

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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IPR2022-00076  
Patent 10,769,598 B1

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Before MICHAEL R. ZECHER, 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 November 17, 2021, PNC Bank N.A. (“Petitioner”) filed a Petition requesting *inter partes* review (“IPR”) of claims 1–20 of U.S. Patent No. 10,769,598 B1 (Ex. 1001, “the ’598 patent”). Paper 3 (“Pet.”). United Services Automobile Association (“Patent Owner”) timely filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 13 (“Prelim. Reply”)), and Patent Owner filed a Sur-Reply (Paper 16 (“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 ’598 patent against Petitioner in *United Services Automobile Association v. PNC Bank, N.A.*, 2:21-cv-00246 (E.D. Tex.) (“the Texas case”). Pet. 2; Paper 6, 2. The parties identify several other district court litigations pending between the parties. Pet. 2–3; Paper 6, 2–3.

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<sup>1</sup> Papers 9, 13, and 16 were filed under seal, and Papers 10, 14, and 18, respectively, are the corresponding public versions. This Decision does not refer to any information that was redacted from the public documents.

The parties identify no other PTAB proceedings that challenge the '598 patent, but identify the following proceedings involving related patents:

<b>Challenged Patent</b>	<b>Case No.</b>	<b>Petitioner</b>
US 10,013,605	CBM2019-00029	Wells Fargo Bank, N.A.
	IPR2020-01742	Mitek Systems, Inc.
	IPR2021-01399	PNC Bank N.A.
US 10,402,638	IPR2020-01516	Wells Fargo Bank, N.A.
	IPR2022-00049	PNC Bank N.A.
	IPR2022-00050	PNC Bank N.A.

*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>
1–16, 18–20	103(a) <sup>2</sup>	Garcia <sup>3</sup> , Byrne <sup>4</sup> , Singfield <sup>5</sup>
17	103(a)	Garcia, Byrne, Singfield, Adusumilli <sup>6</sup>

In support, Petitioner relies on the testimony of Dr. Todd Mowry (Ex. 1002).

<sup>2</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. The '598 patent claims priority to an application filed before that date, so we refer to the pre-AIA version of § 103 (*accord* Pet. 5 & n.1), but our findings and analysis would be the same under the current version of the statute.

<sup>3</sup> WO 2005/043857 A1, published May 12, 2005 (Ex. 1003). Petitioner relies on a certified translation of this publication, which also appears in Exhibit 1003.

<sup>4</sup> US 2006/0249567 A1, filed Feb. 9, 2006, published Nov. 9, 2006 (Ex. 1004).

<sup>5</sup> US 2005/0097046 A1, published May 5, 2005 (Ex. 1005).

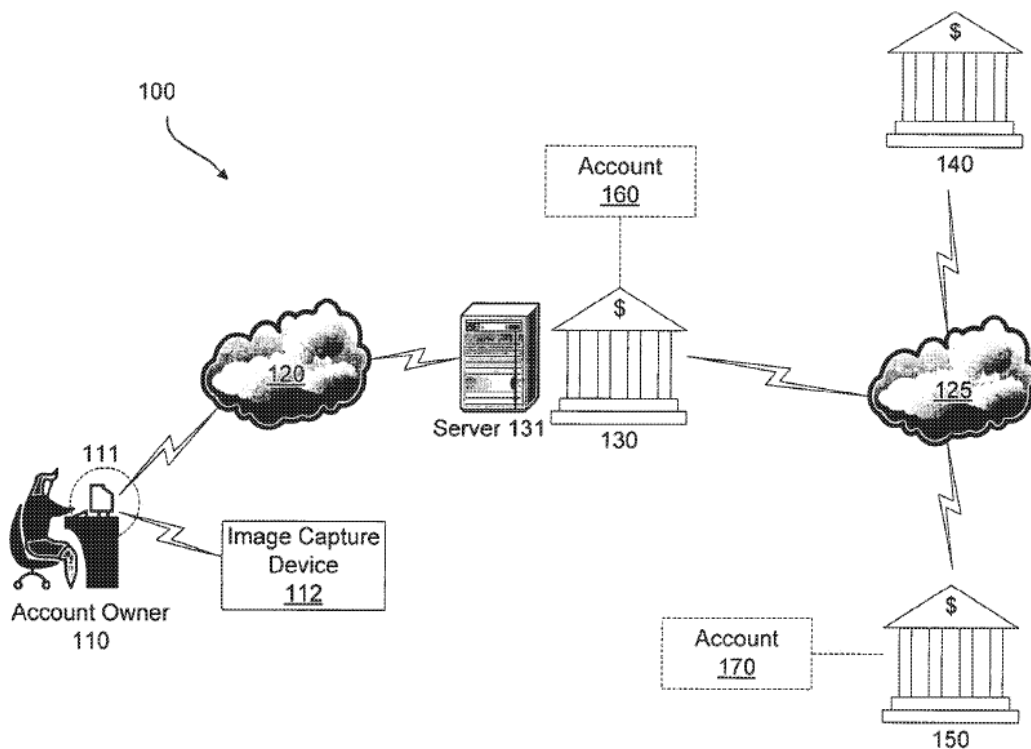
<sup>6</sup> US 2003/0097592 A1, published May 22, 2003 (Ex. 1007).

*C. Summary of the '598 patent*

The '598 patent is titled “Systems and Methods for Remote Deposit of Checks.” Ex. 1001, code (54). The application leading to this patent was filed on September 19, 2017, claiming priority via continuation applications to an application filed on October 31, 2006. *Id.* at codes (22), (63).

The '598 patent explains that there are advantages and disadvantages to using a check to purchase goods or services. *See* Ex. 1001, 1:30–2:20. 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 2:10–15. To address this, the '598 patent provides a method “for remotely redeeming a negotiable instrument,” such as a check, using “a customer’s general purpose computer.” *Id.* at 2:41–44, 2:63–66.

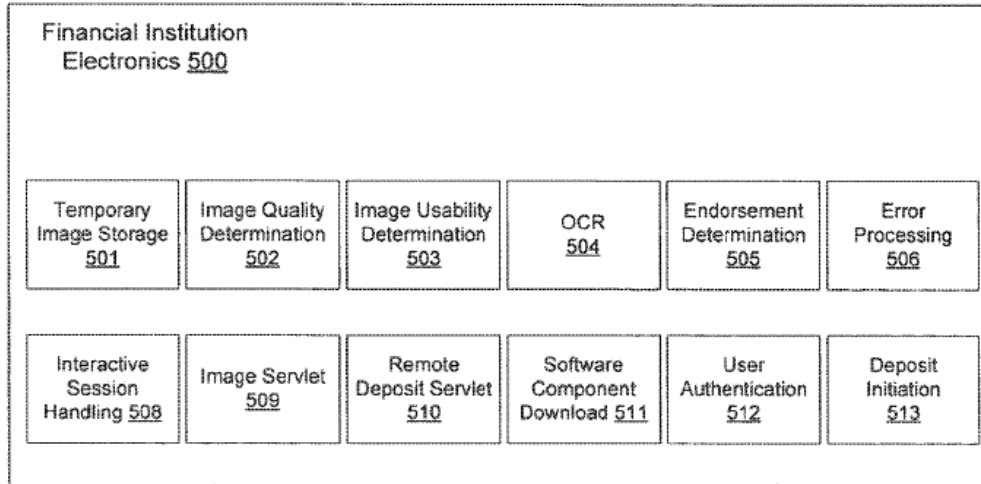
Figure 1 (reproduced below) depicts a system in which the described method may be employed. Ex. 1001, 3:26–27, 3:66–67.



**FIGURE 1**

Figure 1 (shown above) illustrates system 100, which includes: (a) general purpose computer 111 and image capture device 112 associated with account owner 110 (e.g., a bank customer at his private residence), and (b) several financial institutions 130, 140, and 150 (e.g., banks). Ex. 1001, Fig. 1, *Id.* at 3:65–4:5, 7:19–25. In operation, account owner 110 generates an image of a check with image capture device 112 and sends the image to financial institution 130 via general purpose computer 111. *Id.* at 4:6–10, 9:57–61. After receiving the check image, financial institution 130 processes the check image, communicates with other financial institutions (e.g., 140 and 150) to clear the check, and deposits the check value into owner 110’s account 160. *Id.* at 9:64–10:2, 10:3–25.

Figure 5 (reproduced below) is a block diagram of components of financial institution electronics 500 (also referred to as “server 500”) and computer 530. Ex 1001, 10:36–44.



**FIGURE 5**

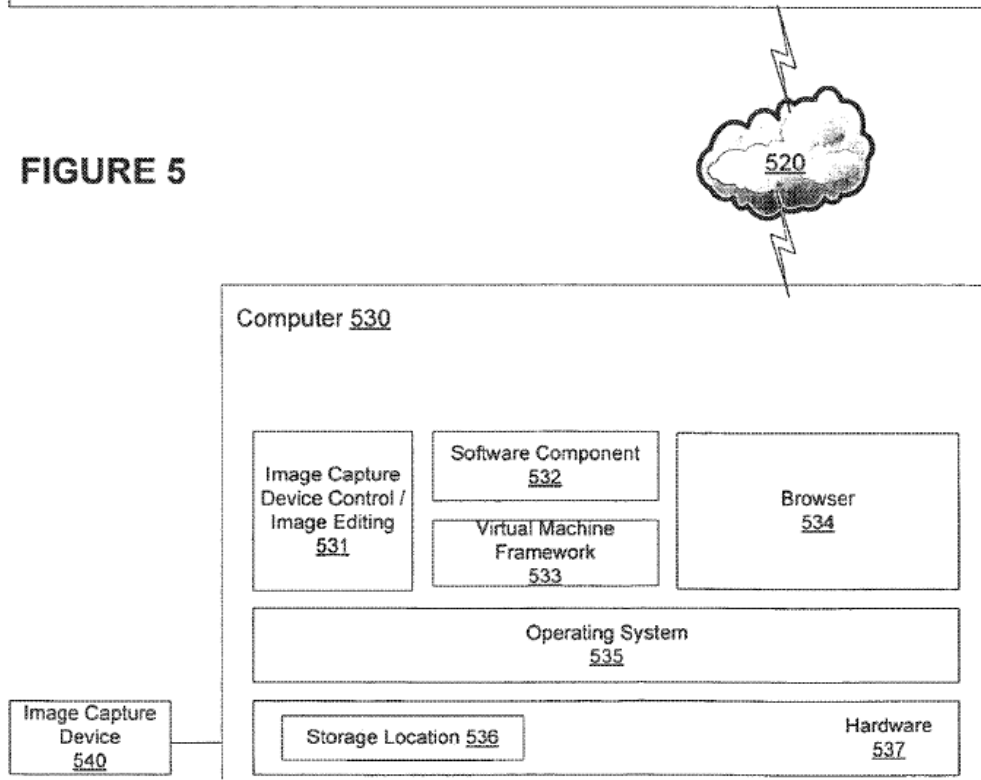


Figure 5 (shown above) is a block diagram illustrating the components of server 500 and computer 530. *Id.* at 3:39–43, 10:36–38. Server 500 provides a software component 532 to computer 530, which “allows the financial institution to control certain aspects of check image creation and delivery by the computer 530.” *Id.* at 10: 45–52. Server 500 also includes a subsystem for user authentication 512, which may require a username and password from the user (*id.* at 10:58–60); remote deposit servlet 510 for

receiving “an identification of an account for deposit of a check[] and an amount of said check” (*id.* at 11:1–5); image servlet 509 for receiving an image of the check from computer 530 (*id.* at 11:16–19); subsystems 502, 503 to analyze the check image for quality and usability (*id.* at 11:28–40); OCR 504 for performing optical character recognition (*id.* at 11:55–57); subsystem 505 to verify that the check is endorsed (*id.* at 12:42–44); and error processing 506 to check for errors, determine if a check was previously deposited, and compare an OCR amount with the amount provided by the customer (*id.* at 12:1–8, 12:18–21).

#### *D. Challenged Claims*

Petitioner challenges all 20 claims of the '598 patent. Of these, claims 1, 10, and 15 are independent, and for purposes of this Decision, claim 1 is representative. Claim 1 recites:

1. [p] A method of facilitating remotely depositing funds into a user's account with a bank's computing system and without using an Automatic Teller Machine (ATM), comprising:

[a] providing a remote deposit application for download to a customer device, wherein the remote deposit application comprises computer-executable instructions that, when executed by a processor, provide a user-interface and control a camera associated with the customer device to facilitate capturing at least one electronic image of a check;

[b] receiving at the bank's computing system, via the user-interface on the customer device: authentication data, an electronic identification of an account for receipt of a value associated with the check, an electronic indication of the value associated with the check, and the at least one electronic image of the check;

[c] determining whether the check was previously deposited using the at least one electronic image of the check; and

[d] initiating and/or logging a first deposit of the value to the account via the bank's computing system unless the bank's computing system determines from the at least one electronic image of the check that the check was previously deposited.

Ex. 1001, 15:39–62 (reference letters added).

## II. EVALUATION OF DISCRETIONARY DENIAL

Patent Owner contends that we should exercise our discretion to deny the Petition in light of the status of the Texas case. Prelim. Resp. 2–9; Prelim. Sur-Reply 1–4. Petitioner disagrees. Pet. 76–77; Prelim. Reply 5–8.

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>7</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;

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<sup>7</sup> Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), *available at* <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.



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.

*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. *See* Pet. 76–77; Prelim. Resp. 3. 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 August 22, 2022, as the date for Jury Selection. Ex. 2016 (First Amended Docket Control Order), 1. A trial date of August 22, 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 exercising discretion to deny institution.

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.

Petitioner argues that the parties and the Texas court have not invested significantly in the merits of the invalidity positions pertaining to the ’598

patent. Pet. 76–77. Petitioner also asserts that it “acted diligently by filing the IPR petition only a few days after four months from the filing of the concurrent district court litigation.” *Id.* at 77.

Patent Owner argues that “claim construction, expert discovery and dispositive motion briefing all will have concluded” before our institution decision. Prelim. Resp. 3 (citing Ex. 2005); *see also* Prelim. Sur-Reply 2–3 (citing Ex. 2016). Patent Owner also argues that we should consider the time and resources that will be invested in the Texas court between the institution decision and the final written decision. Prelim. Resp. 4.

A *Markman* hearing in the Texas case took place in March 2022 (Ex. 2016, 4), and the court issued a Claim Construction Memorandum Opinion and Order. *See United Servs. Auto. Ass’n v. PNC Bank N.A.*, Civil Action No. 2:21-cv-00246, Dkt. 86 (E.D. Tex. March 17, 2022).<sup>8</sup> The parties appear to have completed fact discovery and served expert reports. Ex. 2016, 3.<sup>9</sup> But, contrary to Patent Owner’s assessment, expert discovery and dispositive motion briefing is not complete as of the mailing of this Decision—the deadline for expert discovery is mid-May 2022, and dispositive motions are due by May 23, 2022. *Id.* We do not consider the investments that will occur after this Decision. *See Fintiv*, Paper 11 at 9–10

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<sup>8</sup> “Parties should submit a prior claim construction determination by a federal court or the ITC in an AIA proceeding as soon as that determination becomes available. Preferably, the prior claim construction determination should be submitted with the petition, preliminary response, or response, along with explanations.” CTPG 47.

<sup>9</sup> The district court later issued an order extending some deadlines by ten days or less. *United Servs. Auto. Ass’n v. PNC Bank N.A.*, Civil Action No. 2:21-cv-00246, Dkt. 91 (E.D. Tex. Mar. 24, 2022) (extending deadlines for rebuttal expert reports, expert discovery, and two depositions).

(stating that investment is considered “at the time of the institution decision”).

Further, the evidence shows that Petitioner acted with diligence. Petitioner filed its Petition approximately four months after the complaint in the Texas case was filed (*see* Pet. 77) and approximately two months after the deadline for Patent Owner to serve infringement contentions (*see* Ex. 2016, 5 (identifying September 15, 2021 deadline)). This diligence is not undercut by the fact that the Petition’s asserted references are listed in the documents identified in related proceedings. *See* Prelim. Resp. 4–5.

In any case, given that the Texas court has issued a claim construction ruling, and the parties have largely completed fact and expert discovery, we find that the parties and the Texas court have invested significant resources toward resolving issues that we might be asked to resolve in this proceeding. However, the Petitioner acted with diligence in filing this Petition. Thus, this factor weighs somewhat 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. 76. Here, Petitioner offers a stipulation similar to that discussed in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12, 18–19 (PTAB Dec. 1, 2020) (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 Petitioner’s stipulation is “ineffective,” asserting that “[Petitioner] does not intend to honor the letter and spirit of its stipulation.” Prelim. Resp. 5–6 (citing Ex. 2003; Ex. 2008, 32); *see also* Prelim. Sur-Reply 1–2 (citing Ex. 2014 ¶ 205; Ex. 2015, 13). We are not persuaded by this argument because the Texas court is well equipped to enforce any stipulations and manage its own record.

Patent Owner further argues that, in *Cisco Sys., Inc. v. Estech Sys., Inc.*, IPR2021-00329, Paper 13 at 13 (PTAB July 6, 2021), the Board “distinguished *Sotera* on the basis that ‘relatively limited investment in the parallel proceeding to date,’ had occurred, and therefore the investment factor [i.e., factor 3] ‘weighs strongly in favor of exercising our discretion to deny institution.’” Prelim. Resp. 7–8. We do not agree with Patent Owner’s suggestion that, based on *Cisco*, we should determine that factor 4 favors denial. Rather, *Cisco* expressly found that, “[a]s in *Sotera*, [factor 4] weighs strongly in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a).” *Id.* The *Cisco* panel simply found factor 4 to be outweighed by other factors given the facts of that proceeding. *Id.*

In view of Petitioner’s stipulation, we conclude that, following *Sotera*, this factor weighs strongly against discretionary denial. As in *Sotera*,

“Petitioner’s stipulation here 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.”

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 ’598 [patent].” Prelim. Reply 7. Patent Owner argues that Petitioner’s arguments are weak and “largely similar to those that have been considered (and rejected) before,” but Patent Owner only identifies a challenge to *another* patent. Prelim. Resp. 9.

Both Petitioner's and Patent Owner's arguments are unavailing as to this factor. For example, with regard to the merits of the Petition, although Petitioner has met the standard for institution, we are not persuaded that the merits are so strong or weak as to weigh either for or against the exercise of discretion. Similarly, with regard to Patent Owner's argument, we note that this is the first petition challenging the '598 patent, and Patent Owner fails to identify any relevant prior challenges or proceedings.

Accordingly, after considering the parties' arguments with regard to this factor, we find Factor 6 does not weigh for or against exercising discretion.

### 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.

## 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. 14 (citing Ex. 1002 ¶ 45). Petitioner further asserts that “[l]ess work experience may be compensated by a higher level of education and vice versa.” *Id.*

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 ’598 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. Conceptor, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

Petitioner states that it is unnecessary to construe any claim terms or phrases in this proceeding. Pet. 12–14. However, when analyzing its contentions regarding claim 1, Petitioner addresses the meaning of two claim phrases. *Id.* at 34–35, 37. Patent Owner contends that no claim construction is necessary at this stage. Prelim. Resp. 14.



To provide guidance to the parties, we address our understanding of the two claim phrases discussed by Petitioner in our analysis of claim 1, *infra*. But, for purposes of this Decision, we determine that it is not necessary to expressly construe any other claim terms or phrases. *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))).

During the trial, the parties should directly address any claim construction adopted in this Decision if the party contends we should not adopt that construction in the final written decision.

### *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>10</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).

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<sup>10</sup> The current record does not include allegations or evidence of objective indicia of nonobviousness.

*D. Summary of Asserted Prior Art*

*1. Garcia (Ex. 1003)<sup>11</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. 1003, 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, 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 1 (reproduced below) illustrates an example mobile device and financial institution that can use Garcia’s method. Ex. 1003, 9:11–18.

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<sup>11</sup> The English translation of Garcia begins on page 28 of Exhibit 1003. Unless otherwise noted, we follow the parties’ convention and cite to pages and lines within the English translation.

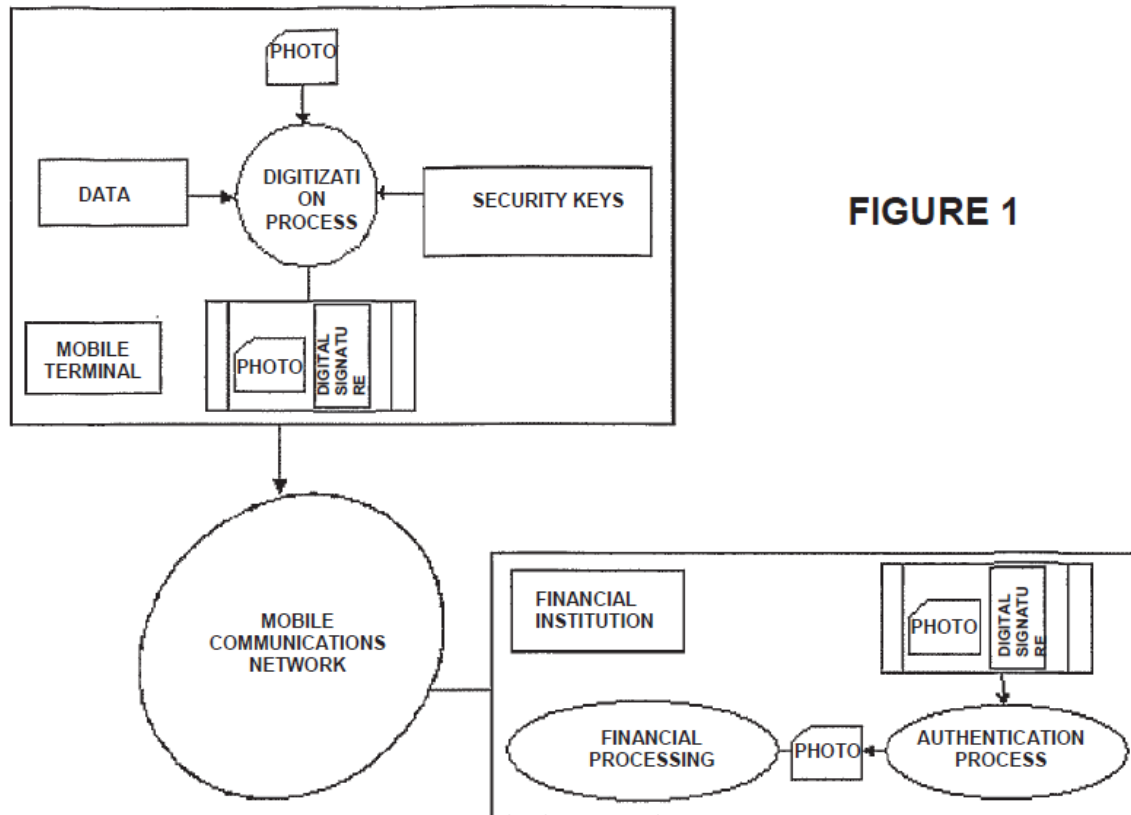


FIGURE 1

Figure 1 (shown above) includes a mobile terminal and a financial institution that are connected via a mobile communications network.

In Garcia’s method, a “user opens a computer application in the mobile telephone in which an interactive session is established with the receiving institution.” Ex. 1003, 9:21–10:3; *see also id.* at 5:9–13. Then, the 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. 1003, 5:14–20; *see also id.* at 10:4–9. The mobile device 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 “[r]ecogniz[es], verif[ies], and electronically treat[s] and process[es] the information received” using computer equipment. *Id.* at 6:8–10, 11:7–19.

Ultimately, the institution deposits the amount of the check into the user's account. *Id.* at 4:9–18.

2. *Byrne (Ex. 1004)*

Byrne “provides a browser plug-in that allows a bank customer to scan checks using a personal computer and deposit the checks via the browser to a bank account.” Ex. 1004 ¶ 3; *see also id.* ¶ 42 (explaining that the description refers to a scanner but “the invention covers . . . any type of capturing device”).

According to Byrne, “[a]pplication software can be packaged in two basic forms,” which it refers to as a “fat application” (which “stays on [the] machine”) and a “thin client” (which is “downloaded with each invocation of the application software”). Ex. 1004 ¶¶ 45–46. Byrne prefers thin clients, which provide “security with ease and speed of software maintenance.” *Id.* ¶ 46; *see also id.* ¶ 45 (disadvantages of fat applications).

Figure 1 (reproduced below) is a flow diagram of Byrne's method of remotely depositing a check using a thin client application. Ex. 1004 ¶¶ 34, 47.

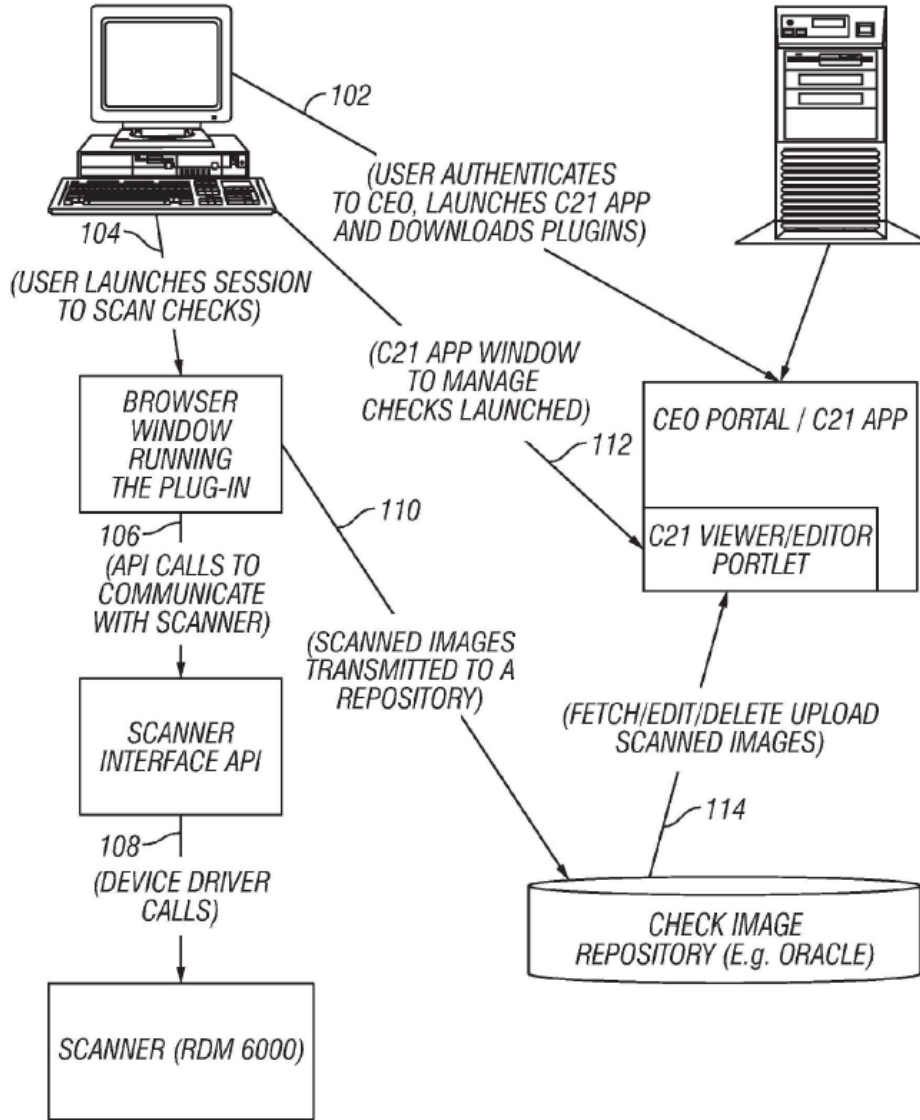


FIG. 1

As shown above in Figure 1, a client personal computer (PC) authenticates with a desktop deposit application (“C21 App”) (step 102). *Id.* ¶ 47. “After authentication, C21 App is launched and the appropriate desktop plug-in(s) is downloaded onto the client PC.” *Id.* ¶¶ 47. Then, “[t]he user launches a session for scanning checks from the browser window running the plug-in(s)” (step 104). *Id.* ¶ 48. “Scanner interface APIs are called from the browser plug-in(s) for communicating with a scanning device that is

communicably connected to the PC” (step 106), and “[t]he scanner APIs make device driver calls to the scanner” (step 108). *Id.* After a check is scanned, “the browser window running the plug-in(s)” transmits the images to C21 App (step 110), and C21 App allows the user to view and edit commands related to stored check images (step 112) and to perform functions such as fetch, edit and delete on the images (step 114).

### 3. *Singfield (Ex. 1005)*

Singfield describes “a method and apparatus for [w]irelessly depositing paper checks that are deposited from [a] home computer, desktop office computer, [or] mobile device that is Internet capable” using an “online account management system (OMS), which acts as a virtual teller.”

Ex. 1005 ¶ 4. In Singfield, an endorsed check is scanned, and the resulting image is transmitted to the OMS via a wireless network. *Id.* After receiving the check image, the OMS verifies the check data with the user. *Id.* ¶¶ 26, 29, 57; *see, e.g., id.* ¶ 26 (“[T]he check information is then verified by the user/depositor (check amount, check date, check routing number, checking account number, bank on check) . . .”). In addition, the OMS verifies “that [the] check hasn’t been cashed before continuing processing for check cashing . . . to prevent fraud and future attempts to cash the same check.”

Ex. 1005 ¶ 44; *see also id.* ¶ 24 & claim 20. “Once approved for deposit, the bank system records the check data received in the encrypted check image . . . to deposit the funds into the depositpr’s [sic] account,” and “the OMS virtually voids the check (through documenting the check data in the system) to prevent future deposits of the same check.” *Id.* ¶¶ 50, 57.

4. *Adusumilli (Ex. 1007)*

Adusumilli relates to network security. Ex. 1007, code (57).

Adusumilli states that “[a]uthentication is a security function and process by which a system validates users and computers that interact with the system.” *Id.* ¶ 136. “One method for authenticating a device is through the use of digital certificates,” which “ensure the legitimate online transfer of confidential information, money or other sensitive materials by means of public encryption technology.” *Id.* ¶ 139.

E. *Obviousness Grounds Based on Garcia, Byrne, and Singfield*

Petitioner contends that the subject matter of independent claims 1, 10, and 15 and dependent claims 2–9, 11–14, 16, and 18–20 would have been obvious over Garcia, Byrne, and Singfield (Pet. 18–72), and the subject matter of dependent claim 17 would have been obvious over Garcia, Byrne, Singfield, and Adusumilli (*id.* at 72–76).

Patent Owner alleges that Petitioner fails to make a sufficient showing for limitations 1[a], 1[c], or 1[d] (Prelim. Resp. 17–34) and that Petitioner’s rationale to combine Garcia and Byrne is facially defective (*id.* 35–44). Patent Owner asserts that that its arguments regarding limitations 1[c] and 1[d] apply to all challenged claims (*see id.* at 18, 22, 44–45), and the deficiencies identified for limitation 1[a] also infect the showing as to claim 10 as well as the showing as to their respective dependent claims (*see id.* at 25, 44).

We have considered the parties’ arguments and the evidence presented at this stage, and we address them in the context of representative claim 1. For the reasons explained below, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that

claim 1 would have been obvious over the cited references, notwithstanding Patent Owner's arguments to the contrary.

*1. Independent Claim 1*

*1[p]: "A method of facilitating remotely depositing funds into a user's account with a bank's computing system and without using an Automatic Teller Machine (ATM)"*

Petitioner contends that "Garcia discloses limitation 1[p]." Pet. 28. According to Petitioner, Garcia's mobile device captures a digital image of a check and transmits the image to a financial institution, and the financial institution deposits the check into the user's account after processing it. *Id.* at 29–31 (citing Ex. 1003, Abst., 1:7–13, 7:18–8:13, 9:9–10:18, 11:1–10, 11:12–15, 11:20–12:1, 12:20–22, Fig. 1).

Based on the current record, Petitioner has shown sufficiently that Garcia teaches the claim's preamble.<sup>12</sup> At this stage, Patent Owner does not allege any deficiencies in this aspect of Petitioner's showing.

*1[a]: "providing a remote deposit application for download to a customer device, wherein the remote deposit application comprises computer-executable instructions that, when executed by a processor, provide a user-interface and control a camera associated with the customer device to facilitate capturing at least one electronic image of a check"*

For limitation 1[a], Petitioner relies upon Garcia and Byrne (Pet. 31–32) and contends that a person of ordinary skill in the art would have found it obvious to combine these references (*id.* at 19–25). Patent Owner

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<sup>12</sup> We need not determine whether the preamble is limiting because Petitioner has sufficiently shown that Garcia discloses this aspect of the claim. *See Vivid Techs.*, 200 F.3d at 803.



contends that the references fail to teach this limitation (Prelim. Resp. 25–33) and submits that there is insufficient evidence of a motivation to combine Garcia and Byrne (*id.* at 33–44).

For the reasons explained below, we determine that Petitioner has made a sufficient showing for limitation 1[a] for purposes of this Decision.

### *Petitioner’s Contentions*

Petitioner contends that Garcia discloses the claimed “remote deposit application” because Garcia expressly states that the “user opens a computer application in the mobile telephone” for establishing an interactive session with the financial institution. Pet. 31 (quoting Ex. 1003, 9:21–10:3; citing Ex. 1003, 4:14–16, 5:2–3; Ex. 1002 ¶ 87). Petitioner contends that Garcia also discloses “capturing at least one electronic image of a check,” as required by limitation 1[a], because Garcia’s “mobile device [] incorporates a digital camera [that is] able to take a digital photograph of one or both sides of said document.” *Id.* at 32 (quoting Ex. 1003, 12:7–9; citing Ex. 1003, 4:11–15, 5:21–22) (emphasis omitted; alterations Petitioner’s).

As for Byrne, Petitioner contends that Byrne teaches “providing a remote deposit application for download to a customer device,” as claimed, because Byrne’s “desktop deposit plug-in(s) is downloaded onto the client PC” to facilitate remote check deposit. Pet. 19–20, 31–32 (quoting Ex. 1004 ¶ 47; citing Ex. 1004 ¶¶ 3, 13, 46–48) (emphasis omitted). Petitioner also contends that Byrne’s downloaded plug-in provides a user-interface and controls the image capture device, as this limitation also requires. Pet. 20, 32 (citing Ex. 1004 ¶¶ 33, 41–42, 48, claim 1).

Petitioner submits that a person of ordinary skill in the art would have been motivated to implement Garcia’s computer application using a

downloaded thin client, such as Byrne’s plug-in. Pet. 20–25. According to Petitioner, Garcia does not expressly disclose implementation details (*id.* at 19), such as “how the handheld mobile device obtains the computer application” (*id.* at 20–21), but “a [person of ordinary skill in the art] would have readily understood that there were well-known ways of doing so in 2006, including, for example, as taught by Byrne.” *Id.* at 21 (citing Ex. 1002 ¶ 64). Petitioner submits that, according to Byrne, a thin client implementation improves ease of software maintenance and support, and it also improves security. *Id.* at 21 (citing Ex. 1004 ¶¶ 46–47).

Petitioner contends that a person of ordinary skill in the art would have had a reasonable expectation of success in implementing the combination because: Garcia and Byrne are both directed to similar methods of remote check deposit; the ordinary artisan would have known that thin clients were suited for mobile devices; downloading software applications to a mobile device was “well-known”; and the ordinary artisan would have known that the distribution technique would not have affected the application’s operations and functionality. Pet. 22–24 (citing Ex. 1002 ¶¶ 68–72; Ex. 1003, 9:21–10:3, 10:10–18; Ex. 1004 ¶¶ 47–48, 174–175, 177–178); *see also id.* at 21–22 (citing Ex. 1002 ¶ 65). Petitioner further contends that the proposed combination applies a known technique to a known device to yield a predictable result (*id.* at 21–22 (citing Ex. 1002 ¶¶ 64–66)) and that the proposed combination would have been obvious to try because “[t]here were a finite number of identified, predictable solutions” (*id.* at 24–25 (citing Ex. 1002 ¶ 73; Ex. 1004 ¶ 45)).

*Patent Owner's Arguments*

Patent Owner asserts that the proposed combination fails to disclose limitation 1[a]. Prelim. Resp. 25–34. Patent Owner contends that Byrne fails to disclose the claimed “remote deposit application” because “the software that controls the deposit-related activities performed by the consumer’s computer resides on a bank server and is never ‘downloaded’ to the customer’s computer.” *Id.* at 25–26 (citing Ex. 1004 ¶¶ 47–48). Patent Owner advances two arguments in support of this position.

First, according to Patent Owner, “Byrne makes clear that the scope of the invention is limited to ‘thin client’ applications,” as opposed to downloaded applications, and Byrne’s browser plug-in is not downloaded. Prelim. Resp. 26–29 (citing Ex. 1004 ¶¶ 6, 42, 45–46).<sup>13</sup> *But see id.* at 32 (stating that “Byrne does make reference to ‘the plug-in being downloaded with each invocation of the software’” (quoting Ex. 1004 ¶ 46)).

Second, Patent Owner contends that “the actual deposit application (‘C21 App’) . . . fully resides on the bank servers,” and “the plug-in [is] only a conduit through which [it] . . . communicates with the customer’s device.” Prelim. Resp. 29–31 (citing Ex. 1004 ¶¶ 41, 47–48, 58,<sup>14</sup> 136, 148, Fig. 1–3). In support, Patent Owner submits that “Byrne expressly discloses that viewing and editing functions are provided by the C21 App executing on the

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<sup>13</sup> Patent Owner contends that its position is also supported by the district court litigation testimony of Mr. Byrne, the first named inventor of the Byrne reference. Prelim. Resp. 28 (citing Ex. 2004). This testimony is hearsay, and Patent Owner’s reliance on it suffers from the same problems as Patent Owner’s other arguments.

<sup>14</sup> Although Patent Owner cites “12:10–13” (Prelim. Resp. 30), the quoted text appears in paragraph 58. We correct this apparent typographical error.

server, and not by the plug-in.” *Id.* at 31 (citing Ex. 1004 ¶ 48). Patent Owner also contends that “the portions of Byrne the Petition relies on . . . describe the C21 application, which resides entirely on the server.” *Id.* at 33 (citing Pet. 19–20; Ex. 1004 ¶¶ 47–48).

Next, Patent Owner contends that Petitioner fails to sufficiently show a motivation to combine Garcia and Byrne. Prelim. Resp. 35–44; *see also id.* at 33–34. Referencing the arguments above, Patent Owner argues that Byrne teaches away from the claim because Byrne discourages download of an application on a customer device. *Id.* at 35–37. Patent Owner also argues that Petitioner’s evidence does not show that Byrne’s browser plug-in was compatible with a mobile device. *Id.* at 33–34 (citing Pet. 21, 23–24); *see also id.* at 37.

Finally, Patent Owner argues that “the Petition’s expectation of success analysis ignores the recited motivation to combine.” Prelim. Resp. 37. In support, Patent Owner repeats its argument that Byrne’s C21 App is the software that “control[s] the image capture” and “analyz[es] the image” (*id.* at 37–38), and Patent Owner submits that Petitioner fails to explain whether an ordinary artisan “would have expected that it was even possible” to have put Byrne’s server software into Garcia’s mobile device (*id.* at 38). Patent Owner also points out that Byrne uses a specialized scanner, rather than a camera phone, and faults Petitioner for “never address[ing] this fundamental difference between Byrne and the Garcia system.” *Id.* at 38–43.

### *Analysis*

On this record, we find that Garcia discloses part of limitation 1[a]. Garcia states that the “user opens a computer application in the mobile

telephone in which an interactive session is established with the receiving institution,” and the mobile device “[c]aptur[es] the digital image” of the check and “[t]ransmit[s] the digital image . . . to the [financial] institution.” Ex. 1003, 9:19–10:18. Thus, Garcia discloses that a user’s mobile device includes a “remote deposit application” and “control[s] a camera . . . to facilitate capturing at least one electronic image of the check,” as required by the claim.<sup>15</sup> In addition, Garcia indicates that its mobile device includes software that “provide[s] a user-interface and control[s] [the device’s] camera,” as claimed, because Garcia states that the mobile device “must allow” receipt of user input and capture of the check’s image. *See id.* at 9:19–10:18; *see also, e.g., id.* at 5:1–6:10. However, Garcia does not expressly state that its application performs these functions, and Garcia does not address how a mobile device acquires this application.

We are currently persuaded that Byrne discloses the remaining aspects of limitation 1[a]. Byrne describes “providing a browser plug-in that allows a bank customer to scan checks using a personal computer and deposit the checks via the browser to a bank account.” Ex. 1004 ¶ 3. Byrne expressly states that this “desktop deposit plug-in(s) is downloaded onto the client PC” (*id.* ¶ 47), and Byrne’s “browser software plug-in [] provide[s] an interface between the user and an enterprise” and calls “APIs . . . for communicating with a scanning device that is communicably connected to the PC” (*id.* ¶¶ 41, 48; *see also id.* at 8 (claim 1), ¶ 42 (explaining that it discusses “a scanner,” but “the invention covers . . . any type of capturing device”)).

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<sup>15</sup> In addition, an application is a type of software, and software “comprises computer-executable instructions, that when executed by a processor,” perform specified operations, as also required. Ex. 1001, 15:45–46.

Thus, we are persuaded that Byrne teaches “providing a remote deposit application for download to a customer device” that “provide[s] a user interface and control[s]” an image capture device, as required by the claim.

Further, on this record, we are persuaded that a person of ordinary skill in the art would have been motivated to combine these teachings of Garcia and Byrne, as Petitioner proposes. In particular, we are persuaded that, because Garcia does not expressly disclose implementation details, a person of ordinary skill in the art would have been motivated to use a known way to distribute Garcia’s application to mobile devices, such as by downloading a thin client application (as Byrne discloses). *See* Pet. 20–21. In addition, Byrne touts the benefits of using a downloaded thin client (Ex. 1004 ¶¶ 45–46; *see also id.* at ¶¶ 47–48), and Garcia suggests using software that provides a user-interface and controls the camera (Ex. 1003, 5:1–6:10, 9:19–10:18). Dr. Mowry testifies that a person of ordinary skill in the art would be motivated to make the proposed combination, given Byrne’s identified benefits, the predictability of the results, and the ordinary artisan’s knowledge that thin clients were well-suited for mobile devices,<sup>16</sup> and Dr. Mowry provides analysis and evidence in support. Ex. 1002 ¶¶ 64–67. In addition, Dr. Mowry testifies that the ordinary artisan would have had a reasonable expectation of success in implementing the combination, and he again provides supporting analysis and evidence. Ex. 1002 ¶¶ 68–72. At

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<sup>16</sup> Patent Owner contends that Dr. Mowry’s evidence fails to show that Byrne’s thin client was compatible with a mobile device. Prelim. Resp. 33–34, 37. But, at this stage, we credit Dr. Mowry’s testimony over Patent Owner’s attorney argument. Patent Owner will have the opportunity to cross-examine Dr. Mowry at trial and develop any critiques of his evidence.

this stage of the proceeding, we credit Dr. Mowry’s testimony because it is logical and appears to be supported by the cited evidence.

At this stage, Patent Owner’s arguments do not reveal a deficiency in Petitioner’s contentions for the following three reasons. First, we disagree with Patent Owner’s contention that Byrne fails to disclose “providing a remote deposit application for download,” as recited by the claim. *See* Prelim. Resp. 25–33. Byrne expressly contradicts Patent Owner’s arguments (*see id.* at 26–28) that Byrne’s plug-in and thin client applications are not downloaded. *See* Ex. 1004 ¶¶ 46 (“[T]he [thin client] plug-in is downloaded with each invocation of the application software.”), ¶ 47 (The “desktop deposit plug-in(s) is downloaded onto the client PC.”). Patent Owner’s misunderstanding appears to stem from its erroneous assumption that, if “[n]o software is installed on the disk” (Ex. 1004 ¶ 46), then no software is downloaded. *See, e.g.*, Prelim. Resp. 26–27. However, software can be downloaded and yet not “installed on the disk” (for example, software could be stored in random access memory after download). Also, contrary to Patent Owner’s assumption, Byrne appears to distinguish fat applications from thin clients based on their *persistence* in the client device’s memory, not the mechanism by which they are *delivered* to the client device. For example, Byrne states that fat applications “stay[] resident on disk and [are] loaded into memory when used” (Ex. 1004 ¶ 45), where thin clients are “distributed with each invocation of the application software” and “[n]o software is installed on the disk” (*id.* ¶ 46).

Second, Patent Owner’s arguments regarding Byrne’s C21 App are inapposite. *See* Prelim. Resp. 28–32. Petitioner relies on Byrne’s desktop deposit plug-in—not the C21 App—to disclose the claimed “application for

download.”<sup>17</sup> *See* Pet. 19–25, 31–32. And, although Patent Owner argues that “the portions of Byrne the Petition relies on for [the] functions [of the remote deposit application] describe the C21 application” (Prelim. Resp. 33 (citing Pet. 19–20; Ex. 1004 ¶¶ 47–48)), this is a mischaracterization of Petitioner’s contentions. The Petition relies on Byrne’s description of the plug-in (*see* Pet. 19–20), and the fact that the same paragraphs also discuss the C21 App (*see* Ex. 1004 ¶¶ 47–48) has no apparent relevance.

Third, Patent Owner’s arguments regarding the rationale to combine are unavailing. We do not agree with Patent Owner that Byrne teaches away from the claimed “application for download.” *See* Prelim. Resp. 35–38. As explained above, Byrne downloads a plug-in to the client PC, and Patent Owner’s arguments to the contrary are premised on a misunderstanding of Byrne. Also, we do not agree that the Petition should have addressed how and why Garcia’s mobile device would have performed the functions of Byrne’s C21 App (*see id.* at 38) because, as explained above, Petitioner relies on Byrne’s plug-in, not the C21 App. Finally, Patent Owner fails to persuasively explain the relevance of its arguments regarding Byrne’s scanner. *See id.* at 38–43. Although Byrne’s description primarily refers to a scanner, Petitioner relies upon Garcia’s camera—not Byrne’s scanner—to teach the claimed “camera.” *See* Pet. 32. And, even if we were to agree that Byrne describes specialized check scanners with “built-in check processing capabilities” (*see* Prelim. Resp. 39–42), Patent Owner does not explain why this would undermine Petitioner’s rationale to combine the references,

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<sup>17</sup> We note that Petitioner relies on Garcia to disclose the claimed “remote deposit application” (Pet. 31), and Patent Owner does not dispute that contention at this stage (*see* Prelim. Resp. 25).



particularly given Byrne’s express statement that its software could be used with “any type of capturing device” (Ex. 1004 ¶ 42).

*1[b]: receiving at the bank’s computing system, via the user-interface on the customer device: authentication data, an electronic identification of an account for receipt of a value associated with the check, an electronic indication of the value associated with the check, and the at least one electronic image of the check;*

For limitation 1[b], Petitioner relies on the combination of Garcia and Byrne. Pet. 33–36. Petitioner contends that Garcia teaches that the financial institution receives information from the mobile device, including the user’s security keys, a user-entered check amount, and a digital image of the check. *Id.* (citing Ex. 1003, 5:4–6:5, 11:7–12, 11:15–17, 12:4–22). From this, Petitioner asserts that Garcia teaches “receiving at the bank’s computing system . . . authentication data, . . . an electronic indication of the value associated with the check,<sup>[18]</sup> and the at least one electronic image of the check,” as required by this limitation. *See id.*

Petitioner contends that Byrne teaches the remaining requirements of this limitation. Pet. 33–34. Specifically, according to Petitioner, Byrne’s plug-in “provide[s] an interface between the user and an enterprise,” as explained above. *Id.* at 33 (quoting Ex. 1004 ¶ 41; citing Pet. 19–25). Petitioner also contends that Byrne discloses the claimed “identification of

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<sup>18</sup> Petitioner contends that a person of ordinary skill in the art would have understood “receiving . . . an electronic indication of the value associated with the check” to mean “receiving an indication of the check amount distinct from the amounts visible in the check image.” Pet. 34. For purposes of this Decision, we adopt Petitioner’s understanding of this claim language. As a result, we do not rely upon Petitioner’s alternate theory that relies on a different claim interpretation. *See id.* at 35 (relying on Byrne).

an account” because Byrne’s user selects an account for deposit and the client prepares an HTTP POST that includes an identification of the account. *Id.* at 34 (citing Ex. 1004 ¶¶ 173, 174,<sup>19</sup> 176, 184; Ex. 1002 ¶ 96). Petitioner asserts that an ordinary artisan would have been motivated to incorporate this feature of Byrne into Garcia. *Id.* (citing Pet. 19–25).

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

*1[c]: determining whether the check was previously deposited using the at least one electronic image of the check; and*

Petitioner contends that Singfield discloses limitation 1[c]. Pet. 36 (citing Ex. 1002 ¶ 99). In support, Petitioner quotes Singfield, which describes “‘a preinstalled tracking system . . . to prevent’ ‘[m]ultiple deposit (i.e., fraudulent activity) of the same check’ by ‘monitor[ing], and log[ging] **every check image received**’ and ‘**recogniz[ing] similar deposit requests.**’” *Id.* (quoting Ex. 1005 ¶ 24) (alterations and emphasis Petitioner’s). Petitioner also quotes Singfield’s statement that a “computer program . . . **verifies** the check information (check number, check amount, routing and account number, signature) does not exactly match any previous deposits linked to the user’s account.” *Id.* (quoting Ex. 1004, claim 20; citing Ex. 1004 ¶¶ 44, 50, claim 14) (alterations and emphasis Petitioner’s). Petitioner further contends that “it would have been obvious to use Singfield’s method for duplicate check detection in Garcia/Byrne’s method

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<sup>19</sup> The Petition cites paragraph 74, but quotes from paragraph 174. *See* Pet. 34. We have corrected this apparent typographical error.

for remote check deposit.” *Id.*; *see also id.* at 25–28 (articulating rationale to combine Singfield with Garcia and Byrne).<sup>20</sup>

Patent Owner argues that the cited portions of Singfield “never refer[] to *using the electronic check image* to determine if the check was previously deposited.” Prelim. Resp. 18 (emphasis added) (citing Ex. 1005 ¶ 24). Patent Owner asserts that, “even if the cited portions of Singfield can be read to disclose the general idea of using of check information to determine matches with prior transactions, Singfield never states that its OMS uses the check image itself for the determination, as opposed to any number of types of check information data in the system (such as by user entry and/or teller involvement).” *Id.* at 21. Patent Owner further contends that Singfield does not collect check information by OCRing the check (as the ’598 patent discloses), but instead relies on input from a user or a “live teller.” *Id.* at 19–21 (citing Ex. 1005 ¶¶ 4, 26, 82, claims 1 and 20). Finally, Patent Owner notes that Petitioner does not rely on inherency or an allegation that the feature would have been obvious. *Id.* at 21.

On this record, Petitioner has sufficiently shown that Singfield discloses this limitation. Singfield’s OMS determines whether a check was previously deposited. Ex. 1005 ¶¶ 24, 44, 50, claim 20. For example, Singfield “verif[ies] . . . that [the] check hasn’t been cashed before continuing processing for check cashing . . . to prevent fraud and future attempts to cash the same check/multiple checks.” *Id.* ¶ 44.

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<sup>20</sup> We address Petitioner’s rationale to combine Singfield with Garcia and Byrne in more detail below, in connection with limitation 1[d].

Although less clear, we are also persuaded that Petitioner has made a sufficient showing, for purposes of this Decision, that a person of ordinary skill in the art would understand Singfield to disclose that *the check image* is used for this determination. For example, Singfield states that it verifies that “the check information,” which includes “check number, check amount, routing and account number, [and] signature,” “does not exactly match any previous deposits linked to the user’s account.” Ex. 1005, claim 20. This appears to disclose use of the check image because “the check information” includes, among other things, the “signature,” which would be obtained from the check image.

Other portions of Singfield also support our preliminary understanding of this passage. For example, Singfield indicates that the term “check information” (or “check image data”) refers to information extracted from the image of the check. *E.g., compare* Ex. 1005 ¶ 4 (“*check image data*” includes “routing number, checking account number on the endorsed check image, dollar amount of the check, date of the check, check owner’s name, and bank name, etc.” (emphasis added)), *with id.* ¶ 26 (“check information” includes substantially the same information). Also, Singfield’s disclosure indicates that the check information is extracted from the check image, and we perceive no passage of Singfield indicating that check information is instead obtained from a user independently. Indeed, Singfield states that a user *verifies* check information, which indicates the user *confirms* information that was previously collected by the system (rather than independently entering the information). *See, e.g.,* Ex. 1005 ¶ 26 (stating that data is delivered and “the check information is then verified by the user/depositor”), claim 1 (describing “confirming endorsed check image data . . . and input typing verification of check data delivered to the

[OMS]”). Patent Owner’s arguments to the contrary do not appear to be supported by the evidence. *See* Prelim. Resp. 19–21 (arguing that Singfield does not collect check information by OCRing the check, but instead relies on input from a user or a live teller).

Moreover, Singfield includes other passages indicating that the check image is used to determine whether the check was previously deposited. For example, Singfield states that the OMS monitors and logs “every check image received[ and] requested for deposit” and “recognize[s] similar deposit requests . . . to prevent fraud.” Ex. 1005 ¶ 24. Although Patent Owner correctly observes that these statements are found in different sentences (*see* Prelim. Resp. 19), we are currently persuaded that these statements are most naturally read together. The sentences in question are sequential, and the very next sentence states that “[t]he data from the image received and transmitted requires a variety of specified details . . . to be recognized, confirmed, and verified.” Ex. 1005 ¶ 25. In addition, Singfield describes OMS receiving an endorsed check image and then verifying that the check has not previously been cashed (*id.* ¶ 44), and OMS “virtually voids the check” once it is processed (*id.* ¶ 50). Both of these further indicate that a check image is used for the relevant determination.

Finally, Dr. Mowry points to these passages of Singfield and testifies that an ordinary artisan would have understood this to disclose “determining . . . using the at least one electronic image of the check.” Ex. 1002 ¶ 99 (emphasis omitted). Given our current understanding of Singfield, we find Dr. Mowry’s testimony to be supported by the cited evidence, and we perceive no evidence contradicting his testimony. As a result, we credit his testimony at this stage.

Accordingly, Petitioner has sufficiently shown that Singfield discloses limitation 1[c] for purposes of this Decision, notwithstanding Patent Owner’s arguments to the contrary. We also determine that Petitioner has made a sufficient showing that it would have been obvious to combine Singfield with Garcia and Byrne. *See infra* § III.E.1[d].

*1[d]: initiating and/or logging a first deposit of the value to the account via the bank’s computing system unless the bank’s computing system determines from the at least one electronic image of the check that the check was previously deposited.*

For limitation 1[d], Petitioner relies on Garcia and Singfield. Pet. 37–40. Petitioner points to Garcia for “initiating . . . a first deposit of the value to the account via the bank’s computing system”<sup>21</sup> because Garcia’s financial institution “automatically process[es] the deposit of the check in question into the service user’s account,” which entails initiating a deposit of the check’s value. Pet. 37 (emphasis omitted; second alteration Petitioner’s) (quoting Ex. 1003, 12:9–22; citing Ex. 1002 ¶ 102), 39 (citing Ex. 1003, 11:7–12; Ex. 1002 ¶ 106).

Petitioner contends that Singfield teaches initiating the deposit “unless” the bank’s computing system determines that the check was previously deposited. Pet. 39–40 (citing Ex. 1005 ¶¶ 44, 50, claims 14 and 20). For example, “Singfield discloses that ‘before [the] entire transaction process begins’ and before ‘funds are verified for deposit,’ a ‘computer

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<sup>21</sup> At this stage, we do not address Petitioner’s alternative contention that Singfield teaches “logging” (Pet. 37–39) because, for purposes of this Decision, we are persuaded by Petitioner’s contention that the phrase “initiating and/or logging” is satisfied by “initiating” (*see id.* at 37).

program’ ‘verifies that no like items have been deposited (i.e. check number, check amount, date, etc.)’” *Id.* at 39 (quoting Ex. 1005, claim 20) (emphasis omitted; alterations Petitioner’s).

Petitioner asserts that “it would have been obvious to incorporate Singfield’s method and software for duplicate check detection in Garcia/Byrne’s method for remote check deposit.” Pet. 40 (citing Pet. 25–28). Specifically, according to Petitioner, Garcia states that its financial institution verifies and validates check images, but Garcia fails to provide details of this operation. *Id.* at 25 (citing Ex. 1003, 1:7–8, 4:11–15,<sup>22</sup> 11:9–10). Thus, Petitioner argues that, in order to implement Garcia, a person of ordinary skill in the art would have been motivated to incorporate Singfield’s “well-known validation technique.” *Id.* at 25–26 (citing Ex. 1002 ¶¶ 74–76); *see also id.* at 28 (citing Ex. 1002 ¶ 79). Specifically, Petitioner contends that Singfield’s teaching is “efficient” and “would have reduced financial losses due to fraud.” *Id.* at 26–27 (citing Ex. 1005 ¶ 44; Ex. 1002 ¶ 76). Petitioner further contends that a person of ordinary skill in the art would have had a reasonable expectation of success. *Id.* at 27–28 (citing Ex. 1002 ¶¶ 77–78; Ex. 1005 ¶ 4).

Patent Owner contends that the Petition is deficient because “Petitioner fails to engage with the claim requirement that the *bank computer* receiving the deposit request performs the determination using the check image.” Prelim. Resp. 22. According to Patent Owner, Petitioner relies on a determination performed by Singfield’s OMS, which is separate

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<sup>22</sup> The Petition cites page 1, lines 11–15, but the quoted text appears on page 4, lines 11–15. We have corrected the apparent typographical error.

from the bank. *Id.* at 22–23 (citing Ex. 1005 ¶¶ 4, 7, 28–30, 40, claim 20, Fig. 9).

On this record, Petitioner has sufficiently shown that the proposed combination of Singfield and Garcia discloses this limitation. Garcia teaches that its financial institution verifies and processes the check image and then deposits the check amount into the user’s account. *E.g.*, Ex. 1003, 11:7–19, 12:9–22. Singfield discloses “determining whether the check was previously deposited using the at least one electronic image of the check” (*see supra* § III.E.1[c]), and Singfield discloses that a deposit is initiated “unless” the software determines that the check was previously deposited (*e.g.*, Ex. 1005 ¶¶ 44, 50, claim 20).

We are also currently persuaded that a person of ordinary skill in the art would have been motivated to incorporate Singfield’s duplicate check detection in Garcia’s financial institution, as proposed by Petitioner. Garcia indicates that the financial institution validates a check before deposit, but Garcia does not provide details of this operation. *E.g.*, Ex. 1003, 4:11–15, 11:7–19. Singfield describes a method of validating a check by verifying that it was not previously deposited (*e.g.*, Ex. 1005 ¶¶ 24, 44), and Dr. Mowry testifies that a person of ordinary skill in the art would have been motivated to use Singfield’s method to implement Garcia (Ex. 1002 ¶¶ 74–79).

Patent Owner’s contrary arguments are unavailing for two reasons. *See* Prelim. Resp. 22–24. First, we do not agree that Petitioner fails to adequately address the requirement that determination is performed by the “the bank’s computer system” (*see id.* at 22)—we understand Petitioner to propose that it would have been obvious for Garcia’s financial institution to validate checks using Singfield’s duplicate detection method (*see, e.g.*,



Pet. 26–27). Second, Patent Owner’s argument distinguishing Singfield’s OMS and its banks is misplaced. *See* Prelim. Resp. 22–24. Petitioner relies on Garcia’s financial institution—not Singfield’s OMS—to teach the claimed “bank’s computing system.” *E.g.*, Pet. 30, 33, 39. Also, although Patent Owner assumes that the claimed “computing system” cannot include the financial institution’s electronics in combination with Singfield’s OMS, Patent Owner does not explain or substantiate this assumption.

Accordingly, Petitioner has shown sufficiently that Singfield and Garcia, in combination, disclose limitation 1[d]. Petitioner has also made a sufficient showing that it would have been obvious to combine Singfield with Garcia and Byrne.

### *Conclusion*

Based on the current record, Petitioner has shown sufficiently that Garcia, Byrne, and Singfield, in combination, teach or suggest each limitation of independent claim 1. Petitioner has also shown sufficiently that it would have been obvious to combine these references in the manner proposed by Petitioner. 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, Byrne, and Singfield.

### *2. Independent Claims 10 and 15*

Petitioner contends that the subject matter of independent claims 10 and 15 would have been obvious in light of the Garcia-Byrne-Singfield combination. Pet. 54–59, 63–69. Petitioner addresses each limitation of these claims and supports its contentions with analysis and evidence,

referencing its prior analysis of commensurate limitations in independent claim 1 as appropriate. *See id.*

Patent Owner contends that Petitioner’s showing for independent claims 10 and 15 includes the same deficiencies as limitations 1[c] and 1[d]. *See Prelim. Resp.* 17–18 & n.7. But, as explained above in connection with those limitations of claim 1, Patent Owner’s arguments regarding those limitations do not reveal a defect in the Petition at this stage of the proceeding. *See supra* § III.E.1[c], 1[d].

Also, Patent Owner contends that Petitioner’s showing for independent claim 10 includes the same deficiencies as limitation 1[a] (*see Prelim. Resp.* 25), but we do not agree that these arguments apply to claim 10. In particular, the arguments regarding limitation 1[a] are premised on the requirement of an application “for download,” where claim 10 includes no such requirement. *Ex.* 1001, 16:40–44. In addition, Petitioner contends that Garcia alone discloses the “application” recited in limitation 10 [a] (*see Pet.* 55–56), and Patent Owner does not allege any deficiencies in Petitioner’s contentions regarding Garcia. Moreover, Patent Owner’s arguments regarding Petitioner’s rationale to combine Garcia and Byrne do not appear to apply to claims 10 or 15, as we understand those arguments to be premised on limitations appearing in claim 1. *See Prelim. Resp.* 35–44.

At this stage, Patent Owner does not otherwise dispute Petitioner’s arguments, analysis, or evidence for independent claims 10 and 15. *See Prelim. Resp.*

On this record, Petitioner has sufficiently shown that Garcia, Byrne, and Singfield, in combination, teach or suggest each limitation recited in claims 10 and 15, and Petitioner has sufficiently shown that it would have been obvious to combine the references in the manner proposed.

Accordingly, we are persuaded that Petitioner has shown a reasonable likelihood that it would prevail in establishing that the subject matter of claims 10 and 15 would have been obvious over Garcia, Byrne, and Singfield.

3. *Dependent Claims 2–9, 11–14, and 16–20*

Petitioner has made an adequate showing, unchallenged by Patent Owner in its Preliminary Response (*see* Prelim. Resp. 44–45), that the proposed Garcia-Byrne-Singfield combination discloses the additional limitations of dependent claims 2–9, 11–14, and 16, 18–20 (*see* Pet. 40–54, 59–62, 69–72), and that it would have been obvious to combine the other references with Adusumilli, which discloses the additional limitations of dependent claim 17 (*see id.* at 72–76).

F. *Identification of Real Parties in Interest*

A petition must identify “all real parties in interest.” 35 U.S.C. § 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. 9–13; *see also* Prelim. Sur-Reply 4–7. 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. 11; Prelim. Reply 2. In this circumstance, we agree with Petitioner that we need not address whether Mitek is an unnamed real party in interest. See Prelim. Reply 2 (citing *SharkNinja v. iRobot Corp.*, IPR2020-00734, Paper 11 at 18 (PTAB Oct. 6, 2020) (precedential)). As the *SharkNinja* case explained, 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 [real party in interest] results in time bar, estoppel, or anything else material to the case.” *SharkNinja*, Paper 11 at 19–20. In cases like this one, not considering the real party in interest issue “better serves the interest of cost and efficiency.” *Id.* at 20.

Patent Owner contends that we should that evaluate real party in interest because Petitioner “purposefully omitted” Mitek to gain an advantage. Prelim. Resp. 11 (quoting *SharkNinja*, Paper 11 at 19); *see also* Prelim. Sur-Reply 4–5. We disagree. According to Patent Owner, naming Mitek “would be tantamount to an admission that the Board should exercise its discretion to deny PNC’s petitions” (Prelim. Resp. 11–12), but Patent Owner provides no basis for this argument. This is the first petition to challenge the ’598 patent, and Patent Owner does not even argue that we should discretionarily deny based on petitions challenging other patents.

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 8 (relating to the Preliminary Response and Exhibit 2006); Paper 12 (relating to the Preliminary Reply); and Paper 15 (relating to the Preliminary Sur-Reply). In each of these motions, the parties seek to protect as confidential certain information that relates to 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* § III.F), we also do not substantively address the arguments and evidence sought to be protected as confidential in this Decision.

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 8, 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 9) requested to be sealed can be identified from the redacted version of the Preliminary Response (Paper 10). Based on the representations in the Joint Motion to Seal (Paper 8), 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 12 (Joint Motion to Seal the Reply) and Paper 15 (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 13) and Preliminary Sur-Reply (Paper 16) requested to be sealed can be identified from the redacted version of the Preliminary Reply (Paper 14) and the redacted version of the Preliminary Sur-Reply (Paper 18), respectively. Based on the representations in these two Joint Motions to Seal (Papers 12 and 15), 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 8, Attach. A) and grant all three Joint Motions to Seal (Papers 8, 12, and 15).

## 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 '598 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 1–20 of the '598 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 '598 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 three pending Motions to Seal (Papers 8, 12, 15) are *granted*; a Protective Order in the form of Attachment A to Paper 8 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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