

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SQUARE, INC.,
Petitioner,

v.

4361423 CANADA INC.,
Patent Owner.

IPR2019-01649
Patent 9,016,566 B2

Before JAMESON LEE, ROBERT J. WEINSCHENK, and
KEVIN C. TROCK, *Administrative Patent Judges*.

WEINSCHENK, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Square, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–4 (“the challenged claims”) of U.S. Patent No. 9,016,566 B2 (Ex. 1001, “the ’566 patent”). 4361423 Canada Inc. (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”) to the Petition.

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Further, a decision to institute may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine that Petitioner demonstrates a reasonable likelihood of prevailing in showing that at least one of the challenged claims of the ’566 patent is unpatentable. Accordingly, we institute an *inter partes* review as to all the challenged claims of the ’566 patent on all the grounds of unpatentability set forth in the Petition.

B. *Real Parties in Interest*

Each party identifies itself as the only real party in interest. Pet. 1; Paper 4, 2.

C. *Related Matters*

The parties indicate that the ’566 patent is the subject of the following district court case: *4361423 Canada Inc. v. Square, Inc.*, No. 4:19-cv-04311 (N.D. Cal.). Pet. 1; Paper 4, 2.

D. The '566 Patent

The '566 patent relates to an apparatus, system, and method “for commercial transactions using a transaction card via a communication device.” Ex. 1001, 2:19–29. Specifically, the '566 patent describes a transaction apparatus, such as a portable point of sale (“POS”) device, linked to a communication device, such as a mobile phone. *Id.* at 5:54–58, 6:1–6.

Figure 2 is reproduced below.

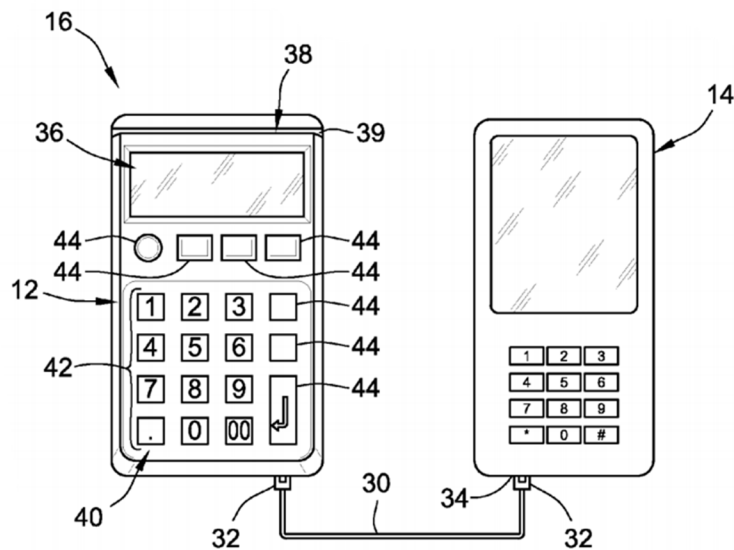


FIG. 2

Figure 2 shows an example of a transaction and communication assembly. *Id.* at 7:22–27. The assembly includes POS device 12 linked to mobile phone 14 via cable 30. *Id.* POS device 12 includes card reader slot 39. *Id.* at 7:34–37. The '566 patent explains that a user swipes a credit card through slot 39, a card reader captures information from the credit card, and the card reader transfers the information to a microcontroller unit (“MCU”). *Id.* at 7:45–46, 7:59–62. The MCU converts the information into an analog audio

signal and transmits it via cable 30 to mobile phone 14. *Id.* at 8:1–7. Mobile phone 14 then transmits the information to a transaction server. *Id.* at 8:8–9. The transaction server responds to mobile phone 14 by indicating whether a processor/issuer accepts or rejects the transaction. *Id.* at 8:9–22.

E. Illustrative Claim

Of the challenged claims, claims 1 and 3 are independent. Claim 1 is reproduced below.

1. A portable smart card reader device for reading a smart card having recorded information stored on an integrated circuit incorporated into the card, the device comprising:

a sensor for reading said recorded information stored on said integrated circuit incorporated into said card and for producing an analog signal indicative of the recorded information, said sensor including circuitry for converting said analog signal to a format suitable for transmission to a jack of a mobile communication device; and

an output jack adapted to be inserted into a jack associated with said mobile communication device for providing the converted signal indicative of the recorded information to said mobile communication device for transmission to a transaction server for further processing.

Id. at 12:4–17.

F. Evidence

Petitioner submits the following evidence:

Evidence	Exhibit No.
Declaration of Bruce McNair (“McNair Declaration”)	1003
Proctor, US 2002/0091633 A1, published July 11, 2002 (“Proctor”)	1007
Vrotsos, US 2005/0236480 A1, published Oct. 27, 2005 (“Vrotsos”)	1009
Morley, US 7,810,729 B2, issued Oct. 12, 2010 (“Morley”)	1010

Evidence	Exhibit No.
Colnot, US 2007/0067833 A1, published Mar. 22, 2007 (“Colnot”)	1011
Eisner, US 5,838,773, issued Nov. 17, 1998 (“Eisner”)	1012

G. Asserted Grounds

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4	103	Proctor, Vrotsos
1–4	103	Colnot, Vrotsos
1–4	103	Eisner, Vrotsos, Proctor
1–4	103	Proctor, Vrotsos, Morley

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner argues that

[t]he level of a person of ordinary skill in the art (“POSITA”) needed to have the capability of understanding the scientific and engineering principles applicable to the ’566 patent is a Bachelor of Science in Electrical Engineering or Computer Engineering, or the equivalent and have at least one to two years of relevant experience in the fields of embedded systems and mobile communication device interfaces, or otherwise equivalent industry experience in the relevant field. Less work experience may be compensated by a higher level of education, such as a Master’s Degree, and vice versa.

Pet. 16 (citing Ex. 1003 ¶¶ 13–17). Patent Owner appears to agree with Petitioner’s description of the level of ordinary skill in the art. *See* Ex. 2004 ¶ 15. Therefore, on this record, we adopt Petitioner’s description, which is supported by the testimony of Petitioner’s declarant, Mr. Bruce McNair, but delete the qualifier “at least” to keep the description from being vague and extending to a level reflecting that of an expert. Pet. 16; Ex. 1003 ¶¶ 13–17.

B. Claim Construction

In an *inter partes* review proceeding, a claim of a patent is construed using the same standard used in federal district court, including construing the claim in accordance with the ordinary and customary meaning of the claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2019). Neither party proposes an express construction for any claim terms at this stage of the proceeding. *See* Pet. 16–17; Prelim. Resp. 1–33. On this record and for purposes of this Decision, we agree that no claim terms require express construction.

C. 35 U.S.C. § 325(d)

Patent Owner argues that the Petition should be denied under 35 U.S.C. § 325(d). Prelim. Resp. 15. Section 325(d) provides that in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” To determine whether to deny institution under § 325(d), we use

the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).

Here, Petitioner argues that Morley is prior art because the challenged claims of the '566 patent are not entitled to the filing date of the provisional to which the '566 patent claims priority, namely, U.S. Provisional Application No. 61/151,459 (Ex. 1005, "Tang Provisional"). Pet. 71–72. Patent Owner contends that Morley and Petitioner's arguments regarding Morley previously were presented to the Office. Prelim. Resp. 17.

Specifically, Patent Owner contends that "[b]oth Patent Owner and a third party submitted Morley for consideration during the '566 prosecution," and "[t]he third party specifically argued that the Tang Provisional did not support the '566 claims and that Morley disclosed every element of those claims." *Id.* According to Patent Owner, "[t]he Examiner considered the arguments and issued a rejection," and, in response, "Patent Owner amended the claims and specifically called the Examiner's attention to the Provisional's support for the amended claims." *Id.* (citing Ex. 1004, 33–36). Patent Owner asserts that "[f]ollowing the amendment, the Examiner issued the '566 patent with (1) the same claims that are challenged today; (2) the priority claim to the Provisional stated on the face of the patent; and (3) Morley cited on the face of the patent." *Id.* at 17–18 (citing Ex. 1001).

We are not persuaded that Petitioner presents the same or substantially the same prior art that previously was presented to the Office. In this case, Petitioner asserts that the challenged claims would have been obvious over 1) Proctor and Vrotsos; 2) Colnot and Vrotsos; 3) Eisner, Vrotsos, and Proctor; and 4) Proctor, Vrotsos, and Morley. Pet. 4–5. Thus, Petitioner relies on Morley in only one of the four asserted grounds. And, in the one asserted ground that includes Morley, Petitioner relies on Morley for only one limitation of the challenged claims. *Id.* at 78–83. Further, Patent Owner

does not contend that Proctor, Vrotsos, Colnot, or Eisner previously were presented to the Office or are substantially the same as Morley. *See* Prelim. Resp. 15–20. Thus, even assuming that Morley previously was presented to the Office, we are not persuaded that the other four references, which form the basis for most of Petitioner’s asserted grounds, previously were presented to the Office or are substantially the same as Morley.

We also are not persuaded that Petitioner presents the same or substantially the same arguments that previously were presented to the Office. As discussed above, Petitioner relies on Morley in only one of the four asserted grounds, and, in the one asserted ground that includes Morley, Petitioner relies on Morley for only one limitation of the challenged claims. Pet. 4–5, 78–83. Further, Patent Owner does not contend that Petitioner’s arguments regarding Proctor, Vrotsos, Colnot, or Eisner previously were presented to the Office or are substantially the same as Petitioner’s arguments regarding Morley. *See* Prelim. Resp. 15–20. Thus, even assuming that Petitioner’s arguments regarding Morley previously were presented to the Office, we are not persuaded that Petitioner’s arguments regarding the other four references, which form the basis for most of Petitioner’s asserted grounds, previously were presented to the Office or are substantially the same as Petitioner’s arguments regarding Morley.

For the foregoing reasons, we are not persuaded that the same or substantially the same prior art or arguments previously were presented to the Office. Thus, because neither condition of the first part of our two-part framework is satisfied, we decline to exercise our discretion to deny institution under § 325(d).

D. Obviousness of Claims 1–4 over Proctor and Vrotsos

Petitioner argues that claims 1–4 would have been obvious over Proctor and Vrotsos. Pet. 17. For the reasons discussed below, Petitioner demonstrates a reasonable likelihood of prevailing in showing that claims 1–4 would have been obvious over Proctor and Vrotsos.

1. Claim 1

Claim 1 recites “[a] portable smart card reader device for reading a smart card having recorded information stored on an integrated circuit incorporated into the card.” Ex. 1001, 12:4–6. Petitioner presents evidence that Proctor teaches a smart card reader device for reading a smart card with a memory chip that stores recorded information. Pet. 17–20 (citing Ex. 1007 ¶¶ 10, 18, Fig. 1). Petitioner presents evidence that Vrotsos teaches a portable smart card reader device. *Id.* at 20–22 (citing Ex. 1009 ¶¶ 36, 41, Figs. 1D, 1E). As discussed in more detail below, Petitioner asserts that a person of ordinary skill in the art “would have found it obvious to incorporate Vrotsos’s teaching into Proctor in order to make its smart card reader device *portable*.” *Id.* at 22. At this stage of the proceeding, Patent Owner does not raise any arguments relating to the preamble of claim 1. Regardless of whether the preamble is limiting, we are sufficiently persuaded that the combination of Proctor and Vrotsos teaches the recited portable smart card reader device.

Claim 1 recites “a sensor for reading said recorded information stored on said integrated circuit incorporated into said card.” Ex. 1001, 12:7–8. Petitioner presents evidence that Proctor teaches a sensor for reading recorded information stored on a smart card’s memory chip. Pet. 24 (citing Ex. 1007 ¶ 10, Fig. 1). Petitioner presents evidence that Vrotsos teaches a

read/write head for reading recorded information stored on a smart card's smartchip. *Id.* at 25 (citing Ex. 1009 ¶ 41). As discussed in more detail below, Petitioner asserts that “[t]o the extent Proctor does not provide a specific configuration of the slot 46 for reading smart card information, a POSITA would have looked to other references, such as Vrotsos, which provides a smartcard read/write head that reads information from a smartcard chip.” *Id.* at 25–26. At this stage of the proceeding, Patent Owner does not raise any arguments relating to this limitation. We are sufficiently persuaded that Proctor alone or in combination with Vrotsos teaches this limitation.

Claim 1 recites a sensor “for producing an analog signal indicative of the recorded information.” Ex. 1001, 12:8–10. Petitioner presents evidence that Proctor's sensor includes a modem that produces a modulated tonal pattern indicative of the recorded information read from the smart card. Pet. 27 (citing Ex. 1007 ¶¶ 4, 5, 11, 16). At this stage of the proceeding, Patent Owner does not raise any arguments relating to this limitation. We are sufficiently persuaded that Proctor teaches this limitation.

Claim 1 recites “said sensor including circuitry for converting said analog signal to a format suitable for transmission to a jack of a mobile communication device.” Ex. 1001, 12:10–12. Petitioner presents evidence that Proctor's sensor includes a modem that converts the recorded information read from the smart card to a modulated tonal pattern suitable for transmission to a connector on a mobile phone. Pet. 27–29 (citing Ex. 1007 ¶¶ 4, 5, 8, 9 11, 16, Fig. 1). At this stage of the proceeding, Patent Owner does not raise any arguments relating to this limitation. We are sufficiently persuaded that Proctor teaches this limitation.

Claim 1 recites “an output jack adapted to be inserted into a jack associated with said mobile communication device for providing the converted signal indicative of the recorded information to said mobile communication device.” Ex. 1001, 12:13–16. Petitioner presents evidence that Proctor teaches a terminal end of a cable inserted into a connector on a mobile phone for transmitting the signal indicative of the recorded information to a mobile phone. Pet. 30–31 (citing Ex. 1007 ¶¶ 8, 9, Fig. 1). Petitioner presents evidence that Vrotsos teaches a connector on a smart card reader device that can be inserted into a communication port on a mobile phone. *Id.* at 32–34 (citing Ex. 1009 ¶¶ 42–43, Figs. 1D, 10). As discussed in more detail below, Petitioner asserts that “[a] POSITA would have been motivated to implement Proctor’s user system 14 with Vrotsos’s specific teaching of attaching the smart card reader attachment directly to the cell phone, at least because doing so would render Proctor’s system 14 *portable.*” *Id.* at 34. At this stage of the proceeding, Patent Owner does not raise any arguments relating to this limitation. We are sufficiently persuaded that Proctor alone or in combination with Vrotsos teaches this limitation.

Claim 1 recites providing the converted signal to said mobile communication device “for transmission to a transaction server for further processing.” Ex. 1001, 12:16–17. Petitioner presents evidence that Proctor’s mobile phone transmits the signal indicative of the recorded information to a central verification facility for further processing. Pet. 35–36 (citing Ex. 1007 ¶¶ 7, 16, 17, Fig. 1). At this stage of the proceeding, Patent Owner does not raise any arguments relating to this limitation. We are sufficiently persuaded that Proctor teaches this limitation.

2. *Claims 2–4*

Petitioner identifies evidence indicating that the combination of Proctor and Vrotsos teaches the limitations of claims 2–4. *Id.* at 36–40. At this stage of the proceeding, Patent Owner does not raise any arguments relating to these claims. We are sufficiently persuaded that the combination of Proctor and Vrotsos teaches the limitations of claims 2–4.

3. *Reason to Combine*

Petitioner argues that a person of ordinary skill in the art would have had reason to combine the teachings of Proctor and Vrotsos. Pet. 22–23, 25–27, 34 (citing Ex. 1003 ¶¶ 53, 85–98, 110). Specifically, Petitioner asserts that a person of ordinary skill in the art “would have found it obvious to incorporate Vrotsos’s teaching [of a portable smart card reader device] into Proctor in order to make its smart card reader device *portable*.” *Id.* at 22. Petitioner contends that doing so would allow a user or merchant to “easily transport the smart card reader device to any location where the transaction takes place,” which “is particularly advantageous and desirable for merchants that ‘conduct business while traveling or at a large facility [that has] distributed customer service.’” *Id.* at 23 (citing Ex. 1003 ¶ 91).

Petitioner also asserts that “[t]o the extent Proctor does not provide a specific configuration of the slot 46 for reading smart card information, a POSITA would have looked to other references, such as Vrotsos, which provides a smartcard read/write head that reads information from a smartcard chip.” *Id.* at 25–26. Petitioner contends that a person of ordinary skill in the art would have done so because “Vrotsos complements Proctor” and “Vrotsos discloses a specific configuration that provides the same function described by Proctor.” *Id.* at 26 (citing Ex. 1003 ¶ 97).

Petitioner asserts that a person of ordinary skill in the art “would have been motivated to implement Proctor’s user system 14 with Vrotsos’s specific teaching of attaching the smart card reader attachment directly to the cell phone . . . instead of having a cable extending between the *sensor* . . . and the phone 22.” *Id.* at 34. Petitioner contends that doing so would have been obvious because it “would render Proctor’s system 14 *portable*.” *Id.*

At this stage of the proceeding, Patent Owner does not raise any arguments relating to the reasons for combining Proctor and Vrotsos. We are sufficiently persuaded that a person of ordinary skill in the art would have had reason to combine the teachings of Proctor and Vrotsos as proposed by Petitioner, namely 1) to use Vrotsos’s portable smart card reader device to make Proctor’s device portable; 2) to use Vrotsos’s read/write head to provide a specific configuration for Proctor’s slot; and 3) to use Vrotsos’s smart card reader attachment instead of Proctor’s cable.

4. *Summary*

For the foregoing reasons, Petitioner demonstrates a reasonable likelihood of prevailing in showing that claims 1–4 would have been obvious over Proctor and Vrotsos.

E. Obviousness of Claims 1–4 over Colnot and Vrotsos

Petitioner argues that claims 1–4 would have been obvious over Colnot and Vrotsos. Pet. 40. Petitioner identifies evidence indicating that the combination of Colnot and Vrotsos teaches the limitations of claims 1–4, and that a person of ordinary skill in the art would have had reason to combine those references. *Id.* at 40–57. At this stage of the proceeding, Patent Owner does not raise any arguments relating to this asserted ground. On this record, Petitioner demonstrates a reasonable likelihood of prevailing

in showing that claims 1–4 would have been obvious over Colnot and Vrotsos.

F. Obviousness of Claims 1–4 over Eisner, Vrotsos, and Proctor

Petitioner argues that claims 1–4 would have been obvious over Eisner, Vrotsos, and Proctor. Pet. 58. Petitioner identifies evidence indicating that the combination of Eisner, Vrotsos, and Proctor teaches the limitations of claims 1–4, and that a person of ordinary skill in the art would have had reason to combine those references. *Id.* at 58–71. At this stage of the proceeding, Patent Owner does not raise any arguments relating to this asserted ground. On this record, Petitioner demonstrates a reasonable likelihood of prevailing in showing that claims 1–4 would have been obvious over Eisner, Vrotsos, and Proctor.

G. Obviousness of Claims 1–4 over Proctor, Vrotsos, and Morley

Petitioner argues that claims 1–4 would have been obvious over Proctor, Vrotsos, and Morley. Pet. 71. Petitioner contends that Morley is prior art to the challenged claims of the '566 patent because the challenged claims are not entitled to a filing date “earlier than February 9, 2010.” *Id.* at 71–72. As discussed above, we determine that Petitioner demonstrates a reasonable likelihood of prevailing on the other asserted grounds that do not include Morley. As a result, we also institute an *inter partes* review on this asserted ground that includes Morley. Trial Practice Guide Update, 31 (July 2019), <https://www.uspto.gov/sites/default/files/documents/trial-practice-guide-update3.pdf> (“The Board will not institute on fewer than all claims or all challenges in a petition.”). Nonetheless, we provide a preliminary analysis of the parties’ arguments regarding this asserted ground “to provide guidance to the parties for the upcoming trial.” *Id.*

The '566 patent issued from an application filed on August 2, 2013, and claims priority through several continuations to PCT Application No. 2010/001367, filed on February 10, 2010, and U.S. Provisional Application No. 61/151,459, filed on February 10, 2009 (Ex. 1005, “Tang Provisional”). Ex. 1001, code (22), (60), (63). Petitioner argues that the challenged claims of the '566 patent are not entitled to the filing date of the Tang Provisional. Pet. 71–72. Specifically, Petitioner contends that the Tang Provisional fails to provide sufficient written description for the following claim limitations: 1) “producing an analog signal indicative of the recorded information” and “converting said analog signal to a format suitable for transmission to a jack of a mobile communication device”; 2) “providing said analog signal indicative of the recorded information . . . to said mobile communication device for further processing by circuitry contained in the mobile communication device”; and 3) a “smart card having recorded information stored on an integrated circuit incorporated into the card.”¹ *Id.* at 72. Patent Owner responds that “the Tang Provisional more than reasonably conveys to

¹ During examination of the '566 patent, the Examiner stated that the Tang Provisional did not “provide adequate support” for the “hands-free jack” recited in the pending claims. Ex. 1004, 44–45. The Applicant amended the claims to delete that feature and argued that the Tang Provisional describes a smart card reader that communicates with a mobile phone using analog tone. *Id.* at 36–37. The Examiner subsequently allowed the claims. *Id.* at 23. Petitioner argues that “the prosecution record cannot be relied on to show the claims are supported by the [Tang Provisional]” because the Applicant “did not refer to anything in the [Tang Provisional] as disclosing the other claim elements, including the *converting* function.” Pet. 76–78. On this record, we do not express an opinion regarding Petitioner’s argument, but we invite the parties to submit pertinent briefing during the course of trial.

one of skill in the art that the inventors had possession of the claimed invention.” Prelim. Resp. 20.

1. Producing and Converting

Independent claim 1 recites “a sensor . . . for producing an analog signal indicative of the recorded information, said sensor including circuitry for converting said analog signal to a format suitable for transmission to a jack of a mobile communication device” (“the ‘producing and converting’ limitation”). Ex. 1001, 12:7–12. Petitioner argues that the Tang Provisional “does not describe in any detail how to read or process information from the smart card, including the claimed functions of a sensor in claim 1.” Pet. 74. Patent Owner responds that the Tang Provisional describes “a card reader device – whether a magnetic stripe reader or smart card reader – that communicates with the jack of a mobile using a signal in analog audio format” and “a ‘secure microprocessor’ for controlling the operation flow of the device.” Prelim. Resp. 23–24 (citing Ex. 1005, 3–4). According to Patent Owner, “[t]he disclosure of the secure microprocessor in connection with achieving the appropriate (encrypted or non-encrypted) analog-audio-formatted signal for transmission to the disclosed jack of a mobile communication device more than ‘reasonably shows’ that the inventors possessed” the claimed invention. *Id.* at 25–26 (citing Ex. 2004 ¶ 21).

On this record, we agree with Patent Owner. Specifically, the Tang Provisional discloses a “device” that includes a “smart card reader” and a “microprocessor.” Ex. 1005, 4. The Tang Provisional also discloses that the “microprocessor controls the operation flow of the device,” and that one of those operations is communicating information from the smart card to “mobile phone 13 via phone jack 10 using analog tone.” *Id.* at 3–4. Thus,

the Tang Provisional describes a smart card reader device with a microprocessor that controls the operation of transmitting smart card information to a mobile phone in analog tone format.

Although the Tang Provisional does not use the word “converting,” Patent Owner’s declarant, Mr. Ivan Zatkovich, explains that a person of ordinary skill in the art would have understood that, in order to transmit smart card information in analog tone format, the microprocessor must produce an analog signal indicative of the smart card information and convert the signal to an analog tone format suitable for transmission to a jack on a mobile phone. Ex. 2004 ¶¶ 19, 21. Petitioner does not identify specific evidence to the contrary. *See* Pet. 74–75; Ex. 1003 ¶¶ 33–37, 201. For example, Petitioner does not represent that a smart card stores information in analog tone format. *See id.* Thus, on this record, we agree with Patent Owner that the Tang Provisional sufficiently describes the “producing and converting” limitation.

Petitioner also argues that the Tang Provisional does not describe “both functions of ‘producing’ and ‘converting’ as being performed by the same sensor or circuitry included within that sensor.” Pet. 74–75 (citing Ex. 1003 ¶¶ 33–37, 201). However, as discussed above, the Tang Provisional describes a smart card reader device with a microprocessor that controls the operation of transmitting card information to a mobile phone in analog tone format, and the evidence of record indicates that this operation would include both functions of the “producing and converting” limitation. Ex. 1005, 3–4; Ex. 2004 ¶¶ 19, 21. Thus, on this record, we agree with Patent Owner that the Tang Provisional sufficiently describes that the

microprocessor controls both functions of the “producing and converting” limitation.

2. *Further Processing*

Independent claim 3 recites “providing said analog signal . . . to said mobile communication device for further processing by circuitry contained in said mobile communication device” (“the ‘further processing’ limitation”). Ex. 1001, 12:34–38. Petitioner argues that “[t]here is simply no disclosure in the Tang [P]rovisional of any processing happening in the phone, let alone that circuitry in the phone is used to process ‘analog signals.’” Pet. 75 (citing Ex. 1003 ¶¶ 38, 202). Patent Owner responds that a person of ordinary skill in the art “would have understood from the [Tang] Provisional’s disclosure of a reader sending an analog signal to the jack of a cell phone with the intent of further transmission to a server, and the discussion of data over voice communications, to indicate that further processing would be done in the phone.”² Prelim. Resp. 30 (citing Ex. 2004 ¶¶ 23–24).

On this record, we agree with Patent Owner. The Tang Provisional discloses that “[c]ard data is captured by the magnetic strip reader or smart card reader 7,” and the captured data is communicated to “mobile phone 13 via phone jack 10 using analog tone.” Ex. 1005, 3–4. The Tang Provisional

² Patent Owner also argues that Petitioner admitted in another proceeding, IPR2014-00312, that the Tang Provisional describes the “further processing” limitation. Prelim. Resp. 28–30. We need not address Patent Owner’s argument because, on this record, we agree with Patent Owner the Tang Provisional sufficiently describes the “further processing” limitation, even without relying on the alleged admission by Petitioner. Patent Owner may raise this issue again in its response to the Petition after institution.

also discloses that the captured data is then “sent by the phone devices” to “payment servers.” *Id.* at 4. Patent Owner’s declarant, Mr. Zatkovich, explains that because “the cell phone transmits the signal or information on to a server to conduct a financial transaction,” a person of ordinary skill in the art would have understood that “the cell phone needs to do some processing.” Ex. 2004 ¶ 23. Petitioner does not identify specific evidence to the contrary. *See* Pet. 75; Ex. 1003 ¶¶ 38, 202. Thus, on this record, we agree with Patent Owner that the Tang Provisional sufficiently describes the “further processing” limitation.

3. *Recorded Information*

Independent claims 1 and 3 recite “a smart card having recorded information stored on an integrated circuit incorporated into the card” (“the ‘record information’ limitation”). Ex. 1001, 12:4–6, 12:21–23. Petitioner argues that although the Tang Provisional “mentions a smart card reader at pp. 3–4, it does not in such full, clear, and exact terms state what, if anything, on the card stores recorded information, including specifically an integrated circuit.” Pet. 75–76 (citing Ex. 1003 ¶¶ 39, 203). Petitioner also argues that “it would be improper for Patent Owner to rely on obviousness to determine what possibly may support the claim element.” *Id.* at 76 (citing Ex. 1003 ¶¶ 39, 203). Patent Owner responds that “a person of ordinary skill in the art would have known at the time of the invention, a smart card – by definition – stores recorded information on an integrated circuit.” Prelim. Resp. 31 (citing Ex. 2004 ¶¶ 25–26).

On this record, we agree with Patent Owner. The Tang Provisional discloses that “[c]ard data is captured by . . . smart card reader 7.” Ex. 1005, 4. Further, Patent Owner’s declarant, Mr. Zatkovich, explains that “a person

of ordinary skill in the art would have known at the time of the invention, a smart card – by definition – stores recorded information on an integrated circuit.” Ex. 2004 ¶ 26. Petitioner does not identify specific evidence to the contrary. *See* Pet. 75–76; Ex. 1003 ¶¶ 39, 203. Thus, on this record, we agree with Patent Owner that the Tang Provisional sufficiently describes the “recorded information” limitation.

4. Summary

As discussed above, because we determine that Petitioner demonstrates a reasonable likelihood of prevailing on the other asserted grounds that do not include Morley, we also institute an *inter partes* review on the asserted ground that includes Morley. Patent Owner may raise the issue of Morley’s status as prior art to the challenged claims again in its response to the Petition after institution.

H. Appointments Clause

Patent Owner argues that the appointment of Administrative Patent Judges (“APJs”) of the Patent Trial and Appeal Board by the Secretary of Commerce “is not constitutional under the Appointments Clause.” Prelim. Resp. 32. Patent Owner also argues that the Federal Circuit’s “attempted cure of the Constitutional violation” in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019), “is insufficient, because it does not give a constitutionally appointed principal officer the power to review APJ decisions.” Prelim. Resp. 32. We decline to consider Patent Owner’s constitutional challenge as the Federal Circuit addressed this issue in *Arthrex*, 941 F.3d at 1325.

Also, Patent Owner’s argument does not support denial of institution of review or dismissal of Petition. In *Arthrex*, the Federal Circuit explained

that “no constitutional infirmity [exists] in an institution decision.” *Id.* at 1340. Patent Owner does not address why APJs, under authority delegated from the Director, may not decide whether to institute *inter partes* review.

I. Due Process

Patent Owner argues that “subjecting a patent effectively filed before September 16, 2012 (when the relevant provisions of the AIA went into effect), as is the case here, to IPR is an impermissibly retroactive, unconstitutional taking” and “violates the Due Process Clause of the Fifth Amendment.” Prelim. Resp. 33. We decline to consider Patent Owner’s constitutional challenge as the Federal Circuit addressed this issue in *Celgene Corp. v. Peter*, 931 F.3d 1342, 1362–63 (Fed. Cir. 2019).

III. CONCLUSION

Petitioner demonstrates a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims of the ’566 patent. At this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims.

IV. ORDER

It is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–4 of the ’566 patent is instituted with respect to all grounds of unpatentability 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 ’566 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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Patent 9,016,566 B2

PETITIONER:

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