

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRUIST BANK,
Petitioner,

v.

UNITED SERVICES AUTOMOBILE ASSOCIATION,
Patent Owner.

IPR2023-00183
Patent 11,182,753 B1

Before KRISTEN L. DROESCH, STACEY G. WHITE, and
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

DECISION
Instituting *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

On November 15, 2022, Truist Bank (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–14 of U.S. Patent No. 11,182,753 B1 (Ex. 1001, “the ’753 Patent”). Paper 1 (“Pet.”). Petitioner also filed another petition in IPR2023- 00184 (“the ’184 IPR Petition”) challenging the same claims of the same patent. IPR2023-00184, Paper 1. In each proceeding, Petitioner filed a Notice ranking the instant Petition first and the ’184 IPR Petition second as the order that Petitioner wishes the Board to consider the merits. Paper 3 (“Ranking Notice”). United Services Automobile Association (“Patent Owner”) filed a Preliminary Response (Paper 11, “Prelim. Resp.”) and a “Patent Owner’s Response to Petitioner’s Supplemental Paper and Notice Ranking Petitions” (Paper 12, “Ranking Resp.”). With our authorization, Petitioner filed a Reply to the Preliminary Response (Paper 13, “Prelim. Reply”) to which Patent Owner filed a Preliminary Sur-reply (Paper 15, “Prelim. Sur-reply”).

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 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).

For the reasons provided below, we determine, based on the record before us, that Petitioner establishes a reasonable likelihood that it would prevail in showing at least one of the challenged claims is unpatentable.

B. Related Matters

The parties indicate that Patent Owner asserted the '753 Patent against Petitioner in *United Services Automobile Association v. Truist Bank*, 2:22-cv-00291 (E.D. Tex.) (“the district court proceeding”). Pet. 69; Paper 5, 2.

The parties identify that Petitioner concurrently filed a petition in IPR2023-00184 challenging the '753 Patent and further identify that Petitioner filed petitions in IPR2023-00143 and IPR2023-00144 challenging related U.S. Patent No. 10,482,432. Pet. 69; Paper 5, 2.

C. The '753 Patent (Ex. 1001)

The '753 Patent is titled “Systems and Methods for Remote Deposit of Checks.” Ex. 1001, code (54). The application that issued as the '753 Patent was filed on July 8, 2019, was a continuation application of a chain of numerous continuation applications, the earliest of which was filed on October 31, 2006. *Id.* at codes (22), (63).

The '753 Patent explains that there are advantages and disadvantages to using a check to purchase goods or services. *See* Ex. 1001, 1:53–2:42. 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 2:18–22. To address this disadvantage, the '753 Patent provides a method “for remotely redeeming a negotiable instrument,” such as a check, using “a customer-controlled general purpose computer.” *Id.* at 2:50–54.

Figure 1 of the '753 Patent is reproduced below.

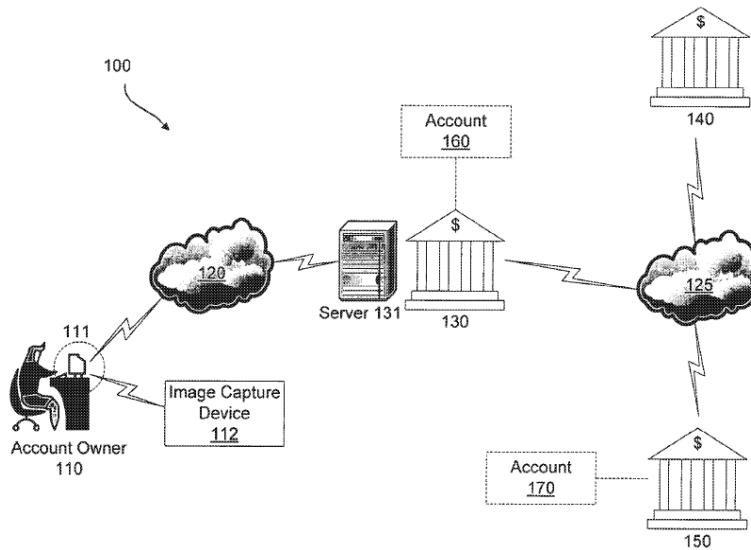


Figure 1 depicts a system in which the described method may be employed. *See* Ex. 1001, 3:30–31, 3:61–62. System 100 includes general purpose computer 111 and image capture device 112 associated with account owner 110 (e.g., a bank customer at his private residence), and several financial institutions 130, 140, and 150 (e.g., banks). *See id.* at 3:62–66, 4:18–21, 5:18–22. In operation, account owner 110 generates a check image with image capture device 112 and sends the image to financial institution 130 via general purpose computer 111. *See id.* at 6:17–21. 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 the owner’s account 160. *See id.* at 6:24–29.

Figure 3 of the '753 Patent is reproduced below.

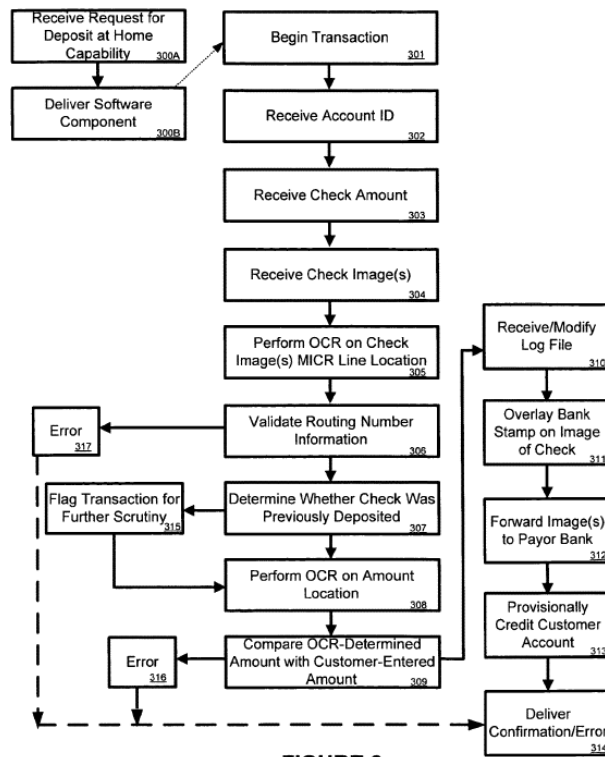


FIGURE 3

Figure 3 illustrates a method for processing a check deposit. *See* Ex. 1001, 3:35, 9:29. In particular, server 131 “receive[s] a request for deposit at home capability 300A, and in response delivers a software component to requesting customer 300B.” *Id.* at 9:35–38; *see id.* at 5:28–31. Thereafter, a transaction is initiated 301 when the customer indicates that a deposit transaction is desired. *See id.* at 9:45–46. In response, the financial institution electronics receive account identifier (ID) 302 and check amount 303. *See id.* at 9:48–50. When check image(s) are received 304, “an Optical Character Recognition (OCR) process may be invoked to determine certain information about the check,” including “the check's MICR line location 305 to determine information such as payor bank routing number, account number, and check number.” *Id.* at 9:54–58. The bank routing number is then validated 306 against a list of valid routing numbers

to ensure that it corresponds to a legitimate bank. *See id.* at 9:59–61. In some embodiments, “the OCR is conducted in real time, i.e., prior to confirming the deposit transaction for the customer, so as to validate some initial deposit information immediately, and thereby filter transactions that may result in errors were the OCR to be conducted at some later time.” *Id.* at 9:63–10:1. “If the routing number determined using OCR cannot be validated, an error may result 317, and the deposit transaction can be aborted.” *Id.* at 10:25–27. In addition, a “duplicate checking procedure may be carried out to determine whether the check was previously deposited 307” and “the transaction may be flagged for further scrutiny 315 at a later time.” *Id.* at 10:30–31, 10:67–11:2. Further OCR may be performed on “check amount location 306, and the amount as determined using OCR may be compared against the customer-entered amount received pursuant to step 303.” *Id.* at 11:5–8. An error 316 can result when the amounts do not match causing termination of the transaction and delivery of appropriate error information to customer 314. *See id.* at 11:8–11.

D. Challenged Claims

Petitioner challenges claims 1–14 of the ’753 Patent. Claims 1 and 8 are independent and claims 2–7 and 9–14 depend therefrom, respectively.

Claim 1 is representative and reproduced below:

- [1P] A system comprising:
 - [1A] a memory; and
 - [1B] a processor in communication with the memory, the processor configured to:
 - [1C] receive an image of a check captured by an image capture device coupled to a remote user device, wherein the image of the check is in a first electronic data format;
 - [1D] perform optical character recognition in real-time on the image of the check to determine information about the check,

including optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check;

[1E1] generate a supplemental image of the check in a second electronic data format from the image of the check in the first electronic data format, [1E2] wherein an image quality of the check in the first electronic data format is a higher image quality than an image quality of the check in the second electronic data format and [1E3] the second electronic data format is configured for an electronic bank-to-bank image transfer;

[1F] validate the determined information about the check;

[1G] deposit the check into a customer account based on the determined information from the image of the check and based on the supplemental image of the check; and

[1H] after validating the determined information, transmit a confirmation message indicating that the customer account has been credited in an amount corresponding to the determined information obtained by the optical character recognition performed on the image of the check;

[1I] wherein the image of the check is received over a secure connection and data communicated over the secure connection is at least one of inaccessible or indecipherable by an unauthorized third party.

Ex. 1001, 14:34–15:2 (Petitioner’s references added in brackets).

E. Asserted Patentability Challenges and Asserted Prior Art

Petitioner presents the following grounds of unpatentability (Pet. 2):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 8	103(a) ¹	Popadic ² , Garcia ³ , Randle ⁴
2, 9	103(a)	Popadic, Garcia, Randle, Maloney ⁵
3–7, 10–14	103(a)	Popadic, Garcia, Randle, Maloney, Viera ⁶

Petitioner also relies on the testimony of Dr. David Doermann (Ex. 1003).

F. Multiple Petitions

As noted above, when filing the Petition, Petitioner concurrently filed the '184 IPR Petition also challenging the same claims of the '753 Patent. Pet. 69; Paper 5, 2; *see* Ranking Notice. The Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019) (“Trial Practice Guide” or “CTPG”⁷) states that generally “one petition should be sufficient to challenge the claims of a patent in most situations” and that “multiple petitions by a petitioner are not necessary in the vast majority of cases.” CTPG 59. According to the CTPG,

¹ 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 '753 Patent claims priority to an application filed before that date, so we refer to the pre-AIA version of § 103, but our findings and analysis would be the same under the current version of the statute.

² US RE44,274 E, filed Oct. 16, 2006, reissued June 11, 2013 (Ex. 1005).

³ WO 2005/043857 A1, published May 12, 2005 (Ex. 1010). Petitioner relies on a certified translation of this publication, which also appears in Exhibit 1010.

⁴ US 2006/0106717 A1, filed May 15, 2004, published May 18, 2006 (Ex. 1011).

⁵ US 7,028,886 B1, filed Nov. 19, 2004, issued Apr. 18, 2006 (Ex. 1012).

⁶ US 8,131,636 B1, filed May, 5, 2005, issued Mar. 6, 2012 (Ex. 1013).

⁷ *Available at*

<https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=>

Two or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns. *See* 35 U.S.C. § 316(b). In addition, multiple petitions by a petitioner are not necessary in the vast majority of cases.

CTPG 59 (citing 35 U.S.C. § 316(b)). The Board further recognizes

there may be circumstances in which more than one petition may necessary, including, for example, . . . when there is a dispute about priority date requiring arguments under multiple prior art references. In such cases two petitions by a petitioner may be needed, although this should be rare.

CTPG 59. To aid the Board, a petitioner who files parallel petitions should “identify: (1) a ranking of the petitions in the order in which it wishes the Board to consider the merits . . . , and (2) a succinct explanation of the differences between the petitions” CTPG 59–60. Pursuant to this guidance, Petitioner filed its Ranking Notice, in which it requests that “if the Board decides to institute only a single petition against the ’753 patent, Petitioner requests that the Board institute IPR2023-00183.” Ranking Notice 4. Petitioner asserts that all three grounds raised in this Petition rely on Popadic and all three grounds raised in the ’184 IPR Petition rely on Garcia. *See id.* at 2.

Petitioner contends that two petitions are justified and both should be granted because “[t]he two petitions rely on different primary references because of different priority dates that may be asserted by Patent Owner.” Ranking Notice 1; *see id.* at 1–3. More specifically, Petitioner asserts that it expects Patent Owner to dispute whether the ’753 Patent is subject to the AIA and whether Popadic (the primary reference in this Petition) is entitled to an earlier effective filing date of its provisional application. *See id.* at 2.

Petitioner asserts that the '184 IPR Petition raises grounds based on Garcia, which cannot be antedated. *See id.* at 2–3. Petitioner points to the Trial Practice Guide, which identifies this type of situation as a circumstance in which more than one petition may be necessary. *See id.* at 3 (quoting *Medtronic, Inc. v. Teleflex Innovations S.A.R.L.*, IPR2020-00136, Paper 20 at 39 (PTAB June 26, 2020; citing CTPG 59; *10X Genomics, Inc. v. Bio-Rad Labs.*, IPR2020-00088, Paper 8 at 47 (PTAB Apr. 27, 2020)). According to Petitioner, “two petitions were needed to explain the prior art status of each reference and address Patent Owner’s expected arguments within the word limits.” *Id.* at 4; *see id.* at 1. Petitioner contends that the Board should grant both Petitions as contemplated in the Trial Practice Guide. *See id.* at 1, 4.

In response to the Ranking Notice, Patent Owner asserts that although the Trial Practice Guide indicates that a dispute about priority date may justify multiple parallel petitions, it further states that “the patent owner may seek to avoid additional petitions by proffering a stipulation that certain claim limitations are not disputed or that certain references qualify as prior art.” Ranking Resp. 2 (quoting CTPG 59, 61). Patent Owner contends that the Board has declined to consider additional petitions where a patent owner has stipulated that it will not attempt to antedate a reference subject to a priority date dispute. *See id.* at 2–3 (quoting *Apple Inc. v. Seven Networks, LLC*, IPR2020-00254, 2020 WL 4341801 at *3 (PTAB July 2020)). Patent Owner asserts that it offers the same stipulation as *Seven Networks* by stating that “Patent Owner will not challenge Popadic’s status as prior art in the IPR2023-00183 proceeding.” *Id.* at 3. According to Patent Owner, because it offers the necessary stipulation, “there is no basis for the Board to consider multiple parallel petitions against the '753 patent.” *Id.* Patent Owner asserts, “given the lack of justification for multiple petitions, the

Board should exercise its discretion to deny institution of the second-ranked IPR2023-00184 petition and only consider IPR2023-00183, consistent with the Trial Practice Guide’s guidance.” *Id.* at 3–4 (quoting CTPG 59).

In the Reply to the Preliminary Response, Petitioner for the first time states that it “elects IPR2023-00184 as its primary petition” “[i]n view of the Board’s Final Written Decision in IPR2021-01077 recently issued on a related patent.” Prelim. Reply 1. According to Petitioner, “[t]he Board’s findings in that Decision necessitate the Board’s review of the Garcia grounds on the similar ’753 patent claims, and many of the findings from that Decision apply directly to IPR2023-00184, [including] that the art satisfies [Patent Owner]’s narrow claim interpretation.” *Id.*

Petitioner asserts that Patent Owner’s stipulation not to challenge Popadic’s status as prior art in the IPR2023-00183 proceeding does not necessitate denial of institution of IPR2023-00184 because Patent Owner’s “reasons for making the stipulation are suspect.” Prelim. Reply 1. According to Petitioner, Patent Owner “makes this concession in an attempt to avoid the prior art applied in the 184 IPR because a recent final written decision (1) addressed a related patent with the same specification and overlapping claim language with the ’753 patent and (2) found those related claims unpatentable based on the same art as applied in the 184 IPR.” *Id.* Petitioner further contends that Patent Owner “wishes to avoid those similar grounds because 37 CFR § 42.73(d)(3)(i) prohibits taking actions inconsistent with the Board’s related unpatentability findings—including relitigating the disclosures of the references or the motivations to make the same combinations at issue here.” *Id.* at 1–2. In support of its argument Petitioner asserts that the preliminary response in the IPR2023-00184 proceeding impermissibly rehashes the same alleged point of novelty already

rejected in the Final Written Decision of IPR2021-01077. *See id.* at 2 (citing Ex. 1026, 37 C.F.R. § 42.73(d)(3)(i)), 4 (citing 37 C.F.R. § 42.73(d)(3)(i)); *see also id.* at 2–3 (addressing findings of 1077 Final Written Decision, quoting Ex. 1026, 63–64; citing Ex. 1026, 85).

Petitioner further contends that the stipulation contradicts and “flips [Patent Owner]’s positions taken in District Court, which prejudiced [Petitioner].” Prelim. Reply 1–2; *see id.* at 4–5 (quoting Ex. 1027, 23–24; Prelim. Resp. 13). According to Petitioner, “[h]ad Petitioner not had to prove Popadic’s status as prior art, both the Garcia grounds of IPR2023-00184 and the Popadic grounds of IPR2023-00183 would have fit within a single petition, obviating this entire dispute.” *Id.* at 2; *see also id.* at 6 (similar argument). Petitioner further asserts that the inconsistency between Patent Owner’s stipulation and its position in the district court proceeding prevented Petitioner from raising all grounds in a single petition because Petitioner was required to dedicate significant space (1832 words and 10% of the Petition) to address Popadic’s status as prior art. *See id.* at 3–4. According to Petitioner, “[i]f [Patent Owner] had conceded that the ’753 patent is not entitled to the earliest claimed priority date in the district court proceeding, [Petitioner] could have omitted the priority discussion and combined the two IPR petitions into one because of the similar secondary references in each.” *Id.* at 4 (citing Ranking Notice 1–2). Petitioner also asserts that Patent Owner’s stipulation is incomplete because the stipulation language specifying “in the IPR2023-00183 proceeding” does not prevent Patent Owner from asserting an earlier priority date or contesting Popadic’s prior art status in other proceedings. *See id.* at 3.

In response to Petitioner’s new designation of the first ranked petition, Patent Owner contends that Petitioner should not be permitted to redesignate

its second-ranked petition as the first ranked petition after seeing Patent Owner's arguments on the merits in the Preliminary Responses. Prelim. Sur-reply 1–2. Patent Owner asserts that it “should not be punished from following the Office’s express guidance and proffering a stipulation to avoid multiple petitions by obviating the alleged dispute about prior art status applicable to the first-elected petition.” *Id.* at 1 (citing CTPG 61); *see id.* at 5 (citing CTPG 61). According to Patent Owner, “[a]s the Board’s Regulations, the Federal Circuit, and the Supreme Court have emphasized, ‘the petitioner is master of its complaint and the petition, once filed, should not be a moving target for Patent Owner or the Board.’” *Id.* at 2 (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016); citing 35 U.S.C. 312(a)(3); *SAS Inst., Inc. v. Iancu*, 138 S.Ct. 1348, 1355 (2018)). Patent Owner contends that Petitioner should be held to its strategic choices regarding ranking and notes that Petitioner cites no case to support its “proposition that a petitioner should be permitted to revise its ranking after Patent Owner has already prepared and filed its Preliminary Responses and made its own strategic decisions, in reliance on Petitioner’s election, about what arguments to emphasize in those responses.” *Id.* at 2; *see id.* at 7.

Patent Owner also asserts that Petitioner’s arguments regarding 37 C.F.R. § 42.73(d)(3)(i) are not applicable because none of the claims at issue in the IPR2021-01077 proceeding have been finally refused or cancelled because Patent Owner intends to appeal the Final Written Decision to the Federal Circuit and no certificate cancelling the claims has been issued. *See* Prelim. Sur-reply 3 (citing 37 C.F.R. § 42.80; *Regents of the Univ. of Minn. v. LSI Corp.*, 926 F.3d 1327, 1345 (Fed. Cir. 2019)). Patent Owner further disputes Petitioner’s contentions regarding any similarities between the

issues raised in the Preliminary Response and those at issue in IPR2021-01077. *See id.* at 3–4 (citing Prelim. Resp. 18–21; Ex. 1026, 9–10, 25).

In response to Petitioner’s assertion that the stipulation is ineffective because it is limited to the IPR2023-00183 proceeding, Patent Owner points out that IPR2023-00183 is the only proceeding before the Board where Popadic’s prior art status is at issue and the Board has declined to institute parallel petitions based on identically worded stipulations. *See* Prelim. Sur-reply 5–6 (quoting *Apple v. Seven Networks*, WL4341801 at *3). “[T]o avoid any possible prejudice, [Patent Owner] will also stipulate not to challenge Popadic’s status as prior art to the ’753 patent in the related district court proceeding if the Board denies institution of IPR2023–00184.” *Id.* at 6.

We agree with Patent Owner that Petitioner should be bound to its initial ranking of this Petition as the first ranked of the two concurrently filed parallel petitions. As pointed out by Patent Owner, Petitioner does not cite any cases to support the proposition that it is permissible to redesignate a first ranked petition after the filing of preliminary responses. *See* Prelim. Sur-reply 2. Moreover, although Petitioner relies on the Board’s Final Written Decision in IPR2021-01077 as a reason to redesignate the first ranked petition, we note that it was foreseeable that the Final Written Decision would issue in January 2023, approximately one year after trial was instituted in IPR2021-01077. It was also a foreseeable possibility that all of the claims might be found unpatentable on the basis of Garcia, Randle, and Slater in the Final Written as it was one of three possible outcomes (i.e., finding all, some, or none of the claims unpatentable). Likewise, it was also a foreseeable possibility that Patent Owner might stipulate not to challenge the prior art status of Popadic because such stipulations are expressly

suggested in the Trial Practice Guide as way for a patent owner to avoid additional petitions. *See* CTPG 61. These foreseeable circumstances do not provide sufficient reason or justification to permit Petitioner to now designate the '184 IPR Petition as the first ranked petition.

Accordingly, we determine that Petitioner is bound to its initial designation ranking this Petition ahead of the '184 IPR Petition.

II. ANALYSIS

A. The Level of Ordinary Skill in the Art

Petitioner asserts that the level of ordinary skill in the art:

would have had either (1) a Bachelor of Science degree in Electrical Engineering, Computer Engineering, Computer Science, or an equivalent field, with at least two years of academic or industry experience in financial technology, including image processing; or (2) a Master of Science degree in Electrical Engineering, Computer Engineering, Computer Science, or an equivalent field, with at least a year of academic or industry experience in the same field.

Pet. 5 (citing Ex. 1003 ¶¶ 24–25). Petitioner further asserts that “[h]igher levels of education may offset less experience and extensive experience can substitute for formal education.” *Id.* at 5–6.

Patent Owner does not offer an alternate proposed level of ordinary skill at this stage. *See generally* Prelim. Resp.

For the purpose of institution, we adopt Petitioner’s definition of a person of ordinary skill in the art because it is consistent with the level of skill reflected by the '398 Patent Specification and the asserted prior art.

B. Claim Construction

We interpret claim terms using “the same claim construction standard that would be used to construe the claims 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. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

Petitioner states that “the plain meaning of each claim term can be applied.” Pet. 6 (citing Ex. 1003 ¶¶ 26–29). Patent Owner does not offer any explicit claim construction at this stage. *See generally* Prelim. Resp. Patent Owner, however, in addressing Petitioner’s application of the prior art to the claims argues that “the determined information about the check” recited in “validate the determined information about the check,” (“elements [1F] and [8F]”) requires that the “determined information” being validated must include information determined via OCR of the MICR line in the check image based on based on the recitation “perform optical character recognition in real-time on the image of the check to determine information about the check, including optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check” (“elements [1D] and [8D]”). *See* Prelim. Resp. 14–20.

In support of its arguments, Patent Owner points to disclosures of the ’753 Patent describing optical character recognition (OCR) of the MICR line to determine information such as routing number, and then validating the determined information prior to confirming the transaction to the user. *See* Prelim. Resp. 15–16 (quoting Ex. 1001, 9:53–10:1). According to Patent Owner, “[t]he plain language of the claims requires, at minimum: (1) determining information from the MICR line of the check using OCR; and (2) validating that information determined from OCR of the MICR line of

the check.” *Id.* at 16 (citing Ex. 1001, claims 1, 8); *see* Prelim. Sur-reply 9 (similar argument). Patent Owner asserts that “elements [1D] and [8B] expressly **require** determining information from optical character recognition of the MICR line in the check image, without excluding systems that also determine other information” and “expressly refer back to the “determined information in elements [1d] and [8B].” Prelim. Resp. 16–17 (quoting *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1344–45 (Fed. Cir. 2003); *David Netzer Consulting Eng’r LLC v. Shell Oil Co.*, 824 F.3d 989, 998 (Fed. Cir. 2016); *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1341 (Fed. Cir. 2008); *Takeda Pharm. Co. v. Sandoz Inc.*, WL2153673 at *6 (N.D. Cal., May 16, 2013)). According to Patent Owner “elements [1D] and [8B] provide the only antecedent basis for ‘the determined information’ validated in elements [1F] and [8F].” *Id.* at 17–18 (quoting *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1356–57 (Fed. Cir. 1999)). Patent Owner asserts that courts and the Board regularly apply the established rule that the second instance of a claim element, referenced using “the” or “said,” has the same scope and meaning as the first. *See id.* at 18–19 (quoting *Vehicle IP, LLC v. Werner Enters., Inc.*, 4 F.Supp. 3d 648, 644 (D. Del. 2013); *HowLink Global LLC v. Network Comm’ns Intern. Corp.*, 561 F. App’x 898 903 (Fed. Cir. 2014); *Eastman Chem. Co. v. Aktiengesellschaft*, 47 F. App’x 566, 573–74 (Fed. Cir. 2002); *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01078, 2020 WL 7213223, at *8 (PTAB Dec. 7, 2020); *Unified Patents Inc. v. Divx, LLC*, IPR2019-01379, 2021 WL 451027, at *9 (PTAB Feb. 8, 2021)). Patent Owner also contends that Petitioner did not identify any reason to deviate from this general claim construction principle, and if it did seek to interpret the claims differently from the plain language of the claims, Patent Owner asserts it

was Petitioner's obligation to identify and support its construction explicitly in its petition. *See id.* at 19–20 (quoting 37 C.F.R. § 42.104 (b); *Intelligent Bio-Systems, Inc.*, 821 F.3d at 1369).

In the Preliminary Reply, Petitioner asserts that if Patent Owner's "construction were correct, the entire MICR line of the check, including the routing number, account number, and check number, must be both OCR'd and validated." Prelim. Reply 7–8 (citing Prelim. Resp. 14–15). Petitioner contends that Patent Owner's interpretation is inconsistent with the portions of the '753 Patent Specification cited by Patent Owner which indicate that only some of the determined information is validated. *Id.* at 8 (quoting Prelim. Resp. 14–15).

In the Preliminary Sur-reply, Patent Owner asserts that there is no inconsistency between Patent Owner's plain reading of the claim language and the exemplary embodiments described in the '753 Patent. *See* Prelim. Sur-reply 9. According to Patent Owner,

[n]either the claim language nor the exemplary embodiments in the specification require that every piece of information contained in the check's MICR line be determined or validated. What the claims do unambiguously require, however, is determining information via OCR of the check's MICR line and validating that same information that was determined via OCR of the check's MICR line.

Id. at 10; *see id.* at 9–10 (quoting Ex. 1001, 9:56–63; citing Prelim. Resp. 14–15).

We do not agree that "validating the determined information" recited in elements [1F] and [8F] requires information determined from "optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check." Patent Owner quotes *Amgen*, for the proposition that the use of the terms "including" and "comprising" means that the named

elements are essential, but overlooks that *Amgen* also explains that “other elements may be added and still form a construct within the scope of the claim.” *Amgen*, 314 F.3d 1313 at 1344–1345. Consistent with *Amgen*, the plain language “perform optical character recognition in real-time on the image of the check to determine information about the check, including optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check” of elements [1D] and [8B] permits other elements to form a construct within the scope of the claim. Therefore, “perform optical character recognition in real-time on the image of the check to determine information about the check, including optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check” recited in elements [1D] and [8B] can include information determined apart from OCR of a MICR line. Accordingly, “validating the determined information” recited in elements [1F] and [8F] does not require information determined from OCR of a MICR line, but may include other information from OCR on the image of the check. For example, the ’753 Patent discloses OCR on the check amount location and any other aspects of the check image. *See* Ex. 1001, 11:5–13; Fig. 3.

Additionally, the remaining limitations of claims 1 and 8 confirm that the “determined information” is not required to be information determined from OCR of a MICR line of the check. Elements [1H] and [8F] recite “an amount corresponding to the determined information obtained by performing optical character recognition on the image of the check.” The ’753 Patent, however, explains that a MICR line of a check includes information such as the payor bank routing number, account number, and check number. *See* Ex. 1001, 9:56–58. Thus, the limitations recited in elements [1H] and [8F] confirm that “the determined information” is not

necessarily information determined from OCR of a MICR line, but includes other information determined from OCR on the image of the check.

Moreover, we note that dependent claims 3 and 10 each recite that “the determined information includes MICR line information.” Ex. 1001, 15:12–13, 16:28–29. Applying the doctrine of claim differentiation, we construe independent claims 1 and 8 to not require the determined information to include MICR line information. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 911 (Fed. Cir. 2004) (“[T]he presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim.”); *Curtis-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (“‘[C]laim differentiation’ refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim.”).

In summary, contrary to Patent Owner’s arguments, for the purpose of this Decision, we find the scope of “the determined information” recited in independent claims 1 and 8, refers to information determined from OCR on the image of the check, which may include, but **does not require**, information determined from OCR of a MICR line.

Other Claim Terms or Phrases

For the purpose 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))).

C. Principles of Laws

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.⁸ *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. Patentability Challenge to Claims 1 and 8

1. Overview of Popadic (Ex. 1005)

Popadic relates to using existing “FAX machine, flat bed scanner, or other ubiquitous imaging device to remote capture check images and make deposits.” Ex. 1005, 2:12–14. Popadic discloses using “ubiquitous imaging devices (e.g., FAX machines, flat bed scanners attached to a computer) capable of reading a check carrier to capture and transmit check images to a bank.” *Id.* at 2:20–22. Popadic’s system includes an image preprocessing unit that

receives the fax and data transmission, identifies the depositor, combines the fronts and backs of checks, assesses image quality, optionally enhances image quality, reads key data off the images using an OCR, optionally enhances the reading with "hinting algorithms, communicates with the depositor, reformats images

⁸ The current record does not include allegations or evidence of objective indicia of nonobviousness.

and data to make them acceptable to the bank's existing remote image capture system, and facilitates the exchange of communication between the depositor and the system.

Id. at 4:35–43. Depending on the bank, the read data includes “the MICR line of the check,” “the courtesy amount,” and the “legal amount,” and these values are “compared to each other and to the amount read off the deposit ticket” to ensure that the amounts “all [are] the same.” *Id.* at 12:34–51. Popadic converts the check image from fax to a “format required for further processing or for submission to other banks.” *Id.* at 14:49–51. Popadic's system prevents the redeposit of checks a second time “by comparing bank, account number, check number and amount data for each check to those already processed.” *Id.* at 13:42–45.

*2. Overview of Garcia (Ex. 1010)*⁹

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. *See* Ex. 1010, 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).

⁹ The English translation of Garcia begins on page 28 of Exhibit 1010. Unless otherwise noted, we follow the parties' convention and cite to pages and lines within the English translation.

Figure 1 of Garcia is reproduced below

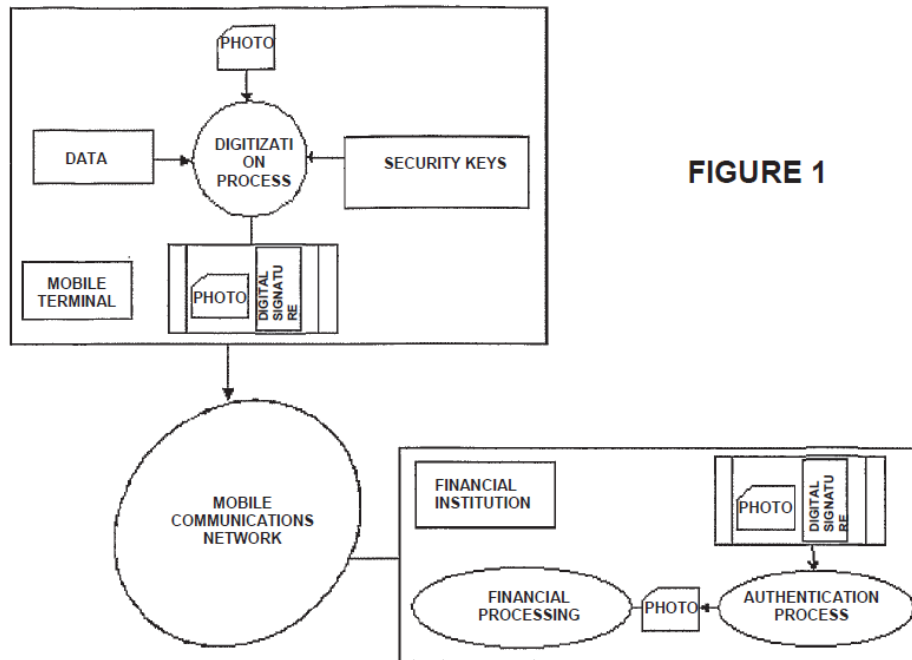


FIGURE 1

Figure 1 illustrates an example mobile device and financial institution connected via a mobile communications network. *See* Ex. 1010, 9:11–18. In reference to Figure 1, Garcia discloses a “user opens a computer application in the mobile telephone in which an interactive session is established with the receiving institution.” *Id.* at 9:21–10:3; *see 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.” *Id.* at 5:14–20; *see 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. *See id.* at 5:21–6:5, 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. *See id.* at 4:9–18.

3. Overview of Randle (Ex. 1011)

Randle “relates generally to end to end electronic transaction processing, particularly involving financial instruments, such as checks, from the capture of transaction data associated with a check and its image at a point of sale or point of presentment . . . to the ultimate settlement and clearing of the check and transfer of funds.” Ex. 1011 ¶ 2. In particular, Randle discloses a payee’s bank that receives scanned images “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.” *Id.* ¶ 19; *see id.* ¶ 18. Randle determines whether a captured check image is quality assured and then performs data reduction on the check image to reduce the file size to speed transmission through the check processing chain. *See id.* ¶¶ 42, 43. The check image and related data are then “processed for settlement, payment and clearing.” *Id.* ¶ 19.

4. Analysis of Claim 1

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently for the purpose of institution that the subject matter of claim 1 would have been obvious over Popadic, Garcia, and Randle.

[1P] A system comprising:

Petitioner contends that “Popadic discloses ‘a system’ that allows ubiquitous imaging devices to submit check images for deposit.” Pet. 25 (citing Ex. 1008¹⁰, 4). Patent Owner does not address or rebut Petitioner’s showing for the preamble. *See* Prelim. Resp. 13–15. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic*

¹⁰ Petitioner cites to provisional application (U.S. 60/727,533) for Popadic. *See* Ex. 1005, code (60).

Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this stage of the proceeding, we need not resolve whether the preamble is limiting because Petitioner shows sufficiently for the purpose of institution that the preamble is satisfied by the disclosures of Popadic.

*[1A] a memory; and
[1B] a processor in communication with the memory,
the processor configured to:*

For limitations [1A] and [1B], Petitioner asserts that a person of ordinary skill in the art would have understood that Popadic teaches or suggests using a processor in communication with a memory to carry out the steps of claim 1 on the basis that Popadic discloses (1) receiving a check image over the Internet, (2) performing OCR, (3) comparing the determined amount of the check and the amount provided by the user, (4) converting the format of the check image, (5) providing image statements, (6) sending the converted check images to other banks for collection, and (7) communicating with the customer via email. *See* Pet. 26 (citing Ex. 1003 ¶ 72; Ex. 1008, 3–4, 6, 8–10). Petitioner also points out that Popadic discloses that users use PCs, which include a processor in communication with a memory. *See id.* (citing Ex. 1003 ¶ 72; Ex. 1008, 5).

Petitioner contends that Garcia also discloses these features based on disclosures of automatically processing check image deposits in which the bank must have computer equipment connected to the internet that is equipped with an OCR system, a key authentication system, and a means for transmitting the data to the institution's document processing system. *See* Pet. 26–27 (reproducing Ex. 1010, Fig. 2 (with color added); quoting Ex. 1010, 11:9–15; citing Ex. 1003 ¶ 73; Pet. 17–22). For the purpose of this decision and based on Petitioner's citations to Popadic, Garcia, and Dr.

Doermann’s testimony (Ex. 1003), we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support the conclusion that it would have been obvious to one of ordinary skill in the art to conduct the computer processing steps taught by the combination of Popadic, Garcia, and Randle system using computing equipment comprising a processor in communication with memory. *See* Pet. 28 (citing Ex. 1003 ¶ 74); *KSR*, 550 U.S. at 418. According to Petitioner, a person of ordinary skill in the art “would have been motivated to do so to efficiently and quickly perform image processing and communication over the Internet,” and “would have had a reasonable expectation of success as such configurations were well known and routine to implement.” Pet. 28 (citing Ex. 1003 ¶ 74; Ex. 1012, 3:23–30, 3:58–4:4).

Patent Owner does not address or rebut Petitioner’s showing for these limitations. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that these limitations are satisfied by the disclosures of Popadic and/or the combined teachings of Popadic and Garcia.

[1C] receive an image of a check captured by an image capture device coupled to a remote user device, wherein the image of the check is in a first electronic data format;

Petitioner contends that “Popadic discloses [1C]” based on Popadic’s disclosures of the bank’s computer system receiving a check image in a fax or other format and the images are captured by an image capture device coupled to a remote user device. Pet. 28–29 (quoting Ex. 1008, 4, 9; citing Ex. 1005, 3:65–4:4; 4:32–43, 14:34–37; Ex. 1003 ¶ 75; Ex. 1008, 4, 5).

Patent Owner does not address or rebut Petitioner’s showing for this limitation. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that this limitation is satisfied by the disclosure of Popadic.

[1D] perform optical character recognition in real-time on the image of the check to determine information about the check, including optical character recognition of a Magnetic Ink Character Recognition (MICR) line in the image of the check;

Petitioner contends that “Popadic discloses [1D]” based on Popadic’s disclosure that the bank’s system reads key data off the check images using OCR and the information read using OCR includes the courtesy amount, legal amount, and MICR line. Pet. 29–30 (quoting Ex. 1008, 6; citing Ex. 1003 ¶¶ 76–77; Ex. 1005, 4:35–43, 12:34–13:6, 14:11–12, 14:62–65; Ex. 1008, 9–10; *see* Pet. 30 (citing Ex. 1003 ¶ 78; Ex. 1008, 8, 9, 10; Ex. 1018 ¶ 42; Ex. 1019 ¶ 19; Ex. 1020, 4:56–5:3).

Petitioner further references the ’753 Patent disclosure defining performing OCR “in real-time,” and asserts that Popadic discloses performing OCR in real-time, because Popadic discloses determining whether the amounts identified through OCR and keyed in, written or transmitted deposit ticket amount match and then delivering a delivery receipt to the customer. *See* Pet. 31 (citing Ex. 1001, 9:63–10:1; Ex. 1003 ¶ 79; Ex. 1008 10).

Petitioner also asserts that “[t]o the extent it is disputed that Popadic’s OCR is ‘in real-time,’ it would have been obvious to do so based on Garcia’s disclosure of a real-time, interactive process for remote check deposit.” Pet. 29 (citing Ex. 1003 ¶ 76); *see* Pet. 31 (quoting Ex. 1010, 5:1–8; citing

Ex. 1003 ¶ 80). For the purpose of this decision and based on Petitioner's citations to Popadic, Garcia, and Dr. Doermann's testimony, we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support the conclusion that it would have been obvious to one of ordinary skill in the art "to carry out Popadic's OCR in real time in view of Garcia so that, if there are any issues with the validation of the check amount, the system could immediately communicate with the user to either confirm the correct amount of the check or resubmit the check image if the system cannot optically read it." Pet. 31–32 (citing Pet. 17–22; Ex. 1003 ¶ 81; Ex. 1008, 10; Ex. 1020, 5:64-6:5); *KSR*, 550 U.S. at 418. According to Petitioner, "[s]uch an implementation would have minimized the amount of "operator intervention" required by the bank, leading to faster processing of the check deposit and fewer human resources required by the bank." Pet. 32 (citing Ex. 1003 ¶ 80; Ex. 1008, 10). Petitioner further contends that a person of ordinary skill in the art would have had a reasonable expectation of success and the implementation would have been well within the skill level of a person of ordinary skill in the art. *See id.* (citing Ex. 1003 ¶ 81).

Patent Owner asserts that the passages of Popadic relied upon by Petitioner do not disclose performing OCR on the MICR line in the image of the check. *See* Prelim. Resp. 21 (citing Pet. 29–30; Ex. 1005, 12:34–13:6, 14:11–12, 14:62–65). Patent Owner directs attention to some of the cited disclosures of Popadic, as well as non-cited disclosures of Popadic, and contends that Popadic does not disclose that any MICR line field provided to the bank is obtained by performing OCR on the check image, but instead depicts the MICR line being part of the deposit ticket." *See id.* at 22–23 (quoting Ex. 1005, 3:45–50; 10:10–13, 12:13–15, 12:26–33; 12:34–36,

12:40–45; citing Ex. 1005, 10:10–31; 12:34–13:6, Figs. 3, 8); 24–25 (similar argument). According to Patent Owner, “[t]he only ‘reading off the check’ mentioned in this passage relates to the amount information.” *Id.* at 23 (citing Ex. 1005, 12:40–45). Patent Owner contends the rest of the cited passage describes techniques to provide hints, which, according to Patent Owner, “are described as relating to the ‘deposit ticket’ (not the check) and the ‘amount’ fields (such as ‘courtesy amount read (CAR),’ ‘legal amount read),’ and ‘deposit ticket’) of the check.” *Id.* (citing Ex. 1005, 12:46–13:6). Patent Owner also directs attention to Popadic’s disclosures at column 14, lines 4–9, 11–12, and 17–31 and contends that “Popadic does not state that its system utilizes either or those techniques (i.e., MICR read or OCR read) and indeed makes no mention of MICR reading ‘in the image of the check.’” *Id.* at 23–24 (quoting Ex. 1004, 14:4–9, 14:11–12; Pet. 30; citing Ex. 1005, 14:17–31). Patent Owner also directs attention to Popadic’s disclosure at column 14, line 62–65 and contends that Popadic only mentions comparing CAR and LAR to the customer provided total, and does not mention anything about MICR information. *See id.* at 25 (citing Ex. 1005, 14:62–65).

We do not agree with Patent Owner’s arguments because Patent Owner overlooks Popadic’s disclosures cited by Petitioner, notably, Popadic’s disclosures of reading key data off the check images using OCR, optionally enhancing the reading with hinting algorithms, and that the information about the check read includes the MICR line in the check image. *See* Pet. 29–30 (quoting Ex. 1008, 6, citing Ex. 4:35–43, 12:34–13:6, 14:11–12, 14:62–65; Ex. 1008, 9–10). More specifically, Patent Owner overlooks Popadic’s cited disclosure regarding how much data that must be read from the images depends on what the bank’s image receiving unit is

expecting, with bank receiving units always wanting the front and back images of the check, and that some bank systems may expect the MICR line of the check as data fields read from the images. *See* Ex. 1005, 12:34–37, 12:42–43. We also do not agree with Patent Owner’s characterization of Popadic’s disclosure contrasting traditional remote capture devices and Popadic’s fax imaging approach. For the purpose of institution, we are persuaded that Popadic’s disclosure contrasting traditional remote capture devices which can MICR read rather than OCR read MICR data with Popadic’s fax imaging approach discloses to a person of ordinary skill in the art that when using ubiquitous imaging devices, e.g., fax imaging, scanner, the bank’s system would read the MICR information via OCR. In relation to the OCR hinting algorithms disclosed by Popadic, and addressed by Petitioner, we note that Popadic further discloses OCR hint data may include the routing, account number, check number, and amount of each check to be deposited that is entered by telephone interaction and which can be used to enhance the reading of these numbers off the check image. *See* Ex. 1005, 11:5–12, 12:54–13:15. It is well-known that the payor bank routing number, account number, and check number is included in a check’s MICR line. *See* Ex. 1001, 9:56–58; Ex. 1011 ¶ 18; Ex. 1012, 6:59–63, Fig. 2. In view of the aforementioned disclosures of Popadic, Petitioner presents evidence sufficient to demonstrate that a person of ordinary skill in the art would have understood that the bank, account number, and check number are found within the check’s MICR line and that Popadic’s bank’s system would perform OCR to identify this information from the check image. *See* Pet. 30; Ex. 1005, 11:5–12, 12:54–13:15; Ex. 1003 ¶ 78.

Accordingly, for the purpose of this Decision, Petitioner shows sufficiently that this limitation is satisfied by the disclosures of Popadic.

[1E1] generate a supplemental image of the check in a second electronic data format from the image of the check in the first electronic data format,

[1E2] wherein an image quality of the check in the first electronic data format is a higher image quality than an image quality of the check in the second electronic data format and

[1E3] the second electronic data format is configured for an electronic bank-to-bank image transfer;

Petitioner contends that “Popadic discloses [1E1]” based on Popadic’s disclosure that the bank’s system converts the check images from the format in which they are received to a format required for further processing or for submission to other banks. *See* Pet. 33 (quoting Ex. 1008, 3–4; citing Ex. 1003 ¶ 83; Ex. 1005, 13:17–23; Ex. 1008, 10). According to Petitioner, a person of ordinary skill in the art “would have understood that Popadic discloses such file format conversion because ‘the image format required by Check 21 is the bi-tonal Tag Image File Format (TIFF).” *Id.* (citing Ex. 1001, 13:3–4; Ex. 1003 ¶ 83).

Petitioner further asserts, to the extent it is disputed that Popadic’s check image conversion generates a supplemental check image, it would have been obvious to do so based on Randle’s disclosure of image data reduction. *See* Pet. 33 (citing Ex. 1003 ¶ 82). For the purpose of this decision and based on Petitioner’s citations to Popadic, Garcia, Randle, and Dr. Doermann’s testimony, we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support the conclusion that it would have been obvious to implement Randle’s data reduction to convert check images from a first format (e.g., color (grey scale or full color)) to a less size intensive format (e.g. bi-tonal) for transmission and check processing. *See* Pet. 33–34 (citing Pet. 22–25; Ex. 1011 ¶¶ 42–43; Ex. 1003 ¶ 84); *KSR*, 550 U.S. at 418.

Petitioner contends that “Popadic in combination with Randle renders obvious [1E2] based on Randle’s disclosure of data image reduction.” Pet. 34 (citing Ex. 1003 ¶ 85). Petitioner contends that Popadic’s check conversion suggests converting to bi-tonal because it was known at the time that bi-tonal TIFF was required by Check 21. *See* Pet. 34 (citing Ex. 1001, 13:3–4; Ex. 1003 ¶ 86; Ex. 1016). Petitioner reiterates that it would have been obvious to implement Randle’s data reduction to convert check images from a first format (e.g., color (grey scale or full color)) to a less size intensive format (e.g., bi-tonal) for transmission and check processing. *See id.* (citing Pet. 22–25; Ex. 1011 ¶¶ 42–43; Ex. 1003 ¶ 86). According to Petitioner, a person of ordinary skill in the art “would have understood that a bi-tonal image format is of a lower quality than a color or grey scale image.” *See id.* (citing Ex. 1003 ¶ 86). Petitioner further contends that “Popadic discloses [1E3]” based on Popadic’s disclosure of “converting the check image format from the format in which the image is received ‘to the format required for further processing or for submission to other banks’ and discloses that this submission includes the electronic submission to ‘banks that are ready to receive images.’” Pet. 35 (quoting Ex. 1008, 10, 3–4; citing Ex. 1003 ¶ 88). According to Petitioner, a person of ordinary skill in the art “would have understood that the second electronic data format of the check image is configured for an electronic bank-to-bank image transfer.” *Id.* (citing Ex. 1003 ¶ 88).

Petitioner asserts, “to the extent it is disputed that Popadic’s check image conversion converts the check image to an electronic format for an electronic bank-to-bank transfer, it would have been obvious to do so based on Randle’s disclosure of transmitting the check image in a less size-intensive format to other banks in the check processing chain.” Pet. 35

(citing Ex. 1003 ¶ 87). Petitioner contends that it would have been obvious to implement Randle’s data reduction to convert check images to a less size intensive format for transmission and use in the check processing chain, which includes an electronic bank-to-bank transfer. *See* Pet. 35–36 (citing Pet. 22–25; Ex. 1011 ¶¶ 19, 42–43; Ex. 1003 ¶ 89).

Patent Owner does not address or rebut Petitioner’s showing for this limitation. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that these limitations are satisfied by the combined teachings of Popadic and Randle.

[1F] validate the determined information about the check;

Petitioner contends that “Popadic discloses [1F]” based on Popadic’s disclosure of “validating the determined check amount information by comparing the amount read from the courtesy amount, the amount read from the legal amount, and the amount ‘keyed in, written, or otherwise transmitted’ to determine whether they match.” Pet. 36 (citing Ex. 1003 ¶ 90; Ex. 1008, 10). According to Petitioner, “[i]f they do not, Popadic discloses that the transaction requires ‘operator intervention.’” *Id.* (citing Ex. 1008, 10).

Patent Owner asserts that the disclosures of Popadic upon which the Petition relies “relates to ‘check amount information,’ e.g., comparing a dollar amount read from the ‘courtesy amount’ or ‘legal amount’ fields of the check to another amount provided by the user to ‘determine whether they match.’” Prelim. Resp. 26. According to Patent Owner, the Petition does not “identify any alleged disclosure in Popadic of validating ‘the determined

information,’ i.e., the MICR line information ‘in the image of the check’ that the claim requires the system to ‘determine’ via OCR in element [1D].” *Id.*; *see id.* at 27 (addressing Popadic’s disclosures; citing Ex. 1005, 14:38–15:33).

We do not agree with Patent Owner’s arguments because they rely on the implicit construction that “the determined information about the check” must include information determined via OCR of the MICR line in the check image. As explained above in Section II.B., we do not agree with Patent Owner’s proposed construction. Instead, we find the scope of “the determined information” recited in independent claims 1 and 8 refers to information determined from OCR on the image of the check, which may include, but **does not require**, information determined from OCR of a MICR line.

For the purpose of this Decision, Petitioner shows sufficiently that this limitation, consistent with the construction for “the determined information” explained above set forth in Section II.B., is satisfied by the disclosures of Popadic.

[1G] deposit the check into a customer account based on the determined information from the image of the check and based on the supplemental image of the check; and

[1H] after validating the determined information, transmit a confirmation message indicating that the customer account has been credited in an amount corresponding to the determined information obtained by the optical character recognition performed on the image of the check;

[1I] wherein the image of the check is received over a secure connection and data communicated over the secure connection is at least one of inaccessible or indecipherable by an unauthorized third party.

Petitioner asserts, “Popadic discloses or renders obvious [1G]” based on Popadic’s “disclosure of processing check image deposits and sending a

converted check image for collection to another bank.” Pet. 36 (citing Ex. 1003 ¶ 91); *see* Pet. 36–38 (citing Pet. 32–36; Ex. 1003 ¶¶ 92–93; Ex. 1008, 3–4, 8, 10; Ex. 1005, Figs. 1–2; Ex. 1011 ¶ 19). Petitioner also contends that “Popadic in combination with Garcia renders obvious [1H],” based on Popadic’s disclosure of “validating the OCR’d check amounts” and Garcia’s disclosure of “transmitting a message to the customer confirming that the check has been successfully deposited into the customer’s account.” Pet. 38 (citing Ex. 1003 ¶ 94); *see* Pet. 39 (citing Pet. 17–22, 36; Ex. 1003 ¶ 95; Ex. 1010, 12:16–13:4). Petitioner further asserts, “Popadic in combination with Garcia renders obvious [1I]” based on Popadic’s disclosure of “encrypting and transmitting the check images to the bank via the Internet,” and Garcia’s disclosure of “encrypting and transmitting the check images to the bank via a secure connection (GSM).” Pet. 39–40 (citing Ex. 1003 ¶ 96); *see* Pet. 40 (quoting Ex. 1008, 8; citing Pet. 26–28; Ex. 1003 ¶ 97; Ex. 1010, 5:8–6:21, 11:20–12:3, 12:13–16).

Patent Owner does not address or rebut Petitioner’s showing for this limitation. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that these limitations are satisfied by the combined teachings of Popadic and Garcia.

Summary

For all of the foregoing reasons, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claim 1 would have been obvious over the combination of Popadic, Garcia, and Randle.

5. Independent Claim 8

Independent claim 8 recites limitations similar to the limitations recited in claim 1 and Petitioner relies on its analysis addressing claim 1 to address independent claim 8. *See* Pet. 40–43 (citing Pet. 26–40; Ex. 1003 ¶ 98; Ex. 1008, 4, 9–11). Patent Owner’s arguments addressing independent claim 8 rely on the same arguments as those addressing claim 1. *See* Prelim. Resp. 14–28. Accordingly, for the same reasons as those explained above addressing independent claim 1, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of independent claim 8 would have been obvious over the combination of Popadic, Garcia, and Randle.

E. Patentability Challenge to Claims 2 and 9

1. Overview of Maloney (Ex. 1012)

Maloney relates to a system and method for detecting duplicate checks to “avoid or quickly rectify fraudulent or erroneous transactions.” Ex. 1012, 1:7–8, 2:11–12. The system includes a receiving entity who is “any original recipient or payee” of the check transaction or “a teller at financial institution.” Ex. 1012, 2:47–51. The system captures check identification data, including data from the MICR line, from each check using OCR, determines “a hash value” based on check identification data, and communicates this hash value to a repository “to determine if another transaction has been processed with the same hash value.” *Id.* at 2:4–18, 6:9–18. “If so, it is likely ... that the transaction is a duplicate.” *Id.* at 6:18–19. If not, the transaction is processed “as a probable unique transaction.” *Id.* at 6:19–21. Once the receiving entity has suitably processed the transaction, it communicates the physical check or an

electronic image to the financial institution. *See id.* at 6:23–26. The financial institution again computes a hash value from the check identification data and communicates this hash value to the repository to determine if the repository already includes this hash value (for an identical transaction). *See id.* at 6:35–43. According to Maloney, performing this duplicate check detection twice “help[s] ensure the detection of two duplicate transactions that were processed by two different [receiving entities] 102 at substantially the same time.” *Id.* at 6:43–48.

2. Analysis of Claims 2 and 9

Petitioner asserts that dependent claims 2 and 9 are unpatentable over Popadic, Garcia, Randle, and Maloney. *See Pet.* 44–49. Claim 2 depends from claim 1 and recites “wherein the processor is further configured to: perform an initial duplicate detection procedure based on the determined information about the check before the confirmation message is transmitted over the secure connection; and perform a complete duplicate detection procedure after the confirmation message is transmitted.” Ex. 1001, 15:3–10. Claim 9 depends from independent claim 8 and recites similar limitations as claim 2. *Compare* Ex. 1001, 16:21–26 *with*, Ex. 1001, 15:3–10.

Petitioner contends that Popadic in combination with Garcia and Maloney render obvious the limitations of claim 2, based on Maloney’s disclosure of repeating a duplicate check detection procedure. *See Pet.* 50 (citing Ex. 1003 ¶¶ 111–112), 52 (citing Ex. 1003 ¶ 116). For the purpose of this decision and based on Petitioner’s citations to Popadic, Garcia, Maloney, and Dr. Doermann’s testimony, we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support

the conclusion that “it would have been obvious to carry out the duplicate detection procedure twice, including once initially, early in the check processing,” and a person of ordinary skill in the art “would have been motivated to perform this initial duplicate detection procedure prior to transmitting the confirmation message.” *See* Pet. 50–51 (citing Pet. 38–39, 45–49; Ex. 1003 ¶ 114; Ex. 1010, 12:21–13:4); *see* Pet. 50 (citing Pet. 29–32; Ex. 1008, 8; Ex. 1003 ¶ 113; Ex. 1012, 6:56–66), 51 (citing Pet. 16–25, 38–40, 45–49); 52 (citing Ex. 1003 ¶ 117; Pet. 45–51). Petitioner relies on its analysis addressing claim 2 to address independent claim 9. *See* Pet. 52–53 (citing Pet. 50–52; Ex. 1003 ¶¶ 118–120).

Patent Owner does not address or rebut Petitioner’s showing for claims 2 and 9. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that the limitations of claims 2 and 9 are satisfied by the combined teachings of Popadic, Garcia, Randle, and Maloney.

Accordingly, for all of the foregoing reasons including those addressing claims 1 and 8, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claims 2 and 9 would have been obvious over the combination of Popadic, Garcia, Randle, and Maloney.

F. Patentability Challenge to Claims 3 through 7

1. Overview of Viera (Ex. 1013)

Viera discloses financial kiosks coupled to a server via the Internet. *See* Ex. 1013, 2:53–55. A user makes a check deposit at the kiosk, and Viera’s system “gather[s] information about the deposit in order to manage

risk and control the transaction.” *Id.* at 3:33–37. The kiosk scans the front and back of the check, and then an OCR program reads information from the check images, including the MICR line, check amount, and payee name. *See id.* at 7:4–18. Based on that information and various risk policies, the kiosk determines a deposit type. *See id.* at 7:18–22. “[R]isk policies are used to control deposit transactions that occur on a kiosk.” *Id.* at 3:64–65. Whenever the system detects the presence of a risk factor, “the system may take further steps based on the particular risk factor that is triggered.” *Id.* at 3:37–42. One such risk factor involves the detection of a “Redeposited Check/IRD” and the system rejects the transaction in this situation. *Id.* at 4:35.

2. Analysis of Claims 3–7 and 10–14

Petitioner asserts that dependent claims 3–7 and 10–14 are unpatentable over Popadic, Garcia, Randle, Maloney, and Viera. *See* Pet. 53–67. Claim 3 depends from dependent claim 2, and recites “the determined information includes MICR line information; and in performing the initial duplicate detection procedure, the processor is further configured to analyze the MICR line information to determine whether the MICR line of the check comprises a money amount.” Ex. 1001, 15:11–17. Claim 10 depends from dependent claim 9 and recites limitations similar to claim 3. *Compare* Ex. 1001, 16:27–33 *with*, Ex. 1001, 15:11–17. Claim 4 depends from dependent claim 3, and recites “the processor is further configured to: in response to a determination that the MICR line comprises a money amount, provisionally detect a duplicate deposit of the check.” Ex. 1001, 15:18–23. Claim 11 depends from dependent claim 10 and recites limitations similar to claim 4. *Compare* Ex. 1001, 16:34–38 *with*, Ex. 1001, 15:18–23. Claim 5 depends from dependent claim 3, and recites “in

performing the initial duplicate detection procedure, the processor is further configured to analyze the MICR line information to determine whether a predetermined character is included in a predetermined position of the MICR line of the check.” Ex. 1001, 15:24–31. Claim 12 depends from dependent claim 9 and recites limitations similar to claim 5. *Compare* Ex. 1001, 16:39–46 *with*, Ex. 1001, 15:24–31. Claim 6 depends from dependent claim 5, and recites “the processor is further configured to: in response to a determination that the predetermined character is included in the predetermined position of the MICR line, provisionally detect a duplicate deposit of the check.” Ex. 1001, 15:32–38. Claim 13 depends from dependent claim 12 and recites limitations similar to claim 6. *Compare* Ex. 1001, 16:47–52 *with*, Ex. 1001, 15:32–38. Claim 7 depends from dependent claim 6, and recites “in performing the initial duplicate detection procedure, the processor is further configured to compare the MICR information with respective MICR information of each check deposited into the customer account within a predetermined time period.” Ex. 1001, 15:39–44. Claim 14 depends from dependent claim 13 and recites limitations similar to claim 7. *Compare* Ex. 1001, 16:53–58 *with*, Ex. 1001, 15:39–44

Petitioner asserts that the subject matter of dependent claims 3, 4, 10, and 11 would have been obvious to a person of ordinary skill in the art based on Popadic’s disclosure of reading the MICR line in the check image using OCR, Petitioner’s contention that Popadic and Maloney render obvious an initial duplicate detection procedure, and Viera’s disclosure of detecting a duplicate check by analyzing the MICR line information to determine whether the check amount is encoded. *See* Pet. 57–59 (citing Pet. 26–28, 29–32, 50–51; Ex. 1003 ¶¶ 133–134, 136–138; Ex. 1005, 4:35–43,

12:34–45; Ex. 1008, 8, 10; Ex. 1013, 3:64–4:2, 4:35, 7:9–22)), 65 (citing Pet. 57–59; Ex. 1003 ¶¶ 153–157).

For the purpose of this decision and based on Petitioner’s citations to Popadic, Garcia, Maloney, Viera, and Dr. Doermann’s testimony, we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support the conclusion that “it would have been obvious to implement Viera’s duplicate detection procedure as an initial duplicate detection procedure in the combined Popadic-Garcia-Randle-Maloney-Viera system.” Pet. 58 (citing Pet. 38–39, 45–49; Ex. 1003 ¶ 136); *see* Pet. 59 (citing Pet. 45–49, 58; Ex. 1003 ¶ 139). According to Petitioner, a person of ordinary skill in the art “would have been motivated to implement Viera’s technique for detecting a redeposited check in addition to, or in place of, the initial duplicate detection procedure in the combined Popadic-Garcia-Randle-Maloney system because Viera’s technique is much more computationally efficient than Popadic’s redeposit check procedure.” Pet. 55–56 (citing Ex. 1003 ¶ 129). Petitioner asserts that, “[r]ather than having to compare multiple pieces of information to a potentially large repository of check information, the system need only determine whether the check amount appears in the MICR line.” Pet. 56.

As to the subject matter of dependent claims 5, 6, 12, and 13, Petitioner further asserts that a person of ordinary skill in the art “would have found it obvious to determine that the check amount is encoded in the MICR line by determining whether the MICR character corresponding to the start or end of a check amount field is included in the corresponding position of the check’s MICR line.” Pet. 60 (citing Ex. 1003 ¶ 142), 62 (citing Ex. 1003 ¶¶ 145–146), 66 (citing Ex. 1003 ¶¶ 158–162). According to Petitioner, a person of ordinary skill in the art “would have understood that,

when a bank's system analyzes a check's MICR line, different standard MICR symbols are placed in predetermined positions to signify the type of MICR field encoded." Pet. 60–61 (quoting Ex. 1021, 19; citing Ex. 1003 ¶ 143; Ex. 1023 ¶ 5, Fig. 1). Petitioner contends that a person of ordinary skill in the art

would have understood that each amount symbol was located at a predetermined position because banking standards established that "[t]he amount field boundaries shall be located 0.250 and 1.875 inches from the leading edge, character spaces 1 through 12," where "[t]he right edge of the opening (rightmost) symbol" is "located 0.3125 inch $\pm$ 0.0625 inch from the leading edge of the document."

Pet. 61 (quoting Ex. 1021, 19).

Regarding the subject matter of claims 7 and 14, Petitioner asserts that Popadic in combination with Maloney and Viera renders the subject matter of claims 7 and 14 obvious. *See* Pet. 62–65 (quoting Ex. 1008, 8; citing Pet. 26–28, 54–57; Ex. 1003 ¶¶ 148–152; Ex. 1012, 6:48–51, 6:59–7:3, Fig. 2; Ex. 1013, 3:64–4:2), 66 (citing ¶¶ 163–164).

Patent Owner does not address or rebut Petitioner's showing for claims 3–7 and 10–14. *See* Prelim. Resp. 20–28. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. For the purpose of this Decision, Petitioner shows sufficiently that the limitations of claims 3–7 and 10–14 are satisfied by the combined teachings of Popadic, Garcia, Randle, Maloney, and Viera.

Accordingly, for all of the foregoing reasons including those addressing claims 1, 2, 8, and 9, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claims 3–7 and 10–14 would have been obvious over the combination of Popadic, Garcia, Randle, Maloney, and Viera.

III. CONCLUSION

For the foregoing reasons, we determine there is a reasonable likelihood that Petitioner would prevail in showing at least one of the challenged claims of the '753 Patent is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–14 of the '753 Patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '753 Patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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FOR PETITIONER:

Lionel Lavenue
Kara Specht
Robert High
Cory Bell
Xirui Zhang
Kai Rajan
Umber Aggarwal
Christina Ji-Hye Yang
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP
lionel.lavenue@finnegan.com
kara.specht@finnegan.com
robert.high@finnegan.com
cory.bell@finnegan.com
xirui.zhang@finnegan.com
kai.rajan@finnegan.com
umber.aggarwal@finnegan.com
christina.yang@finnegan.com

Sharonmoyee Goswami
CRAVATH, SWAINE & MOORE LLP
sgoswami@cravath.com

FOR PATENT OWNER:

Anthony Rowles
Michael Fleming
IRELL & MANELL LLP
trowles@irell.com
m Fleming@irell.com