be transferred. Ex. 1010 ¶¶ 56, 71, 74. Muskin’s system determines whether comp points are retrievable from a land-based account to an online account based on how the system is set up. *Id.* ¶ 74.

We also find that Muskin’s system determines whether comp points at a land-based casino are retrievable at an online casino based on a requested direction of transfer, amount of transfer (some or all), whether they are redeemable, and whether they are a predetermined amount for transfer such as 50 or 100 points. Ex. 1010 ¶¶ 56, 71, 73, 74; *see* Pet. 24. “[I]f a player earns points in the second entity, *some or all* of the points can be transferred from the second account to the first account” in Muskin (Ex. 1010 ¶ 56 (emphasis added)) just as the ’296 patent determines how many credits are available and retrieves some or all of the available credits (Ex. 1001, 5:24–26). Pet. Reply 15–16; *cf.* PO Sur-reply 18 (asserting that Muskin and Herrmann deem all credits as transferrable between accounts). Muskin also bases transferability on *user input* as “a player may manually request a transfer of points.” Ex. 1010 ¶ 73 (cited in Pet. 24).

We agree with Petitioner that a skilled artisan would have combined Muskin's account coordinator, which coordinates online and land-based accounts, with Allen's account server coupled to a WGM and computer over a network, to create new casino and online accounts based on credentials it receives and to associate player identities with the new accounts and that the combination would improve Muskin's ability to create an account if one did not exist for users, by, as Allen teaches, creating a better user experience and seamlessly creating and associating online and casino accounts to increase the number of players on WGMs and online casinos for improved financial benefits. Pet. 11–13, 44–45, 50. Petitioner asserts that a person of ordinary skill would have had a reasonable expectation of success in combining these prior art elements according to known functions for predictable results. *Id.*

We agree that a skilled artisan would have been motivated to combine Herrmann's account interface with Muskin and Muskin-Allen to create a better user experience that allows users to seamlessly create and/or associate online and casino accounts so data can be shared between accounts and effectively drive revenue and deliver the best return on investment by increasing the number of players who frequent casinos as Herrmann teaches. We agree with Petitioner that a skilled artisan would have recognized the benefits of adding Herrmann's targeted marketing to Muskin-Allen to reach players more effectively based on preferred channels. Pet. 35–37, 44–45, 50.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established by a preponderance of the evidence that the combined teachings of Muskin, Allen, and Herrmann teach and suggest elements 18[e] and 18[f].

f. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established by a preponderance of the evidence that claim 18 is unpatentable based on the teachings of Muskin, Allen, and Herrmann.

3. Claim 21

a. Parties' Contentions

Petitioner contends that Herrmann discloses or suggests a PIMS that determines a communication type used by a CMS, where the communication type can be asynchronous or synchronous such as a File Transfer Protocol (FTP) or SOAP that can be asynchronous or synchronous because a skilled artisan would recognize that communication systems that transmit messages must use the same protocol whether synchronous or asynchronous as in element 21[a]. Pet. 50–51 (citing Ex. 1011 ¶ 304; Ex. 1003 ¶¶ 254–256).

Petitioner asserts that Allen and Herrmann disclose or suggest modules configured to communicate asynchronously or synchronously in element 21[b] because a skilled artisan would have found it obvious that the modules in Allen must communicate between two servers in a manner that both servers will allow (i.e., transmitting asynchronous messages for servers requiring asynchronous communication and transmitting synchronous messages for servers requiring synchronous communication). Pet. 51 (citing Ex. 1003 ¶¶ 257–258).

Petitioner contends that Muskin and Herrmann disclose and/or suggest transmitting loyalty credit information asynchronously when it is determined the communication type is asynchronous and synchronously when the type of communication is synchronous. Pet. 51–52 (citing Ex. 1003 ¶¶ 259–260).

Patent Owner argues, “[t]he Petition relies solely on paragraph 304 of Herrmann as allegedly disclosing or suggesting the features of claim 21” “because Herrmann references transferring data via the [FTP] and SOAP protocols.” PO Resp. 58–59. Patent Owner asserts that paragraph 304 describes how data is transferred *from* a CMS to the online system but does not disclose how loyalty credits are transferred from a first server providing a web-based gaming service to the particular CMS as claimed. *Id.* at 59.

Patent Owner asserts that there is no disclosure in paragraph 304 of a PIMS making a determination of the communication type of the CMS as asynchronous or synchronous because read in context with the surrounding paragraphs, “it is clear that the communication protocols are known *a priori*.” PO Resp. 59–60. Patent Owner argues that Herrmann’s disclosure of the use of the SOAP protocol does not disclose a PIMS that determines a communication type used by a particular CMS as claimed. *Id.* at 60.

b. Analysis

Petitioner relies on the teachings of Muskin, Allen, and Herrmann to disclose or suggest elements 21[a]–21[c] as discussed above. *See* Pet. 50–52. Petitioner relies on Herrmann to disclose a PIMS in element 18[c]. *Id.* at 48 (relying on contentions for element 11[c] for element 18[c]), 40–41 (asserting that Herrmann’s system (POS interface) can be operated as a component of another system and accessed via public or private networks as “a partner integration management system of a casino management system” that determines a user’s communication preference for delivery channels that would have been obvious for the particular CMS to use in element 11[c]).

Mr. Crane testifies that in order to transmit loyalty credits, the system must know the proper communication type of the servers. Ex. 1003 ¶ 259.

Patent Owner asserts that the communication type is known *a priori* by Herrmann's PIMS before a communication is made because the way that data is loaded, processed and updated from external accounts is stored in memory, on disk or in a database. PO Resp. 60 (quoting Ex. 1011 ¶ 303).

Petitioner agrees that skilled artisans understand that “a determination of the compatible communication protocol occurs before a communication attempt” and “[f]or the communication protocol to be ‘known,’ it would first be ‘determined.’” Pet. Reply 24 (citing Ex. 1019 ¶¶ 98, 99). Petitioner's contentions are consistent with Patent Owner's contentions that Herrmann's PIMS determines a preferred communication protocol of a CMS and stores it for future use/reference to communicate with that CMS. PO Resp. 60.

Dr. Shamos testifies to the same effect that an online gaming service would

have foreknowledge of all of the CMSs that we might want to communicate with and what their communication preferences are, and when I get a request from a user, I look up to see which casino he wants the points transferred to, and I go up and look in my table to see what is the communication protocol I need to use to talk to that particular CMS. That's one way to do it.

Ex. 1035, 59:1–8.

Petitioner also asserts that a skilled artisan would have understood that communication protocol determination is part of the communication process, and a determination must be made to achieve a successful communication with a CMS. Pet. Reply 24 (citing Ex. 1019 ¶ 98); *see also* Ex. 1031 ¶ 63.

As discussed in Section III.D.3.d. *supra* for element 11[d], the parties agree that communication between an online gaming service and particular CMS requires the online gaming service to determine the communication preference/type of a CMS in order to communicate with that CMS.

Herrmann describes such communications occurring so that data can be transferred from an online system to a CMS as Petitioner asserts. Pet. Reply 23 (citing Ex. 1011 ¶ 306). Herrmann discloses that “the gaming-day ‘limits’ are transferred from the online system to the casino management system.” Ex. 1011 ¶ 306. Petitioner contends persuasively that a skilled artisan would understand that the same communication type would be used to transmit data in both directions between an online gaming service and CMS. Pet. Reply 23–24 (citing Ex. 1019 ¶ 96); *see* Pet. 50–51 (must use the same protocol).

Dr. Shamos’ testimony treats the Petition as relying only on paragraph 304 of Herrmann to teach or suggest claim 21, and ignores that the Petition asserts that a skilled artisan “would have understood that to transmit loyalty credits, the system must know the proper communication type of the servers” and would have found it obvious to transmit loyalty credits asynchronously when the communication type is asynchronous messages and synchronously when the communication type is synchronous. Pet. 51–52. Dr. Shamos also asserts that Herrmann determines and stores a communication preference type in advance, which is consistent with the claim language, knowledge in the art, the ’296 patent specification, and Dr. Shamos’ own testimony above. Ex. 2005 ¶¶ 149–156; Ex. 1035, 58:12–18 (to communicate over a network, the parties must agree on a protocol). Paragraph 304 of Herrmann indicates that a particular CMS may prefer “real time” data transfer using a SOAP protocol, or an asynchronous “batch” format to transfer data.

c. Conclusion

Based on the parties’ contentions and record evidence, we determine Petitioner has established by a preponderance of the evidence that claim 21 is unpatentable based on the teachings of Muskin, Allen, and Herrmann.

4. *Claim 22*

a. *Parties' Contentions*

Petitioner asserts that Allen and Herrmann disclose or suggest modules of a second server communicating with a first server in a CMS, and a skilled artisan would have found it obvious that each server would include a send and receive module to support bidirectional communication by sending and receiving messages asynchronously and a synchronous module to transmit messages to the CMS and receive responses from the CMS in claim 22. Pet. 52–54 (citing Pet. §§ VII.D.2.e., VII.D.4.a; Ex. 1003 ¶¶ 261–266).

Patent Owner argues that Mr. Crane fails to explain why a skilled artisan would understand Allen's *single* network communication module 235 of a WGM to disclose or suggest three separate modules. PO Resp. 60–62.

b. *Analysis*

As discussed in § III.E.2.d *supra*, Herrmann and Allen use modules on a second server to communicate to a first server of a CMS. A skilled artisan would understand that the asynchronous bidirectional communication would use a send and a receive module and synchronous communication would use a synchronous module. Pet. Reply 24–25; Ex. 1003 ¶¶ 248–251, 261–266. The '296 patent describes, and claim 22 recites, generic modules that perform generic functions of sending and receiving data between servers for known communication types. Ex. 1001, 4:26–59, Figs. 2, 3. *Labelling* the elements as “modules” does not impart an inventive structure or function to them.

c. *Conclusion*

Based on the parties' contentions and record evidence, we determine Petitioner has established by a preponderance of the evidence that claim 22 is unpatentable based on the teachings of Muskin, Allen, and Herrmann.

F. Ground 5: Alleged Obviousness Over Muskin, Herrmann, Ellis

Petitioner contends that original claim 16 is unpatentable under 35 U.S.C. § 103 over Muskin, Herrmann, and Ellis. Pet. 2, 54.

1. Ellis (Ex. 1012)

Ellis discloses networked game management system 100 with account management server 102 communicating with host server (controller) 114 over network 112 in Figure 1, reproduced below. Ex. 1012, 7:16–25.

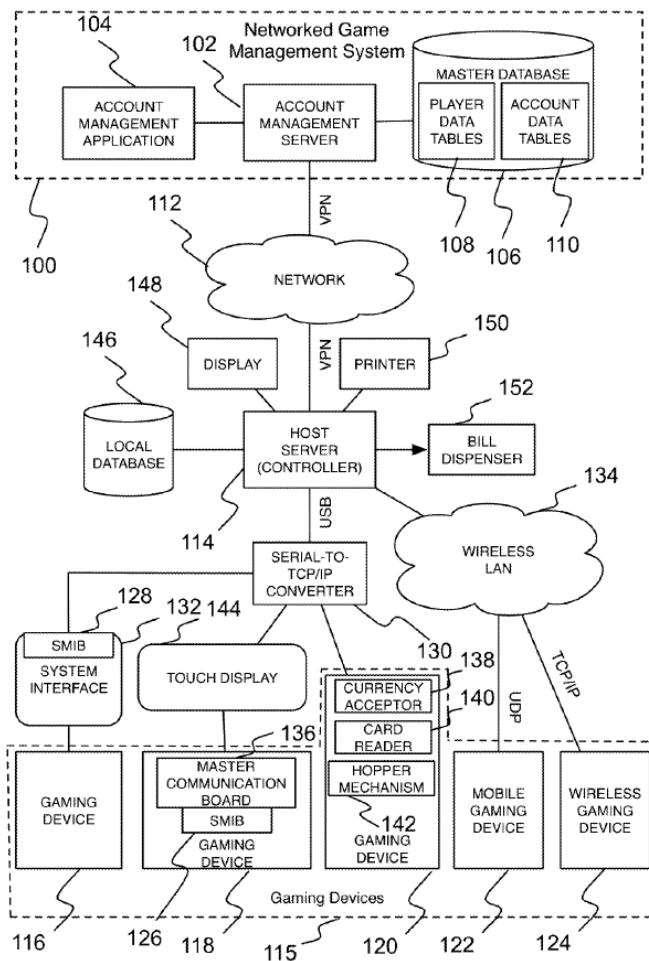


Figure 1

If account management server 102 is offline/unavailable to controller 114, messages are placed on a transmit queue and dequeued only after receipt by account management server 102 to avoid losing wagers. Ex. 1012, 8:15–22.

2. *Motivation to Combine and Expectation of Success*

Petitioner contends that a skilled artisan would have been motivated to combine Herrmann's account interface with Muskin as asserted in § VII.C.2 for Ground 3 and also would have found it obvious to queue messages in the Muskin-Herrmann system as taught by Ellis and asserted in § VII.B.2 for Ground 2. Pet. 54 (citing Ex. 1003 ¶¶ 170–174, 181–189, 267–271).

Petitioner contends that Ellis warns of the danger of losing wagering transactions during interrupted connections and places the messages on a transmit queue where they are dequeued only after receipt by the account management server. Pet. 31 (citing Ex. 1012, 8:17–22), 54. Petitioner also contends that a skilled artisan would recognize that Ellis' queuing method would improve the reliability of credit transfers when network connectivity is interrupted and would have combined the queuing method with Muskin or Muskin-Herrmann because of the volume of transactions that take place in wagering establishments “so that loyalty credit transfers are successfully completed despite network connectivity issues.” *Id.* at 31 (citing Ex. 1003 ¶¶ 171, 173), 54. Petitioner contends that this combination of prior art elements according to known methods would yield predictable results of queuing messages to send when a network connection is re-established. *Id.* at 31 (citing Ex. 1003 ¶ 174), 54.

3. *Claim 16*

a. *Parties' Contentions*

Petitioner contends that claim 16 is substantially similar to claim 7 and would have been obvious for the reasons provided in § VII.B.3 for claim 7 in Ground 2 that Ellis queues messages until a casino management system is available. Pet. 31–34, 54 (citing Ex. 1003 ¶¶ 175–177, 272–273).

Patent Owner argues that claim 16 is not shown to be unpatentable due to its dependency from claim 11. PO Resp. 45–46. Patent Owner argues that Ellis queues wager transaction messages sent from controller 114 to account management server 102 for network game management system 100 and these components are part of the same CMS. *Id.* at 46–47. As a result, Patent Owner asserts that, even if Ellis is combinable with Muskin and Herrmann, “the result would have been to implement the controller 114 and queue disclosed by Ellis between the slot machine(s) 114 and account coordinator 108 disclosed by Muskin to queue wagering messages transmitted from the controller 114 to the account coordinator consistent with the disclosures of both Muskin and Ellis” rather than between an online gaming server and machines providing a CMS. *Id.*

Petitioner replies that Ellis’ server controller 114 queues messages sent between *online* game management system 100 and *land-based* casino gaming devices 115, and a skilled artisan would apply this teaching to queue loyalty credit messages sent between a server providing *online gaming* and machines providing *a CMS* in Muskin. Pet. Reply 18–19 (citing Ex. 1019 ¶¶ 66–78).

b. Analysis

Ellis’ queuing of messages sent between online and land-based gaming services would improve Muskin’s loyalty credit messaging between online and land-based systems to prevent loss of loyalty credits as a predictable use of prior art elements for their established functions. *KSR*, 550 U.S. at 417.

c. Conclusion

Based on the parties’ contentions and record evidence, we determine Petitioner has established by a preponderance of the evidence that claim 22 is unpatentable based on the teachings of Muskin, Allen, and Herrmann.

*G. Non-Contingent Amendment of Claims 1 and 3–10 and
Contingent Amendment of Claims 12–14, 16–18, 21, and 22*

We next consider Patent Owner’s motion to amend claims 1 and 3–10, 12–14, 16–18, 21, and 22. We grant in-part Patent Owner’s motion to amend claims 1 and 3–10 non-contingently and cancel claims 1 and 3–10. We deny Patent Owner’s motion to substitute revised claims 23–39 for claims 1, 3–10, 12–14, 16–18, 21, and 22 because Patent Owner has not shown these claims to respond to a ground of unpatentability in the trial as discussed below.

1. Legal Principles

To support its motion to amend claims 1 and 3–10, 12–14, 16–18, 21, and 22, Patent Owner must establish by a preponderance of the evidence that (1) the motion proposes a reasonable number of substitute claims to replace each challenged claim (35 U.S.C. § 316(d)(1)(B); 37 C.F.R. § 42.121(a)(3)), (2) the amendment does not enlarge the scope of the claims (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii)), (3) the amendment does not introduce new matter (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii)), (4) the amendment responds to a ground of unpatentability in the trial (37 C.F.R. § 42.121(a)(2)), (5) the motion provides a claim listing showing support in the original disclosure of the patent for each claim that is added or amended (37 C.F.R. § 42.121(b)(1)), and (6) the motion provides support in an earlier-filed disclosure for each claim for which benefit of the filing date of the earlier-filed disclosure is sought (37 C.F.R. § 42.121(b)(2)). 35 U.S.C. § 316(a)(9); 37 C.F.R. § 42.121(d)(1); *Lectrosonics, Inc. v Zaxcom, Inc.*, IPR2018-01129, slip op. at 4–8 (PTAB Feb. 25, 2019) (Paper 15) (precedential); PTAB Consolidated Trial Practice Guide 69 (Nov. 2019) (“CTPG”) (available <https://www.uspto.gov/TrialPracticeGuideConsolidated>).

a. Proposal of a reasonable number of substitute claims

Patent Owner wants to substitute claims 23–39 for claims 1, 3–10, 12–14, 16–18, 21, and 22. RMTA 1. The one-for-one substitution of new claims 23–39 for original claims 1, 3–10, 12–14, 16–18, 21, and 22 is a reasonable number of substitute claims. *See* 37 C.F.R. § 42.121(a)(3); RMTA 2. Petitioner does not contend otherwise. *See generally* Opp. RMTA.

b. Do amendments enlarge the original claim scope

Petitioner asserts that “causing transfer of” (23[k]), “causing . . . to be transferred” (24[b], 33[b]), “causing . . . to be transferred” (24[b], 33[b]) are broader than the “transmitting” and “retrieving” of credits steps they replace in claims 1, 3, and 13, and adding “one or more application servers” (37[c]) also broadens claim 18. Opp. RMTA 1–2.

We agree with Patent Owner that these limitations narrow the scope of the claims by requiring transmittal of credits *and* another action to cause the transfer whereas the original claims only required a single action to transmit or retrieve credits. Mr. Crane testifies that the amendments require a direct action *and* an indirect action. Ex. 1031 ¶ 16. The amendments clarify that credits are transferred not merely transmitted, which further narrows their scope. RMTA 7–8 (citing Ex. 2008 ¶ 77).

The ’296 patent describes transferring loyalty credits as comprising the step of transmitting the credits and other actions to transmit them. Ex. 1001, 5:39–45. Therefore, causing a transfer narrows the scope of transmitting loyalty credits as Patent Owner asserts.

The one or more application servers are recited in addition to the first and second servers previously recited in claim 37 and therefore narrow the scope of claim 18. RMTA 8–9.

c. Do amendments introduce new matter

Petitioner asserts that the preambles of revised substitute claims 23 and 37 are limiting and introduce new matter by reciting a method to link an online gaming service and one or more casino management systems where the citations only describe a method to link *user accounts* and do not support linking an online gaming service and casino management systems. Opp. RMTA 2–3. Petitioner asserts that determining a communication preference of a particular casino management system in element 23[c] is not supported because “[t]here are no algorithms, flowcharts, or other disclosures.” *Id.* at 2. Petitioner contends that there is no support for “accessing” information “according to a communication preference.” *Id.* at 2–3.

We determine that the preamble of claims 23 and 37 do not add new matter. Patent Owner cites paragraphs 1, 4–8, 12, 17, 20, 23, 30, 37, and Figures 1, 4, and 5 as support for this claimed subject matter in element [23pre]. RMTA 3, A-1. These citations describe linking an online gaming service and one or more casino management systems. *See* Reply RMTA 1.

The present technology connects a network (e.g., Internet) based gaming system and one or more casino management systems (CMS) for managing patron data, loyalty programs, and other data. The connection may be implemented as an abstracted integration. As such, the connection mechanism may be used to connect the network based gaming system to a variety of proprietary and other CMS types. The connection mechanism may be synchronous, such as for example via a web service using XML over SOAP, or asynchronous, such as for example using a message sender/listener system such as system-2-system (S2S).

Ex. 1005 ('910 application) ¶ 5, *id.* ¶ 17 (same). The online and CMS systems are linked by their respective user accounts in one embodiment.

“Figure 1 illustrates a system for linking a network gaming system to a casino management system.” Ex. 1005 ¶ 8, *id.* ¶ 20 (“Figure 1 illustrates a system for linking a network gaming service to a casino management system with application servers 110, data store 120, web server 130, network 140, casino management system 150, and data store 160). Application server 110 may have modules implementing applications 114 and PIMS 116. *Id.* ¶ 20. Applications 114 may have modules to implement logic connecting the web-based network service of application server 110 and land-based system of CMS 150 to access, manage, and modify a user account of a web-based service or a patron account of a land-based service of CMS 150. *Id.* ¶ 23. The mechanism for linking web-based and land-based casino systems may include functionality for creating patron accounts for a land-based CMS, retrieving patron information from land-based CMS, querying loyalty points for a patron, merging multiple patron records in the internet-based system, and updating patrons in the internet-based system and CMS. *Id.* ¶ 30.

Regarding alleged new matter in element 23[c], Petitioner asserts that a skilled artisan would have understood that, to communicate, a server must know the communication preference of the CMS in advance and perform a query to determine it. Opp. RMTA 2. The parties agree it was known in the art the various ways to determine a communication preference such that the inventor need not describe such well-known matters in detail in the written description by providing flow charts or algorithms. *See Immunex Corp. v. Sandoz Inc.*, 964 F.3d 1049, 1063 (Fed. Cir. 2020) (“It is well-established that a patent specification need not re-describe known prior art concepts.”). To the extent Petitioner raises issues of enablement, enablement is a separate requirement from the written description requirement underlying new matter.

Regarding element 23[d], the written description indicates that “[t]o retrieve the loyalty credits, the online service may contact the CMS system with the patron identifier and any required login information.” Ex. 1005 ¶ 39, Fig. 4; RMTA 3 (citing paragraphs 7, 23, 24, 28, 29, 37–39, Figs. 1, 4 as support for element [23d]). These disclosures describe the application server and its PIMS accessing account information for a user’s account with a particular CMS according to the communication of the particular CMS as determined in step [23c] by the PIMS.

d. Do amendments respond to unpatentability grounds

Patent Owner asserts that the revised substitute claims include new elements that respond to the asserted grounds in the Petition. RMTA 6–7. Petitioner does not dispute that the amendments respond to the grounds of unpatentability asserted in the Petition (Opp. RMTA 1–3), but Petitioner asserts that the revised substitute claims nonetheless are unpatentable on various grounds as discussed in more detail *infra* (*id.* at 3–25).

e. Support in original disclosure for each claim

Patent Owner has cited support in the original disclosure for each claim. RMTA 3–6. Other than the new matter issues discussed *supra*, Petitioner does not challenge Patent Owner’s showing, which we find is sufficient to satisfy Patent Owner’s burden.

f. Support in earlier-filed disclosure for each claim

Patent Owner does not provide support in an earlier-filed provisional application disclosure for each claim. *See generally* RMTA. Accordingly, the revised substitute claims are entitled to an effective date of priority of August 22, 2013. Opp. RMTA 3.

2. *Are the Substitute Claims Eligible for Patenting?*

Petitioner contends that revised substitute claims 23–39 are not eligible for patenting under 35 U.S.C. § 101. Opp. RMTA 4–6.

a. *Legal Principles*

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. Abstract ideas are not patentable. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). To distinguish claims to abstract ideas from claims to patent-eligible applications, we first consider whether claims are directed to a patent-ineligible concept. *Id.* at 217. If so, we consider claim elements, individually and as an ordered combination, to determine if any additional elements provide an inventive concept that amounts to significantly more than a patent on the ineligible concept. *Id.* at 217–218.

The USPTO has issued guidance for this framework. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”) found in MANUAL OF PATENT EXAMINING PROCEDURE §§ 2104–2106 (9th Ed. Rev. 10.2019, June 2020) (MPEP). To determine if a claim is “directed to” an abstract idea, we evaluate whether a claim recites: (1) any judicial exceptions such as laws of nature, natural phenomena, and abstract ideas (e.g., mathematical concepts, certain methods of organizing human activities, and mental processes); and (2) additional elements that integrate the judicial exception into a practical application by applying the judicial exception in a manner that imposes a meaningful limit on it, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Revised Guidance at 52–55; MPEP § 2106.04.

If a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, we consider whether the claim (3) provides an inventive concept by adding an additional limitation that is significantly more than the judicial exception, e.g., because it is not “well-understood, routine, conventional” in the field or (4) merely appends well-understood, routine, conventional activities known to the industry, specified at a high level of generality. *See Revised Guidance* at 56; MPEP § 2106.05.

b. Revised Guidance Step 1

Claim 23 recites a method and claim 37 recites a system, which are statutory categories of a process and machine. 35 U.S.C. § 101. Thus, we next consider whether substitute claims 23 and 37 recite an abstract idea.

c. Revised Guidance Step 2A, Prong One

We agree with Petitioner that claims 23 and 37 recite a system and method that coordinate the transfer and exchange of loyalty credits between a user’s online gaming service loyalty account and offline casino management system loyalty account by linking the accounts to communicate loyalty credit information. Opp. RMTA 4–5. These activities are commercial interactions and transactions, sales and marketing activities, and longstanding commercial practices within the certain methods of organizing human activity category of abstract ideas. *See Revised Guidance* at 52. Players may transfer loyalty credits earned at an online gaming service to an offline patron account at a casino management system (CMS) or retrieve loyalty credits from a loyalty account at a CMS for use at an online gaming service. Ex. 1001, 5:34–45, 5:16–33, 6:31–51; *see id.* at 2:66–3:8, 3:52–62. Judge Burke determined that reexamined claims 1, 11, and 18 are directed to this abstract idea in the related district court proceeding. Opp. MTA 5; Ex. 1023, 164:11–19.

The '296 patent discloses that “casinos may offer a reward or loyalty program to patrons” who gamble at the establishments. Ex. 1001, 1:16–19. “As a patron spends more money at a casino, that casino may offer points, perks, or other credits to the patron.” *Id.* at 1:19–21. The increase of online gaming, which allows users in many locations to participate in gaming in an online environment, creates a need to improve the combined online gaming experience and offline casino loyalty programs. *Id.* at 1:24–35.

The claimed method and system of coordinating the accounting and exchange of loyalty credits between a user’s online gaming patron account and a patron account at a CMS improves a customer’s gaming experience and enjoyment. Ex. 1001, 1:33–2:2. They support the marketing, gaming, and sales activities of such entities and their gaming services. *Id.* at 1:15–29.

The title of the '296 patent, “Network Gaming System and Casino Management System Link,” reflects this focus on linking accounts of online gaming services and land-based CMSs to enhance the customers’ gaming experiences by allowing them to coordinate and exchange loyalty credits between online gaming patron accounts and CMS patron accounts and manage patron and loyalty program data in a more engaging way. Ex. 1001, 1:50–2:2, 2:29–31, 2:66–3:15, 3:52–4:2, 5:16–54, 6:13–51, Figs. 4, 5.

Using rewards points such as loyalty credits to purchase or obtain goods and services is a longstanding commercial practice. *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1376–77 (Fed. Cir. 2021) (cited in *In re AuthWallet, LLC*, No. 2022-1842, 2023 WL 3330298, (Fed. Cir. May 10, 2023) (“We have held to be abstract claims directed to ‘longstanding commercial practice[s],’ such as collecting and relaying rewards program points [in *cxLoyalty*].”)); see Opp. RMTA 4–5; Opp. MTA 5–6.

Coordinating records by requesting, transmitting, receiving, copying, and storing data in records is a fundamental business practice existing long before computers and the Internet. *WhitServe LLC v. Dropbox, Inc.*, 854 F. App'x 367, 371 (Fed. Cir. 2021); *see also WhitServe LLC v Donuts Inc.*, 809 F. App'x 929, 933 (Fed. Cir. 2020) (“The focus of the claims is simply to use computers and a familiar network as a tool to perform a fundamental economic practice involving simple information exchange. Carrying out fundamental economic practices involving simple information exchange is an abstract idea.”); *Kroy IP Holdings, LLC v. Safeway, Inc.*, 107 F. Supp. 3d 677, 690 (E.D. Tex. 2015), *aff'd*, 639 F. App'x 637 (Fed. Cir. 2016) (“The core idea of the '830 patent—providing a computer-based incentive award program—is plainly an unpatentable abstract idea by itself. Incentive award programs designed to encourage sales of products and services have been familiar aspects of marketing for many years.”); Opp. RMTA 4–5.

Linking online and offline gaming accounts to facilitate a transfer of loyalty credits between the accounts to include creating an account if one does not exist recite an abstract idea when recited at this level of abstraction. *See Alice*, 573 U.S. at 220 (a method of using an intermediary to facilitate an exchange of financial obligations between parties by *creating and updating* “shadow” records that reflect the value of each party’s actual accounts and permitting only transactions for which parties have sufficient resources is a fundamental economic practice); *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372–73 (Fed. Cir. 2017) (linking credit card accounts to financial data accounts to access a transmit system is an abstract idea that collects and arranges data).

Communicating according to a communication preference of a particular casino management system to access a user's account information does not take the claim out of the abstract realm. *See ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 773 (Fed. Cir. 2019) (communicating over a network for device interaction has been and continues to be a “building block of the modern economy”); *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (claiming functional results of converting, routing, controlling, monitoring, and accumulating records did not describe how to achieve those results in a non-abstract way); *Adaptive Streaming Inc. v. Netflix, Inc.*, 836 F. App'x 900, 903 (Fed. Cir. 2020) (describing the translation of content from a format of a sender to one suited to a recipient as a fundamental communication practice and finding that converting data to different formats suitable to different media are basic communication practices and abstract ideas); *Ameranth, Inc. v. Domino's Pizza, LLC*, 792 F. App'x 780, 787 (Fed. Cir. 2019) (“[T]he concept of synchronous communications and automatic formatting for different handheld devices without more is an abstract idea.”).

Elements 23[pre]–23[k] and 37[pre]–37[g] recite this abstract idea. Linking accounts, accessing account information, receiving a request to retrieve information, determining a communication preference, accessing a second account or determining such account is lacking, creating a second account, linking accounts, communicating loyalty credit information, and causing transfer are recited at a high level of generality as functional results with no technical implementation details to take the claims out of the abstract realm. Performing such steps on generic servers, systems, and modules does not make claim 37 any less abstract.

Nor do the claims' formats impart eligibility when the focus is the same. *See Alice*, 573 U.S. at 226 (“[T]he system claims are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same abstract idea.”); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344 (Fed. Cir. 2013) (“Because the system claim and method claim contain only ‘minor differences in terminology [but] require performance of the same process,’ . . . they should rise or fall together.”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1374 (Fed. Cir. 2011) (“Regardless of what statutory category . . . a claim’s language is crafted to literally invoke, we look to the underlying invention for patent-eligibility purposes.”).

Substitute claims 24–36, 38, and 39 recite other aspects of the abstract idea such as determining if loyalty credits are transferrable between accounts and usable (claims 24, 25, 27, 33, and 34) and updating loyalty credits (claim 30). *See Alice*, 573 U.S. at 220 (*creating and updating* shadow records that reflect the value of each party’s accounts and permitting only transactions for which parties have sufficient resources is a fundamental economic practice); *In re Smith*, 815 F.3d 816, 818–19 (Fed. Cir. 2016) (rules for a wagering game recite a fundamental economic practice and a method of exchanging financial obligations); *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1160–61 (Fed. Cir. 2018) (rules for playing a dice game recite a method of organizing human activity); *In re Greenstein*, 774 F. App’x 661, 664 (Fed. Cir. 2019) (allocating investment returns to investors in an investment fund involves the basic management of business information as an abstract idea).

Sending user identification and login data before transferring credits (claims 26 and 31) also is abstract. *See Western Express Bancshares, LLC v. Green Dot Corp.*, 816 F. App'x 485, 486–487 (Fed. Cir. 2020) (holding a funds transfer method using personal information is a fundamental economic practice). Indeed, “communicating requests to a remote server and receiving communications from that server, i.e., communication over a network,” is an abstract idea. *ChargePoint*, 920 F.3d at 767.

Nor does queueing messages, when recited at this level of generality, make the claims nonabstract. *See Mortg. Application Techs., LLC v. MeridianLink, Inc.*, 839 F. App'x 520, 525–526 (Fed. Cir. 2021) (“We have further held that information storage and exchange is an abstract idea even when it uses computers as a tool or is limited to a particular technological environment;” holding that automatic message queuing automated a manual method that humans can and have performed without the use of a computer).

In sum, the focus of the claims is on associating accounts to transfer loyalty credits, which is a fundamental economic practice and method of organizing human activity as discussed. *See Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1166–67 (Fed. Cir. 2019) (holding claims to crediting a merchant’s account as early as possible while electronically processing a check is a concept similar to the concepts held to be fundamental economic practices in *Bilski* and *Alice*); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015) (tracking financial transactions to determine if they exceed a pre-set spending limit is a method of organizing human activity).

Thus, we determine that revised substitute claims 23–39 recite the abstract idea identified above.

d. Revised Guidance Step 2A, Prong Two

We next consider whether claims 23–39 have additional elements that integrate the abstract idea into a practical application. *See* Revised Guidance at 54. The additional elements of an application server, partner integration management system, online gaming service, casino management system, server providing the online gaming service, modules, and machines providing the casino management system are generic computers and components that are used as tools to perform the abstract idea. They do not improve the functioning of computers or other technology or a technical field. They do not provide a particular treatment or a prophylaxis for a disease or medical condition. They do not implement the abstract idea on a particular machine that is integral to the claim. Nor do they transform or reduce a particular article to a different state or thing or apply the abstract idea in a meaningful way beyond linking its use to a particular technological environment. *See* Revised Guidance at 55; Opp. RMTA 5–6; Opp. MTA 6–8.

The '296 patent describes these elements generically as technology that “connects a network (e.g., Internet) based gaming system and one or more casino management systems (CMS) for managing patron data, loyalty programs, and other data.” Ex. 1001, 1:39–42. “The connection may be implemented as an *abstracted integration*.” *Id.* at 1:42–43 (emphasis added).

Applications 114 on application server 110 may include modules that implement logic to connect web-based network services of application server 110 to the land-based system of CMS 150. The logic may include accessing, managing, and modifying a user account associated with a web-based service or land-based CMS 150. Ex. 1001, 3:9–15. These elements are generic components that perform generic functions. *See id.* at 7:24–8:22, Fig. 8.

For the abstract integration (Ex. 1001, 1:42–43, 2:32–33), applications 114 may request that PIMS 116 retrieve patron account information, access loyalty credits, or perform other actions at CMS 150. PIMS 116 may receive the abstract request, determine the communication preference of the CMS associated with the user and instruct web server 130 to submit a request to the CMS. *Id.* at 3:17–25. Web server 130 may be a machine configured to send and receive messages over the Internet or other network (*id.* at 3:26–29), and messages may be provided by PIMS 116 via SSL or VPN (*id.* at 3:29–31).

Application server 110 and PIMS 116, web server 130, and machines of CMS 150 are generic computers 800 with processor(s) 810, memory 820 to store instructions and data and executable code, mass storage device 830, portable storage medium drive(s) 840, output devices 850, input devices 860, graphics display 870, and peripheral devices. Ex. 1001, 7:24–36, Fig. 8.

Performing an abstract idea on generic computers does not transform it into a patent eligible application. *Alice*, 573 U.S. at 223 (“[M]ere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”) (citation omitted); *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1286 (Fed. Cir. 2018) (“[C]laims are not saved from abstraction merely because they recite components more specific than a generic computer.”); *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (“[N]ot every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry.”; a telephone and server are a generic environment to carry out the abstract idea); *Dealertack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) (a particular machine must play a significant part in performing the claimed method rather than an obvious means to achieve a solution more quickly); Opp. RMTA 5–6.

Patent Owner asserts that the substitute claims solve a technological problem of linking an online gaming service to land-based CMSs. RMTA 11–12. Patent Owner argues that casino loyalty programs and online gaming services are separate entities with no way to communicate, and claims 23 and 37 recite additional steps to enable an online gaming system to communicate with one or more CMSs via a server having a PIMS. *Id.* We disagree.

“Merely claiming ‘those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance,’ does not make a claim eligible at step one.” *Ericsson Inc. v. TCL Commc’n Tech. Holdings Ltd.*, 955 F.3d 1317, 1328 (Fed. Cir. 2020) (citation omitted); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (“[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology to carry out economic transactions.”); *see* Opp. RMTA 5–6.

Even if the specification described technical details of the operations, no details are claimed. *See Ericsson*, 955 F.3d at 1325 (“[T]he specification may be ‘helpful in illuminating what a claim is directed to . . . [but] the specification must always yield to the claim language’ when identifying the ‘true focus of a claim.’”) (citation omitted); *ChargePoint*, 920 F.3d at 769 (“The breadth of the claim language here illustrates why any reliance on the specification in the § 101 analysis must always yield to the claim language.”); *see also Accenture*, 728 F.3d at 1345 (“[T]he complexity of the implementing software or the level of detail in the specification does not transform a claim reciting only an abstract concept into a patent-eligible system or method.”).

Linking online and land-based gaming accounts by determining a communication preference of the CMS and transferring loyalty credits are recited as an abstraction at a high level of generality with no technical details to indicate how these elements improve the servers, systems, and modules used to obtain such functional results. Opp. RMTA 5–6; Ex. 1031 ¶¶ 26–32. The description of these elements as generic components confirms their use as tools to perform “an abstracted integration.” Ex. 1001, 1:39–49, 2:51–4:12; 7:24–67 (computer system 800 for application server 110, data stores, 120, 160, web server 130, and CMS machines has generic components).

These components automate processes that users would perform. See *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1316 (Fed. Cir. 2019) (“But the need to perform tasks automatically is not a unique technical problem.”); *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055, 1056 (Fed. Cir. 2017) (“[A]utomation of manual processes using generic computers does not constitute a patentable improvement in computer technology.”; “But merely ‘configur[ing]’ generic computers in order to ‘supplant and enhance’ an otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible for patenting.”); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016) (“[T]he claimed linking of orders to customers is a classic example of manual tasks that cannot be rendered patent eligible by performing them with a computer.”); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354 (Fed. Cir. 2014) (noting that *Alice* held that using a computer to create electronic records, track multiple transactions, and issue simultaneous instructions is a form of electronic record-keeping and using a computer to obtain data, adjust account balances, and issue automated instructions does not improve the functioning of the computer).

Patent Owner argues that “[t]he 296 Patent identifies the existence of this technical problem, which arises because ‘[c]asino loyalty programs and online gaming services are two separate entities with no way to communicate with each other,’ and discloses a solution.” RMTA 11. Patent Owner asserts that “[t]he Substitute Claims solve this technological problem with a technological solution: linking an online/web-based gaming service with one or more CMS’s using a PIMS.” Reply to Opp. RMTA 3. “While the invention may use generic or off-the-shelf hardware, the hardware must be configured with *specialized software* to implement the specific steps described by the Substitute Claims.” *Id.* at 4. Dr. Shamos testifies that “[t]he online casino therefore must determine, **based on an identity of the user**, which CMS to communicate with, h[e]nce it must determine, **based on an identity of the user**, a communication preference of that particular CMS to which the user wants the credits transferred.” Ex. 2009 ¶ 33.

“Software can make non-abstract improvements to computer technology just as hardware improvements can, and . . . the improvements can be accomplished through either route.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). “[T]o be directed to a patent-eligible improvement to computer functionality, the claims must be directed to an improvement to the functionality of the computer or network platform itself.” *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1365 (Fed. Cir. 2020); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018) (software-based inventions that do not pass § 101 muster “did not recite any assertedly inventive technology for improving computers as tools and/or because the elements of the asserted invention were so result-based that they amounted to patenting the patent-ineligible concept itself.”).

Here, the substitute claims recite “determining . . . a communication preference of the particular casino management system associated with the user associated with the request” (23[c]) and “a partner integration management system configured to determine a communication preference of the particular casino management system based on an identity of the user” (37[d]). RMTA A-2, A-9. No technical details or specialized software functions are claimed to perform these result-based functional operations.

The ’296 patent describes these operations as follows:

PIMS 116 may generate requests to be sent to a particular CMS associated with a particular user. For example, applications 114 may request that PIMS 116 retrieve patron account information, access loyalty credits, or perform other actions with respect to CMS 150. PIMS 116 may *receive the abstract request from application 114, determine the communication preference of the particular CMS associated with the user associated with the request, and instruct web server 130 to submit a request to the CMS associated with the user of the web service.*

Ex. 1001, 3:16–25 (emphasis added). Even if we could read such description into the claims, it provides no technical description of specialized software to determine a communication preference of a particular CMS or how operation of computer systems and networks is improved beyond the abstract idea.

In the section 101 calculus, adding software (which is as abstract as language) to a conventional computer (which rightfully resides in the public domain) results in a patent eligibility score of zero. . . . Software lies in the antechamber of patentable invention. Because generically-implemented software is an “idea” insufficiently linked to any defining physical structure other than a standard computer, it is a precursor to technology rather than technology itself.

Intellectual Ventures I LLC v. Symantec Corp., 838 F.3d 1307, 1325–26 (Fed. Cir. 2016); *see Aftechmobile Inc. v. Salesforce.com, Inc.*, 853 F. App’x 669 (Fed. Cir. 2021) (claims to creating mobile applications without coding did not recite how program code was written or how it performed the claimed functions); *Ameranth*, 792 F. App’x at 787 (the concept of synchronous communications and automatic formatting for handheld devices is an abstract idea where the claims did not describe the software other than by the results sought to be achieved).

In his deposition, Dr. Shamos testified regarding Figure 1’s depiction of web server 130 communicating over network 140 with CMS 150:

so in order to communicate over a network, it’s well-known that the two parties need to have agreed on a communication protocol, otherwise their bits will go into nowhere and there will be no communication.

Ex. 1035, 58:12–18; *see also* Opp. RMTA 12–13.

In *Two-Way Media*, the patent owner argued that “controlling the routing of the stream of packets in response to selection signals received from the users” means “directing a portion of the routing path taken by the stream of packets from one of a designated group of intermediate computers to the user in response to one or more signals from the user selecting the stream.” *Two-Way Media*, 874 F.3d at 1338. The Court rejected this proposed claim construction because “it fails to indicate how the claims are directed to a scalable network architecture that itself leads to an improvement in the *functioning* of the system . . . [n]or does the construction provide any parameters for the ‘signals’ purportedly dictating how the information is being routed.” *Two-Way Media*, 874 F.3d at 1338.

“At best, the constructions proposed the use of generic computer components to carry out the recited abstract idea, but that is not sufficient.” *Two-Way Media*, 874 F.3d at 1338. Here, we also have no technical details of hardware or software improvements to networks or server communication beyond the abstract idea that an online server and a PIMS must determine a communication preference of a particular CMS in order to communicate with the CMS. *See ChargePoint*, 920 F.3d at 772–773 (“The only improvement alleged is use of the concept of network communication to interact with the particular devices. This remains the focus of these two claims, thus making both directed to an abstract idea.”); *see also* Opp. RMTA 12–13.

Indexing a communication preference by the identity of a user who wants to transfer loyalty credits is part of the abstract idea because it merely identifies the particular CMS whose account is accessed without improving computers or networks. *See Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1327 (Fed. Cir. 2017) (using an index of XML tags and metadata to identify, organize, and locate desired information and facilitate searches “includes longstanding conduct that existed well before the advent of computers and the Internet”); *see also Bridge and Post, Inc. v Verizon Commc’ns, Inc.*, 778 F. App’x 882, 889–90 (Fed. Cir. 2019) (using a MAC address, port identifier or hardcoded identifier to communicate information or generate identifiers to tag a user’s traffic is an abstract idea); § III.B. *supra*.

Because substitute claims 24–36, 38, and 39 recite other aspects of the same abstract idea, they lack additional elements to integrate the abstract idea into a practical application.

Accordingly, we determine that revised substitute claims 23–39 are directed to the abstract idea identified under Prong One above.

e. Alice, Step Two and Revised Guidance Step 2B

We next consider whether claims 23–39 recite additional elements that, when considered individually or as an ordered combination, provide an inventive concept that is significantly more than the abstract idea. *Alice*, 573 U.S. at 217–218. This step is satisfied when the limitations involve more than well-understood, routine, and conventional activities known in the industry. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018).

Individually, the application server, partner integration management system, online gaming service, casino management system, server providing the online gaming service, machines providing the CMS, and modules are generic computers and components that perform well-understood and routine functions of accessing accounts, receiving information, determining a communication preference, creating an account, linking accounts, and communicating loyalty credits. *See* RMTA 13–14. The generic description of these components and their functions indicates these elements are well-known in the art so that no further description is needed to satisfy § 112(a). Ex. 1001, 1:39–2:2, 2:29–3:51, 4:26–6:30, 7:24–8:22, Figs. 1–5, 8. The computer systems and components represent a broad category of computer components that are well known in the art. *Id.* at 7:24–67, 8:9–22.

The '296 patent describes well-known communication protocols that can be used to communicate information between an online gaming service and a CMS. They include XML over SOAP or system-2-system (S2S), SSL connection, VPN, or other connections. Ex. 1001, 1:39–49, 2:29–39, 3:29–31. The network may be the Internet or other generic networks. *Id.* at 3:38–43. Requests are sent in SOAP, XML, and HTTP protocols. *Id.* at 4:53–59. Patent Owner does not purport to have invented any of these protocols.

Patent Owner’s reliance on features of the abstract idea, e.g., elements 23[a]–23[j], to show an inventive concept and technical improvement (RMTA 12–15) is unavailing. “If a claim’s only ‘inventive concept’ is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea.” *BSG*, 899 F.3d at 1290–91. “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *Id.* at 1290 (*Alice* “only assessed whether the claim limitations other than the invention’s use of the ineligible concept to which it was directed were well-understood, routine and conventional”); *see* Revised Guidance at 56 (“[I]f a claim has been determined to be directed to a judicial exception under revised Step 2A, examiners should then *evaluate the additional elements individually and in combination under Step 2B* to determine whether they provide an inventive concept (*i.e., whether the additional elements amount to significantly more than the exception itself*)”) (emphasis added).

As an ordered combination, the additional elements recite no more than when they are considered individually. *Elec. Power*, 830 F.3d at 1355 (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.”). “[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Alice*, 573 U.S. at 225.

Nor is the ordered combination inventive. *See In re Killian*, 45 F.4th 1373, 1380 (Fed. Cir. 2022) (additional steps that collect data, comprehend its meaning, and provide results on generic computers are not inventive); *In re Bd. of Tr. Of Leland Stanford Junior Univ.*, 991 F.3d 1245, 1251–52 (Fed. Cir. 2021) (receiving, extracting, and storing data are well-known, routine, and conventional steps for executing an algorithm on a computer); *Bozeman Fin. LLC v. Fed. Reserve Bank of Atl.*, 955 F.3d 971, 980–81 (Fed. Cir. 2020) (using known computer elements to collect, analyze, and present data and send notifications is a logical sequence with no inventive concept); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (holding data retrieval, analysis, modification, generation, display, and transmission using generic computers is not inventive); *Two-Way Media*, 874 F.3d at 1339 (finding a conventional ordering of steps of processing the data, then routing it, controlling it, and monitoring its reception with conventional technology); *Intellectual Ventures v. Erie Indemnity*, 850 F.3d at 1329 (receiving requests for information and delivering records is well-understood, routine, and conventional activity); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (steps of arranging, storing, retrieving, sorting, eliminating, and determining are conventional and well-known computer functions); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (steps of data collection, recognition, extraction, and storage are well-known); *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (processing, receiving, and storing steps can be performed by any general purpose computer without special programming).

The dependent claims fail to disclose an inventive concept for the same reasons as were discussed for the independent claims, namely, because they recite other aspects of the same abstract idea. “[A] claim for a *new* abstract idea is still an abstract idea.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016); *see also RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea (encoding and decoding) does not render the claim non-abstract.”); *Ameranth*, 842 F.3d at 1240 (“An abstract idea can generally be described at different levels of abstraction.”).

Even if the techniques are groundbreaking, innovative, or brilliant, that is not enough for eligibility. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) (“No matter how much of an advance in the finance field the claims recite, the advance lies entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm. An advance of that nature is ineligible for patenting.”); *see also CyberSource*, 654 F.3d at 1372–1373 (a person can read credit card transactions from a database and make a map of the numbers to compare to online transactions); *Clarilogic, Inc. v. FormFree Holdings Corp.*, 681 F. App’x 950, 954 (Fed. Cir. 2017) (“But a method for collection, analysis, and generation of information reports, where the claims are not limited to how the collected information is analyzed or reformed, is the height of abstraction.”).

We determine Petitioner has established by a preponderance of the evidence that substitute claims 23–39 are directed to the abstract idea identified above without significantly more and are not eligible for patenting.

3. *Ground 4A: Alleged Obviousness Over Muskin, Allen, and Herrmann*

Petitioner asserts that substitute claims 23–27, 29–34, and 36–39 are unpatentable under 35 U.S.C. § 103 based on Muskin, Allen, and Herrmann. Opp. RMTA 3, 8–25.

a. *Revised Substitute Claim 23, Element 23[pre]*

i. *Petitioner's contentions*

Petitioner contends that Muskin's account coordinator 108 linked to a server and Herrmann's interface or process 306 disclose an application server having PIMS, which is off-the-shelf hardware such as a server with off-the-shelf software to provide its functionality of linking an online gaming service user account and an account at a CMS(s) as recited in element 23[pre]. Opp. RMTA 9–11 (citing Pet. 40–50; Opp. MTA 10–16, 19–20, 23–24; Ex. 1031 ¶¶ 47–54; Ex. 1035, 27:21–29:3, 32:5–13, 37:12–18).

ii. *Patent Owner's contentions*

Patent Owner argues that the prior art uses a dedicated communication link between a land-based casino and an online gaming system; therefore, there is no need for an application server having a PIMS to link these entities. RMTA 18. We disagree.

iii. *Analysis*

Muskin's account coordinator 108 may be located at online casino server 100 or another server to link it to land-based casino database 110 over computer communications network 106 that may be the Internet rather than a dedicated link so account coordinator 108 must associate (link) the accounts to permit communication therebetween. Ex. 1010 ¶¶ 28–31, 35–41, Fig. 1; cf. Ex. 1001, 3:38 (online service linked to CMS over Internet network 140).

Herrmann also sends content such as rewards points to users over a variety of networks and communications links using process or interface 306 to determine a communication preference or delivery channel preferred by a user to receive such loyalty content at a particular CMS such that it would have been obvious for the particular CMS to use that same delivery channel to ensure the rewards points reached the player at that particular CMS (e.g., at a CMS slot machine or gaming machine) to increase player engagement and drive revenues. Ex. 1011 ¶¶ 11–18, 21, 32, 62, 63, 65–82, 224–235, 262–268, 304–306, Figs. 1 (108E), 6 (606).

The '296 patent similarly describes application server 110 and PIMS 116 connecting an online gaming service and CMS 150 over network 140, which may be the Internet or other non-dedicated networks. Ex. 1001, 1:39–42, 2:59–60, 3:38–43, 4:3–59, Fig. 1; *see* RMTA 15–16.

iv. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest element 23[pre].

b. Element 23[a]

i. Petitioner's contentions

Petitioner's original contentions that Muskin accesses a player's first account with an online gaming service to obtain comp points stored in the player's loyalty account to exchange for incentive awards in original claim 1 still pertain to element 23[a]. Pet. 13–15; Opp. MTA 13; Opp. RMTA 9.

ii. Patent Owner's arguments

Patent Owner does not contest or otherwise dispute these contentions. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest element 23[a].

c. Elements 23[b] and 23[c]

i. Petitioner's contentions

Petitioner asserts that Muskin's account coordinator and Herrmann's interface or process disclose a PIMS that can retrieve account information of the user from a particular CMS (23[b]) and they determine a communication preference of the particular CMS associated with the user and request (23[c]) because they necessarily must determine a communication preference at the time of the request from a look up table or by requesting a protocol from the PMS prior to communicating with the particular CMS to communicate with the CMS. Opp. RMTA 11–14.

ii. Patent Owner's arguments

Patent Owner argues that Muskin, Allen, and Herrmann use dedicated communication channels that obviate the need to determine a communication preference as claimed. RMTA 18. Patent Owner asserts that Herrmann's communication preference is determined based on the user identifying the preference that is stored in the user's profile. *Id.* Patent Owner argues that Muskin's data integration unit is formatted for integration so there is no need to determine the communication preference of the CMS. RMTA 18–19.

iii. Analysis

The parties agree that the communications between an online gaming service and a land-based CMS indicates the communication occurs according to a preference of these entities as discussed in § III.D.3.d.viii., *supra*.

Furthermore, Herrmann delivers rewards points (like comp points and loyalty credits of Muskin) to users at CMS slot machines and other gaming devices according to a user's delivery preference, and this teaching discloses and suggests that the CMS would use this same communication preference as the user delivery channel to communicate with the online gaming service and receive the rewards points and similar loyalty credits to deliver to the user at the gaming machines of that particular CMS as Petitioner asserts. Further, the system can operate as a component of another system. Ex. 1011 ¶¶ 62–71, 74–84, 223, 235–248, Figs. 1–3, 5 (508), 6 (606); *see also* Opp. MTA 13–14; Opp. RMTA 11–18. Herrmann's interface or process determines the CMS's delivery channel/communication preference based on the identity of the user associated with the request for that particular CMS. Ex. 1011 ¶ 77.

iv. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest elements 23[b] and 23[c].

d. Elements 23[d] and 23[e]

i. Petitioner's contentions

Petitioner asserts that Muskin and Herrmann disclose or suggest accessing account information at a particular CMS according to the communication preference of the CMS (23[d]) and determining that the user does not have a second account with the particular CMS (23[e]). Pet. 15–21; Opp. MTA 10–12, 14, 22–24; Opp. RMTA 8–9, 22–23.

ii. Patent Owner's arguments

Patent Owner does not contest or otherwise dispute these contentions. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest elements 23[d] and 23[e].

e. Element 23[f]

i. Petitioner's contentions

Petitioner contends that Herrmann and Allen create a second account with a particular CMS upon determining that the user does not have a second account based on information stored with the user's first account with the online gaming service. Opp. RMTA 18–21; Opp. MTA 10–11, 22; Pet. 19–21, 39.

ii. Patent Owner's arguments

Patent Owner argues that neither Herrmann nor Allen discloses how a PIMS creates an account with a CMS in response to a request to retrieve account information of a user from a particular CMS. RMTA 20. Patent Owner argues that Allen creates a new account when a user signs into an online account, and Herrmann creates an account based on information that the user inputs into an online registration form rather than based on first account information stored with the user's first account with the online gaming service. *Id.* at 20–21.

iii. Analysis

Element 23[f] requires an application server (not a PIMS) to create a second account with a particular CMS “upon determining, by the application server, that the user does not have a second account with the particular casino management system.” RMTA A-2. There is no requirement that creation is in response to a user request as Patent Owner asserts. Opp. RMTA 20–21.

Herrmann and Allen create a second account when a server determines that one does not exist (23[f]). Ex. 1007, 9:1–33, 10:13–25, Figs. 4, 5; Ex. 1011 ¶¶ 11, 13, 15, 16, 30, 33, 79, Fig. 3. Allen and Herrmann create a new account with a CMS *based on* account information of the user’s first online gaming account because Allen’s new account uses a player’s existing casino player identity, and Herrmann uses information the user provides to create the online gaming account in a registration form. Opp. MTA 10–11; Opp. RMTA 18–20. Accounts are created in response to this user action as well.

iv. Conclusion

Based on the parties’ contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest element 23[f].

f. Elements 23[g], 23[h], and 23[i]

i. Petitioner’s contentions

Petitioner asserts that Muskin and Allen link a user’s online and land-based accounts via an account coordinator or account server (23[g]), access account information at the second account (23[h]), and communicate loyalty credit information between servers providing the online gaming service and machines providing the CMS (23[j]). Opp. MTA 10–15; Opp. RMTA 9–10.

ii. Patent Owner’s contentions

Patent Owner does not dispute Petitioner’s contentions regarding elements 23[b], 23[h], and 23[i]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties’ contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest elements 23[g], 23[h], and 23[i].

g. Elements 23[j] and 23[k]

i. Petitioner's contentions

Patent Owner contends that Muskin determines whether loyalty credits are transferrable to the particular CMS and causes transfer of loyalty credits to the user's second account with the particular CMS when it is determined that they are transferrable and available in the user's first account in elements 23[j] and 23[k]. Opp. RMTA 21–22.

ii. Patent Owner's arguments

Patent Owner argues that Muskin's maintenance of separate accounts for online and land-based casinos does not determine whether loyalty credits are transferrable (23[j]) and therefore does not cause transfer of loyalty credits (23[k]). RMTA 21–22.

iii. Analysis

The '296 patent describes this process of determining whether loyalty credits from an online or offline account should be retrieved as determining whether a user has loyalty credits for use at the casino that the user may use with the online account and vice versa. Ex. 1001, 5:16–20, 6:13–18.

Muskin similarly arranges accounts so some or all of the points earned at one account can be transferred to another linked account. Ex. 1010 ¶ 56. A determination can be made to transfer points automatically or periodically. *Id.* Comp points can be transferred after a predetermined number of comp points accumulates or after a session ends. *Id.* ¶ 71. Transfers can be made after it is determined that the player requesting the transfer is the same player that owns the account to which points are transferred, and transfers may be allowed only one way or in either way. *Id.* ¶ 74. Each of these transfers requires a determination that points are transferrable. Opp. RMTA 21–22.

iv. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that Muskin, Allen, and Herrmann disclose and suggest elements 23[j] and 23[k].

h. Conclusion

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that revised substitute claim 23 is unpatentable over Muskin, Allen, and Herrmann.

i. Revised Substitute Claims 24–31

Substitute claims 24–31 depend from substitute claim 23. *See* RMTA A-3 to A-6. Patent Owner argues that these claims are allowable by virtue of their dependence from claim 23 and steps recited in claims 24, 25, and 27 that are not disclosed as discussed for elements 23[j] and 23[k]. RMTA 23.

Petitioner asserts that the claims have no substantive amendments and remain unpatentable for the reasons stated for elements 23[j] and 23[k]. *Opp.* RMTA 23. Mr. Crane testifies that the amendments remain taught by the references cited in the Petition for claims 3–10. *See Opp.* MTA 15; Ex. 1021 ¶¶ 136–155; Pet. 24–29; Ex. 1031 ¶ 100; *see* RMTA 1. Petitioner addressed the substance of substitute claim 28 based on Muskin, Allen, and Ellis teaching queueing messages as recited in original claim 7. Pet. 29–34.

Based on the parties' contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that substitute claims 24–31 are unpatentable over Muskin, Allen, and Herrmann (and Ellis for claim 28). *See* 37 C.F.R. § 42.121.

j. Revised Substitute Claims 32–36

Petitioner asserts the unpatentability of claims 32–36 based on their contentions in the Opposition to the RMTA and prior papers. Opp. RMTA 23 (citing Pet. 40–44, 54–55, 70–72, 77–78; Reply Opp. 13–17; Opp. MTA 15–19, 25; Ex. 1031 ¶¶ 101, 102). Patent Owner argues that claims 32–36 are patentable because they depend from claim 11 and recite other features. RMTA 25. Patent Owner argues that claim 32 recites features not taught or suggested as discussed for element 23[f], and claims 33 and 34 recite features that are not taught or suggested as discussed for elements 23[j] and 23[k]. *Id.* We disagree for reasons discussed for those elements.

Based on the parties’ contentions and record evidence, we find that Petitioner has established by a preponderance of the evidence that substitute claims 32–36 are unpatentable over Muskin, Allen, and Herrmann (and Ellis for queueing in claim 35). *See* 37 C.F.R. § 42.121.

k. Revised Substitute Claim 37, Element 37[pre]

Petitioner asserts substitute claim 37 is unpatentable over Muskin, Allen, Herrmann, and/or Rajaraman. Opp. RMTA 4, Opp. MTA 19.

i. Rajaraman (Ex. 1027)

Rajaraman discloses middleware that facilitates communications in heterogeneous communications networks of gaming properties, devices, servers, and software of different suppliers and their proprietary protocols. Ex. 1027 ¶¶ 2–6. Rajaraman discloses network 10 including integration gateway module 12 that enables communications among heterogeneous components, and network 10 may comprise a gaming network located at least partially within a gaming property or any of a variety of intranets, extranets, or other networks as illustrated in Figure 1, reproduced below. *Id.* ¶ 43.

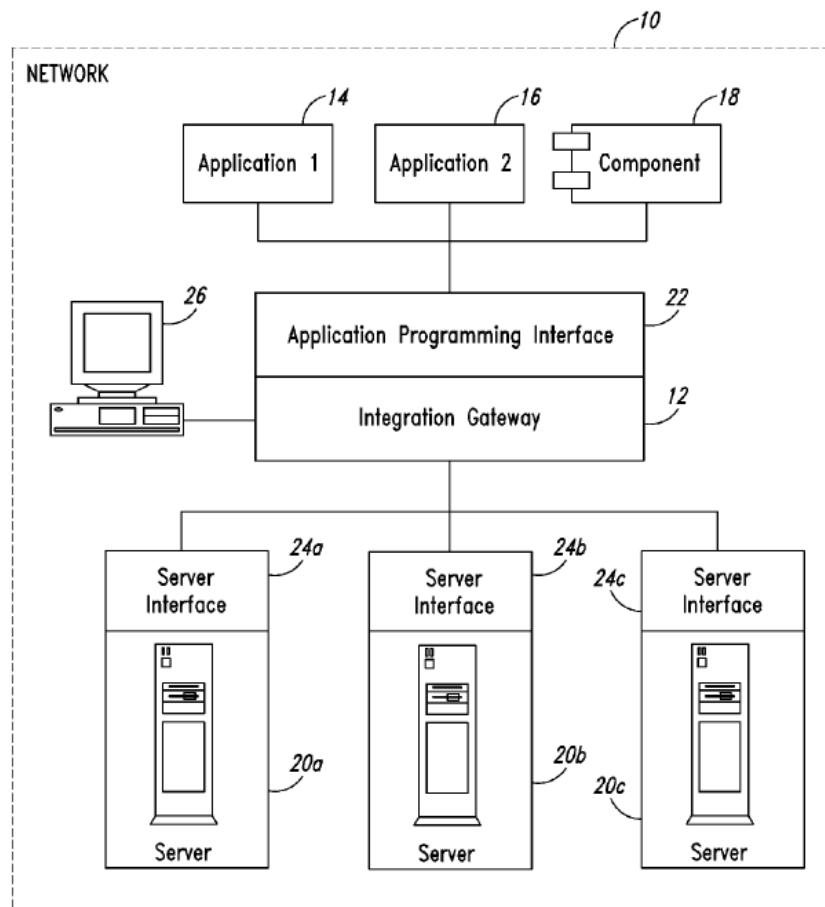


Figure 1 shows integration gateway 12 that can be a stand-alone product or be embeded in a larger system and provide queueing. *Id.* ¶¶ 58, 38.

ii. Petitioner's contentions

Petitioner assert that Muskin and Herrmann link a web-based gaming service and a CMS(s) for element 23[pre], and Rajaraman's integration gateway is an application server and PIMS. Opp. RMTA 24 (citing Ex. 1031 ¶¶ 109–110); Opp. MTA 9–11, 16–19 (citing Ex. 1021 ¶¶ 208–216, 217–299 (citing Ex. 1010 ¶¶ 1, 31, 33, 34, 38); Ex. 1027 ¶¶ 2–5, 38, 58, 157, Fig. 1).

iii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[pre]. *See generally* RMTA; PO Reply.

iv. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, Herrmann, and/or Rajaraman disclose or suggest element 37[pre].

l. Element 37[a]

i. Petitioner's contentions

Petitioner relies on its contentions that Muskin discloses a first server providing a web-based gaming service to the user and having access to the user's first account for element 18[a] as online casino server 100 connected to computer network 102 to allow access to an online playing account to disclose element 37[a], which makes non-substantive amendments to element 18[a]. *See* Opp. RMTA 23–25; *see also* Pet. 45–47; Opp. MTA 19–20.

ii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[a]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, Herrmann, and/or Rajaraman disclose or suggest element 37[a].

m. Element 37[b]

i. Petitioner's contentions

Petitioner relies on its contentions that Muskin discloses a particular casino management system and database 110 that records comp points earned by a player at slot machine 114 and transfers the points to an online account for element 18[b]. Opp. RMTA 23–25; Pet. 47–48 (citing Pet. § VII.A.4.c.; Ex. 1010 ¶¶ 24, 29, 31, 73, 74; Ex. 1003 ¶¶ 242–246); Opp. MTA 19–20.

ii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[b]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, and Herrmann and/or Rajaraman disclose element 37[b].

n. Element 37[c]

i. Petitioner's contentions

Petitioner contends that the requirement for "one or more application servers" in element 37[c] and for at least one application server to include a PIMS is discussed in its contentions for element 23[c] and in the Petition and Reply. Opp. RMTA 25 (citing Pet. 48, 75; Reply 1–8, 12; Opp. MTA 19–22; Ex. 1031 ¶¶ 111, 112). Petitioner asserts that its contentions for elements 23[i]–[k] and in the Petition for elements 1[e]–[g] and Opposition to the MTA for elements 23[g]–[i] address an application server communicating loyalty credit information according to the communication preference, and it would have been obvious to offload this function on a second server. *Id.* (citing Pet. 21–24, 62–64; Opp. MTA 14–15, 24; Ex. 1031 ¶ 112).

ii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[c]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, and Herrmann, and/or Rajaraman disclose or suggest element 37[c].

o. Element 37[d]

i. Petitioner's contentions

Petitioner asserts that Allen and Rajaraman use a PIMS to determine a communication preference of the CMS “based on an identity of the user” in element 37[d], and a skilled artisan would combine Rajaraman with Muskin, Allen, and Herrmann to connect third party systems that lack dedicated links so they must determine a communication preference to communicate. Opp. RMTA 11–18 (Muskin, Allen, and Herrmann disclose a PIMS), 24 (citing Ex. 1031 ¶¶ 104–106; Opp. MTA 17–19; RMTA 23–24; Ex. 2008 ¶¶ 91–96, 110). Petitioner asserts that Rajaraman’s application server uses Integration Gateway (PIMS) to communicate with components that have different communication preferences, including a CMS, requiring it to determine a communication preference in response to a request, by querying a table of communication preferences. Opp. RMTA 14–15 (citing Opp. MTA 16–20; Ex. 1021 ¶¶ 214–216; Ex. 1027, Abstr., ¶¶ 3 (facilitating “communication in heterogenous communications networks”), 24, 58, 82, 158 (determining communication preferences “according to the target system requirements”), 157, claims 7, 11; Ex. 1031 ¶¶ 79, 80).

ii. Patent Owner's arguments

Patent Owner argues that Rajaraman does not disclose determining a communication preference of a particular CMS based on an identity of a user in element 37[d], and Petitioner cites no passage that discloses this element. RMTA 23. Patent Owner asserts that a skilled artisan would not combine Rajaraman with the other references because they all disclose systems that are developed with a dedicated communication link to communicate directly with one another. *Id.* at 23–24 (citing Ex. 2008 ¶¶ 110). We disagree.

iii. Analysis

Patent Owner does not dispute that Muskin, Allen, and Herrmann teach element 37[d], or communicate between online and land-based gaming CMSs over the Internet with no dedicated link (Ex. 1007, 6:6–60, 7:19–34; Ex. 1010 ¶ 31; Ex. 1011 ¶ 74) just as the '296 patent communicates between online gaming service and CMS 150 over Internet 140 (Ex. 1001, 3:38–43, Fig. 1). Dr. Shamos does not support his testimony that the prior art uses a dedicated link. Ex. 2008 ¶ 110. Rajaraman's integration gateway module 12 enables communications among applications 14, 16, software components 18, and servers 20a–c on *different platforms* in network 10 (e.g., a gaming network). Ex. 1027 ¶¶ 3, 43, Fig. 1. Integration gateway 12 is standalone/embedded in another system to provide synchronous and asynchronous messaging across platforms in *different protocols and formats*. *Id.* ¶¶ 58, 59, 82, 84, 157, 158.

iv. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, Herrmann, and also Rajaraman disclose or suggest element 37[d].

p. Element 37[e]

i. Petitioner's contentions

Petitioner provides detailed contentions that the prior art discloses or suggests modules stored on a second server and executed by a processor to communicate user loyalty credits between a first server providing a web-based gaming service and a CMS according to the communication preference of the CMS in element 37[e] to include Rajaraman's disclosure of gateway module 12 to enable communications among heterogenous components and Allen's modules. Opp. RMTA 25; Opp. MTA 19–20; Pet. 48–50.

ii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[e]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine that Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, Herrmann, and Rajaraman, disclose or suggest element 37[e].

q. Elements 37[f] and 37[g]

Element 37[f] and 37[g] determine whether first loyalty credits from the user's first account with the web-based gaming service are transferrable to the user's CMS account and cause transfer of first loyalty credits when it is determined they are transferrable to the CMS. RMTA A-9 to A-10.

i. Petitioner's contentions

Petitioner asserts that the prior art discloses these elements as asserted for elements 23[j] and 23[k]. Opp. RMTA 24 (citing Ex. 1031 ¶¶ 107, 108). For elements 23[j] and 23[k], Petitioner contends that Muskin discloses two types of loyalty credits and determines how to transfer account information between accounts. *Id.* at 21 (citing Ex. 2010 ¶¶ 39, 49, 73–75; Opp. MTA 15; Pet. 23–24; Reply 8–9, 15–16; Ex. 1003 ¶¶ 136–142; Ex. 1031 ¶¶ 90, 91).

ii. Patent Owner's arguments

Patent Owner argues that Muskin, Allen, Herrmann, and Rajaraman do not determine whether loyalty credits from a user's web-based account are transferrable to a user's second CMS account as argued for elements 23[j] and 23[k]. RMTA 24. Patent Owner asserts that Muskin's separate accounts for online and land-based casino accounts do not teach such a determination in elements 23[j] and 23[k]. *Id.* at 21–22; Sur-reply 12.

iii. Analysis

As discussed in §§ III.D.3.e., III.D.4.b., III.D.4.c., and III.E.2.e. *supra*, Muskin and Herrmann disclose this feature in claims 11 and 13–15, and Muskin, Allen, and Herrmann disclose this feature in claim 18 with Rajaraman teaching the additional functionality of a PIMS. Opp. RMTA 19.

iv. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that Muskin, Allen, and Herrmann and Rajaraman disclose elements 37[f] and 37[g].

r. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that claim 37 is unpatentable over Muskin, Allen, Herrmann, and Rajaraman.

s. Revised Substitute Claims 38 and 39

i. Petitioner's contentions

Petitioner cites its contentions in the Petition, Reply, and Opposition to the MTA that Herrmann discloses a CMS that allows data to be loaded, processed, and updated via File Transfer Protocol (FTP) or SOAP protocols that a skilled artisan would understand can be synchronous and asynchronous communications, and Allen discloses modules that allow communication between two servers in the manner preferred by those servers such as either asynchronously or synchronously and transmit loyalty credits by such means using send and receive modules that send and receive messages to and from the CMS as claimed. Pet. 50–54 (citing Ex. 1003 ¶¶ 254–266); Reply 22–25 (citing Ex. 1019 ¶¶ 93–104; Ex. 1031 ¶ 113).

ii. Patent Owner's arguments

Patent Owner does not contest Petitioner's assertions regarding element 37[e]. *See generally* RMTA; PO Reply.

iii. Conclusion

Based on the parties' contentions and record evidence, we determine Petitioner has established, by a preponderance of the evidence, that claims 38 and 39 are unpatentable over Muskin, Allen, Herrmann, and Rajaraman.

t. Conclusion

We determine that Patent Owner has shown that revised substitute claims 23–39 satisfy applicable statutory and regulatory requirements. We also determine that Petitioner has shown, by a preponderance of the evidence, that revised substitute claims 23–39 are unpatentable under 35 U.S.C. § 101 and § 103 for the reasons discussed above.

Accordingly, we grant in-part Patent Owner's Revised Motion to Amend original claims 1 and 3–10 and cancel those claims. We otherwise deny Patent Owner's Revised Motion to Amend claims 1, 3–10, 12–14, 16–18, 21, and 22 by denying entry of revised substitute claims 23–39 because we determine that revised substitute claims 23–39 have been shown to be ineligible for patenting under 35 U.S.C. § 101 and also have been shown to be unpatentable under 35 U.S.C. § 103 for reasons discussed above. We also adopt Petitioner's contentions and evidence as set forth in the Petition, Reply, Opposition to MTA, and Opposition to RMTA along with Mr. Crane's declarations and incorporate them into our determinations and findings above regarding the unpatentability of the challenged claims and the revised substitute claims.

IV. OTHER GROUNDS

Having determined that Petitioner has established the unpatentability of original challenged claims 11–18, 21, and 22, and revised substitute claims 23–39, we exercise our discretion and decline to decide additional instituted grounds beyond those discussed above. *See Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020); *see also SAS Institute, Inc. v. Iancu*, 138 S.Ct. 1348, 1355, 1359–60 (2018) (the Board in its final written decision must address the patentability of all challenged claims).

V. PETITIONER’S MOTION TO STRIKE

Because our findings and determinations do not rely on the paragraphs of Dr. Shamos’ declaration that Petitioner’s Motion to Strike seeks to strike, we dismiss Petitioner’s Motion to Strike as moot.

VI. CONCLUSION

Petitioner has shown by a preponderance of the evidence that original claims 11–18, 21, and 22 are unpatentable and that substitute claims 23–39 are not eligible for patenting under 35 U.S.C. § 101 and are unpatentable under 35 U.S.C. § 103. Our determinations are summarized below.

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable
1, 3–6, 8–10	103	Muskin, Allen	Cancelled ⁷
7	103	Muskin, Allen, Ellis	Cancelled ⁸
11–15, 17,	103	Muskin, Herrmann	11–15, 17
18, 21, 22	103	Muskin, Allen,	18, 21, 22

⁷ Original claims 1 and 3–10 were cancelled by the RMTA. RMTA 1, A-1.

⁸ Original claims 1 and 3–10 were cancelled by the RMTA. RMTA 1, A-1.

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable
		Herrmann	
16	103	Muskin, Herrmann, Ellis	16
1, 6, 9, 10	103	Pascal, Allen	Cancelled ⁹
7	103	Pascal, Allen, Ellis	Cancelled ¹⁰
11, 12, 15	103	Pascal, Herrmann ¹¹	
18, 21, 22	103	Pascal, Allen, Herrmann ¹²	
16	103	Pascal, Herrmann, Ellis ¹³	

Motion to Amend Outcome	Claims
Original Claims Cancelled by Amendment	1, 3–10
Substitute Claims Proposed in Amendment	23–39
Substitute Claims: Motion to Amend Granted	1, 3–10
Substitute Claims: Motion to Amend Denied	23–39
Substitute Claims: Determined Unpatentable	23–39
Substitute Claims: Not Reached	

VII. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Patent Owner’s Revised Motion to Amend is granted in part and original claims 1 and 3–10 of the ’296 patent are cancelled;

⁹ Original claims 1 and 3–10 were cancelled by the RMTA. RMTA 1, A-1.

¹⁰ Original claims 1 and 3–10 were cancelled by the RMTA. RMTA 1, A-1.

¹¹ As noted above, we do not reach this ground.

¹² As noted above, we do not reach this ground.

¹³ As noted above, we do not reach this ground.

FURTHER ORDERED that original claims 11–18, 21, and 22 of the '296 patent have been shown to be unpatentable;

FURTHER ORDERED that Patent Owner's Revised Motion to Amend is denied in all other respects;

FURTHER ORDERED that proposed substitute claims 23–39 have been shown to be ineligible for patenting and unpatentable;

FURTHER ORDERED: Petitioner's Motion to Strike is dismissed as moot; and

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

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