UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CXLOYALTY, INC.,[1]
Petitioner,

v.

MARITZ HOLDINGS INC.,
Patent Owner.

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CBM2018-00037
Patent 7,134,087 B2

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Before MICHAEL R. ZECHER, JUSTIN T. ARBES, and
JON B. TORNQUIST, *Administrative Patent Judges.*

ARBES, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Granting Patent Owner's Motion to Amend
35 U.S.C. § 328(a)

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[1] Petitioner filed updated mandatory notice information indicating that it
changed its name from Connexions Loyalty, Inc. to cxLoyalty, Inc.
Paper 30, 2. Accordingly, the caption for this proceeding has been changed.

I. INTRODUCTION

A. Background and Summary

Petitioner, cxLoyalty, Inc., filed a Petition (Paper 1, "Pet.") requesting a covered business method patent review of claims 1–15 of U.S. Patent No. 7,134,087 B2 (Ex. 1001, "the '087 patent") pursuant to 35 U.S.C. § 321(a). On December 20, 2018, we instituted a covered business method patent review of the sole challenge raised in the Petition. Paper 12 ("Decision on Institution" or "Dec. on Inst."). Patent Owner, Maritz Holdings Inc., subsequently filed a Patent Owner Response (Paper 16, "PO Resp."), Petitioner filed a Reply (Paper 23, "Reply"), and Patent Owner filed a Sur-Reply (Paper 25, "Sur-Reply"). Patent Owner also filed a corrected Motion to Amend (Paper 19, "Mot."), Petitioner filed an Opposition (Paper 24, "Opp."), Patent Owner filed a Reply (Paper 26, "Mot. Reply"), and Petitioner filed a Sur-Reply (Paper 28, "Mot. Sur-Reply"). An oral hearing was held on September 17, 2019, and a transcript of the hearing is included in the record (Paper 35, "Tr.").

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–15 are unpatentable. We also determine that Petitioner has not met its burden to show by a preponderance of the evidence that proposed substitute claims 16–23 are unpatentable. Accordingly, we *grant* Patent Owner's Motion to Amend.

B. Real Parties in Interest

Petitioner states that the real parties in interest are "Petitioner cxLoyalty, Inc. (formerly Connexions Loyalty, Inc.), cxLoyalty Travel

Solutions LLC (formerly Connexions Loyalty Travel Solutions LLC),
Connexions Loyalty Acquisition, LLC, cxLoyalty Group, LLC (formerly
Affinion Group, LLC), cxLoyalty Group, Inc. (formerly Affinion Group,
Inc.), and cxLoyalty Group Holdings, Inc. (formerly Affinion Group
Holdings, Inc.)." Paper 30, 2.

C. Related Matter

The parties indicate that the '087 patent is the subject of the following
district court case: *Maritz Holdings Inc. v. Connexions Loyalty, Inc.*,
No. 1:18-cv-00967 (D. Del.). *See* Pet. 39; Paper 10, 2; Ex. 1003.

D. The '087 Patent

The '087 patent discloses "a system and method in which a participant
of a program which awards points to the participant allows the participant to
transact a purchase using the awarded points with a vendor system which
transacts purchases in currency." Ex. 1001, col. 1, ll. 7–12. Loyalty
programs "issue points to customers (i.e., participants) as a reward for
certain activities such as the purchase of certain products or services or
performing a certain action" and allow the customer to redeem the points for
rewards (i.e., "merchandise, certificates, or other products or services"),
which "create[s] a loyalty or affinity with the customer and encourage[s] the
customer to continue a desired behavior." *Id.* at col. 1, ll. 16–23. A loyalty
program typically has a relationship with various redemption vendors and
allows the customer to "select[] a reward for purchase with the points." *Id.*
at col. 1, ll. 24–34. The loyalty program "obtains the product or service"
from the appropriate vendor and provides it to the customer. *Id.* at col. 1,
ll. 34–37.

The '087 patent discloses that "[s]ome rewards are of a nature that human intervention is needed to redeem/fulfill a reward." *Id.* at col. 1, ll. 37–38. For example, when a customer selects an airline ticket, the loyalty program "would purchase the ticket through a selected travel agent or a selected airline employee and provide the ticket (or have it sent) to the customer," and the agent or employee would deduct the points needed for the reward from the customer's point account. *Id.* at col. 1, ll. 38–46. The '087 patent sought to "eliminate" this need for human intervention by "allowing the customer to systematically redeem their points for rewards using redemption vendors that otherwise deal in currency." *Id.* at col. 1, ll. 47–53, col. 1, l. 66–col. 2, l. 4 (stating that the disclosed invention "provides fulfillment capability without having to involve highly specialized third party organizations," which "enables participants to get greater satisfaction and more immediate gratification from their loyalty program regardless of their preferred method of interaction").

Figure 2 of the '087 patent is reproduced below.

FIG. 2

Figure 2 depicts the flow of information between the various actors in the disclosed system, namely participants 202; loyalty program 210, which maintains participant point accounts 214 for participants 202 and awards points whenever a participant completes a transaction; graphical user interface (GUI) 204; application programming interface (API) 206; and vendor system 208 corresponding to a vendor from which a participant wants to make a purchase. *Id.* at col. 3, ll. 54–67, col. 6, ll. 5–7. As shown in Figure 2, "participant-related information" (i.e., information originating from the participant, such as the participant's identification) flows from left to right, and "vendor-related information" (i.e., information originating from the vendor, such as a list of products available for purchase) flows from right to left. *Id.* at col. 6, ll. 12–20, 35–38.

The process begins with a participant logging on to GUI 204 and indicating that he or she is interested in purchasing products or services (e.g., an airline ticket) from the vendor, using points in the participant's account for the purchase. *Id.* at col. 6, ll. 21–26. GUI 204 transfers the participant's information to API 206, which provides it to vendor system 208. *Id.* at col. 6, ll. 26–33. Vendor system 208 then provides to API 206 a list of items available for purchase and their prices, which API 206 provides to GUI 204 for display to the participant. *Id.* at col. 6, ll. 34–47.

The participant selects a particular item and makes purchase request 212. *Id.* at col. 6, ll. 48–64. GUI 204 "converts the received purchase request 212 into a corresponding purchase request 216 based on . . . shadow credit card 218," which is a credit card that is "hidden or 'shadowed' from the participant so that the participant is not aware that the transaction is actually being transacted using the shadow credit card" rather than just the participant's point account. *Id.* at col. 4, ll. 42–50, col. 5, l. 65–col. 6, l. 1, col. 6, ll. 64–66. Specifically, GUI 204 communicates with loyalty program 210 to determine whether the participant has enough points for the transaction and convert points to currency. *Id.* at col. 6, l. 67–col. 7, l. 7. GUI 204 provides purchase request 216 based on shadow credit card 218 to API 206, which "performs its standard function of transmitting information to the vendor system 208." *Id.* at col. 7, ll. 7–14. Vendor system 208 responds to purchase request 216 "in the same way that it would respond to any other purchase request from a consumer that presents a credit card," and is, thus, unaware that the participant is actually using points to make the purchase. *Id.* at col. 4, ll. 42–47, col. 6, l. 1–4, col. 7, ll. 15–18. If the transaction is authorized, vendor system 208 provides vendor purchase

confirmation 218 to API 206, which provides it to GUI 204. *Id.* at col. 7,
ll. 19–28. GUI 204 communicates with loyalty program 210 to deduct the
appropriate number of points from the participant's account, and converts
vendor purchase confirmation 218 (based on shadow credit card 218) into
purchase confirmation 220 (based on the points) for the participant, such that
the participant is unaware that the purchase actually was made using shadow
credit card 218. *Id.* at col. 7, ll. 28–47.

E. Illustrative Claim

Claims 1, 5, 9, and 13 of the '087 patent are independent. Claim 1 is
illustrative of the challenged claims and it recites:

> 1. A computerized system for use by a participant of a
> program which awards points to the participant, wherein the
> awarded points are maintained in a point account for the
> participant, said system for permitting the participant to transact
> a purchase using the awarded points with a vendor system which
> transacts purchases in currency, said system comprising a
> processor including instructions for defining:
>
> an application programming interface (API) for
> interfacing with the vendor system;
>
> a program account hidden from the participant connected
> to the program for use in currency transactions;
>
> a graphical user interface (GUI) for providing an interface
> between the participant and the API and for communicating with
> the program;
>
> wherein said GUI includes instructions for receiving
> participant-related information from the participant and
> providing the received participant-related information to the
> API;
>
> wherein said GUI includes instructions for receiving
> information regarding the program account hidden from the

participant and for providing the received program account information to the API;

wherein said API is adapted to receive the participant-related information and the program account information from the GUI and adapted to provide the received participant-related information and the received program account information to the vendor system;

wherein said API is adapted to receive vendor-related information from the vendor system and adapted to provide the received vendor-related information to the GUI; and

wherein said GUI includes nstructions for receiving vendor-related information from the API and for providing the received vendor-related information to the participant;

such that from the perspective of the participant, the participant uses the GUI to conduct a purchase transaction with the vendor system based in whole or in part on the points in the participant's point account; and

such that from the perspective of the vendor system, the vendor system conducts the purchase transaction with the participant as a currency transaction based on the program's program account hidden from the participant whereby the participant is not aware that the purchase transaction with the vendor system is being transacted using program account.

Ex. 1001, col. 8, l. 36–col. 9, l. 15.

F. Evidence

Petitioner filed a declaration from Norman E. Knowles (Exhibit 1004) with its Petition. Patent Owner filed a declaration from Bruce Weiner (Exhibit 2001) with its Preliminary Response (Paper 11), and relies on the same declaration in its Patent Owner Response. Patent Owner filed another declaration from Mr. Weiner (Exhibit 2005) in support of its Motion to Amend. Neither witness was cross-examined.

G. Asserted Ground

Petitioner challenges claims 1–15 of the '087 patent on the ground that the claims do not recite patent-eligible subject matter under 35 U.S.C. § 101. Pet. 40, 46–71.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner argues that a person of ordinary skill in the art at the time of the '087 patent would have had "a practical knowledge of and familiarity with incentive or loyalty programs, web interfaces, network protocols, accounting information systems, and invoice processing systems"; "a Bachelor's degree in computer science, computer engineering, or another computer-related field, or equivalent work experience"; and "at least one to two years of experience designing or working with web interfaces and network protocols in systems facilitating commercial transactions." Pet. 42–43 (citing Ex. 1004 ¶ 26). In the Decision on Institution, based on the parties' arguments and record at the time, we preliminarily agreed with Petitioner's assessment. Dec. on Inst. 8–9. Patent Owner does not propose a different level of ordinary skill in the art in its Patent Owner Response or Motion to Amend. Based on the record developed during trial, including our review of the '087 patent and the types of problems and solutions described in the '087 patent, we adopt our previous analysis and apply the level of ordinary skill in the art set forth above for purposes of this Decision.

B. Claim Interpretation

In this proceeding, we interpret the claims of the unexpired '087 patent using the "broadest reasonable construction in light of the

specification of the patent." 37 C.F.R. § 42.300(b) (2017).[2] In the Decision
on Institution, based on the parties' arguments and record at the time, we
preliminarily interpreted the following claim terms:

Term	Interpretation
"program account"	a payment account associated with the loyalty program that is accepted by the vendor system, such as a cash account or credit card
"shadow credit card"	a program credit card account that is hidden from the participant of the program
"program account information"	any information identifying a payment account associated with the loyalty program that is acceptable to the vendor system to be used in a currency transaction

See Dec. on Inst. 9–11; Pet. 43–45. The parties do not dispute the above
interpretations in their papers filed after institution. Upon review of the
parties' arguments during trial and the evidence as a whole, we adopt our
previous analysis for purposes of this Decision and conclude that no
interpretation of any other term is necessary to decide the issues presented
during trial. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*,
868 F.3d 1013, 1017 (Fed. Cir. 2017) ("Because we need only construe

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[2] The Petition in this proceeding was filed on July 5, 2018, prior to the
effective date of the rule change that replaces the broadest reasonable
interpretation standard with the federal court claim interpretation standard.
See Changes to the Claim Construction Standard for Interpreting Claims in
Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg.
51,340, 51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.300(b)
effective November 13, 2018) (now codified at 37 C.F.R. § 42.300(b)
(2019)).

terms 'that are in controversy, and only to the extent necessary to resolve the controversy,' we need not construe [a particular claim limitation] where the construction is not 'material to the . . . dispute.'" (citations omitted)).

C. Eligibility for Covered Business Method Patent Review

Section 18 of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), provides for the creation of a transitional program for reviewing covered business method patents, and limits reviews to persons or their privies that have been sued for infringement or charged with infringement[3] of a "covered business method patent," which does not include patents for "technological inventions." AIA §§ 18(a)(1)(B), 18(d)(1); *see* 37 C.F.R. § 42.302. Petitioner bears the burden of demonstrating that the '087 patent is a "covered business method patent." *See* 37 C.F.R. § 42.304(a).

1. Used in the Practice, Administration, or Management of a Financial Product or Service

A "covered business method patent" is "a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions." AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a). To determine whether a patent is eligible for covered business method patent

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[3] Petitioner was sued for infringement of the '087 patent on June 28, 2018, in *Maritz Holdings Inc. v. Connexions Loyalty, Inc.*, No. 1:18-cv-00967 (D. Del.). *See* Pet. 39; Paper 10, 2; Ex. 1003. The district court case is pending and has been stayed.

review, the focus is on the claims. *See Unwired Planet, LLC v. Google Inc.*, 841 F.3d 1376, 1382 (Fed. Cir. 2016) ("[Covered business method patents] are limited to those with claims that are directed to methods and apparatuses of particular types and with particular uses 'in the practice, administration, or management of a financial product or service.'"); *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1340 (Fed. Cir. 2016) (approving of prior Board decisions that "properly focuse[d] on the claim language at issue," and finding that the challenged patent was eligible for covered business method patent review because the claims recited "an express financial component in the form of a subsidy" that was "central to the operation of the claimed invention"). A patent need have only one claim directed to a covered business method to be eligible for review. Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012).

Petitioner cites multiple claims of the '087 patent in support of its contention that the '087 patent is a covered business method patent, arguing that all of the claims recite "a financial activity element," namely "a transaction between a participant of an awards program and a currency vendor." Pet. 29–32. Claim 1, for example, recites a "computerized system for use by a participant of a program which awards points to the participant," the system "permitting the participant to *transact a purchase* using the awarded points with a vendor system which *transacts purchases in currency*." Ex. 1001, col. 8, ll. 36–37, 39–41 (emphases added). Claim 1 further recites that "the vendor system conducts the *purchase transaction* with the participant as a *currency transaction*." *Id.* at col. 9, ll. 9–10 (emphases added). Conducting a purchase transaction is a financial activity,

and permitting the participant to make such a purchase amounts to providing a financial service. Patent Owner does not dispute Petitioner's arguments in its Patent Owner Response, arguing only that the '087 patent is for a technological invention. PO Resp. 45–54. Petitioner has shown that at least claim 1 recites an apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, as required by § 18(d)(1) of the AIA.

2. *Technological Invention*

The definition of "covered business method patent" in § 18(d)(1) of the AIA does not include patents for "technological inventions." To determine whether a patent is for a technological invention, we consider "whether the claimed subject matter as a whole [(1)] recites a technological feature that is novel and unobvious over the prior art; and [(2)] solves a technical problem using a technical solution." 37 C.F.R. § 42.301(b). In general, the Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), *available at* https://www.uspto.gov/about-us/news-updates/consolidated-trial-practice-guide-november-2019 ("Trial Practice Guide"), provides the following guidance with respect to claim content that typically does not exclude a patent under the category of a "technological invention":

> (a) Mere recitation of known technologies, such as computer hardware, communication or computer networks, software, memory, computer-readable storage medium, scanners, display devices or databases, or specialized machines, such as an ATM or point of sale device.

> (b) Reciting the use of known prior art technology to accomplish a process or method, even if that process or method is novel and non-obvious.

Id. at 42–43.

For the technological invention exception to apply, both prongs (1) and (2) of the inquiry must be met affirmatively, meaning that a negative answer under either prong renders inapplicable the technological invention exception. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) ("We need not address this argument regarding whether the first prong of 37 C.F.R. § 42.301(b) was met, as we affirm the Board's determination on the second prong of the regulation—that the claimed subject matter as a whole does not solve a technical problem using a technical solution."); *Blue Calypso*, 815 F.3d at 1341 (addressing only whether the claimed invention solves a technical problem using a technical solution). We discuss both prongs of the inquiry herein, even though either one would be dispositive.

a) *Technological Feature That is Novel and Unobvious over the Prior Art*

Petitioner argues that claim 1, as a whole, does not recite a technological feature that is novel and unobvious over the prior art, citing the testimony of Mr. Knowles as support. Pet. 34–36 (citing Ex. 1004 ¶¶ 35–40, 108, 113–118, 124, 128–131, 136, 141–142). Claim 1 recites a "computerized" system comprising a "processor" including instructions for defining a "graphical user interface (GUI)" and an "application programming interface (API)." Ex. 1001, col. 8, ll. 36–50. The GUI provides an interface between a participant of a program and the API, and communicates with the program. The API interfaces with a vendor system. Claim 1 further recites the transfer of information between the various actors (i.e., participant, GUI, API, and vendor system). For example, the GUI includes instructions for receiving "participant-related information" from the

participant and "information regarding the [hidden] program account," and providing such information to the API. *Id.* at col. 8, ll. 51–58. In turn, the API is adapted to receive the information and provide it to the vendor system, and receive "vendor-related information" from the vendor system in return and provide it to the GUI. *Id.* at col. 8, ll. 59–67. Finally, the GUI includes instructions for receiving vendor-related information and providing it to the participant.

We agree with Petitioner that claim 1 recites the processor, GUI, and API "in a generic manner, with no specificity as to how the computer components are programmed or designed to allow for the transmittal of information between the various end users (participant, program, vendor system)." *See* Pet. 35. These generic computer components were known in the prior art. *See* Ex. 1004 ¶¶ 36, 39, 40 (citing Exhibits 1008–1011 as evidence that processors, GUIs, and APIs were "well-known to persons of ordinary skill in the art" at the time of the '087 patent). Further, the only functions that claim 1 requires the GUI and API be adapted to perform are "providing" information to and "receiving" information from the other components. These limitations likewise are recited generically, and the communication of information by GUIs and APIs was known in the prior art. *See id.* ¶¶ 39, 40, 115; Ex. 1001, col. 7, ll. 9–14 (describing API 206, shown in Figure 2 above, as performing its "standard function" of transmitting information to a vendor system). We agree with Petitioner that the claimed elements constitute well-known computer components and known technologies for communicating information between those components, which indicates that the '087 patent is not a patent for a technological invention. *See* Trial Practice Guide, 42–43 (examples a and b).

Patent Owner argues that claim 1 recites "the unique combination of a processor; an API; a GUI; a hidden program account (such as a shadow credit card); a display; and a computer to redeem points for goods or services while concealing the nature of the transaction from the participant," the "ordered combination" of which amounts to a computerized system that is novel and unobvious over the prior art, citing the testimony of Mr. Weiner as support. PO Resp. 46–51 (citing Ex. 2001 ¶¶ 60, 70, 105–126); Sur-Reply 19–21. Patent Owner further argues that Petitioner failed to provide a full anticipation and obviousness analysis for any of the claims, contrary to the requirements of 37 C.F.R. § 42.301(b). PO Resp. 47–49.

For purposes of the technological invention exception, we consider whether a claim, as a whole, recites a "technological feature" that is novel and unobvious over the prior art. 37 C.F.R. § 42.301(b). We do not agree that this requires the petitioner to assert and prove unpatentability of the claim under 35 U.S.C. §§ 102 or 103. Patent Owner's only support for such a requirement is a citation to an opinion of two judges concurring in the denial of rehearing en banc in *Secure Axcess, LLC v. PNC Bank Nat'l Ass'n*, 859 F.3d 998, 1003 n.4 (Fed. Cir. 2017).[4] *See* PO Resp. 48. Further, the question is not whether a claim recites a "technological feature" per se, but rather whether the claim recites a "technological feature" that is novel and unobvious over the prior art.

Certainly, as both parties and their declarants recognize, claim 1 recites a number of technical components, namely an overall "computerized

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[4] The underlying decision of the U.S. Court of Appeals for the Federal Circuit in *Secure Axcess, LLC v. PNC Bank Nat'l Ass'n*, 848 F.3d 1370 (Fed. Cir. 2017), was vacated as moot by the Supreme Court in *PNC Bank Nat'l Ass'n v. Secure Axcess, LLC*, 138 S. Ct. 1982 (2018).

system" and a "processor," "GUI," and "API." *See id.* at 46; Reply 22;
Ex. 1004 ¶ 112; Ex. 2001 ¶ 107. All of those components, however, are
recited in generic terms and were known in the prior art. *See* Ex. 1004
¶¶ 36, 39, 40, 112–113; Exs. 1008–11; Ex. 2001 ¶ 107 (Mr. Weiner
testifying that "it is true that such components, individually, were known in
2002"). Nor do the various recitations of the GUI and API "receiving" and
"providing" information in claim 1 qualify as a novel and unobvious
technological feature, as it was known for such components to communicate
information in general. *See* Ex. 1004 ¶¶ 50, 78, 114–115. Claim 1 also does
not recite any "display" as Patent Owner contends, and a "hidden program
account" is simply a type of payment account, not a technical component.
See PO Resp. 46–47; *supra* Section II.B (interpreting "program account"
to mean "a payment account associated with the loyalty program that is
accepted by the vendor system, such as a cash account or credit card").

All that is left in the claim is the positioning of the GUI and API
between the participant/program and vendor system to facilitate the purchase
transaction (via communicating the specific items of information back and
forth). The only functions attributed to the GUI and API as so positioned,
however, are communicating information with other components. Claim 1,
as well as the written description of the '087 patent, does not include any
detail as to the technical means by which the information is communicated
or how the GUI and API are programmed to perform the recited receiving
and providing. *See* Ex. 1004 ¶¶ 60, 113–114, 118 (testifying that the
'087 patent does not describe "any special purpose computer code,
structures, software, or equipment for the recited computer and networking
components"). We do not see how the recited communication of program
account information, participant-related information, and vendor-related

information is any different than the standard way GUIs and APIs were known to communicate information in general.

Finally, relying on the GUI limitations of claim 1, Patent Owner argues that Congress specifically intended to exclude patents directed to "novel software tools and graphical user interfaces" from covered business method patent review, noting one statement that "[v]ibrant industries have developed around the production and sale of these tangible inventions." PO Resp. 52–54 (emphasis omitted; quoting 157 Cong. Rec. S5433). According to Patent Owner, claim 1 recites details of how the GUI is used because the GUI displays "vendor-related information to the participant" so that the participant can "make a purchase selection." *Id.* at 53.

Claim 1, however, only recites that the GUI "receiv[es]" vendor-related information from the API and "provid[es]" that information to the participant, such that "from the perspective of the participant, the participant uses the GUI to conduct a purchase transaction with the vendor system based in whole or in part on the points in the participant's point account." Ex. 1001, col. 9, ll. 1–8. The claim does not include any further limitations regarding how the vendor-related information would be organized or displayed when provided to the participant. Notably, this is unlike the case cited by Patent Owner in support of its position, *IBG LLC v. Trading Techs. Int'l, Inc.*, 757 F. App'x 1004, 1007 (Fed. Cir. 2019), where the Federal Circuit determined that the challenged patents were for technological inventions that improved prior art GUIs "by displaying market depth on a vertical or horizontal plane, which fluctuates logically up or down, left or right across the plane as the market fluctuates." *See* PO Resp. 54. Claim 1 also does not include any limitations as to how the participant would interact with the GUI. The claim only recites that the participant

"uses" the GUI to conduct a purchase transaction, not, for example, that the participant uses the GUI to make a "selection" as Patent Owner contends. *See id.* at 53. We are not persuaded that the GUI limitations of claim 1 indicate that the '087 patent is for a technological invention.

We agree with Petitioner that claim 1 does not recite a technological feature that is novel and unobvious over the prior art.

b) *Solving a Technical Problem Using a Technical Solution*

Our determination that claim 1 does not recite a technological feature that is novel and unobvious over the prior art is sufficient to conclude that the '087 patent is not for a technological invention. Regardless, though, we also are persuaded that claim 1 does not solve a technical problem using a technical solution.

The '087 patent discloses a problem to be solved in the "Background of the Invention" section. Specifically, when a customer selects a reward for purchase using points, a loyalty program typically will obtain the product on the customer's behalf, but "[s]ome rewards are of a nature that human intervention is needed to redeem/fulfill a reward." Ex. 1001, col. 1, ll. 31–38. For example, a travel agent or airline employee may be needed to assist with the purchase of an airline ticket. *Id.* at col. 1, ll. 38–46. The '087 patent states that there was "an opportunity to eliminate the human intervention to redeem such rewards by allowing the customer to systematically redeem their points for rewards using redemption vendors that otherwise deal in currency." *Id.* at col. 1, ll. 47–53. Thus, the problem the '087 patent seeks to solve is the need for human intervention when redeeming rewards. As Petitioner points out, having to use a third-party organization to complete the purchase of certain rewards was "a business

problem, not a technical one," and the purported solution offered by the '087 patent similarly was not technical, as demonstrated by claim 1's recitation of generic computer components performing known functions. *See* Pet. 37–39; Ex. 1004 ¶¶ 60, 118–123.

Patent Owner argues that there were "technical obstacles that prevented reward programs from offering an electronic, computerized platform that permitted participants to communicate and interact directly with a vendor system via a network such as the Internet to redeem reward points while not revealing the nature of the transaction to the participant," and "[c]reating such an e-commerce platform faced purely technical problems as consumers needed to be able to redeem points with a vendor via the web." PO Resp. 51–52 (citing Ex. 2001 ¶¶ 115–118, 128–129); Sur-Reply 21. According to Patent Owner, using a "hidden program account" solved the problem of integrating a "web-based vendor system with a reward program" to allow a participant to make purchases using points "while hiding the nature of the transaction from the participant." PO Resp. 51–52 (emphasis omitted; citing Ex. 2001 ¶¶ 112, 115–118, 120).

Patent Owner, however, does not explain in sufficient detail what the alleged "technical obstacles" were or how those obstacles related to communications over the "Internet"/"web" or "web-based" systems. *See id.* Claim 1 does not recite any technical details as to how the various items of information are communicated between the recited components, such as communication over a network or the Internet. The '087 patent also contains minimal reference to Internet communication, and does not indicate that there was any Internet-related problem that prevented a participant from interacting with a vendor. *See* Ex. 1001, col. 4, ll. 1–4 ("participant 102 may use a communications link such as an Internet connection 110 to connect to"

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GUI 112), col. 5, ll. 3–8 ("vendor system 120 may be a third party goods
vendor on the Internet"), 51–55, 61–65 (GUI 112 receives participant-related
information from, and provides vendor-related information to, participant
102 "via the Internet or other means"). Rather, as described in the
"Background of the Invention" section, the problem in the prior art
addressed by the '087 patent was the need for human intervention with
certain rewards, and the '087 patent allegedly solved that problem with a
GUI and API communicating information with the participant, program, and
vendor system as recited in claim 1. Finally, even if the problem could be
considered the need to conceal the nature of a purchase transaction from the
participant, we do not see how that would be a technical problem as opposed
to a business problem, as Patent Owner contends, given that it pertains only
to what would be displayed to the participant rather than how the transaction
is ultimately conducted. *See* Reply 23.

We agree with Petitioner that claim 1 does not solve a technical
problem using a technical solution.

3. Conclusion

For the foregoing reasons, we conclude that Petitioner has met its
burden to prove that the '087 patent is a "covered business method patent"
and is eligible for covered business method patent review.

D. Legal Standards

An invention is patent-eligible if it claims a "new and useful process,
machine, manufacture, or composition of matter." 35 U.S.C. § 101.
However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include
implicit exceptions: "[l]aws of nature, natural phenomena, and abstract

ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.,* the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent-ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent-eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191

("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id.* at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The Office published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance").[5] Under the Guidance, we first look to whether the claim recites:

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[5] We also have considered the October 2019 Patent Eligibility Guidance Update at https://www.uspto.gov/sites/default/files/documents/peg_oct_

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and

> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or

> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

E.   Asserted Ground Based on 35 U.S.C. § 101

1.   Claim 1

a)   Step 1: Statutory Category

Petitioner challenges claim 1 on the ground that the claim fails to recite patent-eligible subject matter under 35 U.S.C. § 101.[6] Pet. 46–71. We first determine "whether the claim is to a statutory category (Step 1)," namely a process, machine, manufacture, or composition of matter. Guidance, 84 Fed. Reg. at 53–54. Claim 1 of the '087 patent recites a computerized "system" that is statutory subject matter under § 101.

2019_update.pdf.

[6] In their papers filed during trial, the parties largely argue all of the challenged claims together. *See* PO Resp. 14–45; Reply 3–21; Sur-Reply 2–19. We discuss those arguments in the context of claim 1, and note any relevant differences with respect to the other claims below.

b) *Step 2A, Prong 1: Whether the Claim Recites an Abstract Idea*

Under Step 2A, Prong 1 of the Guidance, we must determine whether claim 1 recites limitations that fall within any of the recognized categories of abstract ideas. The Guidance identifies certain groupings of abstract ideas that have been recognized under the case law: mathematical concepts, certain methods of organizing human activity, such as fundamental economic principles or practices, and mental processes. Guidance, 84 Fed. Reg. at 52. As part of this inquiry, we must examine the relevant limitations in the context of the claim language as a whole. *Alice*, 573 U.S. at 218 n.3. "The § 101 inquiry must focus on the language of the [a]sserted [c]laims themselves." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) ("[T]he important inquiry for a § 101 analysis is to look to the claim.").

> Petitioner argues that the challenged claims are directed to
>
> facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency).

Pet. 48. Petitioner addresses each of the limitations of claim 1 and explains how they support Petitioner's contention that the claim, as a whole, is directed to the alleged abstract idea. *Id.* at 52–57. According to Petitioner and Mr. Knowles, the "concept of brokering an exchange between two participants using different forms of currency is a fundamental economic practice." *Id.* at 48; *see* Ex. 1004 ¶¶ 28–31, 130. Petitioner's analysis is

consistent with the language of claim 1, supported by the testimony of Mr. Knowles, and persuasive based on the full record developed during trial.

Beginning with the preamble, claim 1 recites the two entities involved in the transaction being facilitated ("a participant of a program which awards points to the participant" who has a "point account" and "a vendor system which transacts purchases in currency"), as well as the overall purpose of the system ("permitting the participant to transact a purchase using . . . awarded points with a vendor system which transacts purchases in currency"), which mirrors the alleged abstract idea. *See* Pet. 54–55. The transaction is facilitated by transfers of information between the participant, vendor system, and two intermediaries (the GUI and API),[7] as reflected in the five "wherein" clauses of claim 1:[8]

> wherein said GUI includes instructions for *receiving* participant-related information from the participant and *providing* the received participant-related information to the API;
>
> wherein said GUI includes instructions for *receiving* information regarding the program account hidden from the participant and for *providing* the received program account information to the API;

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[7] As explained further below in the context of Step 2A, Prong 2 and Step 2B of the Guidance, claim 1 recites that the system comprises a "processor" including instructions for defining a GUI for "providing an interface between the participant and the API and for communicating with the program" and an API for "interfacing with the vendor system." Ex. 1001, col. 8, ll. 43–50; *see infra* Sections II.E.1.c–d. The GUI and API act as intermediaries between the participant and vendor system to facilitate the transaction between the two entities, as shown in Figure 2 of the '087 patent reproduced above. *See* Pet. 55–56.

[8] Claim 1 appears to have a typographical error in the last "wherein" clause, reciting "nstructions" instead of "instructions."

wherein said API is adapted to *receive* the participant-related information and the program account information from the GUI and adapted to *provide* the received participant-related information and the received program account information to the vendor system;

wherein said API is adapted to *receive* vendor-related information from the vendor system and adapted to *provide* the received vendor-related information to the GUI; and

wherein said GUI includes nstructions for *receiving* vendor-related information from the API and for *providing* the received vendor-related information to the participant.

Ex. 1001, col. 8, l. 51–col. 9, l. 4 (emphases added). These communications are what facilitates the transaction between the participant and vendor system. *See* Pet. 55–56. In other words, by "receiving" and "providing" the recited information ("participant-related information," "program account information," and "vendor-related information"), the various components obtain the information necessary to complete the transaction. *See id.*

Claim 1 also recites "a *program account* hidden from the participant connected to the program *for use in currency transactions*." Ex. 1001, col. 8, ll. 46–47 (emphases added). We interpret "program account" to mean a payment account associated with the loyalty program that is accepted by the vendor system, such as a cash account or credit card. *See supra* Section II.B. The recited program account is simply the mechanism by which the vendor system is paid in currency for the transaction being facilitated, as recited later in the claim.[9] *See* PO Resp. 33 ("The hidden program account

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[9] The '087 patent discloses that a program account can be, for example, a cash account, shadow credit card 118, credit card, debit card, or "other means of payment." Ex. 1001, col. 4, ll. 33–41. Dependent claims 4, 8, 12, and 15 recite that the program account is a "shadow credit card."

is used to pay the vendor in currency following a transaction.").

Specifically, claim 1 recites:

> such that from the perspective of the participant, the participant uses the GUI to *conduct a purchase transaction with the vendor system* based in whole or in part on the points in the participant's point account; and

> such that from the perspective of the vendor system, the vendor system *conducts the purchase transaction* with the participant as a currency transaction based on the program's program account hidden from the participant whereby the participant is not aware that *the purchase transaction with the vendor system is being transacted* using program account.

Ex. 1001, col. 9, ll. 5–15 (emphases added). These clauses recite a final step of actually conducting the facilitated transaction between the participant and vendor system. *See* Pet. 57.

Petitioner has shown persuasively that, by virtue of the limitations reproduced above, claim 1, as a whole, recites facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). *See id.* at 48, 52–57.

Petitioner also has shown persuasively that the limitations of claim 1 identified above amount to a fundamental economic practice long prevalent in commerce. Petitioner asserts that "the concept of a loyalty program exchanging award points for a product or service" was performed previously with a human intermediary, citing the description in the "Background of the Invention" section of the '087 patent of how a loyalty program could purchase an airline ticket through a travel agent or airline employee on behalf of a participant and how the necessary points for the purchase would

be deducted from the participant's point account. *Id.* at 60 (citing Ex. 1001, col. 1, ll. 43–46, 49–53); *see supra* Section II.C.2.b (addressing the problem to be solved of avoiding the need for such human intervention).

Consistent with that disclosure, Mr. Knowles describes based on his personal knowledge[10] how, prior to the '087 patent, a participant could purchase a flight using points by interacting with a human intermediary at a loyalty program call center. Ex. 1004 ¶ 30. According to Mr. Knowles, the participant would speak with an airline agent at the call center via telephone and request to redeem points, and the airline agent would use a CRS, such as Sabre or Worldspan, to search for and book a flight for the participant as requested. *Id.* Mr. Knowles also testifies that points could be redeemed for travel by interacting with a human travel agent unaffiliated with a loyalty program, explaining in detail how such a transaction would be completed financially. *Id.* ¶ 31. A travel agent would fill out and submit an online form to an agency host system, which would send the data to a Global Distribution System (GDS), which, in turn, would request inventory information from one or more airline CRSs. *Id.* The returned information (e.g., schedules, airlines, fares) would be returned on a web page to the travel agent, who would select a particular flight, initiating the same sequence of communications with the agency host system, GDS, and CRS.

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[10] Mr. Knowles attests that he has over 30 years of travel industry experience, 13 years of experience "guid[ing] the development of unique new loyalty programs, products, strategies and services," and an "[i]ntimate technology background" with various related computer systems. *See* Ex. 1004 ¶¶ 1–9; Ex. 1005, 1. Mr. Knowles also cites various supporting materials describing known ways of communicating with central reservation systems (CRSs) like Sabre. Ex. 1004 ¶¶ 32–34, 137 (citing Exs. 1006, 1007, 1011).

Id. Once the selected flight was acquired, the travel agent would receive notification in another web page and,

> [i]f the customer wanted to redeem points, the [agency host system] would calculate the number of points required for the cost of the transaction and the agent would communicate the points required to the customer. If the customer approved, the agent would notify the customer's loyalty program and direct it to reduce the customer's point balance by the specified amount and facilitate the transaction via the webpage. The travel agency's system would notify the airline that payment would be made via Airlines Reporting Corporation ("ARC"). The travel agency system would request a ticket and the airline would issue a ticket number, and the following week ARC would settle the transaction by billing the travel agency's payment account for the amount of the transaction (as well as for any other transactions that occurred during the billing period). Separately, the travel agency would invoice the loyalty program for the amount paid to the airline.

Id. ¶ 31; *see also* Tr. 33:1–34:24, 38:23–39:8 (Patent Owner agreeing that prior to the '087 patent, "the human agent would work through the Sabre system to go out and find flights" and "convey the flight information back to the person," "the person would finally pick the flight that they wanted, and when they picked the flight they wanted, the agent would then have to buy the ticket through Sabre" using "an account of the loyalty program provider" that is "not accessible by the participant," i.e., "[n]ot the participant's account").

According to Mr. Knowles, "providing means for a vendor system to be paid in a currency acceptable to the vendor system is a fundamental economic practice long used by loyalty programs that purchase goods or services on behalf of a participant redeeming awarded points." Ex. 1004 ¶ 130. The GUI in claim 1 takes the place of the human acting as an intermediary, communicating with both the participant and the vendor (via

the API) to complete the transaction. Indeed, according to Mr. Knowles, if the GUI in claim 1 were replaced with a human agent, "claim 1 would recite the standard practice of loyalty program call centers prior to the launch of loyalty program websites, where airline agents in call centers and travel agents used computer systems to interact with CRSs (via the CRS's API) and purchase tickets on behalf of loyalty program participants." *Id.* ¶ 137.

We agree with Petitioner that claim 1 is analogous to various other cases where claims were found to be directed to a fundamental economic practice. *See* Pet. 48–52, 61–65. For example, the claims in *Bilski* were directed to "hedging against economic risk," and "[i]n both *Bilski* and the '087 [p]atent, the purported invention facilitated a transaction between two transaction participants having different commercial characteristics (i.e., risk positions or forms of value)." *Id.* at 61–62. Also, similar to the claims at issue in *Alice*, which were directed to "using a third-party intermediary to mitigate settlement risk" where the intermediary used "shadow records" for the parties' accounts, claim 1 of the '087 patent recites using a GUI as an intermediary to allow a participant to redeem points for a purchase from a vendor system that transacts in currency, using a program account "hidden" from the participant for the currency transaction. *Id.* at 62–64. In *Kroy IP Holdings, LLC v. Safeway, Inc.*, 107 F. Supp. 3d 677, 681, 691 (E.D. Tex. 2015) (Bryson, J.), *aff'd*, 639 F. App'x 637 (Fed. Cir. 2016), the claims were directed to "conducting in[c]entive programs and fulfilling the awards in those programs," which the district court found "indistinguishable in principle from the kinds of financial or business operations that were at issue in *Bilski* and *Alice*." *See* Pet. 3, 51–52.

In *Loyalty Conversion Systems Corp. v. American Airlines, Inc.*, 66 F. Supp. 3d 829, 837–40 (E.D. Tex. 2014) (Bryson, J.), the district court

found that the claims at issue were "directed to the conversion of loyalty award points of one vendor into loyalty award points of another," i.e., "currency exchange." Similar to claim 1 of the '087 patent, the claims at issue in that case recited communications between various computers (e.g., a loyalty program "computer" serving web pages rendered as a "graphical user interface" and "one or more remotely located client machines") and "convert[ing]" between "non-negotiable credits" and "entity independent funds" at a "fixed credits-to-funds conversion ratio" to complete a purchase of goods or services using points. *See id.* at 832–834. As Petitioner points out, the transaction facilitated in claim 1—a purchase by a participant using points from a vendor system transacting purchases in currency—"is, at its core, an exchange of one form of value for another," just as in *Loyalty Conversion. See* Pet. 50 (citing Ex. 1004 ¶¶ 130–131).

Patent Owner argues that Petitioner oversimplifies the claim and fails to account for the transaction being conducted using a program account "hidden" from the participant. PO Resp. 18–29 (citing Ex. 2001 ¶¶ 57, 105, 108–112, 116, 117, 133, 136); Sur-Reply 7–12. Patent Owner argues that claim 1 is more than the alleged abstract idea because it "permits direct interaction between a reward program participant and a third party currency-only vendor computer system or web-based platform so a participant can redeem points for goods/services *without knowing that the actual transaction is a currency transaction at less than the perceived price.*" PO Resp. 20; *see also id.* at 24 (arguing that "the participant believes he is . . . receiving a perceived value higher than the price actually paid"). According to Patent Owner, "[t]his is accomplished through the use of a hidden program account that, through the GUI and API, pays the vendor while keeping the participant unaware as to the value of the currency

transaction." *Id.* at 20. Patent Owner contends that concealing the nature of the transaction from the participant is necessary for the reward program to be profitable while at the same time providing "perceived value" to the participant. *Id.* at 25. Relying on testimony from Mr. Weiner, Patent Owner asserts:

> In order to achieve profitability and provide the highest perceived value to its customers (and thus drive loyalty), a loyalty reward website purchases the goods or services from the vendor at a *lower* price than what the participant believes he or she is actually paying. For instance, a loyalty program might advertise a $5 reward as being available to a participant for five points. The loyalty program would then negotiate with a web-based vendor to make the actual purchase of that reward at a lower cost, for example $2.50, allowing the loyalty program to offer a perceived $5 value to the participant for only $2.50 in cost to the loyalty program. If the participant saw the actual price paid by the loyalty program, the participant's perception of the value being offered would diminish and the program would be less impactful and, ultimately, less successful. This critical aspect to have a successful online loyalty program that allows a participant to interact directly with the vendor is not possible without the hidden program account required by the Challenged Claims.

Id. at 7–8 (citations omitted); *see* Ex. 2001 ¶¶ 57–58.

Patent Owner's arguments regarding concealing the value of the transaction from the participant are premised on claim 1's recitations that the program account is "hidden from the participant" and that "from the perspective of the participant," the purchase transaction is conducted based on points, whereas "from the perspective of the vendor system," the purchase transaction is conducted "as a currency transaction based on the program's program account hidden from the participant whereby the

participant is not aware that the purchase transaction with the vendor system is being transacted using program account." PO Resp. 21–22.

We have reviewed Patent Owner's arguments and supporting testimony of Mr. Weiner, and we do not find them persuasive. As an initial matter, we note that Patent Owner's arguments are not commensurate in scope with claim 1 because the claim does not include any requirement that the *value* of the transaction be concealed from the participant. Instead, the claim only requires that the *program account itself* be hidden from the participant, such that the participant is unaware of how the transaction actually is being conducted with the vendor system (i.e., in currency using the program account, as opposed to in points using the point account). Nor does the Specification of the '087 patent ever mention a "perceived" price or value, concealing from the participant that the actual currency transaction is less than the "perceived" value, or negotiating a particular points-to-currency ratio with vendors to ensure profitability. *See* Reply 5–6, 11. Indeed, as explained above, the '087 patent describes avoiding the need for human intervention when redeeming points for goods and services as the problem to be solved, not any problems associated with pricing based on points and currency. *See supra* Section II.C.2.b.

Moreover, the "program account" recited in claim 1, the existence of which is "hidden" from the participant, is simply a payment account used to pay the vendor system in currency for the transaction that is being facilitated. *See* Pet. 52. Likewise, the "information regarding the program account hidden from the participant" recited in claim 1 is merely information about that account, such as a credit card number or debit card number, that is provided to the vendor system to complete the transaction. *See id.* at 52–53; Ex. 1004 ¶ 132. That the account exists but is "hidden" from the participant

34

does not remove the claim from the realm of abstract ideas. *See* Pet. 52–53;
Reply 12; *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir.
2018) (holding that it "does not matter to [the conclusion that the claim is
directed to an abstract idea] whether the information here is information
about real investments," as "even if a process of collecting and analyzing
information is 'limited to particular content' or a particular 'source,' that
limitation does not make the collection and analysis other than abstract"
(citation omitted)). Further, the last two clauses of claim 1 that recite how
the transaction is viewed from the perspectives of the participant and vendor
system, respectively, merely express the "non-physical result" of the
information transfers and confirm the abstract nature of the claimed subject
matter. *See* Pet. 57. In fact, as to the vendor system clause, the
Specification indicates that the vendor system transfers information no
differently than it would for any other transaction. *See* Ex. 1001, col. 7,
ll. 15–18 (disclosing that vendor system 208 responds to purchase request
216 "in the same way that it would respond to any other purchase request
from a consumer that presents a credit card").

Although Patent Owner seeks to distinguish *Alice* as involving claims
bearing "no resemblance" to claim 1 of the '087 patent, PO Resp. 27,
we disagree and find the case highly relevant to Patent Owner's arguments
regarding the "hidden" program account. The claims in *Alice* were
"designed to facilitate the exchange of financial obligations between two
parties by using a computer system as a third-party intermediary." 573 U.S.
at 213. The intermediary created "shadow" credit and debit records known
only to the intermediary (not the parties to the transaction), updated those
records, and communicated with financial institutions to carry out the

transaction in accordance with those "shadow" records. *Id.* at 213–214.

The Supreme Court concluded that the claims were thus

> directed to an abstract idea. Petitioner's claims involve a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk.   The intermediary creates and updates "shadow" records to reflect the value of each party's actual accounts held at "exchange institutions," thereby permitting only those transactions for which the parties have sufficient resources. At the end of each day, the intermediary issues irrevocable instructions to the exchange institutions to carry out the permitted transactions.

Id. at 219. The Supreme Court held that the claims were "drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk," which was a fundamental economic practice. *Id.*

Similar to *Alice*, where the claims involved "shadow" records known only to a computer system intermediary, rather than the parties to a transaction, and conducting the transaction in accordance with those "shadow" records, claim 1 recites a program account known to a computer system intermediary (i.e., the GUI) but "hidden" from one of the parties to a transaction (i.e., the participant, who views the transaction as being conducted based on points rather than currency from his or her perspective) and conducting the transaction in accordance with that "hidden" program account (i.e., using the program account, which is for currency transactions, to pay the vendor system that only transacts purchases in currency). The fact that the program account is "hidden" from the participant does not mean that the claim does not recite an abstract idea, just as the fact that the "shadow" records were unknown to the parties in *Alice* did not negate the claims reciting intermediated settlement.

Finally, even accepting Patent Owner's argument that the "hidden" program account is designed to permit point redemption while concealing from the participant that the actual value is less than the perceived value, the ultimate transaction being facilitated is still the same—making a purchase using points with a vendor system that transacts purchases in currency. *See* PO Resp. 20, 24; Sur-Reply 2–4, 10–12. The limitations of claim 1 addressed above still recite facilitating a purchase between the participant using points and the vendor system using currency, regardless of whether the actual value of the purchase is identical to or different from what the participant perceives. Facilitating a purchase transaction in either case is still a fundamental economic practice. *See* Reply 8–13; Ex. 1004 ¶¶ 130–131; *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378–79 (Fed. Cir. 2017) (concluding that the claims at issue were directed to "local processing of payments for remotely purchased goods," which was a fundamental economic practice); *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1054 (Fed. Cir. 2017) (concluding that the claims at issue were directed to "processing an application for financing a purchase," which was a fundamental economic practice).

Based on the full record developed during trial, we are persuaded that claim 1 recites facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). Doing so is a fundamental economic practice, which is one of the certain methods of organizing human activity identified in the Guidance, and, thus, an abstract idea.

c) *Step 2A, Prong 2: Whether the Judicial Exception is Integrated Into a Practical Application*

The Supreme Court has long distinguished between abstract ideas themselves (which are not patent-eligible) and the integration of those abstract ideas into practical applications (which are patent-eligible). *See, e.g.*, *Alice*, 573 U.S. at 217 (explaining that "in applying the § 101 exception, we must distinguish between patents that claim the 'buildin[g] block[s]' of human ingenuity and those that integrate the building blocks into something more" (quoting *Mayo*, 566 U.S. at 89), and stating that *Mayo* "set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts"); *Mayo*, 566 U.S. at 80, 84 (noting that the Court in *Diehr* found "the overall process patent eligible because of the way the additional steps of the process integrated the equation into the process as a whole," but the Court in *Benson* "held that simply implementing a mathematical principle on a physical machine, namely a computer, was not a patentable application of that principle"). The Federal Circuit likewise has distinguished between claims that are "directed to" a judicial exception (which require further analysis to determine their eligibility) and those that are not (which are therefore patent-eligible). *See, e.g.*, *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–16 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

Consistent with Supreme Court and Federal Circuit precedent, the Guidance provides that, if a claim recites an abstract idea, it must be further analyzed to determine whether the recited judicial exception is integrated into a practical application. Guidance, 84 Fed. Reg. at 53. Specifically, under Step 2A, Prong 2 of the Guidance, a claim reciting an abstract idea is

not "directed to" the abstract idea "if the claim as a whole integrates the recited judicial exception into a practical application of that exception." *Id.* Step 2A, Prong 2 is evaluated by "(a) [i]dentifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application." *Id.* at 54–55. "A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." *Id.* at 53.

Petitioner has shown persuasively that claim 1 does not integrate the recited abstract idea into a practical application. One example in which a judicial exception may be integrated into a practical application is when the claim includes "[a]n additional element [that] reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field." *Id.* at 55. We do not find additional elements in claim 1 that would reflect any such improvement. *See* Pet. 38, 53–54; Reply 14–16. The claim recites only generic computer components, namely a "processor," "GUI," and "API." The functionality of those components is recited at a high level of generality. The GUI and API merely communicate certain "information" back and forth with the participant, program, and vendor system, and the participant "uses" the GUI to conduct the transaction. No further technical detail as to how the transaction is accomplished is recited. The Specification of the '087 patent also does not describe the GUI and API as being anything more than generic in nature. *See, e.g.*, Ex. 1001, col. 6, l. 8–col. 7, l. 9 (describing GUI 204, shown in Figure 2 above, as
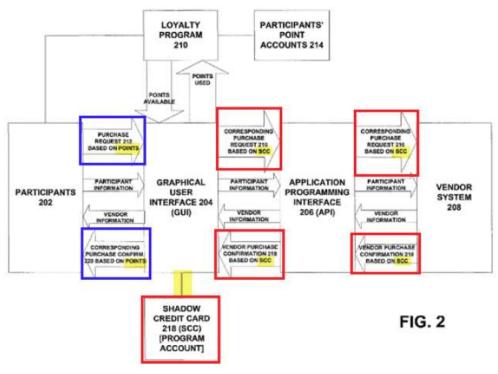
39

exchanging information with participant 202, loyalty program 210, and API 206), col. 7, ll. 9–14 (describing API 206 as exchanging information with GUI 204 and vendor system 208, and disclosing that API 206 performs its "standard function" of transmitting information to a vendor system). The recitation of the GUI and API in generic terms in claim 1 and the similar description in the Specification indicate that the abstract idea recited in the claim is not integrated into a practical application. *See Kroy*, 107 F. Supp. 3d at 692 (determining that "[t]he role of the computer in the claims . . . is limited to the basic functions of a generic computer, including storing, transmitting, and displaying information," and "[n]othing in the claims purports to improve the functioning of the computer itself"); *Loyalty Conversion*, 66 F. Supp. 3d at 841 (determining that "[t]he role of the computer in the claims . . . is limited to the basic functions of a generic computer, including storing and displaying information," and "[n]othing in the claims purports to improve the functioning of the computer itself").

Other examples in which a judicial exception may be integrated into a practical application are when "an additional element implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim," "an additional element effects a transformation or reduction of a particular article to a different state or thing," and "an additional element applies or uses the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception." Guidance, 84 Fed. Reg. at 55. We do not find any such additional elements in claim 1.

An example in which a judicial exception is *not* integrated into a practical application is the mere use of "a computer as a tool to perform an abstract idea." *Id.*; *see Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (finding that "the focus of the claims is not on . . . an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools"); *Enfish*, 822 F.3d at 1335–36 (determining whether the claims at issue were focused on a "specific asserted improvement in computer capabilities" or "a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool"). Petitioner argues that the GUI and API in claim 1 are "merely invoked as tools in transacting the purchase" between the participant and vendor system. Pet. 55–56; Reply 14–15. We agree. The five "wherein" clauses of claim 1 recite the GUI and API "receiving" and "providing" information, and it is those communications that facilitate the transaction. No further functionality is attributed to the GUI and API. Thus, the GUI and API are each merely invoked as a tool to perform the abstract idea.

Our conclusion also is supported by the '087 patent's description of the problem to be solved. As explained above, the '087 patent sought to avoid the need to use a human intermediary to redeem certain rewards. *See supra* Section II.C.2.b; Ex. 1001, col. 1, ll. 31–53. That was a business problem, not a technical problem. *See* Pet. 37–39; Ex. 1004 ¶¶ 60, 118–124. The '087 patent's purported solution to the problem—having a GUI and API act as an intermediary for the participant and vendor to facilitate the transaction, rather than a human being—similarly is not an improvement on technology, given the recitation of generic computer components in claim 1. *See id.*

Patent Owner argues that the limitations in claim 1 specifying "how the purchase transaction is accomplished (through the use of a *hidden program account*, such as a shadow credit card)" and "how the GUI and API interact with the rewards program and the participant to accomplish the points-based transaction" demonstrate integration into a practical application. PO Resp. 29–30 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014)); Sur-Reply 12–17. Patent Owner explains how the transaction occurs via communications between the various components, providing the following modified version of Figure 2 of the '087 patent (PO Resp. 30–34).

FIG. 2

Modified Figure 2 above depicts blue squares each indicating a "points based interaction" and red squares each indicating "an interaction based on the hidden program account." *Id.*

First, Patent Owner points to the various "hidden" program account limitations of claim 1, arguing that "the use of a hidden program account to

make a currency-based transaction that is *concealed from the participant . . .* integrates the invention into a practical application that solves real-world problems." *Id.* at 35–36 (citing Ex. 2001 ¶¶ 80–90, 112, 117–118). According to Patent Owner and Mr. Weiner, reward programs maintain profitability while providing "perceived value" to participants by negotiating lower prices with vendors (e.g., offering a participant a $5 reward for 5 points but actually purchasing the reward from the vendor for $2.50). *Id.* at 35 (citing Ex. 2001 ¶¶ 57–58). Patent Owner asserts that "[i]t is imperative for the success of a loyalty program to conceal the actual currency price paid for that gift card, so that the participant perceives greater value based on his redemption of points." *Id.* We are not persuaded that the "hidden" program account limitations of claim 1 show integration of the abstract idea into a practical application. The "hidden" program account is a payment account used to pay the vendor system in currency, not a technical component. Its existence is "hidden" from the participant such that from the participant's perspective, the transaction is being conducted using points rather than currency. This is accomplished by only communicating certain information with the participant (i.e., the interactions shown in blue in modified Figure 2 above). "At that level of generality, the [claim does] no more than describe a desired function or outcome . . . . The purely functional nature of the claim confirms that it is directed to an abstract idea, not to a concrete embodiment of that idea." *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269–70 (Fed. Cir. 2016).

Second, Patent Owner points to the limitations of claim 1 pertaining to the GUI communicating with other components, as shown in the modified version of Figure 2 above. PO Resp. 39–41. Patent Owner argues that the GUI "access[es] the participant's point account" and "displays the available

points to the participant so that the participant is able to determine whether he or she can afford to make a purchase," such that the recited interaction between "the GUI, the point account, and the participant" amounts to a practical application. *Id.* We do not agree. The GUI is recited only in terms of its basic functions, namely "receiving" and "providing" information to facilitate the transaction between the participant and vendor system, which is the abstract idea itself. Claim 1 recites using the GUI as a tool to communicate information with other components and complete the transaction (i.e., interactions for which a human intermediary previously was required), without any detail explaining how the GUI and its communications improve computer functioning.

Finally, we note that the instant facts with respect to claim 1 are distinguishable from those of the cases relied upon by Patent Owner. *See id.* at 23, 29–30; Sur-Reply 8–10. In *DDR Holdings*, 773 F.3d at 1257, the claims at issue did not "recite a fundamental economic or longstanding commercial practice" and, "[a]lthough the claims address[ed] a business challenge (retaining website visitors), it [was] a challenge particular to the Internet." 773 F.3d at 1257. The claims recited specific limitations reflecting the nature of the problem being solved, including, for example, multiple different web pages with associated links, a web browser, and computer components "in communication through the Internet with [a] host web page." *Id.* at 1248–50, 1257. The claims did not merely use the Internet to implement "an abstract business practice." *Id.* at 1258. Instead, the claims specifically recited "how interactions with the Internet are manipulated to yield a desired result" that "overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink." *Id.* Claim 1 of the '087 patent, by contrast, recites a

fundamental economic practice long prevalent in commerce, which is implemented using only generic computer components ("processor," "GUI," and "API") and transmitting information between those components, without any detail as to how those communications take place or how the communications are different from standard types of communications made by such components. A claim that recites "generalized steps to be performed on a computer using conventional computer activity" or "simply add[s] conventional computer components to well-known business practices" is directed to an abstract idea. *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) (quoting *Enfish*, 822 F.3d at 1338).

Similarly, in *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295, 1303 (Fed. Cir. 2019), the Federal Circuit determined that the claims at issue were not directed to an abstract idea because they "us[ed] a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network." Further, instead of merely "using a computer as a tool," the claims "improve[d] the technical functioning of the computer and computer networks by reciting a specific technique for improving computer network security." *Id.* at 1304. By contrast, the GUI and API recited in claim 1 are each used as a tool to facilitate the transaction and do not result in an improvement to the technical functioning of the claimed computerized system.

Based on the full record developed during trial, we are persuaded that claim 1 as a whole, looking at the additional limitations of the "processor," "GUI," "API," and "hidden" nature of the program account, does not

integrate the abstract idea into a practical application. Petitioner has proven that claim 1 is directed to facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency), which is a fundamental economic practice, one of the certain methods of organizing human activity identified in the Guidance.

d) Step 2B: Whether the Claim Provides an Inventive Concept

Under the second step of the *Alice* inquiry, we "scrutinize the claim elements more microscopically" for additional elements that might be understood to "'transform the nature of the claim'" into a patent-eligible application of an abstract idea. *Electric Power*, 830 F.3d at 1353–54 (quoting *Alice*, 573 U.S. at 217). That is, we determine whether the claims include "an 'inventive concept'–*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73). The relevant inquiry is whether "additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." *Accenture*, 728 F.3d at 1344–45 (internal quotations and citation omitted). If the claimed elements involve "well-understood, routine, [and] conventional activity previously engaged in," they do not include an "inventive concept." *Mayo*, 566 U.S. at 72–73. Notably, the patent eligibility inquiry may contain underlying issues of fact. *Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314,

1325 (Fed. Cir. 2016). In particular, "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

Consistent with the foregoing, under the Guidance, if a claim has been determined to recite a judicial exception at Step 2A, we must evaluate the additional elements individually and in combination at Step 2B to determine whether they provide an inventive concept (i.e., whether the additional elements amount to significantly more than the exception itself). Guidance, 84 Fed. Reg. at 56. We must consider in Step 2B whether an additional element or combination of elements: (1) "[a]dds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present," or (2) "simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present." *Id.*

Petitioner has shown persuasively that claim 1 does not recite any element or combination of elements that would transform the claim into a patent-eligible application of the alleged abstract idea. Claim 1 merely recites generic and conventional computer components (i.e., "processor," "GUI," and "API") and functionality for carrying out facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). *See* Pet. 65–67; *Alice*, 573 U.S. at 223 ("[T]he mere recitation of

a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention."); *DDR Holdings*, 773 F.3d at 1256 ("[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible."); *see also Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (holding that the claims at issue, which "recite[d] both a generic computer element—a processor—and a series of generic computer 'components' that merely restate their individual functions, . . . merely describe the functions of the abstract idea itself, without particularity," which is "not enough under step two"); *Mortgage Grader*, 811 F.3d at 1324–25 (holding that "generic computer components such as an 'interface' . . . do not satisfy the inventive concept requirement"). Those components also are recited in the claim (and described in the written description of the '087 patent) entirely in terms of what other components they communicate with and what information they exchange with those components to facilitate the transaction. *See* Pet. 67–69; *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1339–40 (Fed. Cir. 2017) (holding ineligible claims requiring "the use of 'intermediate computers'" where nothing in the claims "require[d] anything other than conventional computer and network components operating according to their ordinary functions"); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1319, 1321–22 (Fed. Cir. 2016) (holding ineligible a claim directed to a method of virus screening requiring use of an "intermediary computer in forwarding information").

Citing the unrebutted testimony of Mr. Knowles, disclosure in the '087 patent itself, and other supporting materials, Petitioner contends that the recited components and communications amount to only

well-understood, routine, and conventional activity, which is insufficient to demonstrate an inventive concept. Pet. 65–69. For example, Mr. Knowles testifies that "[p]rocessors were well-known to persons of ordinary skill in the art and were generally used to perform different types of processing in computerized systems," "GUIs were well-known to persons of ordinary skill in the art as a means by which a user could interact visually with a computer system using graphical elements such as windows, icons, menus, and pointers," and "APIs were well-known to persons of ordinary skill in the art and generally referred to software used to provide an interface between different computer components, as opposed to the GUI, which provided an interface between the computer and the user." Ex. 1004 ¶¶ 36, 39, 40 (citing Exs. 1008–1010). Further, the only functions that claim 1 requires the GUI and API be adapted to perform are "providing" information to and "receiving" information from the other components. These limitations likewise are recited generically, and the communication of information by GUIs and APIs was well-known in the prior art. *See id.* ¶¶ 39, 40, 50, 78, 113–115, 133–136; Ex. 1001, col. 7, ll. 9–11 (describing the transmission of information to a vendor system as a "standard function" of API 206).

Patent Owner argues that the combination of limitations recited in claim 1 does not amount to well-understood, routine, and conventional activity. PO Resp. 42–45 (citing Ex. 2001 ¶¶ 128–129, 134, 137); Sur-Reply 17–19. Again focusing on the recited "hidden" program account, Patent Owner contends that "no computerized system existed that permitted a reward program participant to access a web-based application using a GUI to redeem points via an API coupled to a currency-only vendor system using a hidden program account" due to "technical problems" for which no solution existed prior to the '087 patent. PO Resp. 43–44. As explained

above, however, the problem addressed by the '087 patent was the need for a human intermediary to facilitate certain reward purchases, which was a business, rather than technical, problem. *See supra* Section II.C.2.b. As to the recited GUI and API, the only functions attributed to the components are "receiving" and "providing" information and the participant "us[ing]" the GUI to conduct the transaction, which are the abstract idea itself, rather than additional elements that could transform the claim into a patent-eligible application of an abstract idea. *See supra* Section II.E.1.b; *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) ("[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.").

As to the "hidden" nature of the program account relied upon by Patent Owner, that is not a technical feature at all, as the "hidden" program account is simply a payment account used to pay the vendor system in currency, and the result of only communicating certain information to the participant is that from the participant's perspective, the transaction is being conducted in points rather than currency. *See supra* Sections II.B, II.E.1.b; *Affinity Labs*, 838 F.3d at 1271–72 (determining that the claims at issue did not provide an inventive concept where they were "result-focused" and "neither the claim nor the specification reveal[ed] any concrete way of employing a customized user interface"). Again, the instant facts are very similar to those of *Alice*, where the Supreme Court noted that

> [u]sing a computer to create and maintain "shadow" accounts amounts to electronic recordkeeping—one of the most basic functions of a computer. The same is true with respect to the use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are

"well-understood, routine, conventional activit[ies]" previously
known to the industry. In short, each step does no more than
require a generic computer to perform generic computer
functions.

573 U.S. at 225 (citations omitted). Similarly, maintaining a "hidden"
program account and using a generic computer component (i.e., the GUI) to
receive information regarding that account, as recited in claim 1, are
well-understood, routine, and conventional activities.

Patent Owner further argues that "Petitioner has made *no showing* that
. . . an API and GUI had ever been implemented in a program that rewards
points to a participant that can be redeemed to make currency-only
purchases by using the program account (such as a shadow credit card)
hidden from the participant." PO Resp. 44. "Eligibility and novelty are
separate inquiries," however. *Two-Way Media*, 874 F.3d at 1340 (citing
Affinity Labs of Texas, LLC v. DIRECTV, LLC, 838 F.3d 1253, 1263 (Fed.
Cir. 2016), for the "holding that 'even assuming' that a particular claimed
feature was novel does not 'avoid the problem of abstractness'"); *see SAP*,
898 F.3d at 1163 (holding that it is not "enough for subject-matter eligibility
that claimed techniques be novel and nonobvious in light of prior art,
passing muster under 35 U.S.C. §§ 102 and 103").

We determine that the limitations of claim 1, viewed individually and
as an ordered combination, merely use well-understood, routine, and
conventional computer components and functionality to implement
facilitating, or brokering, a commercial transaction (i.e., the sale and
purchase of goods and services) between a purchaser using a first form of
value (i.e., a rewards program participant using points in whole or part) and
a seller transacting in a second form of value (i.e., a vendor system which

transacts purchases in currency). Based on the full record developed during trial, we are persuaded that claim 1 does not provide an inventive concept.

e) Conclusion

Based on the full record developed during trial, we are persuaded by Petitioner's arguments and supporting evidence that, when considered individually and as an ordered combination, the elements of claim 1 do no more than apply a certain method of organizing human activity, namely facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency), which is a fundamental economic practice. *See Alice*, 573 U.S. at 217–18. In addition, we are persuaded that claim 1 does not recite anything in a manner sufficient to transform that abstract idea into a patent-eligible invention. *See id.* Petitioner has shown, by a preponderance of the evidence, that claim 1 is unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

2. Claims 2–15

Independent claims 5, 9, and 13 are very similar to claim 1, reciting the same basic components (i.e., "participant," "program account hidden from the participant," "GUI," "API," and "vendor system"), nearly identical steps of the GUI and API "receiving" and "providing" information (i.e., "participant-related information," "information regarding the program account," and "vendor-related information"), and nearly identical clauses for how the transaction is viewed from the "perspective[s]" of the participant

and vendor system. Petitioner provides a chart comparing these claims, asserts that they are directed to the same abstract idea as claim 1, and accounts for all of the various limitations in its § 101 analysis, with supporting testimony from Mr. Knowles. *See* Pet. 12–19, 46–71; Ex. 1004 ¶¶ 65–80. For example, whereas claim 1 recites a computerized system for permitting a participant to transact a purchase using awarded points with a vendor system that transacts purchases in currency, claim 5 recites a method for doing so with a plurality of participants, including many of the same limitations and adding the following:

> converting a purchase request from a participant based in whole or in part on points into a corresponding purchase request provided to the vendor system based on the program account information if the participant's point account has sufficient points to cover the purchase request; [and]

> causing the points for the purchase request to be deducted from the participant's point account in response to a received vendor purchase confirmation of the corresponding purchase request . . . .

Ex. 1001, col. 9, l. 66–col. 10, l. 8. Petitioner contends that these steps of converting a purchase request from one based on points into one based on currency and deducting the corresponding amount of points from the participant's point account are part of facilitating a commercial transaction between a purchaser using points and a seller transacting in currency, which is "the fundamental economic practice of facilitating a point redemption transaction." *See* Pet. 12–19, 58; Ex. 1004 ¶¶ 65, 127–137. We agree.

Both in its Patent Owner Response and Sur-Reply, Patent Owner argues the challenged independent claims together for purposes of the § 101 ground, citing, for example, similar limitations regarding the "hidden" program account in all of the independent claims. PO Resp. 21–22, 33, 41;

Sur-Reply 2–19. We disagree with those arguments for the reasons stated above. *See supra* Section II.E.1. For the reasons stated in the Petition, which we adopt, and supported by the testimony of Mr. Knowles, Petitioner has shown, by a preponderance of the evidence, that independent claims 5, 9, and 13 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

Petitioner also addresses the additional limitations of dependent claims 2–4, 6–8, 10–12, 14, and 15 in its Petition, explaining why the claims are directed to the same abstract idea as their underlying independent claims and explaining that they do not recite anything that would transform the abstract idea into a patent-eligible invention, again with supporting testimony from Mr. Knowles. *See* Pet. 58–59, 69–70; Ex. 1004 ¶¶ 82–84, 138–144. For example, similar to independent claim 5 addressed above, dependent claim 2 recites that the GUI includes instructions for "receiving a purchase request from the participant," "converting the received purchase request based on the points into a corresponding purchase request based on the program account," and "providing the corresponding purchase request based on the program account to the API."[11] Ex. 1001, col. 9, ll. 16–29. Petitioner contends that this amounts to "merely tak[ing] a currency exchange rate between points and cash and apply[ing] it to the purchase request," which is "an element of any fundamental brokerage transaction." Pet. 58; *see* Ex. 1004 ¶¶ 138–140, 142. We agree. Dependent claim 3 recites "converting the received vendor purchase confirmation based on the program account into a corresponding purchase confirmation based on the

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[11] Claims 6, 10, and 13 recite similar limitations.

points."[12] Again, similar to independent claim 5 addressed above, the step
of converting a vendor purchase confirmation from one based on currency
into one based on points is part of facilitating a commercial transaction
between a purchaser using points and a seller transacting in currency. *See*
Pet. 21–23, 58; Ex. 1004 ¶¶ 138, 141–142.

In its Patent Owner Response and Sur-Reply, Patent Owner largely
argues the challenged dependent claims together with the independent
claims for purposes of the § 101 ground, citing, for example, similar
limitations regarding the "hidden" program account, which may be a
"shadow credit card." *See* PO Resp. 21–22, 33–34, 37–38, 41–42;
Sur-Reply 2–19. We disagree with those arguments for the reasons stated
above. *See supra* Section II.E.1. With respect to claims 4, 8, 12, and 15,
which recite that "the program account is a shadow credit card," Patent
Owner argues that "many vendors only conduct transactions via credit card"
and "[u]sing a shadow credit card that is hidden from the participant . . .
gives the participant access to a credit card to interact with a currency-only
vendor, even if the participant is not credit worthy or not qualified to obtain
a credit card," allowing "100% participation by all participants" without the
need for credit checks. PO Resp. 37–38 (citing Ex. 2001 ¶ 117). We do not
see, however, how the program account being a credit card (as opposed to,
for example, a cash account or debit card) makes the claims any less
abstract. The recited program account is still merely the mechanism by
which the vendor system is paid in currency for the transaction being
facilitated. *See supra* Sections II.B (interpreting "shadow credit card"
to mean "a program credit card account that is hidden from the participant

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[12] Claims 7, 11, and 14 recite similar limitations.

55

of the program"), II.E.1.b. Nor does the "hidden" or "shadow" nature of the credit card show that the claims integrate the abstract idea into a practical application. *See supra* Section II.E.1.c.

For the reasons stated in the Petition, which we adopt, and supported by the testimony of Mr. Knowles, Petitioner has shown, by a preponderance of the evidence, that dependent claims 2–4, 6–8, 10–12, 14, and 15 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

F. Motion to Amend

Pursuant to 35 U.S.C. § 326(d)(1) and 37 C.F.R. § 42.221(a), Patent Owner moves to replace claims 1, 4, 5, 8, 9, 12, 13, and 15 of the '087 patent with proposed substitute claims 16–23. Mot. 1. The Motion is contingent on our determination as to whether a preponderance of the evidence establishes that claims 1, 4, 5, 8, 9, 12, 13, and 15 of the '087 patent are unpatentable. *Id.* As discussed above, we determine that original claims 1–15 of the '087 patent have been shown to be unpatentable by a preponderance of the evidence. *See* Section II.E. Therefore, we proceed to address Patent Owner's contingent Motion to Amend.

Patent Owner provides a declaration from Mr. Weiner in support of its Motion to Amend (Exhibit 2005). Petitioner did not cross-examine Mr. Weiner or submit any declarant testimony of its own in support of its Opposition to the Motion to Amend.

1. Proposed Substitute Claims

Patent Owner seeks to substitute claims 16–23 for claims 1, 4, 5, 8, 9, 12, 13, and 15, respectively. Mot. 1, App'x A (claim listing). Claims

16, 18, 20, and 22 are independent. Claim 16 recites (with underlining indicating language added to claim 1 and brackets indicating language removed from claim 1):

16. (substitute for claim 1) A computerized system for use by [[a]] participants of a program which awards points to the participants, wherein the awarded points for each participant are maintained in a point account for the respective participant, said system for permitting [[the]] each participant to transact a purchase using the respective awarded points with a vendor system which transacts purchases in currency, said system comprising a processor including instructions for defining:

an application programming interface (API) for interfacing with the vendor system;

a program account hidden from the participants connected to the program for use in currency transactions;

a program database storing information about the program including a listing of the point accounts of the participants;

a graphical user interface (GUI) for providing an interface between the participants and the API and for communicating with the program, wherein the GUI is configured so that the participants can connect to the GUI using an internet connection;

wherein said GUI includes instructions for receiving participant-related information from [[the]] each participant via the internet connection and providing the received participant-related information to the API;

wherein said GUI includes instructions for receiving information regarding the program account hidden from the participants and for providing the received program account information to the API;

wherein said API is adapted to receive the participant-related information and the program account information from the GUI and adapted to provide the received participant-related information and the received program account information to the vendor system;

57

wherein said API is adapted to receive vendor-related information from the vendor system <u>in a format of the vendor system</u> and adapted to provide the received vendor-related information to the GUI; [[and]]

wherein said GUI includes <u>i</u>nstructions for receiving vendor-related information from the API<u>, for converting the received vendor-related information from the format of the vendor system into a format of the GUI,</u> and for providing the received vendor-related information to the participants<u> in the format of the GUI via the internet connection</u>;

<u>wherein the computerized system is configured to use the program account to complete purchase transactions with the vendor system based on participant-related information received from the participants via the internet connection including purchase requests based on points; and</u>

<u>wherein in response to each completed purchase transaction, the computerized system is configured to store an indication of the completed purchase transaction in the program database and display an order message indicating the completion of the purchase transaction to the respective participant;</u>

such that from the perspective of the participant<u>s</u>, the participant<u>s</u> use[[s]] the GUI to conduct [[a]] <u>the</u> purchase transaction<u>s</u> with the vendor system based in whole or in part on the points in [[the]] <u>each</u> participant's point account; and

such that from the perspective of the vendor system, the vendor system conducts the purchase transaction<u>s</u> with the participant<u>s</u> as [[a]] currency transaction<u>s</u> based on the program's program account hidden from the participant<u>s</u> whereby the participant<u>s</u> [[is]] <u>are</u> not aware that the purchase transaction<u>s</u> with the vendor system [[is]] <u>are</u> being transacted using <u>the</u> program account.

Id. at 2–4. Claim 22 recites (with underlining indicating language added to claim 13 and brackets indicating language removed from claim 13):

22. (substitute for claim 13) A computerized system for permitting a participant to transact a purchase using awarded points with a vendor system which transacts purchases in

currency, said system comprising a processor including instructions for defining:

a loyalty program which awards points to a participant, wherein the awarded points are maintained in a point account for the participant;

an application programming interface (API) for interfacing with the vendor system;

a program account hidden from the participant connected to the program for use in currency transactions;

a program database storing information about the loyalty program including a listing of point accounts of a plurality of users of the loyalty program including the participant;

a graphical user interface (GUI) for providing an interface between the participant and the API and for communicating with the program, wherein the GUI is configured so that the participant can connect to the GUI using an internet connection;

wherein said GUI includes instructions for:

receiving participant-related information from the participant via the internet connection and providing the received participant-related information to the API;

receiving a purchase request from the participant via the internet connection to conduct a purchase with the vendor system based on the points in the participant's point account;

receiving information regarding the program account hidden from the participant from the loyalty program;

converting the received purchase request based on the points into a corresponding purchase request based on the program account information if the point account has sufficient points to cover the purchase; [[and]]

providing the corresponding purchase request based on the program account information to the API wherein the API is adapted to receive the corresponding purchase request from the GUI and provide the received corresponding purchase request to the vendor system as a

purchase request based on the program account information;

based on the purchase request, completing a purchase transaction with the vendor system on behalf of the participant using the program account;

receiving a vendor purchase confirmation from the vendor system, the vendor purchase confirmation comprising a record of the order being successfully placed based on the program account information; and

in response to receiving the vendor purchase confirmation:

storing an indication of the completed purchase transaction in the program database; and

displaying an order message to the participant indicating the completion of the purchase transaction;

wherein said API is adapted to receive the participant-related information from the GUI and to provide the received participant-related information to the vendor system;

wherein said API is adapted to receive vendor-related information from the vendor system and provide the received vendor-related information to the GUI; and

wherein said GUI includes instructions for receiving vendor-related information from the API and providing the received vendor-related information to the participant via the internet connection;

such that from the perspective of the participant, the participant uses the GUI to conduct a purchase transaction with the vendor system based in whole or in part on the points in the participant's point account; and

such that from the perspective of the vendor system, the vendor system conducts the purchase transaction with the participant based on the loyalty program's program account hidden from the participant whereby the participant is not aware that the purchase transaction with the vendor system is being transacted using the program account;

wherein the API comprises an airline reservation system API and the vendor system comprises an airline reservation system; and

wherein the processor further includes instructions for providing another vendor system API for interfacing with another vendor system of a vendor that sells other goods or services, the other vendor system API being adapted to:

receive the participant-related information from the GUI and provide the received participant-related information to said other vendor system; and

receive vendor-related information from said other vendor system and provide the received vendor-related information from said other vendor system to the GUI.

Id. at 14–17.

2. *Statutory and Regulatory Requirements*

Before considering the patentability of proposed substitute claims in a motion to amend, we first determine whether the motion meets the statutory and regulatory requirements set forth in 35 U.S.C. § 326(d) and 37 C.F.R. § 42.221. *See Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 4 (PTAB Feb. 25, 2019) (precedential) ("*Lectrosonics*").[13]

a) *Reasonable Number of Substitute Claims*

A motion to amend may, "[f]or each challenged claim, propose a reasonable number of substitute claims." 35 U.S.C. § 326(d)(1)(B). "The

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[13] The *Lectrosonics* decision originated from an *inter partes* review. The decision, however, applies equally to a covered business method patent review because the statutory provisions and regulations that govern a motion to amend are identical in both types of proceedings. *Compare* 35 U.S.C. § 316(d) *and* 37 C.F.R. § 42.121, *with* 35 U.S.C. § 326(d) *and* 37 C.F.R. § 42.221.

presumption is that only one substitute claim would be needed to replace each challenged claim, and it may be rebutted by a demonstration of need." 37 C.F.R. § 42.221(a)(3). Patent Owner proposes eight substitute claims for eight of the original claims. Mot. 1. We determine that the number of proposed substitute claims is reasonable under 35 U.S.C. § 326(d)(1)(B) and 37 C.F.R. § 42.221(a)(3).

b) Responding to a Ground of Unpatentability

"A motion to amend may be denied where . . . [t]he amendment does not respond to a ground of unpatentability involved in the trial." 37 C.F.R. § 42.221(a)(2)(i). In its proposed substitute claims, Patent Owner adds limitations to every original claim being replaced and explains how the proposed substitute claims are patent-eligible under 35 U.S.C. § 101, the sole ground of unpatentability involved in the trial. Mot. 1, 8–30, App'x A. We determine that the amended language in the proposed substitute claims is responsive to the ground of unpatentability involved in this trial under 37 C.F.R. § 42.221(a)(2)(i).

c) Scope of the Proposed Substitute Claims

A motion to amend "may not enlarge the scope of the claims of the patent." 35 U.S.C. § 326(d)(3); *see* 37 C.F.R. § 42.221(a)(2)(ii). Patent Owner argues that "no substitute claim enlarges the scope of the claim that it replaces in any respect" because the proposed substitute claims only add limitations, further limit the claim language (e.g., reciting the plural term "participants" rather than the term "participant"), or relocate limitations in the original claims. Mot. 2. We have reviewed proposed substitute claims

16–23 and determine that they do not enlarge the scope of the original claims.

A motion to amend also "may not . . . introduce new matter." 35 U.S.C. § 326(d)(3); *see* 37 C.F.R. § 42.221(a)(2)(ii). "New matter is any addition to the claims without support in the original disclosure." *Lectrosonics*, Paper 15 at 7 (citing *TurboCare Div. of Demag Delaval Turbomachinery Corp. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001)). In order to show that an amendment does not introduce new subject matter, a motion to amend must set forth "[t]he support in the original disclosure of the patent for each claim that is added or amended" and "[t]he 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. § 42.221(b).

The test for compliance with the written description requirement of 35 U.S.C. § 112, first paragraph, is whether "the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). One shows "possession" by descriptive means such as words, structures, figures, diagrams, and formulas that set forth fully the claimed invention. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). "It is not sufficient for purposes of the written description requirement . . . that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose." *Id*. "[T]he hallmark of written description is disclosure. . . . [T]he test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art." *Ariad*, 598 F.3d at 1351. The "description need not recite the claimed

invention in haec verba but must do more than merely disclose that which would render the claimed invention obvious." *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009).

In its Motion to Amend, Patent Owner provides citations, for each respective limitation of the claims, showing that proposed substitute claims 16–23 are supported by U.S. Patent Application No. 10/117,309 (Ex. 2006, "the '309 application"), which issued as the '087 patent. Mot. 3–7. We have reviewed proposed substitute claims 16–23, the '309 application, and Patent Owner's citations to supporting disclosures in the '309 application, and determine that the claims do not introduce new matter.

Petitioner makes two arguments. First, Petitioner argues that Patent Owner's string citations to the '309 application are insufficient because Patent Owner does not explain how the cited disclosures allegedly support the limitations of each proposed substitute claim, individually or as a whole. Opp. 3–5; Mot. Sur-Reply 1–5.

Based on the particular facts of this proceeding, we do not agree. Unlike other cases relied upon by Petitioner where the patent owner merely provided a single string cite to a lengthy portion of an application for a particular claim, Patent Owner identifies, for each individual limitation of each proposed substitute claim, specific support in the written description (by page and line number), figures, and/or claims of the '309 application. *See* Mot. 3–7; *B.E. Tech., L.L.C. v. Google, Inc.*, No. 2015-1827, 2016 WL 6803057 at *7 (Fed. Cir. Nov. 17, 2016) (cited at Opp. 4) (agreeing with the Board's finding that the patent owner had not shown written description support for a particular claim, where the patent owner "only provided a string citation to eighteen different pages of the [challenged] patent's original specification, without explaining how those various pages supported

each of the proposed substitute limitations"); Tr. 28:20–25 (Petitioner acknowledging that string citations to an application "could be enough in some circumstances").

For example, proposed substitute claim 16 adds a limitation of "a program database storing information about the program including a listing of the point accounts of the participants." Patent Owner cites as support Figure 3 and three lines of the '309 application that plainly support the added limitation. *See* Mot. 3; Ex. 2006, Fig. 3 ("PROGRAM DATABASE"), pg. 10, ll. 27–29 ("A loyalty program database 302 includes information relating to the loyalty program including the listing of the accounts of the participants."). Claim 16 also adds a limitation that "the GUI is configured so that the participants can connect to the GUI using an internet connection." Patent Owner cites as support a number of disclosures in the '309 application, including Figure 1 and three lines that again plainly support the added limitation. *See* Mot. 3; Ex. 2006, Fig. 1 (connection between participants 102 and GUI 112 via Internet 110), pg. 5, ll. 14–16 ("From time-to-time, the participant 102 may use a communications link such as an Internet connection 110 to connect to a graphical user interface (GUI) 112 to access the loyalty program 104."). We are able to ascertain based on Patent Owner's focused citations to specific disclosures in the '309 application that there is sufficient written description for each of proposed substitute claims 16–23. *See* Mot. 3–7.

Second, Petitioner challenges Patent Owner's showing with respect to certain flight search limitations of proposed substitute claims 18, 19, and

21.[14] Opp. 5–7; Mot. Sur-Reply 5–6. Specifically, claim 18 recites using the interface to "provide a search page by which a participant purchaser can conduct a search for a flight to purchase *based in whole or in part on points* that are indicated to have been awarded to the participant purchaser in the respective point account stored in the program database" and "transform the vendor flight search result into a *formatted flight search result* in a format of the GUI." Mot., App'x A, 8 (emphases added). Claim 19 depends from claim 18. Claim 21 includes similar limitations pertaining to searching for a flight to purchase "based in whole or in part on points" and conversion of a flight result into a "formatted flight result." *Id.* at 13. As support for these limitations, Patent Owner cites Figures 4 and 5 and page 11, lines 4–7 of the '309 application. Mot. 4–6.

Petitioner argues that Patent Owner fails to explain how the cited disclosures "provide[] any support for searching for flights/displaying flight results based in whole or in part on *points* or concealing the currency costs of flights from the user." Opp. 5–7 (emphasis added); Mot. Sur-Reply 5–6. Patent Owner responds that "the '309 application repeatedly states that the invention facilitates making purchases on the basis of points from a participant's perspective," and Figure 4 depicts one implementation of that invention in the context of purchasing an airline ticket. Mot. Reply 4–5. We agree with Patent Owner.

With respect to the limitation of searching for a flight to purchase "based in whole or in part on points," the cited portion of the '309 application discloses that "Figures 4 and 5 illustrate a flow diagram of

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[14] Petitioner does not identify any other alleged deficiency in Patent Owner's showing of written description support for the proposed substitute claims. *See* Mot. 3–7; Opp. 2–7.

the steps involved in a participant purchasing an airline ticket from a
SABRE host 402. After agreeing to terms and conditions at 404, the
participant proceeds to search for flights by the steps generally referred to by
arrow 406." Ex. 2006, pg. 11, ll. 4–7. Figure 4 of the '309 application is
reproduced below.
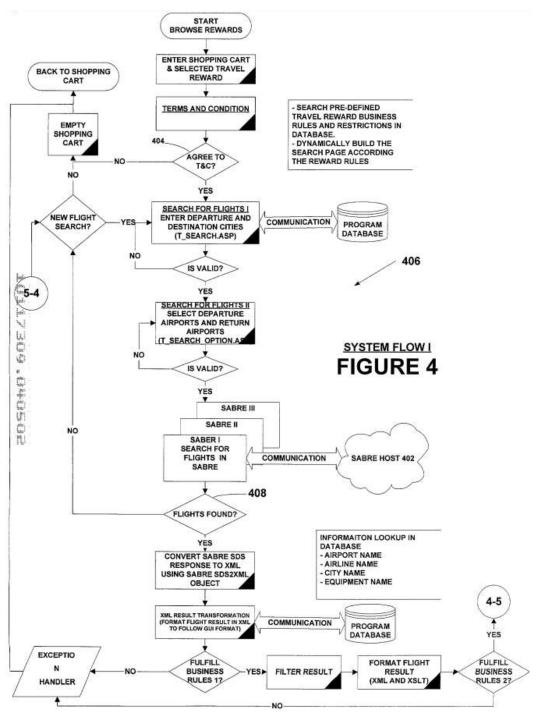

SYSTEM FLOW I

FIGURE 4

Figure 4 depicts a flow chart of "one preferred embodiment of implementation of the system and method of the invention" in which a participant purchases an airline ticket from a SABRE host. *Id.*, pg. 4, ll. 25–26, pg. 11, ll. 4–5. Figure 4 shows a step labeled "SEARCH FOR FLIGHTS," including communication with the "PROGRAM DATABASE," and discloses a step labeled "DYNAMICALLY BUILD THE SEARCH PAGE ACCORDING [TO] THE REWARD RULES."

As Patent Owner correctly points out, Figure 4 is a preferred embodiment of "the invention" described in the '309 application, which involves the exchange of information allowing a participant to select particular goods or services (e.g., an airline ticket) to purchase and complete the transaction using points. *See* Mot. Reply 4–5; Ex. 2006, pg. 5, l. 28–pg. 6, l. 7 (describing participant 102 using an interface to "select a particular airline ticket for purchase" with points, if sufficient points are available), pg. 8, ll. 27–31 (disclosing that the "participant may indicate that he or she is interested in purchasing products or services from a particular vendor system and that the participant is interested in using points to make such a purchase"), pg. 9, ll. 15–22 (disclosing that "participant 202 may eventually determine that a particular product or service is of interest to the participant 202 for purchase," where "[e]ssentially the participant 202 is requesting a purchase based on points in the participant's account 214"). The description of the embodiment shown in Figure 4 must be read in context with the '309 application's full disclosure of the invention. Indeed, the paragraph immediately following the cited portion on page 11 states that "[t]he *above* discussion has generally been focused on purchase of goods or services in situations where the participant has sufficient points in their point account to cover the purchase" where it is "contemplated that the participant

could use their points to conduct a partial purchase so that the transaction may be *based in whole or in part on the points* in the participant's account." Ex. 2006, pg. 11, ll. 12–16 (emphases added).

With respect to the limitation of transforming or converting a flight search result into a "formatted flight search result," Figure 4 above shows a step labeled "XML RESULT TRANSFORMATION (FORMAT FLIGHT RESULT IN XML TO FOLLOW GUI FORMAT)," again including communication with the "PROGRAM DATABASE." The conversion to Extensible Markup Language (XML) is described in the sentence immediately preceding the cited portion on page 11, which discloses that "GUI core application 310 . . . interfaces with an XML agent 316 to convert information provided by the SABRE host system 306 into XML." *Id.*, pg. 11, ll. 1–3. Mr. Weiner testifies that, based on these descriptions in the '309 application, a person of ordinary skill in the art "would have understood that the effect of the XML agent 316 converting the [Sabre Data Source (SDS)] responses to XML was to transform flight results from the SDS format into the format of the GUI," and the '309 application, thus, "reasonably conveys to those skilled in the art that the inventors had possession of a GUI that converted vendor-related information from the format of the vendor system into a format of the GUI." Ex. 2005 ¶¶ 31–32. Petitioner did not cross-examine Mr. Weiner and does not point to any evidence contradicting his testimony regarding formatted flight search results, which we find to be consistent with the disclosure of the '309 application and persuasive.

Finally, with respect to Petitioner's argument regarding "concealing the currency cost of the flights from the user," Opp. 6–7, we agree with Patent Owner that proposed substitute claims 18, 19, and 21 do not recite

that language, *see* Mot. Reply 5; *ICU Med.*, 558 F.3d at 1377 ("To satisfy the written description requirement, a patent applicant must 'convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*.'" (citation omitted)).

We determine that the proposed substitute claims do not introduce new matter under 35 U.S.C. § 326(d)(3) and 37 C.F.R. § 42.221(a)(2)(ii).

d) Conclusion

We determine that Patent Owner's Motion to Amend meets the statutory and regulatory requirements of 35 U.S.C. § 326(d) and 37 C.F.R. § 42.221, and proceed to the issue of whether Petitioner has met its burden of persuasion with respect to patentability.

3. Patentability of Proposed Substitute Claims

Patent Owner "does not bear the burden of persuasion to demonstrate the patentability of [the proposed] substitute claims." *Lectrosonics*, Paper 15 at 4. "Rather, as a result of the current state of the law and [Office] rules and guidance, the burden of persuasion will ordinarily lie with the petitioner to show that any proposed substitute claims are unpatentable by a preponderance of the evidence." *Id.* Petitioner argues that proposed substitute claims 16–23 fail to recite patent-eligible subject matter under 35 U.S.C. § 101. Opp. 7–30. Petitioner does not argue that the claims are unpatentable under 35 U.S.C. §§ 102, 103, or 112. Thus, we must determine whether Petitioner has met its burden to show, by a preponderance of the

evidence, that claims 16–23 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

a) *Proposed Substitute Claim 16*
(1) *Step 1: Statutory Category*

Claim 16, which is proposed as a substitute for original claim 1, recites a computerized "system" that is statutory subject matter under § 101.

(2) *Step 2A, Prong 1: Whether the Claim Recites an Abstract Idea*

As explained above, original claim 1 is directed to facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). *See supra* Section II.E.1.b. Petitioner argues that proposed substitute claim 16 is directed to the same fundamental economic practice. Opp. 8–10. We agree.

Proposed substitute claim 16 adds a number of limitations corresponding to the alleged abstract idea. First, whereas original claim 1 recites that that the system permits "a participant" to transact a purchase using awarded points in a point account for "the participant," proposed substitute claim 16 recites that the system is for use by "participants" where "each" participant transacts a purchase using awarded points in a point account for "the respective participant." Thus, claim 16 involves a program with multiple participants as opposed to at least one participant. The basic economic transaction—a purchase by a participant using points from a vendor system transacting purchases in currency—is still the same, however,

71

and it is that transaction that the recited GUI and API facilitate (by communicating information with the participant and vendor system).

Proposed substitute claim 16 also adds a limitation that "the computerized system is configured to use the program account to complete purchase transactions with the vendor system based on participant-related information received from the participants . . . including purchase requests based on points." Similar to the language in original claim 1 that the participant "uses" the GUI to "conduct" a purchase transaction with the vendor system, this language simply recites the final step of actually conducting the facilitated transaction between the participant and vendor system. The transaction is based on "participant-related information" received from a participant, such as, for example, a request to purchase a particular airline ticket. *See, e.g.*, Ex. 1001, col. 4, ll. 21–29 ("participant 102 can select a particular airline ticket for purchase"), col. 6, ll. 18–26, 48–59 ("participant information also includes a purchase request based on points"), col. 7, ll. 56–63 ("the participant proceeds to search for flights" and "selects the desired itinerary"). Thus, this limitation is part of the alleged abstract idea as well.

Patent Owner argues that proposed substitute claim 16 does not recite an abstract idea at Step 2A, Prong 1 because it "recite[s] explicitly technical terms for *how* the claimed API and GUI communicate." Mot. 10–12. Specifically, Patent Owner relies on the limitations in claim 16 of communication between the participants and GUI via "an internet connection" and conversion of vendor-related information from a "format of the vendor system" into a "format of the GUI." *Id.* at 10. We agree that these limitations do not recite the abstract idea, and evaluate them as

additional limitations below with respect to Step 2A, Prong 2. *See infra* Section II.F.3.a.3.

Based on the full record developed during trial, we are persuaded that proposed substitute claim 16 recites facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). Doing so is a fundamental economic practice, which is one of the certain methods of organizing human activity identified in the Guidance, and, thus, an abstract idea.

(3) Step 2A, Prong 2: Whether the Judicial Exception is Integrated Into a Practical Application

Consistent with Supreme Court and Federal Circuit precedent, the Guidance provides that a claim reciting an abstract idea must be further analyzed to determine whether the recited judicial exception is integrated into a practical application of that exception. Guidance, 84 Fed. Reg. at 53. Step 2A, Prong 2 is evaluated by "(a) [i]dentifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application." *Id.* at 54–55. We incorporate our analysis above of the "processor," "GUI," "API," and "hidden" nature of the program account, *see supra* Section

II.E.1.c,[15] present in both original claim 1 and proposed substitute claim 16, and address four additional limitations added to proposed substitute claim 16, *see* Opp. 9–14, 17–25.

First, claim 16 recites that the GUI "is configured so that the participants can connect to the GUI using an internet connection," receives participant-related information from each participant via "the internet connection," and provides vendor-related information to the participants via "the internet connection." Mot., App'x A, 2–4. These limitations merely recite the medium by which the participants and GUI communicate, and do not amount to integration into a practical application. *See* Opp. 10; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) ("[T]he use of the Internet is not sufficient to save otherwise abstract claims from ineligibility under § 101.").

Second, claim 16 recites "a program database storing information about the program including a listing of the point accounts of the participants" and "stor[ing] an indication of the completed purchase transaction" once it has been completed. Mot., App'x A, 2, 4. Similar to the "GUI" and "API" recited in the claim, the "program database" is a generic computer component recited at a high level of granularity. As recited in claim 16, we view the database as merely a tool used to store information

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[15] Patent Owner repeats its argument that "the use of a hidden program account to make a currency-based transaction having a value which is *concealed from the participant . . .* integrates substitute claim 16 into a practical application," relying on Mr. Weiner's original testimony submitted with the Preliminary Response. Mot. 14–15 (citing Ex. 2001 ¶¶ 57, 58, 88, 118, 132). We are not persuaded by Patent Owner's arguments regarding the "hidden" nature of the program account, for the reasons stated above regarding claim 1. *See supra* Section II.E.1.c; Opp. 20.

when facilitating the transaction between the participant and vendor system, rather than an improvement in the functioning of the overall computerized system. *See* Opp. 20; *Mortgage Grader*, 811 F.3d at 1318, 1324 (concluding that claims reciting storing loan package data in a "database" were directed to "the collection of information to generate a 'credit grading' and to facilitate anonymous loan shopping"); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367–68 (Fed. Cir. 2015) (concluding that claims reciting "storing" certain information "in a database" were "directed to an abstract idea: tracking financial transactions to determine whether they exceed a pre-set spending limit (i.e., budgeting)"); *Kroy*, 107 F. Supp. 3d at 678–79 (concluding that claims requiring "a database of awards" on which different information about awards was stored were ineligible).

Third, claim 16 recites "in response to each completed purchase transaction, . . . display[ing] an order message indicating the completion of the purchase transaction to the respective participant." Mot., App'x A, 4. An example in which a judicial exception is not integrated into a practical application is when "an additional element adds insignificant extra-solution activity to the judicial exception." Guidance, 84 Fed. Reg. at 55; *Flook*, 437 U.S. at 590 (holding that a step of adjusting an alarm limit variable was "post-solution activity"). Displaying an order message *after* the facilitated transaction has been completed amounts to insignificant post-solution activity, and does not support a conclusion that the abstract idea of claim 16 is integrated into a practical application.

Fourth, claim 16 recites that the API is adapted to "receive vendor-related information from the vendor system in a format of the vendor system" and provide that information to the GUI, and the GUI includes

instructions for "converting the received vendor-related information from the format of the vendor system into a format of the GUI" and for providing the vendor-related information to participants "in the format of the GUI" (the "format conversion" limitations).[16] Mot., App'x A, 3.

Petitioner argues that the format conversion limitations do not amount to an improvement in the functioning of a computer or an improvement to converting between data formats. Opp. 10–13, 20–25; Mot. Sur-Reply 9–10. As support, Petitioner relies on *University of Florida Research Foundation, Inc. v. General Electric Company*, 916 F.3d 1363, 1368 (Fed. Cir. 2019), arguing that like the claims in that case, claim 16 recites the conversion in "functional terms" and neither the '087 patent nor claim 16 "explains *how* the GUI converts vendor-related information to the format of the GUI or *how* the information is provided in the format of the GUI." Opp. 10–13.

Patent Owner argues that the "uniquely programmed GUI and API" of claim 16 amount to a "technical improvement (an e-commerce platform for making points-based purchases from electronic vendor systems that communicate in vendor-specific formats) to the field of purchasing systems for programs that award points that can be redeemed for purchases." Mot. 10–14; Mot. Reply 6–9. According to Patent Owner, the format

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[16] We note that the format conversion limitations, which pertain to "converting" vendor-related information from one "format" to another, are different from other claims reciting "converting" a purchase request or purchase confirmation. For example, original claim 2 recites "converting the received purchase request based on the points into a corresponding purchase request based on the program account," and claims 5, 6, 10, and 13 recite similar limitations. Original claim 3 recites "converting the received vendor purchase confirmation based on the program account into a corresponding purchase confirmation based on the points," and claims 7, 11, and 14 recite similar limitations.

conversion performed in claim 16 addresses a "previously unmet technical need" for an e-commerce platform capable of interacting with vendors that only communicate in vendor-specific formats. Mot. 10–11 (citing Ex. 2001 ¶¶ 56, 59–70, 77–90, 115–118; Ex. 2005 ¶¶ 27–28). As support, Patent Owner relies on Example 42 of the Office's Subject Matter Eligibility Examples: Abstract Ideas (Jan. 7, 2019) ("Eligibility Examples"), *available at* https://www.uspto.gov/sites/default/files/documents/ 101_examples_37to42_20190107.pdf (Ex. 1014). Mot. 15–18.

Example 42, claim 1 recites:

A method comprising:

a) storing information in a standardized format about a patient's condition in a plurality of network-based non-transitory storage devices having a collection of medical records stored thereon;

b) providing remote access to users over a network so any one of the users can update the information about the patient's condition in the collection of medical records in real time through a graphical user interface, wherein the one of the users provides the updated information in a non-standardized format dependent on the hardware and software platform used by the one of the users;

c) *converting, by a content server, the non-standardized updated information into the standardized format*,

d) storing the standardized updated information about the patient's condition in the collection of medical records in the standardized format;

e) automatically generating a message containing the updated information about the patient's condition by the content server whenever updated information has been stored; and

f) transmitting the message to all of the users over the computer network in real time, so that each user has immediate access to up-to-date patient information.

Eligibility Examples, 18 (emphasis added). Patent Owner contends that the limitations of claim 16 integrate the abstract idea into a specific improvement in a way "directly analogous to" Example 42, providing the following chart mapping the limitations of claim 16 to those of the example (Mot. 15–18).

Additional Element of Claim 1, Example 42	Additional Element of Substitute Claim 16
(1) storing information	"a program database storing information about the program including a listing of the point accounts of the participants."
(2) providing remote access over a network	"participants can connect to the GUI using an internet connection"
(3) converting updated information that was input in a non-standardized form to a standardized format	First Analog - "converting the received vendor-related information from the format of the vendor system into a format of the GUI" Second Analog - "use the program account to complete

	purchase transactions with the vendor system based on participant-related information received from the participants via the internet connection including purchase requests based on points"
(4) automatically generating and transmitting to all users a message when updated information is stored	First Analog – "providing the received vendor-related information to the participants in the format of the GUI via the internet connection" Second Analog – "in response to each completed purchase transaction, the computerized system is configured to store an indication of the completed purchase transaction in the program database and display an order message indicating the completion of the purchase transaction to the respective participant."

Patent Owner contends that "the conversion step [in Example 42] is executed electronically and triggers the further steps of generating and transmitting an update message," and the conversion of claim 16, which is "the same type of action and . . . recited at the same level of detail as the conversion step of Example 42," is similarly "executed electronically and

triggers the further step of providing the vendor-related information from the GUI to the participant via the internet connection." *Id.* at 17.

We have reviewed both parties' arguments and supporting evidence, and conclude that claim 1 of Example 42 is distinguishable from claim 16. As explained in the "Background" section of Example 42, medical patients often visit multiple medical providers, who each record information about the patient's condition in records "stored locally on a computer in a non-standard format selected by whichever hardware or software platform is in use in the medical provider's local office." Eligibility Examples, 17. This makes it difficult for medical providers to share information with other providers and consolidate patient records due to "format inconsistencies." *Id.* Example 42, claim 1 solves this problem by providing a "method that collects, converts and consolidates patient information from various physicians and health-care providers into a standardized format, stores it in network-based storage devices, and generates messages notifying health care providers or patients whenever that information is updated." *Id.* Whenever a user inputs an update to a patient's information, "it will first be converted into the standardized format and then stored in the collection of medical records." *Id.* The system then immediately generates and transmits a message, such an email message, to providers containing the updated information in the "standardized format" so that "each of a group of health care providers is always given immediate notice and access to changes." *Id.* Example 42 indicates that claim 1 recites an abstract idea but integrates the abstract idea into a practical application:

> The claim recites a combination of additional elements including storing information, providing remote access over a network, converting updated information that was input by a user in a non-standardized form to a standardized format, automatically

generating a message whenever updated information is stored, and transmitting the message to all of the users. The claim as a whole integrates the method of organizing human activity into a practical application. Specifically, the additional elements recite *a specific improvement over prior art systems by allowing remote users to share information in real time in a standardized format regardless of the format in which the information was input by the user.*

Id. at 18–19 (emphasis added).

Unlike Example 42, the Specification of the '087 patent does not describe a technical problem associated with information being provided in a vendor-specific format or a specific improvement over prior art systems involving conversion of such information from one format to another. To the contrary, the '087 patent indicates that the problem to be solved was the need for human intervention when redeeming rewards, which was a business, rather than technical, problem. *See supra* Section II.C.2.b; Ex. 1001, col. 1, ll. 31–53 (disclosing that "[s]ome rewards are of a nature that human intervention is needed to redeem/fulfill a reward" and there was "an opportunity to eliminate the human intervention to redeem such rewards"). Further, although the Specification of the '087 patent provides written description support for the format conversion limitations of claim 16, it does not describe the converting process as solving a technical problem with a technical solution over prior art systems (unlike Example 42) or disclose any particular advantage from converting information in the manner described (unlike Example 42, which describes real-time communication capability as an advantage of the conversion into a standardized format). *See, e.g.*, Ex. 1001, col. 7, ll. 42–65, Figs. 3–5; Ex. 2005 ¶¶ 31–32.

The lack of detail regarding a technical problem or technical improvement with respect to format conversion supports Petitioner's

position that the format conversion limitations do not integrate the abstract idea into a practical application. *See* Opp. 20–21; Eligibility Examples, 17–18; *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1363 (Fed. Cir. 2018) (finding at *Alice* step one that "[t]he specification confirms that these claims disclose an improved user interface for electronic devices, particularly those with small screens"); *Affinity Labs*, 838 F.3d at 1259 (finding at *Alice* step one that "the specification underscores the breadth and abstract nature of the idea embodied in the claims"); *McRO*, 837 F.3d at 1313 (finding at *Alice* step one that "the specification confirms [that] the claimed improvement here is allowing computers to produce 'accurate and realistic lip synchronization and facial expressions in animated characters' that previously could only be produced by human animators" (citation omitted)); *Enfish*, 822 F.3d at 1337 (finding at *Alice* step one that the "conclusion that the claims are directed to an improvement of an existing technology is bolstered by the specification's teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements").

Based on the full record developed during trial, we are persuaded that proposed substitute claim 16 as a whole, looking at the additional limitations of communication via "an internet connection," a "program database" in which an "indication of the completed purchase transaction" is stored, displaying an "order message" to the participant, and "converting" from a "format of the vendor system" into a "format of the GUI" (as well as the "processor," "GUI," "API," and "hidden" nature of the program account originally addressed in the context of claim 1), does not integrate the abstract idea into a practical application. Petitioner has proven that proposed

substitute claim 16 is directed to facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency), which is a fundamental economic practice, one of the certain methods of organizing human activity identified in the Guidance.

(4) Step 2B: Whether the Claim Provides an Inventive Concept

At *Alice* step two, we "scrutinize the claim elements more microscopically" for additional elements that might be understood to "'transform the nature of the claim'" into a patent-eligible application of an abstract idea. *Electric Power*, 830 F.3d at 1353–54 (quoting *Alice*, 573 U.S. at 217). The additional elements must be distinct from those reciting the abstract idea itself, as "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." *BSG Tech*, 899 F.3d at 1290. Claim elements that involve "well-understood, routine, [and] conventional activity previously engaged in" are insufficient to supply an "inventive concept." *Mayo*, 566 U.S. at 73. The Federal Circuit recently explained the inquiry as follows:

> The appropriate question is not whether the entire claim as a whole was "well-understood, routine [and] conventional" to a skilled artisan (*i.e.*, whether it lacks novelty), but rather, there are two distinct questions: (1) whether each of "the [elements] in the claimed [product] (apart from the natural laws themselves) involve well-understood, routine, conventional activity previously engaged in by researchers in the field," and (2) whether all of the steps "*as an ordered combination* add[]

nothing to the laws of nature that is not already present when the steps are considered separately." In other words, beyond the [abstract idea], what elements in the claim may be regarded as the "inventive concept"?

Chamberlain Grp., Inc. v. Techtronic Indus. Co., 935 F.3d 1341, 1349 (Fed. Cir. 2019) (citations omitted). Consistent with Supreme Court and Federal Circuit precedent, the Guidance provides that, even if an additional claim element does not integrate an abstract idea into a practical application, if "reevaluation indicates that the element is unconventional or otherwise more than what is well-understood, routine, conventional activity in the field, this finding may indicate that an inventive concept is present and that the claim is thus eligible." Guidance, 84 Fed. Reg. at 56. For example, a "combination of steps [may] gather data in an unconventional way and therefore include an 'inventive concept.'" *Id.*

We begin by emphasizing that Petitioner bears the burden to prove that the proposed substitute claims are unpatentable by a preponderance of the evidence. *Lectrosonics*, Paper 15 at 4. Thus, to demonstrate unpatentability under 35 U.S.C. § 101, Petitioner must make a sufficient showing regarding both steps of the *Alice* inquiry. Having reviewed all of the parties' arguments and evidence, we are not persuaded that Petitioner has done so.

We focus on the format conversion limitations of claim 16, which, as discussed above, are additional limitations and not part of the abstract idea itself. *See supra* Sections II.F.3.a.2–3. As recited in claim 16, participant-related information flows, in sequence, from the participant to the GUI to the API to the vendor system. Vendor-related information flows in the reverse from the vendor system to the API to the GUI to the participant. The API receives vendor-related information from the vendor

system "in a format of the vendor system" and provides that information to the GUI. Mot., App'x A, 3. The GUI "convert[s] the received vendor-related information from the format of the vendor system into a format of the GUI" and provides the received vendor-related information to participants "in the format of the GUI." *Id.* This is a significant difference from original claim 1, which merely recites the communication ("receiving" and "providing") of vendor-related information between components, without any limitation on the format or alteration of such information. Claim 16, by contrast, recites vendor-related information in at least two different "format[s]," with the GUI performing a conversion of the information from the vendor system format to another format appropriate for the GUI so that the information can be presented to the participant using the GUI. *See* Mot. 18–20.

Petitioner argues that the format conversion of claim 16 is "claimed without any recitation as to how it is actually accomplished" and is "just more functionality added to the GUI for which there is no special purpose computer code, structures, software, or equipment recited." Opp. 10–13, 25–26 (citing Ex. 1004 ¶¶ 29–31, 60, 113–114, 118; Ex. 2001 ¶¶ 60, 68, 123); Mot. Sur-Reply 11–12. Petitioner further contends that the XML Agent disclosed in the Specification "is described in terms of its function rather than explaining how the conversion is actually accomplished." Opp. 25. According to Petitioner, claim 16 recites only "conventional computer components and networking interactions" that are well-understood, routine, and conventional activities. *Id.* at 27 (citing Ex. 1004 ¶¶ 35–40, 134–136).

Petitioner did not submit any testimony from Mr. Knowles (or another witness) or other supporting evidence with its papers opposing the Motion to Amend. Rather, Petitioner asserts that Mr. Knowles's original declaration

filed with the Petition is "relevant" and should be given "full weight" because it "addresses generic computer and networking components that are recited in the challenged claims as well as in the substitute claims." *Id.* at 12 n.3; Mot. Sur-Reply 11. Petitioner, however, does not explain in any detail how the cited testimony from the original declaration supports its arguments regarding the format conversion of claim 16.[17] Moreover, Mr. Knowles never considered the format conversion limitations of claim 16, as the claim did not even exist at the time he signed his declaration. We conclude that Mr. Knowles's testimony in the original declaration has very limited relevance, if any, to the analysis of claim 16, in particular with respect to the format conversion limitations.

Nevertheless, we have reviewed Mr. Knowles's original testimony and do not find it persuasive. Mr. Knowles testifies, for example, that "[p]rior to the launch of loyalty program websites," participants could use points for travel by calling a toll-free number and speaking with a loyalty program call center airline agent, who would search for flights using a CRS. Ex. 1004 ¶ 30. The airline agent would enter the participant's travel parameters into a form on a computer and, "[u]pon submitting the form, the information would be reformatted and sent to the CRS as a query." *Id.* According to Mr. Knowles, "[t]he CRS would return a response, which would be reformatted by the airline agent's computer and displayed on the computer screen." *Id.* Mr. Knowles, however, cites no support for this

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[17] Petitioner, for example, would need to show *more* than just disclosure in a single prior art reference. *See Berkheimer*, 881 F.3d at 1369 ("Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art. The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.").

statement and provides no further detail. He does not explain, for example, what specific information is "reformatted," what such "reformat[ing]" entails, what the result is, or when it occurs. Without more, Mr. Knowles's bare assertion that a CRS "response" would be "reformatted" in some unspecified way is entitled to little weight. *See* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."). The parties do not dispute that communication with CRSs like Sabre occurred prior to the '087 patent; the issue is whether the specific format conversion recited in claim 16, individually and in combination with the other limitations of the claim, involves well-understood, routine, and conventional activity. *See, e.g.*, Ex. 1001, col. 7, ll. 42–65, Figs. 3–5; Ex. 2001 ¶ 90; Ex. 2005 ¶¶ 29–32.

Mr. Knowles also discusses examples of computer systems that could "interact with CRSs" using a GUI or API, but again does not cite any evidence of converting between formats when doing so. Ex. 1004 ¶¶ 32–34 (citing Exs. 1006, 1007). Finally, Mr. Knowles makes the general assertion that "it was well known that . . . converting information in one format into information in another format . . . could readily be performed by components of a computer system." *Id.* ¶ 39. That does not address, however, the specific conversion of vendor-related information between vendor system and GUI formats recited in claim 16. Other portions of Mr. Knowles's original declaration are equally inapplicable to the recited format conversion. *See, e.g., id.* ¶¶ 29, 31, 35–38, 40, 60, 78, 112–114, 118, 124, 134–136.

Further, even acknowledging that data conversion in general was well-understood, routine, and conventional prior to the '087 patent,

Petitioner has not accounted for the limitations of claim 16 *as an ordered combination.* *See BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016) ("The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. As is the case here, an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces."). Indeed, it would have been impossible for Mr. Knowles to do so, as claim 16 did not exist at the time of his declaration. Patent Owner, on the other hand, persuasively argues, with supporting testimony from Mr. Weiner specifically addressing the proposed substitute claims, that claim 16 recites a "uniquely programmed combination of an API and GUI" that performs a format conversion necessary to communicate vender-related information to a participant so that the information can be presented to the participant using the GUI, which represents an "unconventional combination of additional elements." Mot. 19–20 (citing Ex. 2005 ¶¶ 27–32, 36); Mot. Reply 10–11.

Mr. Weiner testifies that prior to the '087 patent, a "technical challenge" existed when trying to develop "an e-commerce platform that allowed purchasers to make points-based purchases directly from third-party internet vendor systems that transacted only in currency" in that "third-party internet vendor systems often communicated in vendor-specific formats." Ex. 2005 ¶ 27. Mr. Weiner explains that

> [v]endor-specific formats were designed to communicate and transact fundamentally in currency price of the goods or services available for purchase. They lacked the capability to communicate from a reward program participant any special arrangement that might exist between the vendor and the reward program in terms of the price the reward program would ultimately pay on the program account. Furthermore,

87

vendor-specific formats lacked any indication of an association with the loyalty program. Thus, providing vendor information to a participant in the vendor-specific format would confuse participants about whether they were shopping from the vendor based on the points in their program account, as intended. Additionally, many vendor-specific formats were quite technical and therefore not suitable for unsophisticated participants and there were significant differences between vendor-specific formats. By using a GUI associated with the loyalty program, in communication with an API, to convert vendor information from a vendor-specific format to the format of the GUI, the inventions described in the '087 patent could, for the first time, remedy these concerns and provide an e-commerce platform that participants use to purchase goods and/or services directly from third-party vendor systems using points in their point accounts. The uniquely programed combination of an API and GUI as described and claimed in the '087 patent, and in the proposed substitute claims, was not well-understood, routine, or conventional in the field of reward programs as of the filing date of the '087 patent.

Id. ¶ 28. Mr. Weiner's explanation is consistent with the disclosure of the '087 patent in at least one respect—the Sabre CRS was one example of a vendor with its own vender-specific format, where the SDS response in the vender-specific format needs to be converted to XML so that the information can be presented to the participant. *See* Ex. 1001, col. 7, ll. 46–53, Figs. 3–4; Ex. 2005 ¶¶ 29–32. According to Mr. Weiner, because of the disclosed format conversion, a "critical achievement" of the '087 patent was "the ability for a participant to use a single loyalty program GUI to make points-based purchases directly from multiple third party internet vendor systems that sell goods of different types," which was not possible prior to the '087 patent. Ex. 2005 ¶¶ 33–34.

We credit Mr. Weiner's unrebutted testimony that the overall "arrangement of an API and a GUI configured to convert information from

the API in a vendor-specific format to a format of the GUI was unconventional." *See* Mot. Reply 10 (emphasis omitted). Again, Petitioner chose not to cross-examine Mr. Weiner and did not submit any supporting testimony of its own in opposition to the Motion to Amend. We see no basis on this record to conclude that Mr. Weiner is mistaken in his understanding of the state of the art prior to the '087 patent and what would have been well-understood, routine, and conventional at the time. In addition, given that Petitioner bears the burden to prove that claim 16 is unpatentable by a preponderance of the evidence, it is not incumbent upon us to search through all 151 paragraphs of Mr. Knowles's original declaration filed with the Petition to determine what, if any, portions are "relevant" because they might "address[] generic computer and networking components that are recited . . . in the substitute claims." *See* Opp. 12 n.3; Mot. Sur-Reply 11.

Finally, we note that the instant facts with respect to claim 16 are similar to those in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). The claims at issue in that case were held to be patent-eligible at *Alice* step two because they involved "an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases)." *Id.* at 1300. Although the solution required generic components, the Federal Circuit determined that "the claim's enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality." *Id.* at 1300–1301. "[E]ven though the [claimed] system . . . relies upon some arguably generic limitations, when all limitations are considered individually and as an ordered combination, they provide an inventive concept through the use of distributed architecture." *Id.* at 1302.

Similarly, the record before us contains unrebutted evidence that the use of a GUI and API positioned between a participant and vendor system that convert vendor-related information from the vendor system into a format of the GUI so that the information can be presented to the participant was unconventional prior to the '087 patent. This is different from original claim 1, for example, which merely recites the GUI and API "receiving" and "providing" information. Claim 16 recites a technical mechanism of carrying out communications between components that present information in different formats—converting vendor-related information from one format of the particular vendor system into a different format of the GUI— which the record shows was not well-understood, routine, and conventional. The record indicates that the claimed arrangement provides a technical benefit as well—the ability to interact with multiple different vendor systems that each communicate information in their own specific format. *See* Ex. 2005 ¶¶ 28 (Mr. Weiner explaining the features of "[v]endor-specific formats" and noting that "there were significant differences between vendor-specific formats"), 33–34; Tr. 46:9–19 (Patent Owner arguing that "different vendors have formats that are sufficiently diff[erent] tha[t] if you don't have some form of conversion, there's no communication").

We also note that the instant facts are distinguishable from those in *Kroy* and *Loyalty Conversion*, where the claims held patent-ineligible pertained to point redemption, but did not recite anything analogous to format conversion as in claim 16. *See Kroy*, 107 F. Supp. 3d at 678–81; *Loyalty Conversion*, 66 F. Supp. 3d at 831–34.

It is Petitioner's burden to prove unpatentability by a preponderance of the evidence, which includes in this instance making a sufficient showing

as to both steps of the *Alice* inquiry. *See Lectrosonics*, Paper 15 at 4; *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378–79 (Fed. Cir. 2015) ("'Failure to prove the matter as required by the applicable standard means that the party with the burden of persuasion loses on that point—thus, if the fact trier of the issue is left uncertain, the party with the burden loses.'" (citation omitted)). Petitioner has not shown sufficiently that the overall arrangement recited in claim 22 involving conversion of vendor-related information between a particular vendor format and a GUI format was well-understood, routine, and conventional, and Patent Owner provides persuasive evidence to the contrary. Based on the full record developed during trial, including the unrebutted testimony of Mr. Weiner regarding the specific limitations added in proposed substitute claim 16, we conclude that Petitioner has not made a sufficient showing that the claim lacks an inventive concept.

(5) Conclusion

Petitioner has not shown, by a preponderance of the evidence, that proposed substitute claim 16 is unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

b) Proposed Substitute Claim 22
(1) Step 1: Statutory Category

Claim 22, which is proposed as a substitute for original claim 13, recites a computerized "system" that is statutory subject matter under § 101.

(2) Step 2A, Prong 1: Whether the Claim Recites an Abstract Idea

We agree with Petitioner that proposed substitute claim 22 is directed to the same abstract idea as the original claims. *See* Opp. 8–10. Proposed substitute claim 22 adds many of the same limitations to claim 13 as proposed substitute claim 16 adds to claim 1,[18] including the limitation of "completing a purchase transaction with the vendor system on behalf of the participant using the program account." As with proposed substitute claim 16, this language simply recites the final step of actually conducting the facilitated transaction and, thus, is part of the abstract idea itself. *See supra* Section II.F.3.a.2. Patent Owner does not make any specific arguments for claim 22 with respect to Step 2A, Prong 1. *See* Mot. 29.

Based on the full record developed during trial, we are persuaded that proposed substitute claim 22 recites facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency). Doing so is a fundamental economic practice, which is one of the certain methods of organizing human activity identified in the Guidance, and, thus, an abstract idea.

(3) Step 2A, Prong 2: Whether the Judicial Exception is
Integrated Into a Practical Application

We evaluate additional elements present in proposed substitute claim 22 individually and in combination to determine whether they integrate the

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[18] Unlike proposed substitute claim 16, proposed substitute claim 22 does not recite any limitations regarding format conversion. *See* Opp. 23 n.7.

judicial exception into a practical application. Guidance, 84 Fed. Reg. at 53. Again, we incorporate our analysis of the "processor," "GUI," "API," and "hidden" nature of the program account that are present in both original claim 13 and proposed substitute claim 22. *See supra* Section II.E.c. Also, similar to proposed substitute claim 16, proposed substitute claim 22 adds limitations of communication via "an internet connection," a "program database" storing information about the loyalty program in which an "indication of the completed purchase transaction" is stored, and displaying an "order message" to the participant. Mot., App'x A, 14–16. These limitations do not support a conclusion that the abstract idea is integrated into a practical application, for the reasons explained above. *See supra* Section II.F.3.a.3. Proposed substitute claim 22 further adds a limitation of "receiving a vendor purchase confirmation from the vendor system, the vendor purchase confirmation comprising a record of the order being successfully placed based on the program account information." Mot., App'x A, 16. We view this as insignificant post-solution activity, as it occurs *after* the facilitated transaction has been completed.

Finally, proposed substitute claim 22 adds the following limitations (the "multiple vendor system API" limitations):

> wherein the API comprises an airline reservation system API and the vendor system comprises an airline reservation system; and

> wherein the processor further includes instructions for providing another vendor system API for interfacing with another vendor system of a vendor that sells other goods or services, the other vendor system API being adapted to:

>> receive the participant-related information from the GUI and provide the received participant-related information to said other vendor system; and

receive vendor-related information from said other vendor system and provide the received vendor-related information from said other vendor system to the GUI.

Id. at 17. Patent Owner argues that having multiple APIs for interfacing with multiple vendor systems amounts to a "technical solution that addressed the need for a platform to connect a participant seeking to redeem points directly to the vendor systems of multiple vendors so that the participant could choose between different types of goods to purchase." Mot. 20–21, 29 (citing Ex. 2005 ¶¶ 33–34). For reasons similar to those explained above regarding proposed substitute claim 16, we are not persuaded by Patent Owner's arguments with respect to Step 2A, Prong 2, given that the '087 patent only describes a business, rather than technical, problem and does not describe having multiple APIs as solving a technical problem with a technical solution over prior art systems or as providing any particular advantage (unlike Example 42). *See supra* Section II.F.3.a.3.

Based on the full record developed during trial, we are persuaded that proposed substitute claim 22 as a whole, looking at the additional limitations of communication via "an internet connection," a "program database" in which an "indication of the completed purchase transaction" is stored, receiving a "vendor purchase confirmation," displaying an "order message" to the participant, and using multiple APIs for multiple vendors (as well as the "processor," "GUI," "API," and "hidden" nature of the program account originally addressed in the context of claim 13), does not integrate the abstract idea into a practical application. Petitioner has proven that proposed substitute claim 22 is directed to facilitating, or brokering, a commercial transaction (i.e., the sale and purchase of goods and services) between a purchaser using a first form of value (i.e., a rewards program participant

using points in whole or part) and a seller transacting in a second form of value (i.e., a vendor system which transacts purchases in currency), which is a fundamental economic practice, one of the certain methods of organizing human activity identified in the Guidance.

(4) Step 2B: Whether the Claim Provides an Inventive Concept

We are not persuaded that Petitioner has met its burden to show that proposed substitute claim 22 lacks an inventive concept, for reasons similar to those explained above regarding claim 16. *See supra* Section II.F.3.a.4. Although claim 22 does not include the same format conversion limitations, claim 22 recites, in the multiple vendor system API limitations, communication with two different APIs and corresponding vendor systems (i.e., an "airline reservation system API" for an "airline reservation system" and "another vendor system API" for "another vendor system" that sells "other goods or services"). Mot., App'x A, 17. Both APIs receive participant-related information from the GUI and provide it to the respective vendor system, and receive vendor-related information from the respective vendor system and provide it to the GUI. *Id.* at 14–17. This arrangement is reflected in Figure 1 of the '087 patent, which depicts airline reservation system API 116 communicating with airline reservation system 114 and other currency vendor API 122 communicating with other currency vendor system 120. *See* Ex. 1001, col. 4, ll. 11–41, col. 4, l. 65–col. 5, l. 9, Fig. 1.

Petitioner argues that "the claimed APIs are generic computer components" that "do nothing more than receive and transmit certain types of information, common and well-known functions of components of a computer network," and limiting the APIs to an "airline reservation system" and "another vendor system" "merely limits each API to a field of use."

Opp. 16–18, 26–27 (citing Ex. 1004 ¶¶ 112, 134–136). According to Petitioner, "[c]laim 22 merely recites the pre-Internet practice of allowing participants to select more than one vendor and uses generic computer components as tools to facilitate that practice." *Id.* at 27 (citing Ex. 1004 ¶ 31 n.1). Patent Owner argues, again relying on testimony from Mr. Weiner, that claim 22 "recites a computerized system that includes multiple APIs for interfacing with the vendor systems of different types of vendors, including at least one airline reservation system," which advantageously "allow[s] participants to directly interact with multiple vendors when deciding how to spend their points." Mot. 20–22, 29 (citing Ex. 2005 ¶¶ 33–34, 37). According to Patent Owner, "this is an unconventional arrangement . . . constituting a patent-eligible inventive concept." *Id.* at 29.

Again, Petitioner did not submit any testimony from Mr. Knowles (or another witness) or other supporting evidence with its papers opposing the Motion to Amend, and the portions of his original declaration cited by Petitioner are of very limited relevance. For example, Mr. Knowles testifies that a "[a] CRS is an airline-specific inventory system that allows for direct interaction with the airline's inventory" and "[a] GDS enables a user to shop across multiple airline CRSs and retrieve schedule and ticketing information from each airline participating in [the] GDS." Ex. 1004 ¶ 31 n.1. That does not address the specific arrangement recited in claim 22, however, where a single GUI communicates certain information with multiple APIs each communicating with a corresponding vendor system.

Mr. Weiner testifies that the claimed arrangement, with a GUI associated with the loyalty program in communication with multiple APIs, provided "the ability for a participant to use a single loyalty program GUI to

make points-based purchases directly from multiple third party internet vendor systems that sell goods of different types" (e.g., because the GUI is capable of converting received information from a vendor-specific format to a GUI format, as explained above), which was not possible prior to the '087 patent. Ex. 2005 ¶¶ 28, 33–34. In Mr. Weiner's view, having "multiple vendor-specific APIs—such as one airline reservation system API and another API for a vendor of other goods or services—between a loyalty program GUI and multiple vendor systems provided a novel arrangement of software components that significantly advanced the technical field of purchasing systems for points-awarding programs." *Id.* ¶ 34. We credit Mr. Weiner's unrebutted testimony that the overall arrangement of a single GUI communicating certain information with multiple APIs having corresponding vendor systems was unconventional, for the reasons explained above. *See supra* Section II.F.3.a.4; Mot. Reply 10.

Based on the full record developed during trial, including the unrebutted testimony of Mr. Weiner regarding the specific limitations added in proposed substitute claim 22, we conclude that Petitioner has not made a sufficient showing that the claim lacks an inventive concept.

(5) Conclusion

Petitioner has not shown, by a preponderance of the evidence, that proposed substitute claim 22 is unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

> c) *Proposed Substitute Claims 17–21 and 23*
>
> (1) *Format Conversion Claims: Claims 17–21 and 23*

Similar to claim 16 addressed above, independent claim 18 recites "providing an interface between the participants and the vendor system" and "using the interface to . . . receive from the vendor system a vendor flight search result," "*transform* the vendor flight search result into a *formatted flight search result in a format of the GUI*," and "receive from the participant purchaser a purchase request for a flight selected from the *formatted flight search result* based in whole or in part on points." Mot., App'x A, 6, 8 (emphases added). Independent claim 20 also recites limitations nearly identical to the format conversion limitations in claim 16. Claim 20 recites that the "API is adapted to receive vendor-related information from the vendor system in a *format* of the vendor system and provide the received vendor-related information to the GUI" and the "GUI includes instructions for receiving vendor-related information from the API [and] for *converting the received vendor-related information from the format of the vendor system into a format of the GUI*." *Id.* at 11–12 (emphases added). Dependent claim 23 recites that "the GUI includes instructions for *transforming the vendor-related information from the airline reservation system from an airline reservation system format to a format of the GUI*." *Id.* at 17–18 (emphasis added). Claims 17, 19, and 21 depend from claims 16, 18, and 20, respectively.

Thus, all of claims 17–21 and 23 recite converting or transforming certain information associated with the vendor into a format that can be used by the GUI to communicate with the participant and complete the transaction. Patent Owner's arguments in its Motion to Amend regarding claims 18, 20, and 23 are similar to those made with respect to claim 16. *See*

Mot. 9–20, 23–28, 30. Petitioner argues independent claims 16, 18, and 20 together, and references those arguments when addressing dependent claims 17–21 and 23. *See* Opp. 7–30; Mot. Sur-Reply 6–12. For the same reasons set forth above with respect to claim 16, based on the full record developed during trial, we conclude that Petitioner has not made a sufficient showing that claims 17–21 and 23 lack an inventive concept. *See supra* Section II.F.3.a.

(2) Multiple Vendor System Claims: Claims 17 and 23

As explained above, Petitioner has not met its burden with respect to claim 17, which depends from and includes the format conversion limitations of parent claim 16, and claim 23, which includes format conversion limitations similar to those of claim 16. *See supra* Section II.F.3.c.1. In addition, claim 17 recites limitations nearly identical to the multiple vendor system API limitations in claim 22 addressed above, including "another vendor system API for interfacing with another vendor system of a vendor that sells other goods or services," the other vendor system API receiving and providing participant-related information and vendor-related information. Mot., App'x A, 5. Claim 23 depends from claim 22 addressed above. Thus, for the same reasons set forth above with respect to claim 22, based on the full record developed during trial, we conclude that Petitioner also has not made a sufficient showing that claims 17 and 23 lack an inventive concept on this basis as well. *See supra* Section II.F.3.b.

(3) Conclusion

Petitioner has not shown, by a preponderance of the evidence, that proposed substitute claims 17–21 and 23 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–15 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101. Petitioner has not met its burden to show, by a preponderance of the evidence, that proposed substitute claims 16–23 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101. In summary:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–15	101	Eligibility	1–15	
Overall Outcome			1–15	

Motion to Amend Outcome	Claims
Substitute Claims Proposed in the Motion to Amend	16–23
Substitute Claims: Motion to Amend Granted	16–23

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–15 of the '087 patent have been shown to be unpatentable; and

FURTHER ORDERED that Patent Owner's Motion to Amend is *granted* as to proposed substitute claims 16–23.

This is a final decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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