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Paper 14
Date: August 11, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

CARDWARE INC.,
Patent Owner.

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PGR2023-00012
Patent 11,328,286 B2

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Before ELIZABETH M. ROESEL, SHARON FENICK, and IFTIKHAR AHMED, *Administrative Patent Judges.*

FENICK, *Administrative Patent Judge*.

DECISION
Granting Institution of Post-Grant Review
*35 U.S.C. § 324*

# I. INTRODUCTION

## *A. Background and Summary*

Samsung Electronics Co., Ltd. ("Petitioner") filed a Petition (Paper 3, "Pet.") requesting post-grant review of claims 1–27 ("the challenged claims") of U.S. Patent No. 11,328,286 B2 (Ex. 1001, "the '286 patent"). CardWare Inc. ("Patent Owner") filed a Preliminary Response (Paper 9, "Prelim. Resp."). With the Board's authorization, Petitioner filed a Preliminary Reply (Paper 10) and Patent Owner filed a Preliminary Sur-reply (Paper 11). After further authorization, Petitioner filed a corrected Preliminary Reply (Paper 12, "Prelim. Reply") and Patent Owner filed a corresponding second Preliminary Sur-reply (Paper 13, "Prelim. Sur-reply").

A post-grant review may be instituted only if "the information presented in the petition filed under section 321, if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable." 35 U.S.C. § 324(a). For the reasons below, Petitioner has demonstrated that it is more likely than not that at least one of the challenged claims is unpatentable. Accordingly, we institute a post-grant review of the challenged claims of the '286 patent on all grounds raised in the Petition.

## *B. Real Parties in Interest*

Petitioner identifies itself, Samsung Electronics Co., Ltd., as well as Samsung Electronics America, Inc. as real parties-in-interest. Pet. 91.

Patent Owner identifies itself, CardWare Inc., as a real party-in-interest. Paper 4 (Patent Owner's Mandatory Notices), 1.

## *C. Related Matters*

The parties each identify as a related matter the district court case styled as *CardWare Inc. v. Samsung Electronics Co., Ltd. and Samsung*

*Electronics America, Inc.*, Case No. 2:22-cv-00141 (E.D. Tex.). Pet. 91; Paper 4, 1.

The parties also indicate that the ’286 is being challenged in another petition for post-grant review (PGR2023-00013). Pet. 91; Paper 4, 1.

*D. The ’286 Patent*

The ’286 patent is titled “Multi-Function Electronic Payment Card and Device System” and describes emulating a standard credit card with a device capable of generating a programmed magnetic field of alternating polarity when used in an electronic credit card reader. Ex. 1001, codes (54), (57), 2:22–28. The ’286 patent observes that presently available credit cards, including cards with magnetic strips, cards with smart integrated circuit chips, and radio frequency identification (RFID) cards, have certain security limitations. *Id.* at 1:39–2:8. In addition, according to the ’286 patent, chip cards and RFID cards “are not in wide use at present because they are incompatible with existing credit card infrastructure.” *Id.* at 2:8–11. The ’286 patent thus describes a device for “credit, debit and cash transactions, including cryptocurrency and card-to-card transactions,” particularly with a limited-duration credit card number, that generates “a magnetic field of alternating polarity responsive to the body being detected as adjacent to a standard magnetic card reader.” *Id.* at 2:28–51.

Figure 2B, reproduced below, illustrates “an exemplary embodiment of a smart multi-function electronic device.” *Id.* at 5:62–63.

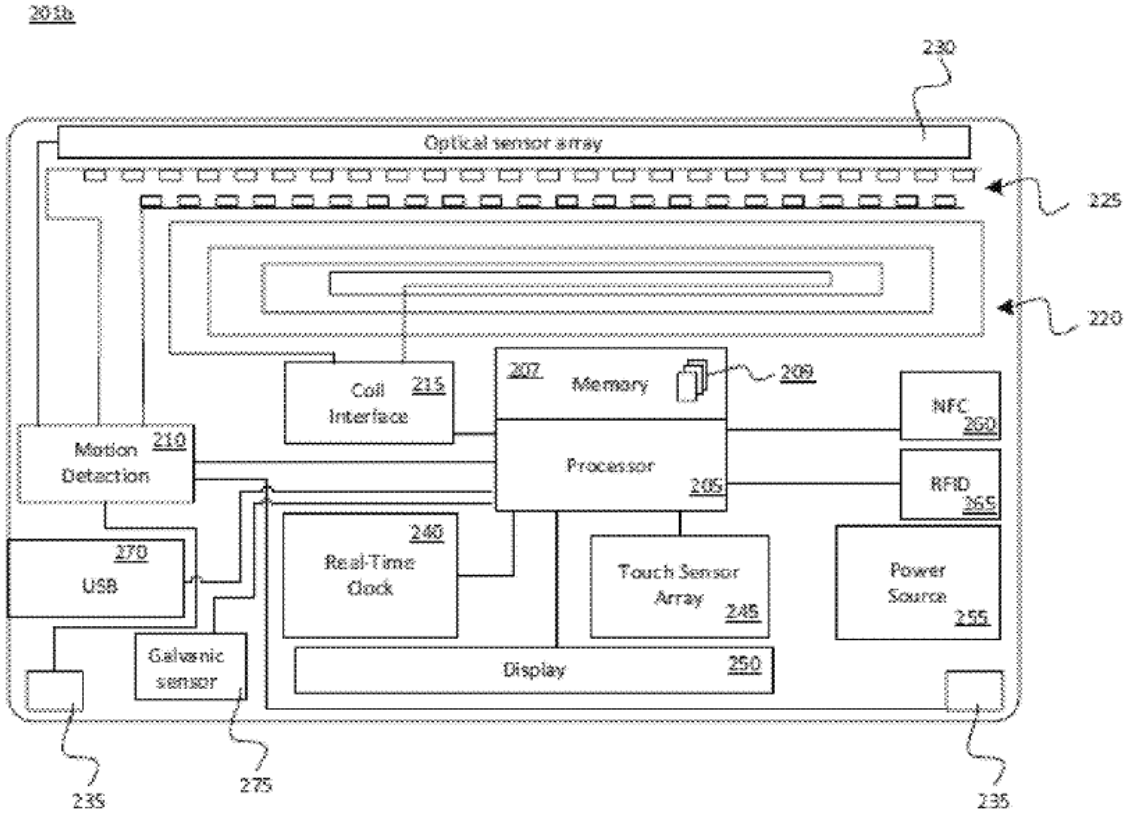


FIG. 2B

Figure 2B shows multi-function electronic device 201*b* comprising processor 205 and memory unit 207 that stores accounts 209, "which may be credit card accounts, banking accounts, merchant accounts, online accounts, cryptocurrency accounts, and combinations thereof." *Id.* at 6:51–59. Motion detector module 210 is coupled to processor unit 205 and to motion detection units, including rate detection assembly 225, optical sensor array 230, and accelerometers 235. *Id.* at 6:59–62. "Each of the motion detection units detects the motion of the credit card . . . in a distinct manner," and a detected movement signal received by motion detection module 210 and sent to processor unit 205 can be "generated by any one of the set of motion detection units, or any combination of motion detection units of the set." *Id.* at 8:2–9:3. Planar coil 220, controlled by processor unit 205 via coil

interface 215, generates a magnetic field that changes polarity to encode the user data at a rate depending "on the rate of relative movement detected by the rate detector." *Id.* at 6:64–7:1.

Device 201*b* also comprises touch-sensor array 245 and display 250, both of which are coupled to processor unit 205. *Id.* at 7:1–4. "A user input may be made via the touch sensor array 245, which may comprise a touch screen panel, a keypad, or a combination thereof." *Id.* at 7:4–6. And "display 250 is able to display an alphanumeric sequence, as well as graphical icons (such as a logo for a bank, or other images)." *Id.* at 7:7–9.

Figure 2C, reproduced below, illustrates "a process of selecting an account from a plurality of stored accounts in order to perform a transaction with the selected account." *Id.* at 7:38–40.

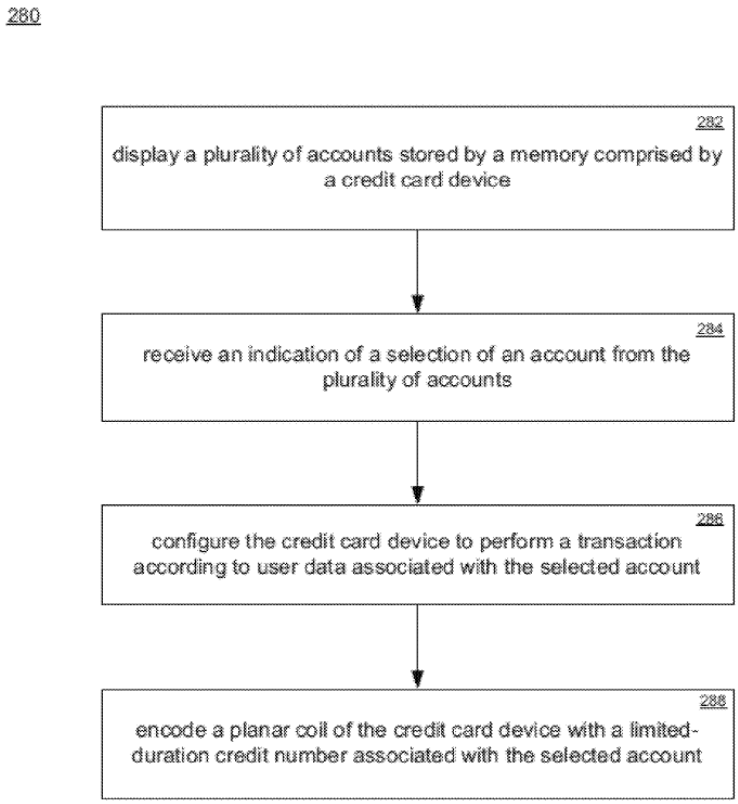


FIG. 2C

As shown in Figure 2C, process 280 begins at step 282 with the display, on display 250 of a multi-function electronic device, of accounts stored in memory unit 207. *Id.* at 7:41–45; *see also id.*, Fig. 2B. At step 284, a user selects an account by using touch sensor array 245, and the selected account may be indicated on display 250. *Id.* at 7:45–49; *see also id.*, Fig. 2B. At step 286, the multi-function electronic device is then "configured according to account information associated with the selected account, which may include an account number, an expiration date, and other user information associated with the account (e.g. a username, PIN, password, email address, etc.)." *Id.* at 7:49–54. Planar coil 220 is then, at step 288, "encoded with a limited-duration credit card number that is associated with the selected account." *Id.* at 7:54–57.

### *E. Illustrative Claim*

Of the challenged claims, claims 1, 15, and 20 are independent. Claim 1, reproduced below with bracketed identifiers added as used by the Petitioner (*see* Pet. v), is illustrative.

1. [1.0] A payment system comprising:

[1.1] a payment card device free of any fixed payment numbers visible thereon and wherein said payment card device is operable for use in payment card reader equipment; and

[1.2] a computing device comprising:

a processor;

[1.3] a memory;

[1.4] a wireless interface;

[1.5] a touch-screen user interface operable to provide a visual user-interface for user payment interactions; and

[1.6] a user-input device coupled to the processor, and

[1.7a] wherein the processor is operable to store a transaction sequence count, [1.7b] a device account number and [1.7c] secrets limited to the computing device, and

[1.8] wherein the computing device is operable to receive, store and transmit a card payment information not visible on the payment card device, and

[1.9] wherein the processor is operable to generate at least a portion of a limited-user card payment information for use by an authenticated card user, and

[1.10] wherein the computing device is operable to convey said limited-use card payment information via an interface of the computing device, and

[1.11] wherein a card issuer authority is operable to reject as invalid a transaction attempt outside of its limitations of use,

[1.12] wherein a card issuer authority is operable to validate a card payment information as authentic when received from at least one of: an authenticated users payment card; and an authenticated users computing device, and

[1.13] wherein the card issuer authority is operable to permit the authentic transactions to complete.

Ex. 1001, 19:50–20:15.

*F. Asserted Grounds*

Petitioner raises the following grounds of unpatentability with respect to the challenged claims:

| Claims Challenged | 35 U.S.C. §[1] | References |
|---|---|---|
| 1, 2, 7–10, 12–16, 18 | 103 | Smith[2], Kobylkin[3], Gomez[4] |
| 3 | 103 | Smith, Kobylkin, Gomez, Saarisalo[5] |
| 4 | 103 | Smith, Kobylkin, Gomez, Saarisalo, Slonecker[6] |
| 5, 11, 17 | 103 | Smith, Kobylkin, Gomez, Mestre[7] |
| 6 | 103 | Smith, Kobylkin, Gomez, Sahota[8] |
| 19 | 103 | Smith, Kobylkin, Gomez, Moosavi[9] |
| 20–27 | 103 | Smith, Kobylkin, Gomez, Mullen[10] |

Pet. 7.

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because we preliminarily find that the '286 patent includes at least one claim with an effective filing date in the priority application, filed March 15, 2013, we use the AIA versions , we refer to the AIA version of § 103.
[2] Smith et al., US 2013/0232083 A1 (Ex. 1004).
[3] Kobylkin et al., US 2013/0166441 A1 (Ex. 1005).
[4] Gomez, Sr. et al., US 9,600,808 B1 (Ex. 1017).
[5] Saarisalo, US 2009/0291634 A1 (Ex. 1011).
[6] Slonecker, Jr., US 2007/0045403 A1 (Ex. 1013).
[7] Mestre et al., US 2011/0112918 A1 (Ex. 1010).
[8] Sahota et al., US 2005/0043997 A1 (Ex. 1006).
[9] Moosavi, WO 2010/037218 A1 (Ex. 1015).
[10] Mullen et al., WO 2012/154915 A1 (Ex. 1007).

## II. POST-GRANT REVIEW ELIGIBILITY

As a threshold issue, we must determine whether the '286 patent is eligible for post-grant review. The post-grant review provisions of the AIA apply to a patent that contains a claim with an effective filing date on or after March 16, 2013. *See* AIA, Pub. L. No. 112-29, 125 Stat. 284 (2011), §§ 3(n)(1), 6(f)(2)(A). The statute defines the "effective filing date" as:

> (A) if subparagraph (B) does not apply, the actual filing date of the patent or the application for the patent containing a claim to the invention; or
>
> (B) the filing date of the earliest application for which the patent is entitled, as to such invention, to a right of priority under section 119, 365(a), 365(b), 386(a), or 386(b) or to the benefit of an earlier filing date under section 120, 121, 365(c), or 386(c).

35 U.S.C. § 100(i)(1).

For a claim in a later-filed application to be entitled to the filing date of an earlier application, the earlier application must provide written description support for the claimed subject matter. *Anascape, Ltd. v. Nintendo of Am. Inc.*, 601 F.3d 1333, 1337 (Fed. Cir. 2010). The written description requirement "guards against the inventor's overreaching by insisting that he [or she] recount his [or her] invention in such detail that his [or her] future claims can be determined to be encompassed within his [or her] original creation." *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991). The test for determining compliance with the written description requirement under § 112(a) is whether the original disclosure of the earlier-filed application reasonably would have conveyed to one with ordinary skill in the art that the inventor had possession of the claimed subject matter at the time of the earlier-filed application. *Ariad Pharm., Inc. v. Eli Lilly& Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). It is well settled that "[e]ntitlement to a filing date does not extend to subject matter

which is not disclosed but would be obvious over what is expressly disclosed." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1571−72 (Fed. Cir. 1997). "It is not sufficient for purposes of the written description requirement of § 112 that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose." *Id.*

The '286 patent claims priority to a provisional application filed on March 15, 2013, U.S. Provisional App. No. 61/794,891 (Ex. 1012, "the '891 provisional"). Ex. 1001, code (60), 1:6–27. Petitioner argues that claims 3, 5, 6, 12, 15, and 20[11] of the '286 patent lack written description and enabling support in the '891 provisional, and that therefore the '286 patent is eligible for post-grant review. Pet. 1–6. Patent Owner argues that Petitioner has not shown that any claim is not entitled to claim priority to the '891 provisional. Prelim. Resp. 14–26. We address claim 5 in detail. Based on the present record and for the purpose of institution, we determine that there is insufficient support for claim 5 in the '891 provisional, and the '286 patent is eligible for post-grant review.

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

Petitioner contends that:

> A person of ordinary skill in the art . . . would have had (1) a bachelor's degree in computer science, computer engineering, electrical engineering, or a related field, and (2) one to two years of experience working with payment processing and/or digital authentication systems, including familiarity with short-range wireless technologies.

[11] Claim 20 is listed as unsupported in a table listing assertedly unsupported claims, but argument is only presented with respect to the other claims in the table. Pet. 2–6.

Pet. 10 (citing Ex. 1003 ¶¶ 49–54). Patent Owner does not dispute Petitioner's proposed level of ordinary skill in the art. *See* Prelim. Resp. 13.

For purposes of this Decision, we apply Petitioner's definition of the level of ordinary skill in the art, which is consistent with the level of skill reflected in the Specification and in the asserted prior art references. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

*B. Claim 5*

Claim 5 depends from claim 1, adding two additional limitations, one of which recites that "the information presented on an interface of said card device, are limited to an in-store merchant card reader facility use only." Ex. 1001, 20:39–41.

Petitioner argues that "the provisional application does not describe limiting the field of use of the payment card device to in-store card reader facility use only, to the exclusion of online transactions." Pet. 4 (citing Ex. 1003 (Declaration of Dr. Michael I. Shamos) ¶ 35). Petitioner argues that the provisional application states explicitly that "the credit card of the present invention could also be used to make online purchases." *Id.* (citing Ex. 1012 ¶ 17). Patent Owner contends that the '891 provisional's disclosure is of a card that only generates usable payment information upon use at an in-store merchant, and that such a card therefore "lacks payment information, such that it cannot be used in an online store." Prelim. Resp. 17–18 (citing Ex. 1012, page 19[12] (figure)), ¶ 14; Ex. 2007 (Declaration of Dr. William C. Easttom II) ¶ 36)). Patent Owner argues, with respect to the '891 provisional's disclosure relating to online transactions, that this

[12] Exhibit 1012 contains page numbers added by Petitioner; when not referring to paragraph numbers, we use these added page numbers to refer to portions of the '891 provisional.

disclosure describes the card connecting to a personal computer "to ***uniquely*** generate" payment information for online purchases. *Id.* at 18 (quoting Ex. 1012 ¶ 17). Patent Owner argues that this means that "the information for online purchases is unique from that used for in-store transactions." *Id.*

On this record, and for the purposes of institution, we agree that Petitioner has sufficiently shown that the information presented on the interface of the card device is not described in the '891 provisional as being limited to use in an in-store merchant card reader facility. The '891 provisional describes the card "connect[ing] to a personal computer" for use in generating payment information for online purchases. Ex. 1012 ¶ 17. While Patent Owner argues that the description in the '891 provisional of "uniquely generat[ing] a credit card number" means a use "unique from that used for in-store transactions," this description echoes the general description of the use of the card to provide "a unique credit card number . . . for each transaction." *Compare* Ex. 1012 ¶ 14, *with id.* ¶ 17.

Dr. Easttom's testimony that "[g]iven that the payment card disclosed in the provisional does not have visible account information, there is no way for a user to simply use the information that might be presented on an interface of the card (such as a partial number) to perform an online transaction," does not appear to take into account the description in the provisional that the card is connected to the personal computer via RFID or near field technology to generate the credit card number, and thus that information would not need to be visually presented to a user in order to be used. Ex. 2007 ¶¶ 36–39; Ex. 1012 ¶ 17. The description of this connection is followed by a description that the number "*could* also" be displayed on a front display of the card. Ex. 1012 ¶ 17 (emphasis added). Our determination is that this describes the generated number *could* be displayed

for the user, or alternatively (if not displayed) could be used without being displayed on the front display of the card. This is confirmed in the immediately following sentence, describing an embodiment in which the payment card is "equipped with a means for communicating with the USB port on the computer in connection with making the online purchases." *Id.* "A connector for connection to standard computing devices" is described in the '891 provisional as a "USB *interface*." *Id.* at claim 8 (p. 17).

Dr. Easttom concludes that, if there is no visible account information on the payment card, "there is no way for a user to simply use the information that might be presented on an interface of the card . . . to perform an online transaction." Ex. 2007 ¶ 36. This conclusion appears to rely on an assumption that claim 5's "an interface of said card device" must be a display of the card device, such as the thin film liquid crystal display described in the '891 provisional. Ex. 2007 ¶ 36; Ex. 1012 ¶ 16 (describing display), p. 19 (figure). But, as discussed, the '891 provisional describes a card with a USB interface used in making online purchases.

On this record, and for the purposes of institution, Petitioner has shown sufficiently that the '891 provisional does not support a payment card device presenting information on an interface of said card device that is limited to in-store merchant card reader facility use, as recited in claim 5, and the '286 patent is eligible for post-grant review.

## III. DISCRETION UNDER 35 U.S.C. § 324(a)

Patent Owner argues that we should exercise discretion to deny institution under 35 U.S.C. § 324(a) because the factors identified in *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"), weigh in favor of denying institution. Prelim. Resp. 43–51; Prelim. Sur-reply 4–6. Petitioner argues we should not

discretionarily deny institution under *Fintiv*. Pet. 88–90; Prelim. Reply. 4–6. Additionally, Petitioner, having filed two petitions for post grant review (in this proceeding and PGR2023-00013), submitted a Ranking of Petitions. Paper 2. As Petitioner ranked this Petition first (Paper 2, 1) we address our discretion to deny on the basis of multiple petitions in PGR2023-00013.

The precedential decision in *Fintiv* identifies a non-exclusive list of factors parties may consider addressing where there is a related, parallel district court action to determine whether such action provides any basis for discretionary denial. *Fintiv*, 5–16. Those factors include:

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

*Id.* at 5–6.

In evaluating the 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. The Director has issued additional guidance on the application of *Fintiv*. *See* Katherine K. Vidal, *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court*

*Litigation* (June 21, 2022)[13] ("*Fintiv* Memo"). Additionally, we are guided by the precedential decisions of the Director in *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49–50 (Oct. 4, 2022) (precedential) and *CommScope Techs. LLC v. Dali Wireless, Inc*, IPR2022-01242, Paper 23 (Feb. 27, 2023) (precedential) ("*CommScope*").

We are instructed to consider compelling merits under *Fintiv* factor six only after a determination that the first five *Fintiv* factors favor discretionary denial. *CommScope*, 4–5. Thus, we begin by considering the first five *Fintiv* factors.[14]

*A. Fintiv Factors*

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

"A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts." *Fintiv*, 6. *Fintiv* 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. *Id.* at 6–8.

Patent Owner notes that a stay was requested after the filing of the Petition and not granted in the district court litigation, and asserts that this

[13] Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

[14] While *Fintiv* factor six encompasses considerations other than the compelling merits, neither party has argued such considerations exist in this case.

factor should be viewed as neutral. Prelim. Resp. 45; Prelim. Sur-reply 5; Ex. 1107.[15]

Petitioner notes that the dismissal of the stay request was without prejudice, and that it maintains the right to move for a stay if we institute. Prelim. Reply 4; Ex. 1107. Petitioner argues that the factor should be considered "at worst" neutral, that is (as we understand it), either to militate against discretionary denial or to be neutral. *Id.* at 5.

The court in the district court litigation noted in its denial of the stay request that it was following "the universal practice" in the district, to deny a stay based on post-grant review requests where institution decisions have not yet been issued, and provided no additional reasoning or indication of future action with respect to any potential renewal of the stay request. Ex. 1107. Because, "[i]n the absence of specific evidence, we will not attempt to predict" whether a district court would stay "based on a variety of circumstances and facts beyond our control and to which the Board is not privy," we find this factor to be neutral. *See Sand Revolution II, LLC v. Cont'l Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) ("*Sand Revolution*").

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

The proximity factor in *Fintiv* asks us to evaluate our discretion in light of a trial date that has been set in a parallel litigation. *See Fintiv*, 3, 5 ("*NHK* applies to the situation where the district court has set a trial date to occur earlier than the Board's deadline to issue a final written decision in an

[15] Patent Owner cites Exhibit 2003. Exhibits 1107 and 2003 appear to be the same order, but Exhibit 1107 is signed by the magistrate judge.

instituted proceeding."; "When the patent owner raises an argument for discretionary denial under *NHK* due to an earlier trial date, the Board's decisions have balanced the following factors . . . .") (citing *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential)("*NHK*")). As noted above in the discussion of the first factor, *Fintiv* cites concern regarding "inefficiency and duplication of efforts." *Id.* at 6. In its analysis of the proximity factor, *Fintiv* echoes that concern in its guidance that "[i]f the court's trial date is at or around the same time as the projected statutory deadline or even significantly after the projected statutory deadline, the decision whether to institute will likely implicate other factors discussed herein, such as the resources that have been invested in the parallel proceeding." *Id.* at 9. Similarly, in *NHK*, the Board expressed concern that a trial before the deadline for a final written decision addressing the same prior art and arguments would have undermined the Board's objectives of providing an effective and efficient alternative to district court litigation. *See NHK*, 20 (citing *General Plastic Indus. Co., Ltd. v. Cannon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017 (precedential))).

We are instructed that

> when analyzing the proximity of the court's trial date under factor two of *Fintiv*, when other relevant factors weigh against exercising discretion to deny institution or are neutral, the proximity to trial should not alone outweigh all of those other factors. Parties may present evidence regarding the most recent statistics on median time-to-trial for civil actions in the district court in which the parallel litigation resides for the PTAB's consideration. Where the parties rely on time-to-trial statistics, the PTAB will also consider additional supporting factors such as the number of cases before the judge in the parallel litigation and the speed and availability of other case dispositions.

*Fintiv* Memo, 8–9 (internal citations and footnote deleted).

Based on median time-to-trial data for the Eastern District of Texas, Petitioner asserts that "trial would be expected to occur in May, 2024" but that "delays are possible" and indicated by the median time to trial statistics. Pet. 88–89 (citing Ex. 1103, 35; Ex. 1104). According to Petitioner, a final written decision ("FWD") in this proceeding is anticipated in July of 2024. *Id.* at 88. Nevertheless, Petitioner argues that "[t]he Board should not deny institution due to the close proximity of the FWD and the predicted trial date in E.D. Tex." *Id.* at 88–89. In its Preliminary Reply, Petitioner noted that the median time to trial decreased to 19 months. Prelim. Reply 4, 5 (citing Ex. 1109, 35).

Patent Owner contends that as the docket control order sets jury selection for February 5, 2024, the district court trial date precedes the anticipated final written decision deadline by six months. Prelim. Resp. 46 (citing Ex. 2001). Patent Owner additionally argues that, if the Board relies on median time-to-trial, then we should use the more recent time-to-trial data for the district, which would indicate an even earlier trial date than that scheduled in the docket control order, or the specific judge's median time-to-trial, which is similar. *Id.* at 47 (citing Ex. 2004, 35; Ex. 2002, 1); *see* Prelim. Sur-reply 4 at n.2.

Because the trial in the district court litigation, under any of the parties' proposed approaches, appears likely to begin several months before our deadline to reach a decision, this factor weighs in favor of discretionary denial.

*3. Factor 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*, 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 bulk of investment in the district court litigation has yet to occur, and that no part of claim construction or document production had occurred at the time of the filing of the Petition. Pet. 89. Petitioner further argues that its diligence in filing the Petition four months after the service of preliminary infringement contentions "heavily favors institution." Prelim. Reply 6.

Patent Owner argues that by the time of our decision, the claim construction process will be complete and the document production process substantially complete. Prelim. Resp. 47–48 (citing Ex. 2001, 3–4).

The docket control order shows that the claim construction hearing was scheduled to take place on August 1, 2023. Ex. 2001, 3. *Fintiv* directs us to consider whether "the petitioner filed the petition expeditiously." *Fintiv*, 11. Although we are mindful of the investment of the parties to date, we find that, at this time, that no substantive orders related to the challenged patent have been issued by the district court. Additionally, on the record before us the filing of the Petition was expeditious. We determine this factor weighs slightly against exercising discretion to deny institution.

*4. Factor 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*, 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. A stipulation as in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A), if one is entered, would be highly relevant. "Consistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB." *Fintiv* Memo 3 (footnote omitted).

Petitioner offers, in the Petition, a stipulation that, if IPR is instituted, "it will not pursue in the Related Litigation any invalidity grounds against the Challenged Claims of the '286 patent that are the same as those raised in this Petition." Pet. 89–90. It later offers an additional stipulation that "if this PGR is instituted, Petitioner will not pursue an invalidity defense in the E.D. Texas litigation with respect to the claims of the '286 Patent in the instituted PGR based on (i) any of the same grounds in the instituted PGR or (ii) any prior art reference that forms the basis of any ground in the instituted PGR." Prelim. Reply 5; Ex. 1110. Petitioner argues that this stipulation "leaves only meaningfully different prior art for use in E.D. Tex." Prelim. Reply 6. Petitioner additionally notes that Patent Owner dropped

claims 1–19 from the related litigation and that this is the only forum where the validity of those claims is to be assessed. *Id.* at 5 (citing Ex. 1112).

Patent Owner argues that, in the new stipulation, Petitioner only restricts itself from pursuing "in district court the same grounds or the specific references in those grounds," but "leaves Petitioner free to pursue the very same arguments in district court under the guise of technically different references or combinations." Prelim. Resp. 49 (emphases omitted). Patent Owner argues that, because Petitioner has not offered a *Sotera* stipulation and the same or substantially the same prior art or arguments may be considered, factor 4 favors denial. *Id.* at 50–51. Patent Owner additionally argues that Petitioner's stipulation is further ineffective as it does not affect grounds brought under 35 U.S.C. §§ 101 and 112 in PGR2023-00013. *Id.* at 50. And Patent Owner contends that the reduction in the number of claims in the district court litigation counsels against institution or has no impact because "the Board will be considering claims that are not at issue in district court" and because, in the Petition, the analysis with respect to the claims at issue in the district court is related to that with respect to the claims no longer at issue in the district court. Prelim. Sur-reply 5.

While not a *Sotera* stipulation, Petitioner's stipulation appears to be similar to that in *Sand Revolution*. *Sand Revolution*, 11–12 (finding that a stipulation not to pursue the same grounds in the parallel litigation "mitigates to some degree the concerns of duplicative efforts"). We recognize that *Sand Revolution*-type stipulations are narrower in scope than *Sotera*-type stipulations. However, Petitioner's stipulation still reduces potential overlap with the district court litigation. In *Sand Revolution*, such a stipulation weighed marginally in favor of not exercising discretion. *Sand*

*Revolution*, 12. The fact that the Petition challenges claims that are no longer at issue in the district court litigation reduces the overlap of issues, notwithstanding any similarity in arguments.

We determine this factor weighs against exercising discretion to deny institution.

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

If the petitioner is unrelated to the defendant in the parallel proceeding, that might weigh against discretionary denial. *See Fintiv*, 13–14.

Patent Owner notes that the related district court litigation involves the same parties. Prelim. Resp. 51.

As with *Fintiv* factor 2, therefore, this factor weighs marginally in favor of exercising our discretion to deny the Petition.

*B. Conclusion*

We have considered the circumstances and facts before us in view of the first five *Fintiv* factors. Because our analysis is fact-driven, no single factor is determinative of our conclusion. Considering these five *Fintiv* factors together, we determine that they do not favor a discretionary denial. As we do not find that the first five *Fintiv* factors favor discretionary denial, we therefore do not make a determination regarding compelling merits under *Fintiv* factor 6, and our consideration ends with this conclusion. *CommScope*, 4–5.

## IV. PATENTABILITY ANALYSIS

In a post-grant review, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable. *See* 35 U.S.C. § 322(a)(3) (requiring post-grant review petitions to identify "with

particularity . . . the evidence that supports the grounds for the challenge to each claim"); *cf. Harmonic Inc.*, 815 F.3d at 1363 (Fed. Cir. 2016) ("[I]t was [Petitioner's] burden to explain to the Board how [the combination of prior art] rendered the challenged claims unpatentable."). This burden never shifts to Patent Owner. *Cf. Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

*A. Claim Construction*

We construe claim terms according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc), i.e., as construed in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b). Under *Phillips*, claim terms are afforded "their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312. "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1313. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. An inventor may rebut that presumption by providing a definition of the term in the specification "with reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

We address the meaning of several claim terms below and determine that no additional claim construction is needed for purposes of this Decision.

Our claim constructions are not final, and we invite the parties to address claim construction in their post-institution submissions to the extent allowable by our rules.

*1. Alleged printed matter in claims 1, 5, 15, 19, and 20*

Petitioner contends that claims 1, 5, 15, 19, and 20 include limitations directed to printed matter because they have "no functional or structural relationship to the claimed substrate on which the information is disposed or printed," and that these limitations, therefore, are entitled to no patentable weight. Pet. 8–9.

On this record, we agree with Petitioner that claim elements 1.1, 1.8, 5.0, 15.1, 19.0, 19.1, and 20.1[16] recite printed matter entitled to no patentable weight.

"[P]rinted matter encompasses any information claimed for its communicative content, and the doctrine prohibits patenting such printed matter unless it is 'functionally related' to its 'substrate,' which encompasses the structural elements of the claimed invention." *C R Bard Inc. v. AngioDynamics, Inc.*, 979 F.3d 1372, 1381 (Fed. Cir. 2020); *see also Praxair Distribution, Inc. v. Mallinckrodt Hosp. Prod. IP Ltd.*, 890 F.3d 1024, 1031 (Fed. Cir. 2018) ("Claim limitations directed to printed matter are not entitled to patentable weight unless the printed matter is functionally related to the substrate on which the printed matter is applied."); *In re Distefano*, 808 F.3d 845, 848 (Fed. Cir. 2015) ("[I]f a limitation claims (a) printed matter that (b) is not functionally or structurally related to the

[16] We use the claim limitation identifiers as used by Petitioner in the Petition's claim listing. *See* Pet. v–ix.

physical substrate holding the printed matter, it does not lend any patentable weight to the patentability analysis.”).

In our view, claim elements 1.1, 1.8, 5.0, 15.1, 19.1, and 20.1 recite printed matter entitled to no patentable weight because they require that a particular type of information—“fixed payment numbers” or “card payment information” or “payment number information”—be absent from the face of the payment card device. If they were affirmatively recited, “fixed payment numbers” or “payment number information” would no doubt qualify as information claimed for its communicative content that is not functionally related to the substrate, as no reference to or functional use of such fixed payment numbers, card payment information, or payment number information is found in claims 1, 5, 15, 19, and 20. The negative limitation, that no fixed payment numbers, card payment information, or payment number information is on the device, is just as much recitation of printed matter as the affirmative recitation would be. In both cases, information is being claimed for its communicative content. These claim elements simply recite that a particular type of information—fixed payment numbers, card payment information, or payment number information—is not included in the communication.

Patent Owner argues that these claim elements are “functionally related to the claimed devices within the claimed system” because “the claimed ‘no fixed payment numbers’ and similar enhance the security of the claimed systems by removing the possibility that ‘a malicious third party [would] record [such information] in order to later make fraudulent transactions on the account.’” Prelim. Resp. 22 (citing Ex. 1001, 9:62–10:2). We disagree. Our reviewing court instructs: “In evaluating the existence of a functional relationship, we have considered whether the

printed matter merely informs people of the claimed information, or whether it instead interacts with the other elements of the claim to create a new functionality in a claimed device or to cause a specific action in a claimed process." *Bard*, 979 F.3d at 1381. Fixed payment numbers inform people of particular information, and claim elements 1.1, 1.8, 5.0, 15.1, 19.1, and 20.1 recite that the matter printed on the payment card device should not inform people of that particular information. The absence of fixed payment numbers does not interact with the other elements of the claim to create a new functionality in a claimed device or to cause a specific action in a claimed process.

The foregoing analysis applies equally to element 19.0 of dependent claim 19, which recites an limitation that recites that the payment card device "comprises fixed payment information disposed thereon," but that such fixed payment information "comprises only" certain types of information.

*2. Alleged additional non-limiting claim features in claims 1, 6, 11, 13–15, and 17*

Petitioner contends that claims 1, 6, 11, 13–15, and 17 include features that "are not limiting as they do not define further limitations of the recited payment devices and systems." Pet. 9–10. The claim elements relate to certain limitations on a "card issuer authority," a "card issuing authority," or a "payment issuing authority." Ex. 1001, 20:7–15, 20:45–59, 21:13–16, 21:38–46, 22:6–12, 22:25–29. Petitioner argues, without more, that in claim 1, the "card issuer authority" is not recited as being included in the "payment system" and that therefore "language describing a function the card issuer authority 'is operable' to perform does not limit any aspect of the claimed

payment system." Pet. 10. On this record, Petitioner has not shown these limitations to be non-limiting to the scope of the claims.

### *B. Obviousness of claims 1, 2, 7–10, 12–16, and 18 over Smith, Kobylkin, and Gomez*

Petitioner challenges claims 1, 2, 7–10, 12–16, and 18 based on Smith, Kobylkin, and Gomez. Pet. 7, 11–51. Patent Owner opposes. Prelim. Resp. 28–33, 35–43. We begin with an overview of Smith, Kobylkin, and Gomez before turning to the disputed issues.

#### *1. Smith (Ex. 1004)*

Smith discloses using a mobile device to conduct a contactless payment transaction. Ex. 1004 ¶¶ 2–6. Smith discloses processing a financial transaction by mapping a mobile cloud account to a payment account. *Id.* at code (57), ¶¶ 2, 6–8, 15, 32, Fig. 1. According to Smith, a mobile device, such as a smart phone, stores mobile cloud account data, including a mobile cloud account number ("MCA") that is associated with a real account number ("RCA"). *Id.* ¶¶ 33, 34. The MCA enables the user to conduct a financial transaction without storing the RCA on the mobile device, thereby reducing the potential for fraud. *Id.* ¶¶ 32, 34.

#### *2. Kobylkin (Ex. 1005)*

Kobylkin discloses an "instant disposable payment card" having a quick response ("QR") code, which can be scanned by the user to facilitate activation and/or funding of the payment card and/or creation of an account or activation of a pre-created account at a payment system provider. Ex. 1005, code (57). According to Kobylkin, the user "can then use the instant payment card to pay for purchases." *Id.*

*3. Gomez (Ex. 1017)*

Gomez discloses a secure payment card that generates an authentication cryptogram, which is unique for each attempted use of the payment card to make a transaction and which expires within a short period of time thereafter. Ex. 1017, codes (54), (57), 1:58–63, 5:13–18, 5:48–57, Figs. 2, 9, 10.

*4. Independent Claim 1*

Petitioner challenges claim 1 based on a combination of Smith, Kobylkin, and Gomez. Pet. 21–41.

*a) Claim Element 1.7b*

Claim 1 is directed to a payment system that, *inter alia*, comprises a computing device comprising a processor, and claim element 1.7b specifies that the processor is operable to store a device account number. Ex. 1001, 10:50–64.

Petitioner contends that Smith discloses or suggests claim element 1.7b. Pet. 27–28 (citing Ex. 1004 ¶ 34; Ex. 1003 ¶ 149). Petitioner asserts that "Smith describes that the 'MCA may be mapped to the RCA such that the user may conduct a financial transaction using the MCA for funding of the financial transaction, and the funds may be supplied by the payment account corresponding to the RCA' [and 'a]s a result the user may be able to conduct a payment transaction using the mobile device 102 without storing the RCA, thereby reducing the potential for fraud.'" *Id.* at 28.

Patent Owner disputes Petitioner's contention that Smith's mobile cloud account data is "device account number." Prelim. Resp. 29–30. According to Patent Owner, Smith's MCA does not correspond to a device,

and Smith discloses mobile devices separately from mobile cloud accounts. *Id.* at 30 (citing Ex. 1004 ¶¶ 15, 32, 34, 77, 83, 93). "In sum," Patent Owner argues, "the MCA corresponds to the mobile cloud account, not a device." *Id.*

For purposes of institution, we find that Petitioner makes a sufficient showing for claim element 1.7b. Pet. 27–28. At this stage, Patent Owner does not dispute Petitioner's contention that, according to Smith, mobile cloud account data is wirelessly provisioned to a mobile device. Prelim. Resp. 29–30; *see also* Prelim. Sur-reply at 1 (In Smith, "the mobile cloud account data is generated and provided to a mobile device."). Patent Owner argues that Smith's "mobile cloud account data" is not associated with the mobile device that receives it. Prelim. Resp. 30. Patent Owner's argument overlooks Smith's teaching of "a mapping database . . . wherein each mapping record includes at least a master key identifier, a mobile cloud account number (MCA), and a real card account number (RCA)." Ex. 1004 ¶ 8. As Patent Owner discusses in its review of Smith, the master key identifier "may be [a value that is] unique to the mobile device" and is used "to identify an MCA and map the MCA to the RCA." Prelim. Resp. 8–9 (quoting Ex. 1004 ¶ 43, citing *id* ¶¶ 43, 44, 49–51, 54, 56–59, 79–87, Figs. 4A, 4B, 9).

In our preliminary view, this teaching shows an association between at least one component of Smith's mobile cloud account data—the mobile account number (MCA)—and a master key identifier that is unique to the mobile device.

*b) Combination of Smith, Kobylkin, and Gomez*

Petitioner contends that a person of ordinary skill in the art ("POSITA") would have been motivated to configure Smith's mobile device

to be used in activating and/or funding Kobylkin's disposable payment card so that the user could "make ready use of disposable payment cards." Pet. 15 (citing Ex. 1003 ¶ 120). Petitioner further contends a POSITA would have wanted:

> to permit a user to perform Kobylkin's activation and funding operations on the *same* mobile device as the user uses for other tasks such as conducting mobile payment transactions as taught in Smith—especially since use of the same device for both purposes would have increased convenience and freed the user from needing to access separate devices for performing online payment transactions based on Smith's techniques and for funding or activating a disposable card based on Kobylkin's [techniques].

*Id.* at 16 (citing Ex. 1003 ¶ 121).

Patent Owner argues that Petitioner does not "explain how or why a POSITA would . . . activate or fund Kobylkin's instant disposable payment card in the context of Smith, which is directed to a mobile device for conducting contactless payment transactions at a physical payment terminal." Prelim. Resp. 38 (citing Ex. 1004 ¶ 35, Fig. 1; Ex. 1005 ¶ 31).

For purposes of institution, we find that Petitioner provides a sufficient rationale for combining Smith and Kobylkin, as summarized above, and that Petitioner's rationale is sufficiently supported by the cited prior art and Dr. Shamos's Declaration. Pet. 15–18 (citing Ex. 1004 ¶¶ 4, 33; Ex. 1005 ¶¶ 31, 50, 52, 134; Ex. 1003 ¶¶ 120–124). Petitioner relies on Kobylkin, which discloses that disposable payment cards are "easily made" and "have no value to anyone unless and when the user funds the . . . disposable payment cards;" that funding the disposable payment cards "can be easily accomplished anywhere by the user scanning the QR code with a user smart phone;" and the disposable payment cards "provide a safe way

for the user to make payments, while limiting exposure that a credit or debit card can have." Ex. 1005 ¶ 52 (cited at Pet. 15).

Petitioner contends that "[a] POSITA would have . . . found it obvious for Smith's payment device to store a transaction sequence count, and to generate a payment cryptogram for each transaction only after receiving a valid credential . . . from the user, based on the teachings of Gomez." Pet. 18–19 (citing Ex. 1003 ¶ 126). Petitioner further contends that:

> [i]mplementing Gomez's transaction counting and cryptogram generation techniques in Smith's mobile device would further Smith's aim of "reducing the potential for fraud" by preventing the use of a stolen mobile device to initiate fraudulent transactions, and preventing the re-use of intercepted cryptograms for additional transactions, as taught by Gomez.

Pet. 19 (citing Ex. 1004 ¶¶ 34, 45; Ex. 1017, 5:39–41, 7:24–26, 8:37–41, 10:34–42, 10:66–11:2, Fig. 7; Ex. 1003 ¶ 126).

Patent Owner argues that Smith "already includes security measures to prevent fraudulent access to the functions of the mobile device" and that Gomez discloses a less secure payment card. Prelim. Resp. 39.

For purposes of institution, we find that Petitioner provides a sufficient rationale for combining Gomez with Smith and Kobylkin, as summarized above, and that Petitioner's rationale is sufficiently supported by the cited prior art and Dr. Shamos's Declaration. Pet. 18–21 (citing Ex. 1004 ¶¶ 33, 34, 45; Ex. 1017, 5:39–41, 7:24–26, 8:37–41, 10:34–42, 10:66–11:2, 13:1–4, Fig. 7; Ex. 1003 ¶¶ 126–130). Petitioner relies on Smith, which indicates that "reducing the potential for fraud" is one aim of the disclosed system. Ex. 1006 ¶ 34. Petitioner also relies on Gomez, which discloses a payment card that "generates an authentication cryptogram for each attempted transaction only after the cardholder successfully presents a

credential, such as a fingerprint or PIN number, into the payment card." Ex. 1007, 5:14–18 (cited at Pet. 13).

Patent Owner's counterargument raises factual issues as to the motivations of a POSITA, but does not preclude a determination of obviousness. *See Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1331 (Fed. Cir. 2019) ("Whether a skilled artisan would have been motivated to combine prior art references is . . . a question of fact."); *see also Intel*, 61 F.4th at 1380–81 (holding that the Board improperly rejected *KSR*'s known-technique rationale when it reasoned that Kabemoto "already addresses" the prior art problem and that it "fail[ed] to see why" a POSITA would regard Bauman's technique as an obvious improvement to Kabemoto).

On the present record, and for the purposes of institution, we conclude that Petitioner's provided explanation of the motivation for the combination of Smith, Kobylkin, and Gomez is sufficient.

*c) Remaining Claim Elements*

At this stage, Patent Owner does not dispute Petitioner's contention that the combination of Smith, Kobylkin, and Gomez teaches or suggests claim elements 1.0 (to the extent limiting), 1.1–1.7a, and 1.7c–1.13. We determine that Petitioner's showing for independent claim 1 is sufficient for purposes of institution.

*5. Independent Claim 15*

Petitioner challenges claim 15 based on a combination of Smith, Kobylkin, and Gomez, including by reference to the challenge of claim 1. Pet. 46–48.

*a) Claim Element 15.7*

Claim element 1.9 of claim 1 specifies that the processor of element 1.2 of claim 1 "is operable to generate at least a portion of a limited-use card payment information for use by an authenticated card user." Ex. 1001, 20:1–3. Claim element 15.7 of claim 15 specifies that the [card-users personal] computing device of limitation 15.2 "is configured to dynamically generate limited-use payment information." Petitioner's contentions with respect to limitation 15.7 refer to its contentions with respect to limitation 1.9. Pet. 47.

Petitioner contends that Smith discloses or suggests claim element 1.9 in its disclosure of a user initiating transmission of payment credentials including a payment cryptogram generated based on at least a portion of the MCA data. Pet. 35 (citing Ex. 1004 ¶¶ 67, 96, 103; Ex. 1003 ¶ 164). Petitioner quotes Smith's disclosure that the payment cryptogram may be "an authorization request cryptogram or dynamic card validation code." *Id.* (quoting Ex. 1004 ¶ 67). Petitioner additionally argues that Gomez teaches that its "authentication cryptogram" is generated if the cardholder successfully presents a credential, and that the cryptogram is thus generated only for an authenticated user. *Id.* at 35–36 (citing Ex. 1017 5:25–28; Ex. 1003 ¶ 165).

Patent Owner argues that because limitation 15.7 requires dynamic generation of limited-use payment information, and limitation 1.9 does not specify that the generation of at least a portion of limited-use card payment information is dynamic, Petitioner has not adequately shown that Smith discloses the dynamic generation of claim 15.7. Prelim. Resp. 35–36. Patent Owner focuses on the Petition's citation of Smith's payment cryptogram and does not address the disclosure that it may be a "dynamic

card validation code." *Id.* at 36–37. Patent Owner argues that Petitioner's citation of Gomez is also unavailing because "Petitioner fails to explain how [Gomez's] cryptogram is dynamically generated or corresponds to limited use payment information." *Id.* at 37–38.

For purposes of institution, we find that Petitioner makes a sufficient showing for claim element 15.7. Pet. 18–20, 35–36, 47. Petitioner has adequately shown how Gomez's cryptogram generation techniques would be used in combination with Smith's teachings. *See id.* at 18–20, 35–36.

In our preliminary view, Petitioner has adequately shown, for the purposes of institution, how limitation 15.7 is taught or suggested in its proposed combination of Smith, Kobylkin, and Gomez.

*b) Remaining Claim Elements*

At this stage, Patent Owner does not dispute Petitioner's contention that the combination of Smith, Kobylkin, and Gomez teaches or suggests the additional claim elements of claim 15. We determine that Petitioner's showing for independent claim 1 is sufficient for purposes of institution.

*6. Dependent Claims 2, 7–10, 12–14, 16, and 18*

Claims 2, 7–10, and 12–14 depend from claim 1 and claims 16 and 18 from claim 15. Petitioner challenges these claims based on Smith, Kobylkin, and Gomez. Pet. 7, 41–46, 49–51. Patent Owner does not present arguments for dependent claims 2, 7–10, 12–14, 16, and 18 separate from its arguments for independent claims 1 and 15.

*C. Additional Grounds – claims 3–6, 11, 17, and 19–27*

Petitioner challenges claims 3–6, 11, 17, and 19–27 based on Smith, Kobylkin, and Gomez, adding Saarisalo, Slonecker, Mestre, Sahota, Moosavi, and Mullen to the combinations for various claims. Pet. 7, 52–88.

Patent Owner does not raise arguments with respect to these grounds separate from its arguments above.

## V. CONCLUSION

We determine that Petitioner has demonstrated that it is more likely than not that at least one of the challenged claims is unpatentable. Accordingly, we institute a post-grant review of all challenged claims on all asserted grounds.

## VI. ORDER

It is

ORDERED that, pursuant to 35 U.S.C. § 324(a), a post-grant review of claims 1–27 of the ’286 patent is instituted; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this Order.

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