

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PNC BANK N.A.,  
Petitioner,

v.

UNITED SERVICES AUTOMOBILE ASSOCIATION,  
Patent Owner.

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IPR2021-01077  
Patent 10,621,559 B1

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Before KRISTEN L. DROESCH, TERRENCE W. McMILLIN, and  
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

DIRBA, *Administrative Patent Judge*.

DECISION

Granting Institution of *Inter Partes* Review

*35 U.S.C. § 314*

Granting Motions to Seal and Entering Protective Order

*37 C.F.R. §§ 42.14, 42.54*

On July 21, 2021, PNC Bank N.A. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–18 of U.S. Patent No. 10,621,559 B1 (Ex. 1101, “the ’559 patent”). Paper 4 (“Pet.”). United Services Automobile Association (“Patent Owner”) timely filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). With our authorization (Paper 12), Petitioner filed a pre-institution reply (Paper 14 (“Prelim. Reply”)), and Patent Owner filed a pre-institution sur-reply (Paper 17 (“Prelim. Sur-Reply”)).<sup>1</sup>

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Having reviewed the parties’ papers and the evidence of record, we are not persuaded to discretionarily deny institution, and we determine that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim. Accordingly, we institute an *inter partes* review.

## I. BACKGROUND

### A. *Related Matters*

The parties indicate that Patent Owner asserted the ’559 patent against Petitioner in *United Services Automobile Association v. PNC Bank N.A.*, Case No. 2:20-cv-00319 (E.D. Tex.) (“the Texas case”). Pet. 2; Paper 6, 2. In addition, the parties indicate that Patent Owner has asserted patents that

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<sup>1</sup> Papers 8, 14, and 17 were filed under seal, and Papers 11, 16, and 20, respectively, are the corresponding public versions. This Decision does not refer to any information that was redacted from the public documents.

are related to the '559 patent in two other litigations: *United Services Automobile Association v. PNC Bank N.A.*, Case No. 2:21-cv-00110 (E.D. Tex.) and *United Services Automobile Association v. PNC Bank, N.A.*, 2:21-cv-00246 (E.D. Tex.). Pet. 2; Paper 6, 2–3. According to the parties, each of these district court litigations also involve other, unrelated patents. See Pet. 2–3; Paper 6, 2–3.

The parties further indicate that Petitioner concurrently filed an *inter partes* review petition challenging the '559 patent in IPR2021-01076. Pet. 3; Paper 6, 3. Today, we grant institution of this proceeding and deny institution in IPR2021-01076.

The parties identify no other PTAB proceedings that challenge the '559 patent, but the following PTAB proceedings involve related patents:<sup>2</sup>

<b>Challenged Patent</b>	<b>Case No.</b>	<b>Petitioner</b>
U.S. 9,224,136	CBM2019-00027	Wells Fargo Bank, N.A.
	IPR2022-00075	PNC Bank N.A.
U.S. 10,013,681	CBM2019-00028	Wells Fargo Bank, N.A.
	IPR2020-01650	Mitek Systems, Inc.
	IPR2021-01381	PNC Bank N.A.
U.S. 10,482,432	IPR2021-01071	PNC Bank N.A.
	IPR2021-01074	PNC Bank N.A.

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<sup>2</sup> The parties identify some (but not all) of these proceedings. See Pet. 3; Paper 6, 3. The parties are reminded of their continuing obligation to update their mandatory notices within 21 days of any relevant change, including changes in related matters. 37 C.F.R. §§ 42.8(a)(3), 42.8(b)(2).

*B. The Petition's Asserted Grounds*

Petitioner asserts the following grounds of unpatentability (Pet. 7):

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1–3, 10–12	103(a) <sup>3</sup>	Garcia <sup>4</sup> , Randle <sup>5</sup> , Slater <sup>6</sup>
4, 9, 13, 18	103(a)	Garcia, Randle, Slater, Lev <sup>7</sup>
5, 14	103(a)	Garcia, Randle, Slater, Lev, Watanabe <sup>8</sup>
6, 15	103(a)	Garcia, Randle, Slater, Lev, Watanabe, Aoyama <sup>9</sup>
7, 8, 16, 17	103(a)	Garcia, Randle, Slater, Byrne <sup>10</sup>

In support, Petitioner relies on the testimony of Dr. Brian Noble (Ex. 1102).

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<sup>3</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. Because the challenged patent claims priority to an application filed before March 16, 2013, and because Petitioner does not challenge this priority claim in this proceeding (Pet. 5), we refer to the pre-AIA version of § 103. We note, however, that our findings and analysis would be the same under the current version of the statute.

<sup>4</sup> WO 2005/043857 A1, published May 12, 2005 (Ex. 1103). Petitioner relies on a certified translation of this publication, which also appears in Exhibit 1103.

<sup>5</sup> US 2006/0106717 A1, published May 18, 2006 (Ex. 1104).

<sup>6</sup> EP 0984410 A1, published Mar. 8, 2000 (Ex. 1105).

<sup>7</sup> US 2006/0164682 A1, published July 27, 2006 (Ex. 1106).

<sup>8</sup> US 7,027,171 B1, issued Apr. 11, 2006 (Ex. 1107).

<sup>9</sup> US 2002/0172516 A1, published Nov. 21, 2002 (Ex. 1108).

<sup>10</sup> US 2006/0249567 A1, filed Feb. 9, 2006, published Nov. 9, 2006 (Ex. 1109).

*C. Summary of the '559 Patent*

The '559 patent is titled “Systems and Methods for Remote Deposit of Checks.” Ex. 1101, code (54). The application leading to this patent was filed on April 11, 2019, claiming priority through a series of continuations to an application filed on October 31, 2006. *Id.* at codes (22), (63).

The Specification explains that there are advantages and disadvantages to using a check to purchase goods or services. *See* Ex. 1101, 1:25–2:31. One disadvantage is that “receiving a check may put certain burdens on the payee, such as the time and effort required to deposit the check,” because “depositing a check typically involves going to a local bank branch and physically presenting the check to a bank teller.” *Id.* at 2:5–9. To address this, the '559 patent provides a method “for remotely redeeming a negotiable instrument,” such as a check, using “a customer-controlled general purpose computer.” *Id.* at 2:35–41.

Figure 1 (reproduced below) shows a system in which the described method may be employed. Ex. 1101, Fig. 1, 2:35–41, 3:17–18.

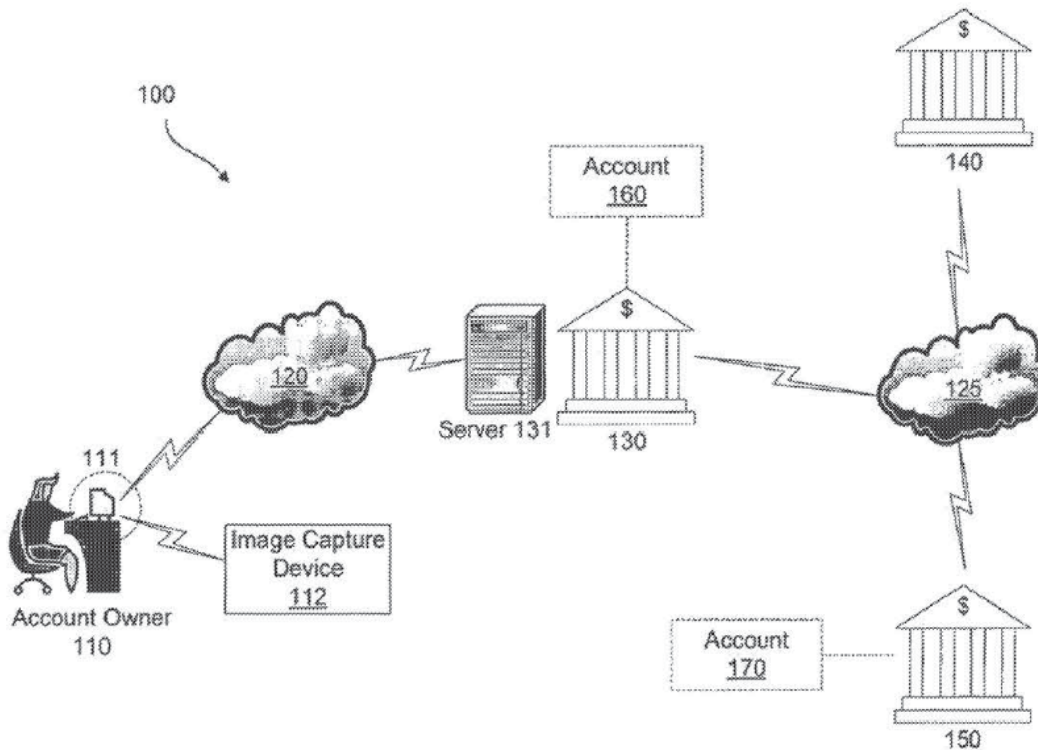


FIGURE 1

As depicted above, Figure 1 illustrates a system 100 that includes account owner 110 (e.g., a bank customer at his private residence) and an associated customer-controlled general purpose computer 111 and image capture device 112, as well as financial institutions 130, 140, and 150 (e.g., banks). *Id.* at 3:49–53, 4:59–64, 5:4–9, 5:26–31.

To deposit a check, account owner 110 converts the check into electronic data by, for example, “scanning the front and/or back of the check using image capture device 112,” and then general purpose computer 111 sends that data to financial institution 130. *Ex.* 1101, 5:60–6:8. After receiving the image, financial institution 130 communicates with other financial institutions (e.g., 140 and 150) to clear the check. *Id.* at 6:11–49. For example, financial institution 130 may create a substitute check using the image provided by account owner 110 and present the substitute check to

an intermediary (financial institution 140), which identifies the paying bank (financial institution 150). *Id.* at 6:21–28. Financial institution 140 then presents the substitute check to financial institution 150, and “[i]f financial institution 150 verifies the check (i.e., agrees to honor the check), financial institution 140 may then settle the check by debiting funds from financial institution 150 and crediting funds to financial institution 130.” *Id.* at 6:32–38. Financial institutions 130 and 150 make the appropriate changes in the respective accounts (i.e., accounts 160 and 170). *Id.* at 6:11–13, 6:38–39.

#### *D. Challenged Claims*

Petitioner challenges all 18 claims of the ’559 patent. Of these, claims 1 and 10 are independent, and for purposes of this Decision, claim 1 is representative. Claim 1 recites:

1. [pre] A computing device for processing a remote deposit of a check, the computing device comprising:
  - [a] first processing circuitry;
  - [b] a first memory having stored thereon executable instructions that, when executed by the first processing circuitry, cause the first processing circuitry to perform first operations including:
    - [c] receive a digital image depicting at least portions of the check submitted by a user for the remote deposit of the check, the digital image transmitted using a mobile device associated with an image capture device, the digital image being captured by the image capture device;
    - [d] detect an image format of the digital image;
    - [e] determine the digital image is stored in a first image format;

[f] convert the digital image into a second image format, wherein an image quality of the first image format is greater than an image quality of the second image format;

[g] apply optical character recognition to the digital image;

[h] determine an amount for the remote deposit of the check based on the optical character recognition applied to the digital image;

[i] compare the determined amount against a customer-entered amount;

[j] optically read a magnetic ink character recognition (MICR) line depicted in the digital image;

[k] determine a routing number from the optically read MICR line;

[l] perform duplicate check detection on the check depicted in the digital image based at least in part on information obtained via the optical character recognition applied to the digital image; and

[m] determine the digital image is suitable for creating a substitute check and sufficient to go forward with the deposit;

[n] second processing circuitry; and

[o] a second memory having stored thereon executable instructions that, when executed by the second processing circuitry, cause the second processing circuitry to perform second operations including:

[p] accepting the digital image for check deposit in place of the check depicted in the digital image.

Ex. 1101, 14:22–65 (reference letters added).



## II. EVALUATION OF DISCRETIONARY DENIAL

### A. Patent Owner's Argument under 35 U.S.C. § 314(a)

Patent Owner contends that we should exercise our discretion to deny the Petition in light of the Texas case, a parallel district court proceeding involving the parties and the challenged patent. Prelim. Resp. 3–7; Prelim. Sur-Reply 1–4. Petitioner disagrees. Pet. 88–90; Prelim. Reply 5–6.

The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Consolidated Trial Practice Guide (“CTPG”)<sup>11</sup> 58 & n.2. We consider the following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

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<sup>11</sup> Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>

*Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In evaluating these factors, we “take[] a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6. Upon consideration of these factors, we decline to exercise our discretion to deny the Petition.

1. *Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

The *Fintiv* panel indicated that, in previous Board decisions, the existence of a district court stay pending Board resolution of an *inter partes* review has weighed strongly against discretionary denial, while a denial of such a stay request sometimes weighs in favor of discretionary denial. *Fintiv*, Paper 11 at 6–8.

Neither party indicates that a stay has been requested or granted in the Texas case. Pet. 88–90; Prelim. Resp. 3–5. Determining how the Texas court might handle a motion for stay that has not yet been filed invites conjecture. It would be improper to speculate, at this stage, what the Texas court might do regarding a motion to stay, given the particular circumstances of this case. Accordingly, this factor is neutral as to the exercise of our discretion. *Cf. Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (“In the absence of specific evidence, we will not attempt to predict how the district court in the related district court litigation will proceed because the court may determine whether or not to stay any individual case, including the related one, based on a variety of circumstances and facts beyond our control and to which the Board is not privy.”); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB

May 13, 2020) (informative) (“*Fintiv IP*”) (“We decline to infer, based on actions taken in different cases with different facts, how the District Court would rule should a stay be requested by the parties in the parallel case here. This factor does not weigh for or against discretionary denial in this case”).

2. *Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

The Texas court has scheduled April 18, 2022, as the date for Jury Selection. Ex. 2016 (Third Amended Docket Control Order), 1. A trial date of April 18, 2022, would be approximately nine months prior to our expected statutory deadline for a final written decision. Petitioner does not present meaningful argument that this date is expected to change. Accordingly, this factor weighs in favor of exercise of our discretion to deny the Petition.

3. *Investment in the parallel proceeding by the court and the parties*

If, at the time of the institution decision, the district court has issued substantive orders related to the challenged patent, such as a claim construction order, this fact weighs in favor of denial. *See Fintiv*, Paper 11 at 9–10. On the other hand, if the district court has not issued such orders, this fact weighs against discretionary denial. *Id.* at 10. A *Markman* hearing in the Texas case took place on November 10, 2021, and the Texas court issued a Claim Construction Memorandum Opinion and Order on November 22, 2021. Ex. 1159.

Petitioner contends that the parties have not completed fact or expert discovery or briefing on dispositive invalidity issues in the Texas case. Pet. 89. Thus, Petitioner argues, the parties and the Texas court have not

invested significantly in the merits of the invalidity positions pertaining to the '559 patent. *Id.*

Patent Owner argues that we should consider the additional investment of time and resources that will occur in the Texas court after our institution decision but before a final written decision, although Patent Owner does not state what additional investment we should consider.

Prelim. Resp. 5. We note that *Fintiv* instructs us to consider investment “at the time of the institution decision.” *Fintiv*, Paper 11 at 9–10.

In any case, given that the Texas court has issued a claim construction ruling, we find that the parties and the Texas court have invested at least some resources toward resolving issues that we might be asked to resolve in this proceeding. In arguing that factor 4 favors denial, Patent Owner argues that “[b]y the time the Board issues an institution decision, expert discovery and dispositive motions briefing will be complete.” Prelim. Sur-Reply 2 (citing Ex. 2016, at 3). Thus, this factor weighs in favor of exercising our discretion to deny the Petition.

4. *Overlap between issues raised in the petition and in the parallel proceeding*

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” *Fintiv*, Paper 11 at 12. “Conversely, if the petition includes materially different grounds, arguments, and/or evidence than those presented in the district court, this fact has tended to weigh against exercising discretion to deny institution under *NHK*.” *Id.* at 12–13.

“Petitioner stipulates that, if this IPR is instituted, it will not advance the grounds that are raised or reasonably could have been raised in this IPR

in the co-pending district court proceeding, eliminating any overlap between the IPR and the co-pending district court proceeding.” Pet. 89. Here, Petitioner offers a stipulation similar to that discussed in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12, 18–19 (PTAB) (precedential) (finding that “a stipulation that, if IPR is instituted, they will not pursue in the District Court Litigation any ground raised or that could have been reasonably raised in an IPR,” weighed strongly in favor of not exercising discretion to deny institution).

Patent Owner argues that “it is not apparent that the stipulation would have any meaningful effect” because the Texas case involves related U.S. Patent No. 10,013,681, which “shares many similar limitations” with the ’559 patent, and “given the positions Petitioner is taking with respect to closely related art and past challenges brought by related parties.” Prelim. Resp. 6. According to Patent Owner, Petitioner does not disclaim its intent to pursue arguments against that related patent, and Petitioner’s prior art includes “a ‘system’ reference . . . in an apparent attempt to defeat its own stipulation.” *Id.*; see Prelim. Sur-Reply 1–2. We are not persuaded by these arguments, and in any case, the Texas court will manage its own record.

In view of Petitioner’s stipulation, we conclude that, following *Sotera*, this factor strongly favors institution. As in *Sotera*, “Petitioner’s stipulation mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions.” *Sotera*, Paper 12 at 19. We agree with the reasoning in similarly situated *Samsung Electronics Co., Ltd. v. Acorn Semi, LLC*, IPR2020-01183, Paper 17 at 43 (PTAB Feb. 10, 2021), that the stipulation “meaningfully simplifies overlapping issues between the parallel district court proceeding and this proceeding.” Patent Owner argues that, in *Cisco Sys., Inc. v. Estech Sys.*,

*Inc.*, IPR2021-00329, Paper 13 at 13 (PTAB July 6, 2021), the Board “distinguished *Sotera* because there ‘relatively limited investment in the parallel proceeding to date,’ had occurred, and thus ‘factor [4] weighs strongly in favor of exercising our discretion to deny institution’ despite the presence of a *Sotera* stipulation.” Prelim. Sur-Reply 4 (alteration Patent Owner’s). Patent Owner’s alteration to add “[4]” in its quote of *Cisco* is inaccurate and misleading. Rather, the *Cisco* case found factor 3, “investment,” not factor 4, to weigh strongly in favor of exercise of discretion. *Cisco*, Paper 13 at 13. Indeed, *Cisco* expressly found, as to factor 4, that, “[a]s in *Sotera*, this factor weighs strongly in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a).” *Id.* The *Cisco* panel found that factor 4 was outweighed by other factors, such as factor 3. *Id.*

5. *Whether the petitioner and the defendant in the parallel proceeding are the same party*

If the petitioner here was unrelated to the defendant in the parallel proceeding, that might weigh against discretionary denial. *See Fintiv*, Paper 11 at 13–14. Here, however, Petitioner is the defendant in the parallel proceeding. This fact could weigh either in favor of, or against, exercising discretion to deny institution, depending on which tribunal was likely to address the challenged patent first. Given the current information concerning the relative timing of the proceedings, we accord this factor as weighing in favor of exercising discretion to deny the Petition.

6. *Other circumstances that impact the Board's exercise of discretion, including the merits.*

Petitioner argues that “this Petition presents a strong prior art reference—Garcia—that had not been before the Office and specifically teaches the purported inventive concept of the ’559 patent: remote check deposit system using a mobile device with a digital camera.” Pet. 90. Patent Owner argues that “Petitioner’s arguments are both substantively weak and repetitive of past failed challenges.” Prelim. Resp. 7.

We agree with Petitioner’s characterization of Garcia. Moreover, for the reasons explained below, on the current record, we disagree with Patent Owner’s assessment that Petitioner’s arguments are substantively weak. *See infra* § III.E.1 (addressing parties’ substantive arguments). Furthermore, although Patent Owner accuses Petitioner of presenting a case that is “repetitive of past failed challenges” (Prelim. Resp. 7), Patent Owner fails to identify any such past challenges (*see* Prelim. Sur-Reply 4–5). Accordingly, on the preliminary record, we determine the merits of Petitioner’s case weigh in favor of institution. *See Fintiv*, Paper 11 at 14–15 (“[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution.”).

7. *Holistic Assessment of Fintiv Factors*

We have considered the circumstances before us in view of the *Fintiv* factors. Because our analysis is fact driven, no single factor is determinative of whether we exercise our discretion to deny institution under § 314(a). Further, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” when evaluating these factors. *Fintiv*, Paper 11 at 6. Having evaluated all of the factors on

this record, we do not exercise our discretion under § 314(a) to deny institution of *inter partes* review.

*B. Multiple Petitions*

As noted above, when filing the Petition, Petitioner concurrently filed an *inter partes* review petition challenging the '559 patent in IPR2021-01076 (“the 1076 IPR”). Pet. 3; Paper 6, 3; *see also* Paper 3 (Petitioner’s Ranking Notice). Petitioner contends that two petitions are justified “because they are based on different priority dates and different sets of prior art references.” Paper 3 at 1; *see id.* at 2–3. Petitioner points to the Consolidated Trial Practice Guide, which identifies this type of situation as a “circumstance[] in which more than one petition may be necessary.” *Id.* at 3–4 (quoting CTPG 59) (alteration Petitioner’s).

Patent Owner argues that we should deny institution because Petitioner has failed to sufficiently justify two concurrently-filed petitions. Paper 10 (Patent Owner’s Opposition to Ranking Notice), 1–3. Patent Owner states that the Consolidated Trial Practice Guide says that “two petitions by a petitioner *may* be needed” when there is a disputed priority date, but clarifies that “this should be *rare*.” *Id.* at 1 (quoting CTPG 59). According to Patent Owner, Petitioner “offers no explanation, other than the mere fact that the two petitions rely on different priority dates and non-overlapping grounds, why the Board should consider both petitions.” *Id.* at 2. Patent Owner contends that we should discretionarily deny this Petition for this reason, whether or not we institute review of the 1076 IPR. *Id.* at 3.

On this record, we are persuaded that we should consider the merits of this Petition. In particular, Petitioner sufficiently explains and justifies its decision to file two petitions—one challenging the '559 patent’s claimed



priority date (in the 1076 IPR) and one assuming entitlement to that date (in this proceeding). Moreover, we deny institution of the other petition (*see* IPR2021-01076, Paper 21), and in our view, this further mitigates in favor of considering the merits of this Petition.

Accordingly, we do not exercise our discretion under § 314(a) to deny institution of *inter partes* review on this basis.

### III. ANALYSIS

#### A. *The Level of Ordinary Skill in the Art*

Petitioner asserts that the level of ordinary skill in the art corresponds to “a bachelor’s degree in electrical engineering, computer science, computer engineering, or equivalent field” and “two years of prior experience with image capturing/scanning technology, involving transferring and processing of image data to and at a server.” Pet. 15–16 (citing Ex. 1102 ¶¶ 42–45). Petitioner further asserts that “[l]ess work experience may be compensated by a higher level of education, and vice versa.” *Id.* at 16.

Patent Owner applies Petitioner’s proposed level of ordinary skill at this stage. Prelim. Resp. 13.

For purposes of this Decision, we adopt Petitioner’s proposed level of skill, as articulated above. We are satisfied that Petitioner’s proposed definition generally comports with the level of skill necessary to understand and implement the teachings of the ’559 patent and the asserted prior art.

To the extent the level of ordinary skill in the art is in dispute or makes a material difference in the obviousness analysis, the parties should brief their respective positions in this regard during trial.

*B. Claim Construction*

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

Petitioner identifies various claim constructions proposed by Petitioner and/or Patent Owner in the co-pending district court litigation. Pet. 12–15. For some claim limitations, Petitioner proposes that we apply either the Patent Owner’s construction or the parties’ agreed construction (*id.* at 12–13), and for others, Petitioner contends that the challenged claims are invalid under either party’s proposed construction (*id.* at 14–15). Patent Owner contends that no construction of any claim term or phrase is necessary at this stage. Prelim. Resp. 13. However, according to Patent Owner, the latter half of Petitioner’s discussion fails to identify the constructions to be applied in this proceeding, as required by 37 C.F.R. § 42.104, and fails to support Petitioner’s proposals. *Id.* at 14 (citing Pet. 14–15)).

At this stage, we determine that it is not necessary to expressly construe any claim terms or phrases for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”

(quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Turning to the arguments made by Patent Owner, we do not agree that the Petition's claim construction section violates Rule 42.104. Although this portion of the Petition is not the picture of clarity, we understand the identified table to candidly disclose the parties' positions from the Texas case, and we understand Petitioner's position to be that these terms and phrases<sup>12</sup> do not require construction because the claims are unpatentable under either party's construction. *See* Pet. 14–15.

We do, however, agree with Patent Owner's argument that the Petition does not sufficiently explain why any term or phrase lacks patentable weight. *See* Prelim. Resp. 14; Pet. 14–15. In particular, the Petition recognizes that Patent Owner contends that the preamble is limiting, where Petitioner contends that only *some* of the preamble is limiting, but the Petition includes no supporting analysis or explanation. Pet. 14. Instead, Petitioner only provides a string citation to passages from the Specification. Having reviewed those passages, we do not discern sufficient support for Petitioner's view. Also, Petitioner contends that “control[ling] display of instructions” lacks patentable weight, despite Patent Owner's contrary position, but similarly fails to provide sufficient support or analysis. *Id.* at

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<sup>12</sup> As noted above, with regard to terms in another table, Petitioner proposes that we apply the parties' agreed constructions or Patent Owner's proposed constructions from the Texas case. *See* Pet. 13. At this stage, Patent Owner does not dispute those constructions or this approach (*see* Prelim. Resp. 13–14), and these proposals appear to be consistent with the claim construction order in Texas case (*compare* Pet. 13, *with* Ex. 1159, 12–20).

15 (alteration Petitioner's). Accordingly, at this stage, we determine that the Petition does not sufficiently support either of these positions.

*C. Law on Obviousness*

The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.<sup>13</sup> *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

*D. Summary of Asserted Prior Art References*

*1. Garcia (Ex. 1103)*<sup>14</sup>

*Garcia* describes a method of transmitting a digital image of a check from a mobile device to a financial institution (such as a bank) for validation, processing, and storage. Ex. 1103, code (57), 1:6–13, 4:1–18. In this way, a check can be “deposit[ed] into the existing account at a banking institution . . . by a user using a mobile device that incorporates a camera.” *Id.* at 4:14–16. According to *Garcia*, its “system achieves greater simplicity,

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<sup>13</sup> The current record does not include allegations or evidence of objective indicia of nonobviousness.

<sup>14</sup> The English translation of *Garcia* begins on page 28 of Exhibit 1103. Unless otherwise noted, we follow the parties' convention and cite to pages and lines within the English translation.

speed, and security . . . in depositing checks[] by replacing the traditional check reader with a multi-purpose mobile device.” *Id.* at 7:18–22; *see id.* at 7:22–8:14 (further explaining these benefits).

Figure 2 (reproduced below) illustrates an example mobile device and financial institution that can use Garcia’s method. Ex. 1103, 9:6–7.

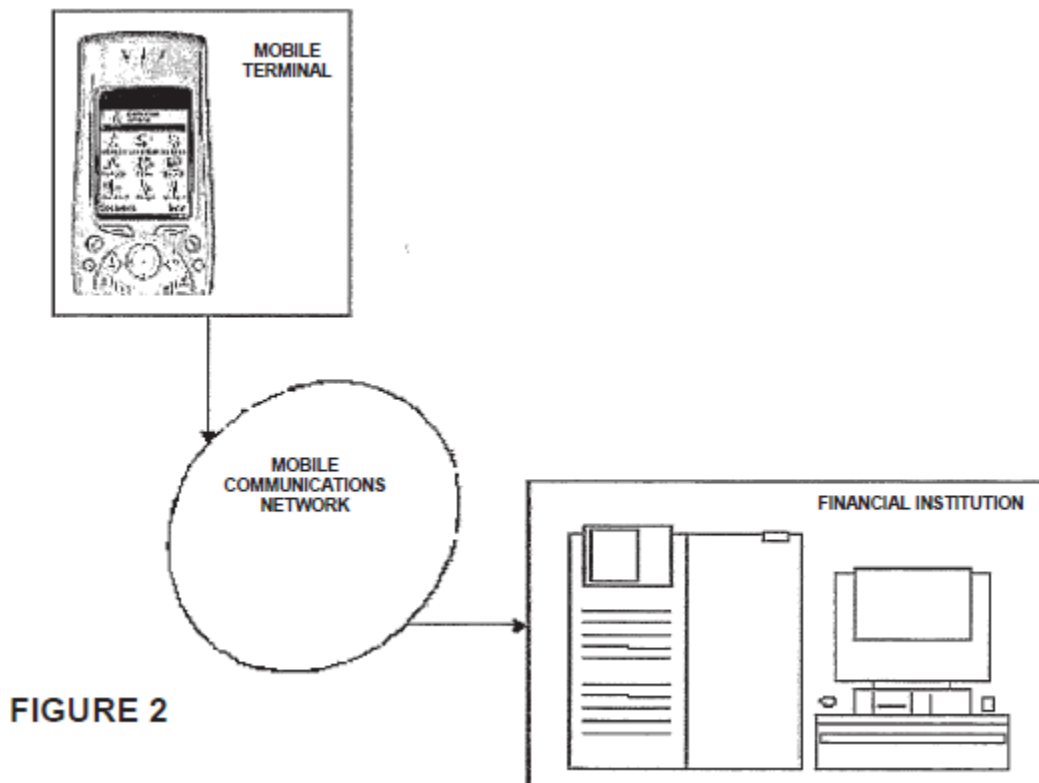


Figure 2 (reproduced above) shows a mobile device and a financial institution that are connected via a mobile communications network.

In Garcia’s method, a session is opened with the receiving institution, and a user enters “user recognition data, consisting of security keys for the user’s identification and authentication . . . as well as data associated with the document itself, such as the amount.” Ex. 1103, 5:9–20; *see also id.* at 9:21–10:9. The mobile device then captures a digital image of the document and transmits both the digital image and the user recognition data to the institution. *Id.* at 5:21–6:5; *see also id.* at 10:10–18. The institution then

“[r]ecogniz[es], verif[ies], and electronically treat[s] and process[es] the information received.” *Id.* at 6:8–10. For these tasks, the institution “must have certain electronic means . . . consist[ing] basically of computer equipment connected to the Internet that has an optical character recognition (OCR) system, a code authentication system and means of transmitting data to the institution’s document processing system.” *Id.* at 11:7–15. Garcia states that the financial institution “processes the document in question by the usual means (truncation systems),” but does not further explain how this is done. *Id.* at 11:15–19.

## 2. *Randle (Ex. 1104)*

Randle describes an “electronic end to end check processing” system that captures “check payment data and an electronic image of the check” and performs dynamic quality assurance (QA) and routing in order to settle and clear the check. Ex. 1104, code (57), ¶¶ 2, 4; *see id.* ¶ 7 (noting that the invention “capture[s], validate[s] and clear[s] transactions” with “the electronic capture of paper items”).

In Randle, a deposit bank captures an image of the front and back of the check and “collects information such as the payee name, bank, payee’s account number, the amount of the check and the MICR data.” Ex. 1104 ¶ 19. Then, based on the transaction profile, dynamic QA “is performed on a captured check image and its related transaction data.” *Id.* ¶ 42. The QA (which can include parallel paths) may evaluate “pre-stored information criteria” such as “human input amount,” “OCR amount,” “MICR read,” and/or “point of presentment.” *Id.* ¶ 74, Figs. 19A, 19B. After QA, the image may be “converted to a less size intensive format for transmission and use in the check processing chain” to “increase[] transmission speed and

reduce[] storage requirements.” *Id.* ¶ 43. Once the transaction is cleared, the check “in image or IRD (image replacement document) form” is returned to the payor bank, where it is associated with the payor’s account, and payee bank credits the funds to the payee. *Id.* ¶ 19.

Randle’s system can be implemented in a network that connects multiple banks, as depicted in Figure 3, below. Ex. 1104 ¶¶ 13, 66.

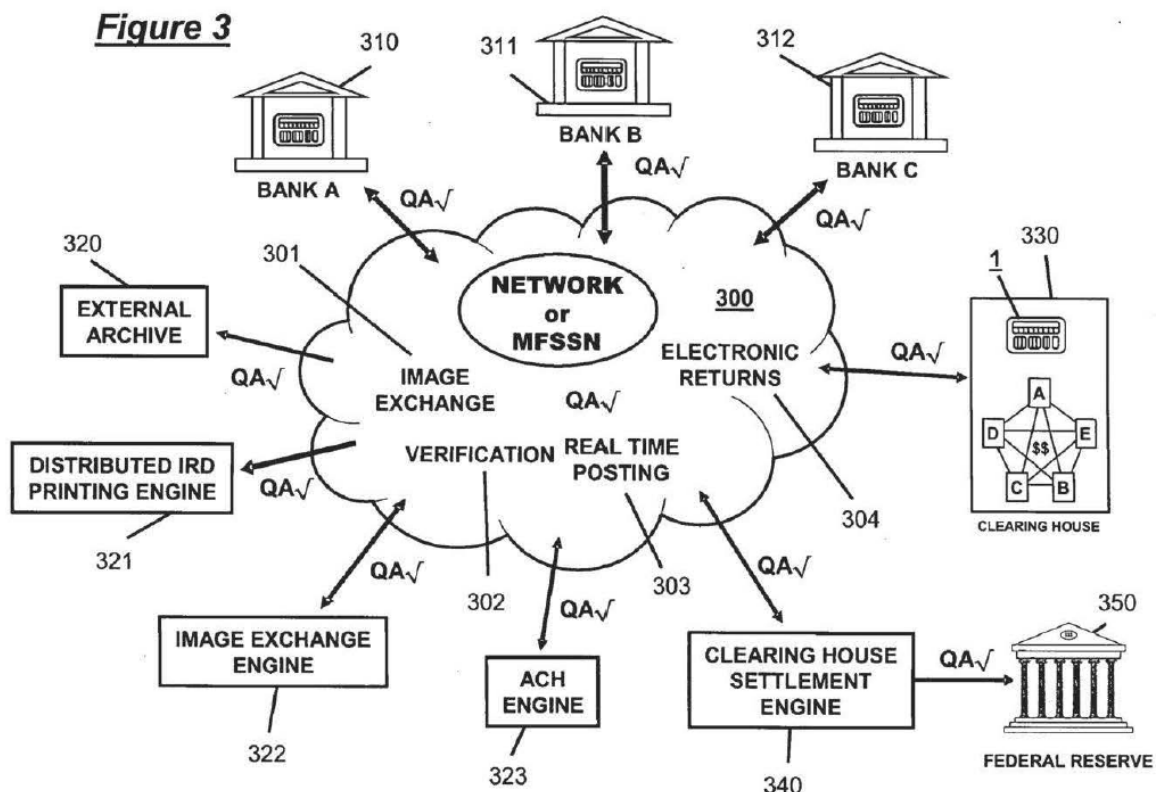


Figure 3 (reproduced above) depicts a private network 300 (with image exchange 301, verification 302, real-time posting 303, and electronic returns 304 functions), participating Bank A 310, Bank B 311, and Bank C 312, clearing house 330, and clearing house settlement engine 340. *Id.* ¶ 66. Randle explains that this arrangement “provides enhanced inter-bank clearing capabilities, such as real-time verification and posting across members.” *Id.* ¶ 67.

3. *Slater (Ex. 1105)*

Slater provides a method for processing, verifying, and transmitting an electronic image of a check in place of the paper check. Ex. 1105, code (57), ¶ 2. Specifically, Slater describes a customer access terminal (CAT) at a banking center that includes “a scanner or check imager in place of a traditional envelope deposit slot as currently used in automatic teller machines” as well as OCR software. *Id.* ¶¶ 22–23. Slater states:

When a check is scanned in, an image of each check is presented on the customer display. The customer can then, using an appropriate keyboard and Courtesy Amount Recognition Software (CAR), input the check amount. A comparison between the scanned amount and the entered amount is made, and if there is a match, the transaction proceeds. If the customer’s input and the courtesy amount recognition differ, even after a customer’s second input, the system will send the check image to a customer service operator who will be able to read the check and resolve any discrepancies.

*Id.* ¶ 23; *see also id.* ¶ 28. The CAT then transmits the electronic image of the check along with other data to a central processing center. *Id.* ¶¶ 24, 27.

4. *Lev (Ex. 1106)*

Lev converts a printed document (such as a “bank check[]”) into electronic form using “a standard portable wireless device,” such as a camera phone or camera enabled PDA. Ex. 1106 ¶¶ 42, 72. Lev states that images can be captured “during an interactive session,” where the server provides instructions to the user to assist with capturing a sufficient image. *Id.* ¶¶ 71, 114–119; *see id.* ¶¶ 20–24 (identifying problems that can occur when taking an image with a mobile device). For example, the server may provide the following instruction: “move camera to the right and closer



please.” *Id.* ¶ 117. The server may also correct the orientation, shape, and size of the captured image. *Id.* ¶ 93; *see also id.* at Fig. 4.

5. *Watanabe (Ex. 1107)*

Watanabe describes a digital camera which has a document photographing mode in addition to a normal photographing mode. Ex. 1107, 1:8–10. In the document photographing mode, “a display unit displays the guidance to notify a user of photographing conditions of a document during displaying of the picture of the subject on the monitor before it is photographed” so that “the user can easily fix the location of the document.” *Id.* at 2:49–54. The guidance is provided in the form of “a guidance frame” shown on the camera’s liquid crystal display (LCD) screen. *Id.* at 7:16–35, Fig. 4; *see also id.* at 3:61–4:4, Fig. 1.

6. *Aoyama (Ex. 1108)*

Aoyama describes a camera that displays “guidance information” on its LCD screen to assist users. Ex. 1108, ¶¶ 2, 12, 58, 62; *see also id.* at Figs. 2, 5A–7B. For example, when a mode dial is set to a fully automatic mode, the camera’s guidance information states: “You can easily photograph well simply by pressing the shutter button.” *Id.* ¶¶ 114, 125–126.

7. *Byrne (Ex. 1109)*

Byrne allows a bank customer to scan checks using a personal computer and then to deposit them into a bank account. Ex. 1109 ¶ 3. In particular, after a user logs into the system’s server, a “Check21 application launches . . . and creates an account list from the user’s authorized accounts.” *Id.* ¶ 173; *see id.* ¶¶ 47–48, Figs. 1, 6. From that list, the user selects an account into which the checks should be deposited. *Id.* ¶ 173.

*E. Obviousness Ground Based on Garcia, Randle, and Slater*

Petitioner contends that the subject matter of the independent claims would have been obvious over the combination of Garcia, Randle, and Slater. Pet. 23–67, 69–72. For the dependent claims, Petitioner relies on the Garcia-Randle-Slater combination alone or in combination with additional references. *Id.* at 67–69, 72–88.

Patent Owner alleges that Petitioner fails to sufficiently show unpatentability of the independent claims. Prelim. Resp. 17–35. First, Patent Owner contends that Petitioner fails to sufficiently support a motivation to combine Garcia, Randle, and Slater with a reasonable expectation of success. *Id.* at 17–29. Second, Patent Owner contends that Petitioner fails to sufficiently show that the amount limitations (i.e., “determin[ing] an amount for the remote deposit of the check based on the optical character recognition applied to the digital image” and “compar[ing] the determined amount against a customer-entered amount”) would have been obvious in light of the proposed combination. *Id.* at 29–35 (alterations Patent Owner’s). Patent Owner submits that each deficiency infects all challenged claims and all grounds. *Id.* at 17, 29, 36.

We have considered the parties’ arguments and the evidence presented at this stage. For the reasons explained below, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that the challenged claims would have been obvious over the cited references, notwithstanding Patent Owner’s arguments to the contrary. Accordingly, we institute *inter partes* review.

*1. Independent Claim 1*

First, we summarize and evaluate Petitioner’s contentions that it would have been obvious to combine Garcia, Randle, and Slater and that the proposed combination teaches or suggests each limitation of the claim. Then, we address each of Patent Owner’s arguments.

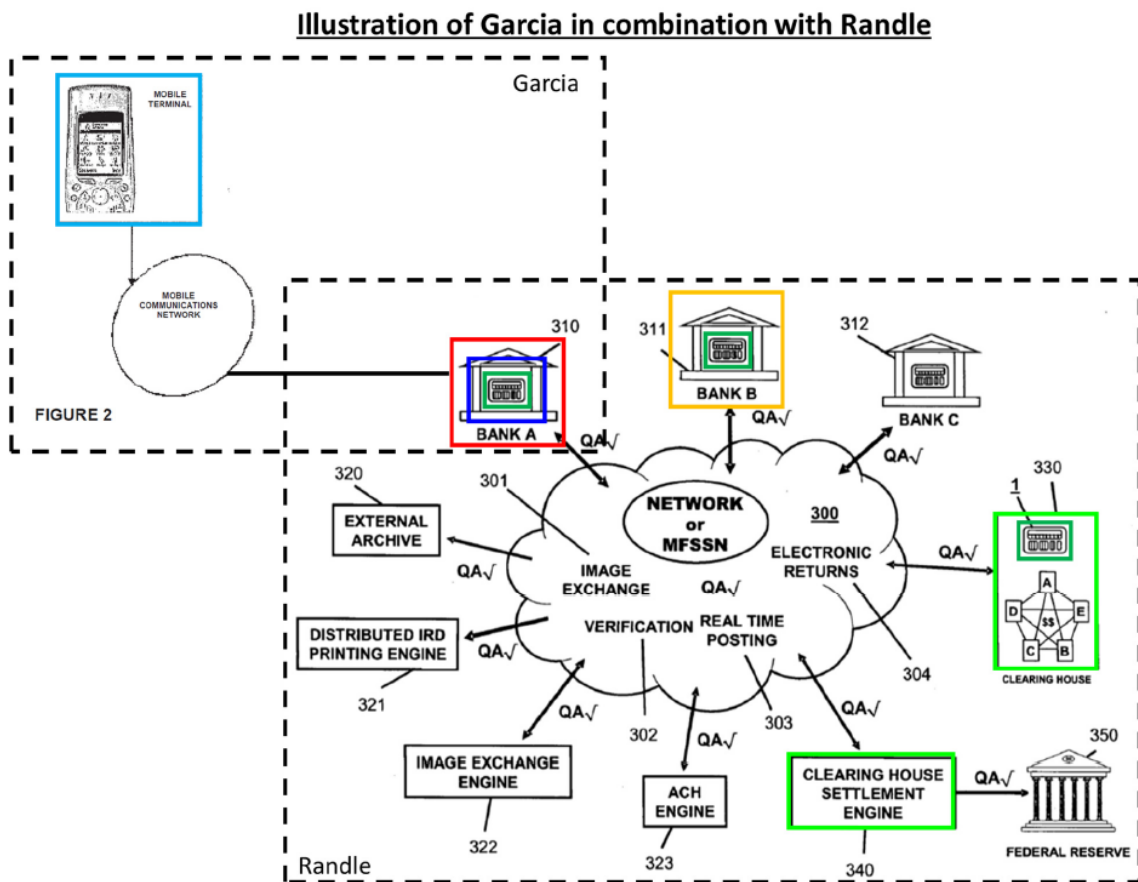
*a) Petitioner’s Contentions*

*(1) Combination of Garcia, Randle, and Slater*

Petitioner asserts that it would have been obvious to a person of ordinary skill in the art to combine Garcia, Randle, and Slater. Pet. 23–33. According to Petitioner, Garcia discloses that “computer equipment” at a financial institution recognizes, verifies, processes, and deposits a check image received from a mobile device using OCR, but Garcia does not “expressly disclose details about how the computer equipment implements these processes.” *Id.* at 23–24 (citing Ex. 1103, 4:11–16, 7:18–21, 9:11–18, 11:7–13, 12:20–21, 15:8–10, Fig. 2). Petitioner contends that an ordinary artisan would have been motivated to find these implementation details, and would have expected the prior art to provide them, given Garcia’s indication that these details were known. *Id.* at 24–25 (citing Ex. 1103, 11:10–19; Ex. 1102 ¶ 63).

Petitioner contends that Randle discloses these implementation details. Pet. 25–26. According to Petitioner, Randle provides a check processing system that “validate[s] and clear[s] transactions” based on an electronic image of a paper check. *Id.* at 25 (quoting Ex. 1104 ¶ 7). Petitioner asserts that, after receiving a check image, Randle’s engine performs QA operations on the received check and then transmits the quality-checked image to a clearing house, which clears and settles the

transaction between the banks. *Id.* at 25–26 (citing Ex. 1104 ¶¶ 19–21, 28, 36, 42–43, 54, 74, Fig. 3). Petitioner contends that it would have been obvious to incorporate Randle’s engine into Garcia’s computer equipment (in its financial institution) and to implement Garcia’s financial institution as part of Randle’s network. *Id.* at 26–28 (citing Ex. 1103, 11:7–13; Ex. 1104 ¶¶ 20–21, 28, 36, 42–43, 54, 74, Fig. 1B; Ex. 1102 ¶¶ 64–65). To illustrate its proposed combination, Petitioner combines Garcia’s Figure 2 with Randle’s Figure 3, as shown below. *Id.* at 27.



Petitioner’s illustration (shown above) depicts Randle’s Figure 3 alongside an excerpt of Garcia’s Figure 2. The illustration includes Garcia’s mobile terminal (in light blue box), but it replaces Garcia’s financial institution with Randle’s Bank A 310, which is shown as including a dark blue box that

represents Garcia's computer equipment. The illustration also includes Randle's Bank A 310 (payee bank) in red, Bank B 311 (payor bank) in yellow, and clearing house 330 and settlement engine 340 in light green. Petitioner further explains that it would have been obvious to combine Garcia and Randle in this way because it combines known elements and methods in a predictable way, an ordinary artisan would have had a reasonable expectation of success, and it would have been obvious to try given Garcia's need for implementation details. Pet. 28–29 (citing Ex. 1102 ¶¶ 66–68).

Next, Petitioner contends that, although the Garcia-Randle combination's QA operations consider "the check amount determined by the OCR and the check amount input by the user," neither reference explicitly teaches how this information is used to validate a check transaction. Pet. 29–30 (citing Ex. 1104 ¶¶ 20–21, 28, 42, 74, Fig. 1B). According to Petitioner, Slater explains that a transaction can be validated by comparing the OCR amount with an amount input by a customer. *Id.* at 30 (citing Ex. 1105 ¶¶ 23, 28). Petitioner contends that it would have been obvious to incorporate Slater's comparison into Garcia-Randle's engine because an ordinary artisan would have understood that this would both reduce data entry and OCR errors and predictably improve the system's accuracy and reliability. *Id.* at 30–32 (citing Ex. 1102 ¶¶ 70–72). Petitioner further contends that the ordinary artisan would have been motivated to make this combination because it combines known elements and methods in a predictable way, an ordinary artisan would have had a reasonable expectation of success, and it would have been obvious to try given that Slater provided a predictable, improved solution to the design need to validate check items. *Id.* at 32–33 (citing Ex. 1102 ¶¶ 73–75).

At this stage, we are sufficiently persuaded that a person of ordinary skill in the art would have been motivated to combine Garcia, Randle, and Slater in the manner proposed by Petitioner. We have considered Patent Owner's arguments that this aspect of the Petition is deficient, but for the reasons explained fully below, we do not agree. *See infra* § III.E.1.b.1.

(2) *Limitation-by-Limitation Analysis*

(a) *The Structural Limitations: 1[pre], 1[a], 1[b], 1[n], and 1[o]*

Claim 1 recites:

[pre] A computing device for processing a remote deposit of a check, the computing device comprising:

[a] first processing circuitry;

[b] a first memory having stored thereon executable instructions that, when executed by the first processing circuitry, cause the first processing circuitry to perform first operations . . .

. . .

[n] second processing circuitry; and

[o] a second memory having stored thereon executable instructions that, when executed by the second processing circuitry, cause the second processing circuitry to perform second operations . . . .

Ex. 1101, 14:22–28, 14:59–63. For these limitations, Petitioner relies on the combination of Garcia and Randle.<sup>15</sup> *See* Pet. 33–41, 59–62. In particular,

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<sup>15</sup> At this stage, we treat the preamble of claim 1 as a limitation. As noted above, Petitioner does not sufficiently explain its position that some, but not all, of the preamble is limiting. *See supra* § III.B (addressing Petitioner's claim construction); *see also* Pet. 14, 33. Also, the district court concluded that the preamble of claim 1 is limiting. *See* Ex. 1159, 25–29.

Petitioner contends: computer equipment in payee bank (Bank A) includes the claimed the “first processing system” and “first memory”; the engine in the payor bank (Bank B), the clearing house, and/or equipment for accepting inbound check images (Bank A) includes the claimed “second processing system” and “second memory”; and these components collectively form the claimed “computing device.” *Id.* at 34–35 & n.9 (citing Ex. 1102 ¶¶ 78–80); *see also id.* at 39–41 (re: “first processing system” and “first memory”), 59–62 (re: “second processing system” and “second memory”). Petitioner asserts that these components are “for processing a remote deposit of a check,” as recited. *Id.* at 38–39 (citing Ex. 1103, 12:17–22; Ex. 1104 ¶ 2).

Petitioner further elaborates on these contentions. Petitioner asserts that an ordinary artisan would have understood the computer equipment and engine to be a general purpose computer, as “it was well known that financial institutions performed electronic check processing using servers implemented using general-purpose computers.” Pet. 35–37 (citing Ex. 1102 ¶¶ 81–82; Ex. 1103, Fig. 2); *see also id.* at 37–38 (citing Ex. 1102 ¶¶ 83–85) (further arguing that, for similar reasons, it would have been obvious to use a general purpose computer). Petitioner also asserts that, like the ’559 patent, the payor and payee banks may be the same, and “the computer equipment in payee bank includes Randle’s engine that also performs the functionalities of the payor bank.” *Id.* at 61–62 (citing *id.* at 62–67; Ex. 1101, 12:14–18; Ex. 1102 ¶¶ 137–138; Ex. 1104 ¶¶ 36, 57, 59, 60). Petitioner further asserts that an ordinary artisan would have understood Garcia’s computer equipment and Randle’s engine to each implement its functionality as instructions stored in memory and executed by processing circuitry. *Id.* at 40, 60–61 (citing Ex. 1102 ¶¶ 88, 134); *see*

*also id.* at 40–41, 61 (citing Ex. 1102 ¶¶ 89, 135–136) (further arguing that this would have been obvious).

Based on the current record, Petitioner has shown sufficiently that Garcia and Randle, in combination, teach these limitations. At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner’s showing.

*(b) The Image Receipt Limitation: 1[c]*

Claim 1 recites: “receive a digital image depicting at least portions of the check submitted by a user for the remote deposit of the check, the digital image transmitted using a mobile device associated with an image capture device, the digital image being captured by the image capture device.” Ex. 1101, 14:29–34. Petitioner relies on Garcia to teach this limitation. *See* Pet. 41–44. In particular, Petitioner quotes Garcia’s disclosure that a “mobile device with incorporated digital camera” “captur[es] the digital image of the obverse and the reverse side of the [check]” and “transmit[s] the digital image . . . to the institution” so that the institution’s computer equipment can “process the deposit of the check.” *Id.* at 42–44 (alterations Petitioner’s) (quoting Ex. 1103, 6:3–5, 6:12–20, 10:10–11, 10:16–18, 12:17–22; citing *id.* at 4:11–18, 5:21–22, 9:19, 11:10–15, 12:4–9, 15:17–18, Fig. 1).

Based on the current record, Petitioner has shown sufficiently that Garcia teaches this limitation. At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner’s showing.



(c) *The Image Format Limitations: 1[d], 1[e], and 1[f]*

Claim 1 recites:

[d] detect an image format of the digital image;

[e] determine the digital image is stored in a first image format;

[f] convert the digital image into a second image format,  
wherein an image quality of the first image format is greater  
than an image quality of the second image format;

Ex. 1101, 14:35–41. Petitioner relies on Randle to teach these limitations.  
*See* Pet. 44–46.

In particular, Petitioner points to Randle’s disclosure of converting the check image from “a high level of quality” to “a less size intensive format for transmission and use in the check processing chain.” Pet. 44 (quoting Ex. 1104 ¶ 43). Petitioner quotes Randle, which states that “[e]xamples of data reduction include: 1) 8 bit gray scale to bi-tonal (black and white); . . . 6) color (grey scale or full color) to bi-tonal (black and white).” *Id.* at 44 (quoting Ex. 1104 ¶ 43) (alteration Petitioner’s). According to Petitioner, an ordinary artisan would have understood that different data reduction processes would be applied, depending upon the format of the received image; therefore, ordinary artisan would have understood Randle’s engine to detect an image format before creating the lower quality image. *Id.* at 44–45 (citing Ex. 1102 ¶ 98). Finally, Petitioner contends that an ordinary artisan would have been motivated to incorporate these aspects of Randle in the combination to “increase[] transmission speed and reduce[] storage requirements” and because the Federal Reserve banks adopted a bi-tonal TIFF format for Check 21 services. *Id.* at 45, 47 (quoting Ex. 1104 ¶ 43; citing Ex. 1113; Ex. 1102 ¶¶ 99, 103–104) (alterations Petitioner’s).

Based on the current record, Petitioner has shown sufficiently that Randle teaches these limitations. At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner's showing.

*(d) The OCR Verification Limitations: 1[g], 1[h], 1[i], 1[j], 1[k], and 1[l]*

Claim 1 recites:

[g] apply optical character recognition to the digital image;

[h] determine an amount for the remote deposit of the check based on the optical character recognition applied to the digital image;

[i] compare the determined amount against a customer-entered amount;

[j] optically read a magnetic ink character recognition (MICR) line depicted in the digital image;

[k] determine a routing number from the optically read MICR line;

[l] perform duplicate check detection on the check depicted in the digital image based at least in part on information obtained via the optical character recognition applied to the digital image; and

Ex. 1101, 14:42–55. Petitioner relies on Garcia, Randle, and Slater for these limitations. Pet. 46–56.

As to element 1[g], Petitioner points to Garcia's disclosure that the financial institution includes computer equipment that "has an optical character recognition (OCR) system" for "recognizing, verifying and processing" the check image received from the user. Pet. 46 (quoting Ex. 1103, 11:7–15; citing *id.* at 6:3–10, 12:4–9, 12:13–22).

As to elements 1[h] and 1[i], Petitioner asserts that Randle's engine performs QA based on data including a check's "OCR amount" and a

“human input amount.” Pet. 47 (citing Ex. 1104 ¶ 74, Fig. 9B (item 121)); *see id.* at 29–30 (alleging Randle teaches “117 human input amount”).

Petitioner contends that an ordinary artisan would have understood that Randle’s engine would have applied OCR to the check image to “determine an amount for the remote deposit of the check,” as recited. *Id.* at 47 (citing Ex. 1102 ¶ 108) (footnote omitted). Petitioner further contends, in the alternative, that it would have been obvious to use Garcia’s OCR to obtain the “OCR amount” from the check. *Id.* at 48–49 (citing Ex. 1102 ¶ 109). Further, Petitioner argues that Slater expressly teaches comparing an OCR amount and an amount entered by a user. *Id.* at 49–50 (citing Ex. 1105 ¶¶ 23, 26).

As to elements 1[j] and 1[k], Petitioner again points to Garcia’s statement that the financial institution’s computer equipment includes OCR for recognizing, verifying, and processing the check image. Pet. 50–51. According to Petitioner, Randle teaches that the payee bank collects the MICR data and, from it, determines a routing number identifying the payor bank. *Id.* at 51 (citing Ex. 1104 ¶¶ 18–19), 54 (citing Ex. 1104 ¶¶ 18–19, 76, Fig. 11A (item 150); Ex. 1102 ¶ 120). According to Petitioner, a person of ordinary skill in the art would have understood that Randle reads the MICR data “optically” from the check image because “that was a standard method of collecting MICR data from a check image” and because Randle expressly teaches performing an OCR on the check number. *Id.* at 51 (citing Ex. 1102 ¶ 114; Ex. 1104 ¶ 74). In the alternative, Petitioner contends that an ordinary artisan would have been motivated to optically read the MICR data because, in the proposed combination, the payee bank only receives an image of the check. *Id.* at 52–54 (citing Ex. 1102 ¶ 115–118); *see also id.*

at 61–62 (addressing contention that payee bank also includes this component).

As to element 1[l], Petitioner contends that Randle’s check verification controller detects duplicate transactions using the check number determined from an OCR of the check image. Pet. 54–56 (citing Ex. 1104 ¶¶ 36, 54, 61, 74, Fig. 2 (items 220 and 221), Fig. 9B (item 115)).

Based on the current record, Petitioner has shown sufficiently that Garcia, Randle, and Slater, in combination, teach or suggest these limitations. At this stage, Patent Owner alleges deficiencies in Petitioner’s showing for elements 1[h] and 1[i], but we do not agree with these arguments for the reasons explained below. *See infra* § III.E.1.b.2.

*(e) The Suitability Limitation: 1[m]*

Claim 1 recites: “determine the digital image is suitable for creating a substitute check and sufficient to go forward with the deposit.” Ex. 1101, 14:56–58. For this limitation, Petitioner relies on the disclosure of Randle and Garcia. *See* Pet. 56–59. According to Petitioner, Randle discloses that this limitation because, based on the quality assessment (QA), its engine dynamically routes the check for clearing and settlement, which may include posting to the image exchange or paper clearing utilizing an image replacement document (IRD) (i.e., a substitute check). *Id.* at 57–58 (citing Ex. 1104 ¶¶ 7–8, 47, 51, 74, Fig. 9B; Ex. 1102 ¶¶ 127–128). Petitioner contends that Garcia teaches that the financial institution’s computing equipment verifies the check image and processes the deposit into the user’s account. *Id.* at 58 (citing Ex. 1103, 11:7–19, 12:17–22). Petitioner further contends that these aspects are taught by Randle, which performs QA on the

image and, if quality is insufficient, the transaction is routed for exception processing. *Id.* at 58–59 (citing Ex. 1104 ¶¶ 19, 21, 23–24, 28).

Based on the current record, Petitioner has shown sufficiently that Randle teaches this limitation. At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner’s showing.

*(f) The Accepting Limitation: 1[p]*

Finally, claim 1 recites: “accepting the digital image for check deposit in place of the check depicted in the digital image.” Ex. 1101, 14:64–65. For this limitation, Petitioner relies on Randle’s disclosure. *See* Pet. 62–67. In particular, Petitioner contends that Randle teaches that payor bank (Bank B) and the clearing house each can accept a check image for deposit in place of the physical check, and the corresponding engine (specifically, image exchange receipt process 280) handles the acceptance processing. *Id.* at 64–67 (citing Ex. 1104 ¶¶ 2, 19, 48, 59, Fig. 1A, Fig. 2); *see also id.* at 61–62 (contending that Bank A may be the payee bank that includes image exchange receipt process for handling the acceptance processing).

Based on the current record, Petitioner has shown sufficiently that Randle teaches this limitation. At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner’s showing.

*b) Patent Owner’s Contentions*

*(1) Insufficient Rationale to Combine*

Patent Owner contends that Petitioner’s rationale to combine Garcia, Randle, and Slater is insufficient because Petitioner does not sufficiently show that an ordinary artisan would have had a reasonable expectation of

success. Prelim. Resp. 17–29. Patent Owner argues that “the Petition relies on portions of Randle that require the use of a ‘high resolution image’ from a specialized scanning device to supply elements of its theorized combination – while ignoring the fundamental question of whether Garcia (which uses a camera on a cellular phone) can create this type of image to begin with.” *Id.* at 18 (citing Ex. 1104 ¶¶ 43); *see also id.* at 20–21, 27–28 (citing Ex. 1104 ¶¶ 7, 20, 43). According to Patent Owner, the Petition fails to address this issue, despite the fact that this difference “is at the very heart of the distinction drawn by the inventors when describing their inventions.” *Id.* at 19 (citing Ex. 1101, 3:63–67, 4:16–19). Also, Patent Owner submits that this “deficiency is particularly stark” for the image format limitations (i.e., elements 1[d], 1[e], and 1[f]) because:

Reducing the quality of an image to reduce storage requirements makes sense in Randle’s system, which starts with a “high quality format” scan obtained from commercial check scanning equipment, and thus has room to reduce resolution without losing important check information needed for check processing. But the Petition does not argue or present any evidence that the images taken by the Garcia cellular telephone could produce that quality of check image.

Prelim. Resp. 23–24; *see also id.* at 25–26 (contending that Petitioner fails to explain why Garcia’s mobile image would have the resolution or quality needed for other aspects of Randle’s processing).

We do not agree. On this record, we are persuaded that Petitioner provides sufficient evidence of a rationale to combine the references with a reasonable expectation of success. *See* Pet. 28–29 (citing Ex. 1102 ¶¶ 66–68). Petitioner’s declarant, Dr. Noble, testifies that “[a] person of ordinary skill would have reasonably expected that Randle’s back-end check processing system could process a check image captured by Garcia’s mobile

device with integrated camera.” Ex. 1102 ¶ 67. Dr. Noble also states that “[i]t was well known that back-end check processing systems are mostly independent of the source from which the check image is received,” and “Randle’s engine, in fact processes check images received from a variety of sources,” including “an image-scanning device at the customer’s location.” *Id.* (quoting Ex. 1104 ¶ 28; citing *id.* ¶¶ 23, 25). At this stage, we credit this testimony because it is reasonable and because we perceive no contradictory evidence.

We do not agree that the Petition should have more specifically addressed whether Garcia’s mobile device can create an image of sufficient quality and resolution for use with Randle’s engine. *See* Prelim. Resp. 17–29. This argument appears to be premised on the assumption that Randle’s engine requires a “high resolution image” from a specialized scanning device, but Patent Owner identifies no evidence to support this assumption.<sup>16</sup>

Randle does not indicate that it requires a commercial scanner or any particular quality or resolution for the image. Rather, Randle’s engine receives images from a variety of different sources, including a teller and an ATM, but also including a point of sale and a “commercial and corporate” source (Ex. 1104 ¶¶ 7, 20, Fig. 1B), and Randle appears to recognize that there will be differences among those different sources (*see, e.g., id.* ¶ 21 (noting that QA may depend “the presentment method or environment”)).

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<sup>16</sup> Patent Owner points to Dr. Noble’s declaration from another proceeding, in which he testified that “a cellphone camera[] would have had limited resolution” in 2006. Prelim. Resp. 24 (quoting Ex. 2015). At this stage, we do not perceive a direct conflict with Dr. Noble’s testimony in this proceeding; however, Patent Owner will have an opportunity to cross-examine Dr. Noble during trial to flesh-out any inconsistencies.

Moreover, Randle does not say that a “high resolution image” is required; rather, it identifies a particular resolution as beneficial “to assure a high level of quality for a QA process.” *Id.* ¶ 43; *cf. id.* (noting that “QA [is] available before and after data reduction”). Finally, Randle’s “high resolution” includes “an 8 bit gray scale (or color) high dpi format (100 dpi or 200 dpi).” *Id.* Currently, the record includes no evidence to indicate that, in 2006, an ordinary artisan would have understood a mobile device to be incapable of taking such an image. Instead, the only evidence related to this issue is Garcia’s express teaching that a mobile device transmits a digital image of a check to a financial institution for deposit. As a result, at this stage, we do not agree that there is a fundamental discrepancy between these references.

Moreover, we do not agree with Patent Owner’s argument that this distinction lies at the “very heart of the distinction drawn by the inventors.” Prelim. Resp. 19; *see also id.* at 21 n.6. The Specification focuses on depositing a check with a “customer-controlled” device “that today’s consumers actually own or can easily acquire,” not than the resolution or quality provided by the image capturing device. Ex. 1101, 3:67–4:6; *see also id.* at 3:63–4:19. Accordingly, we also do not agree with Patent Owner’s suggestion that the Petition should have anticipated and specifically addressed this argument.

(2) *Elements 1[h] and 1[i]*

Patent Owner also contends that Petitioner fails to make a sufficient showing for elements 1[h] and 1[i], which recite “determine an amount . . . based on the optical character recognition” and “compare the determined amount against a customer-entered amount.” Prelim. Resp. 29–35. Patent Owner begins by contending that “Petitioner relies entirely on Randle and



Slater for these limitations.” *Id.* at 29–30 (citing Pet. 47–50). As for Randle, Patent Owner asserts that Randle references a “human input amount,” without identifying *who* enters this information or *when* it is captured. *Id.* at 30–32 (citing Ex. 1104 ¶ 74, Fig. 9B). According to Patent Owner, Randle distinguishes between a “user,” which refers to the banking institution, and a “customer,” who seeks to deposit a check into his account. *Id.* at 30–31 (citing Ex. 1104 ¶¶ 4, 16, 29, 34, 57, 74). Patent Owner asserts that Randle does not teach that it would be advantageous “to have the customer enter a check amount,” and that Petitioner’s argument is simply that this could have been done. *Id.* at 32.

In addition, Patent Owner argues that Petitioner fails to explain why an ordinary artisan would have compared the OCR amount against a customer-entered amount, rather than “simply us[ing] [the] OCR determined amount to process the check deposit.” Prelim. Resp. 32–33. Patent Owner further argues that Slater is “a completely different system” because it performs the comparison “before the bank receives the image” (i.e., on the front-end) rather in the bank’s QA routines (i.e., on the back-end). *Id.* at 33–35 (citing Ex. 1105 ¶¶ 22, 28; Ex. 1103, 12:20–13:5).

Patent Owner’s arguments are unavailing. First, we disagree with Patent Owner’s myopic assessment of the Petition’s contentions. *See* Prelim. Resp. 29–30. Petitioner relies on Garcia, Randle, and Slater for the disputed limitations, as detailed above. *See* Pet. 46, 48–49; *cf.* Prelim. Resp. 32–33 (addressing the Petition’s contentions regarding Garcia).

Second, we disagree that the Petition’s showing is deficient. On this record, we are persuaded that Petitioner sufficiently shows that it would have been obvious to combine Garcia, Randle, and Slater to yield the recited claim limitations. As Petitioner demonstrates, Garcia expressly states that

the bank's computer equipment "has an optical character recognition (OCR) system" for "recognizing, verifying and processing the information sent by the user," which includes the check image as well as recognition data entered by the user.<sup>17</sup> Ex. 1103, 11:7–15 (quoted by Pet. 46). Randle similarly indicates that its engine includes OCR software, and specifically, Randle states that its QA considers a "human input amount" and an "OCR amount." *See, e.g.*, Ex. 1104 ¶¶ 19, 74, Fig. 19A (items 117, 121).

Although Randle does not explain how the QA uses these two pieces of data, Slater expressly teaches that such information should be compared to identify transactions that require manual review by a customer service operator. Ex. 1105 ¶¶ 22–23. Petitioner's declarant, Dr. Noble, opines that it would have been obvious to include Slater's comparison in the Garcia-Randle system. *See* Ex. 1102 ¶¶ 70–75, 111. In particular, Dr. Noble testifies:

A person of ordinary skill would have understood that in a reliable check transaction, the check amount determined by the OCR would match the check amount input by the user. Any discrepancy would mean there was error either in the user input or the image from which the check amount is read. Furthermore, there would be no reason to capture both OCR and customer-entered versions unless there was a possibility of such discrepancy. A person of ordinary skill would have been motivated to implement this comparison to further improve the deposit system's reliability by predictably reducing data entry and OCR errors because [Randle's] engine is designed to facilitate validation and clearing of check transactions.

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<sup>17</sup> Garcia expressly states that the recognition data includes a check amount entered by the user. *E.g.*, Ex. 1103, 5:14–22, 9:19, 10:12–13, 12:9–11. At trial, the parties should address this disclosure and its relevance, if any.

*Id.* ¶ 72; *see also id.* ¶ 71, 73 (testifying that the combination would predictably improve accuracy and reliability of check validation). Dr. Noble further testifies that an ordinary artisan would have had a reasonable expectation of success because the proposed combination compares two values already disclosed by Randle. *Id.* ¶ 74. As a result, Petitioner’s showing is sufficient at this stage of the proceeding.

Although we agree with Patent Owner that Randle does not identify *who* enters the “human input amount” or *when* this information is captured (*see* Prelim. Resp. 30–32), this does not reveal any deficiencies in the Petition because Patent Owner does not sufficiently explain why these observations are relevant to the limitations of the claim. Patent Owner appears to assume that an employee of the payee bank cannot be the source of “a customer-entered amount,” but there is not sufficient support for this assumption. For example, the fact that Randle distinguishes between a “user” and a “customer” (*see* Prelim. Resp. 30–31) does not automatically mean that an amount entered by Randle’s user fails to qualify as the claimed “customer-entered amount.”<sup>18</sup> Further, in any event, the Petition relies on Slater’s express disclosure of an amount entered by an end-user customer. *See* Pet. 49–50.

Finally, at this stage, we do not agree that Petitioner failed to adequately provide a motivation to combine “completely different system[s],” as Patent Owner contends. Prelim. Resp. 33–35. Although we agree that Slater’s comparison is performed on the front end (i.e., in the

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<sup>18</sup> We do not assume that the scope of this claim term is dictated by the meaning attributed to the word “customer” in a prior art reference. At trial, Patent Owner should identify evidence supporting its proposed construction of this term, with a particular focus on the intrinsic record of the ’559 patent.

customer access terminal), where Randle’s QA is performed on the back end (i.e., in the engine) (*see id.* at 33–34), we do not currently agree that this difference in location is relevant to the proposed combination. In particular, Petitioner does not simply pluck a function from Slater’s front end and drop it in Randle’s back end without context or justification. Rather, as Petitioner observes, Randle states that its QA process considers an amount entered by a person and an amount determined by OCR (Ex. 1104 ¶ 74), and Slater describes *how* these amounts would be considered to verify the transaction (*see* Ex. 1105 ¶ 23). *See also* Ex. 1102 ¶ 72 (explaining that “there would be no reason to capture both OCR and customer-entered versions unless there was a possibility of . . . discrepancy”). Accordingly, on the current record, we do not agree with Patent Owner’s argument.

*c) Conclusion*

For the reasons provided above, we are persuaded that Petitioner has sufficiently shown that the Garcia-Randle-Slater combination teaches or suggests each limitation of claim 1, and we are persuaded that Petitioner has sufficiently explained why a person of ordinary skill in the art would have combined these references in the manner proposed by Petitioner. We have considered Patent Owner’s arguments that Petitioner’s arguments are insufficient, but at this stage and on this record, we do not agree.

Accordingly, we are persuaded that Petitioner has shown a reasonable likelihood that it would prevail in establishing that the subject matter of claim 1 would have been obvious over Garcia, Randle, and Slater.

2. *Independent Claim 10*

Independent claim 10 includes limitations that are commensurate with limitations found in independent claim 1, and Petitioner relies on its prior analysis for this claim. *See* Pet. 69–72. Other than its arguments presented regarding claim 1 (*see supra* § III.E.1.b), Patent Owner does not dispute Petitioner’s arguments, analysis, or evidence for this claim at this stage. *See* Prelim. Resp.

Accordingly, for the reasons provided for claim 1, we are persuaded that Petitioner has shown a reasonable likelihood that it would prevail in establishing that the subject matter of claim 10 would have been obvious over Garcia, Randle, and Slater.

3. *Dependent Claims*

For the dependent claims (i.e., claims 2–9 and 11–18), Petitioner relies on the Garcia-Randle-Slater combination, either alone or in combination with one or more of Lev, Watanabe, Aoyama, and Byrne. *See* Pet. 67–69, 72–88; *accord id.* at 7 (table listing grounds). We have reviewed Petitioner’s arguments and cited supporting evidence.

On this record, Petitioner has sufficiently shown that the identified references teach or suggest each limitation recited in the dependent claims, and Petitioner has sufficiently shown that it would have been obvious to combine the references in the manner proposed by Petitioner. At this stage, Patent Owner does not separately challenge Petitioner’s showing regarding any of these dependent claims. *See* Prelim. Resp. 36.

Accordingly, for purposes of institution, we are persuaded that Petitioner has shown a reasonable likelihood that it would prevail in establishing that: the subject matter of claims 2, 3, 11, and 12 would have

been obvious over Garcia, Randle, and Slater; the subject matter of claims 4, 9, 13, and 18 would have been obvious over Garcia, Randle, Slater, and Lev; the subject matter of claims 5 and 14 would have been obvious over Garcia, Randle, Slater, Lev, and Watanabe; the subject matter of claims 6 and 15 would have been obvious over Garcia, Randle, Slater, Lev, Watanabe, and Aoyama; and the subject matter of claims 7, 8, 16, and 17 would have been obvious over Garcia, Randle, Slater, and Byrne.

*F. Identification of Real Parties in Interest*

A petition must identify “all real parties in interest.” 37 C.F.R. § 312(a)(2). Petitioner identifies itself as the only real party in interest (Pet. 2), and Patent Owner identifies itself as the only real party in interest (Paper 6, 2). Patent Owner argues the Petition should be denied because Petitioner failed to identify Mitek Systems, Inc. (“Mitek”) as a real party in interest. Prelim. Resp. 7–13; *see also* Prelim. Sur-Reply 5–7. For the reasons below, we disagree.

Whether a non-party must be identified as a real party in interest in a proceeding is a highly fact-dependent question that is handled on a case-by-case basis. *See Ventex Co., Ltd. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 148 at 6 (PTAB Jan. 24, 2019) (precedential).

According to the Federal Circuit:

Determining whether a non-party is a “real party in interest” demands a flexible approach that takes into account both equitable and practical considerations, with an eye toward determining whether the non-party is a clear beneficiary that has a preexisting, established relationship with the petitioner. Indeed, the Trial Practice Guide . . . suggests that the agency understands the “fact-dependent” nature of this inquiry, explaining that the two questions lying at its heart are whether a

non-party “desires review of the patent” and whether a petition has been filed at a nonparty’s “behest.”

*Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1351 (Fed. Cir. 2018) (quoting Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012)); accord CTPG 13–14; *RPX Corp. v. Applications in Internet Time, LLC*, IPR2015-01750, Paper 128 (PTAB Oct. 2, 2020) (precedential).

As an initial matter, the parties agree that Petitioner could have named Mitek as a real party in interest without triggering a statutory bar under 35 U.S.C. § 315. Prelim. Resp. 10; Prelim. Reply 2. In this circumstance, Petitioner argues, we need not address whether Mitek is an unnamed real party in interest. Prelim. Reply 1 (citing *SharkNinja v. iRobot Corp.*, IPR2020-00734, Paper 11 at 18 (PTAB Oct. 6, 2020) (precedential)). The *SharkNinja* case explained that it is not necessary to conduct the “extensive analysis” necessary to determine whether a party should have been named as a real party in interest “where there is no allegation that the failure to name the purported RPI results in time bar, estoppel, or anything else material to the case.” *SharkNinja*, Paper 11 at 19–20. Patent Owner argues that Petitioner omitted Mitek “in an attempt to conceal [Petitioner’s] involvement in a scheme of serial, redundant attacks against [Patent Owner’s] patents.” Prelim. Resp. 7; *see also id.* at 10–11; Prelim. Sur-Reply 5 (generally alleging that Petitioner received an “unfair advantage”). But the alleged “serial, redundant attacks” consist of challenges to *other patents*, not the patent challenged in this proceeding. *See* Prelim. Resp. 8. Patent Owner’s allegations of impropriety appear to assume that any petitions challenging a patent owned by Patent Owner are relevant (*see id.* at 8–13), but we do not agree. Patent Owner identifies (and we perceive) no persuasive evidence

that Petitioner omitted Mitek as a real party in interest to gain an unfair advantage.<sup>19</sup>

Thus, we need not (and do not) consider whether Mitek is an unnamed real party in interest.

#### IV. MOTIONS TO SEAL

There are three joint motions to seal pending: Paper 9 (relating to the Preliminary Response and Exhibit 2006); Paper 13 (relating to the Preliminary Reply); and Paper 19 (relating to the Preliminary Sur-Reply). In each of these motions, the parties seek to protect as confidential certain information that relates to the issue of whether Petitioner has properly identified all the real parties in interest in its Petition. *See* 35 U.S.C. § 312(a)(2). Because we do not substantively address that dispute (*see supra* § V.F), we need not address the arguments and evidence sought to be protected as confidential.

In the first Joint Motion to Seal, the parties request entry of a Protective Order that is substantially the same as the Board’s Default Protective Order (*see* CTPG 107–122 (App. B, Protective Order Guidelines and Default Protective Order)). Paper 9, 1. The parties also request sealing of Exhibit 2006 and sealing of portions of the Preliminary Response relating to that exhibit. *Id.* at 1–2. The portions of the Preliminary Response (Paper 8) requested to be sealed can be identified from the redacted version of the Preliminary Response (Paper 11). Based on the representations in the

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<sup>19</sup> The *SharkNinja* case held that when the failure to name a real party in interest does not bar the proceeding, not considering the real party in interest issue “better serves the interest of cost and efficiency.” *SharkNinja*, Paper 11 at 20.



Joint Motion to Seal (Paper 9), the parties have shown good cause for entering the Protective Order and for sealing Exhibit 2006 and the identified portions of the Preliminary Response.

Paper 13 (Joint Motion to Seal the Reply) and Paper 19 (Joint Motion to Seal the Sur-Reply) request sealing of the portions of the Preliminary Reply and Preliminary Sur-Reply relating to Exhibit 2006. The portions of the Preliminary Reply (Paper 14) and Preliminary Sur-Reply (Paper 17) requested to be sealed can be identified from the redacted version of the Preliminary Reply (Paper 16) and the redacted version of the Preliminary Sur-Reply (Paper 20), respectively. Based on the representations in these two Joint Motions to Seal (Papers 13 and 19), the parties have shown good cause for sealing the identified portions of the Preliminary Reply and Preliminary Sur-Reply.

Accordingly, we enter the Protective Order (*see* Paper 9, Attach. A) and grant all three Joint Motions to Seal (Papers 9, 13, 19).

## V. CONCLUSION

As explained above, we determine that Petitioner has established a reasonable likelihood of prevailing in its challenge to at least one claim of the '559 patent, and we are not persuaded to exercise our discretion to deny institution. Thus, we institute an *inter partes* review of all challenged claims on all asserted grounds. Moreover, we enter the parties' proposed protective order and grant the parties' joint motions to seal.

Our factual findings, conclusions of law, and determinations at this stage of the proceeding are preliminary, and based on the evidentiary record developed thus far. Our final decision as to the patentability of challenged claims will be based on the record developed during trial.

## VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review is instituted on all of the challenged claims, i.e., claims 1–18 of the '559 patent, on all corresponding grounds of unpatentability as specified in the Petition and identified in the Table in Section I.B. of this Decision;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '559 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial; and

FURTHER ORDERED that the Motions to Seal (Papers 9, 13, 19) are *granted*; a Protective Order in the form of Attachment A to Paper 9 is entered; and Exhibit 2006 and the portions of the Preliminary Response, Preliminary Reply, and Preliminary Sur-Reply requested to be sealed are sealed until further order.

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