

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

DH INTERNATIONAL LTD.,
Patent Owner.

IPR2025-00173
Patent 7,628,333 B2

Before KARL D. EASTHOM, BRIAN P. MURPHY, and
MARY C. HOFFMAN, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Apple Inc. (“Petitioner”) filed a Petition pursuant to 35 U.S.C. § 311 requesting institution of *inter partes* review of claims 1–13 of U.S. Patent No. 7,628,333 B2 (Ex. 1001, “the ’333 patent”). Paper 1 (“Pet.”). DH International (“Patent Owner”) timely filed a Patent Owner Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Under § 314, the Board may not institute review on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 371 (2018). If the Board institutes a review, it will institute “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a). Upon consideration of the Petition, the Preliminary Response, and the evidence of record, for the reasons set forth below, we conclude the Petition does not demonstrate a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one challenged claim in the ’333 patent. Accordingly, we do not institute an *inter partes* review of claims 1–13 of the ’333 patent.

B. Real Parties in Interest and Related Matters

Petitioner, Apple Inc., identifies itself as the real party in interest. Pet. 68. Patent Owner, DH International Ltd., identifies itself as the real party in interest. Paper 3, 2.

Petitioner and Patent Owner identify the following related matters:

- *DH International Ltd v. Apple Inc.*, No. 1:23-cv-01114 (W.D. Tex.), transferred to Northern District of California (3:24-cv-06185)
 - *DH International Ltd. v. Apple.*, N.D. CA, No. 3:23-cv-06185-TLT
 - *DH International Ltd v. Google LLC*, No. 1:23-cv-01116 (W.D. Tex.), dismissed
 - *Google LLC v. DH International Ltd.*, IPR2024-01321 (PTAB)
 - *Samsung Electronics Co., Ltd. v. G. Holdings, Ltd*, IPR2021-00885 (PTAB), terminated pre-institution pursuant to settlement
 - *Google LLC v. DH International Ltd.*, IPR2024-01322 (PTAB), challenging related U.S. Patent No. 9,022,294.
 - *Samsung Electronics Co., Ltd. v. G. Holdings, Ltd*, IPR2021-00884 (PTAB), challenging U.S. Patent No. 9,022,294, terminated pre-institution pursuant to settlement
 - *G. Holdings Ltd. v. Samsung Electronics Co., Ltd. et al*, No. 2:20-cv-00342 (E.D. Tex.), dismissed
 - *Apple Inc. v. DH International Ltd.*, IPR2025-00172 (PTAB), challenging U.S. Patent No. 9,022,294.
- Pet. 68; Paper 3, 2–3.

C. The '333 Patent

The '333 patent, titled “Portable Electronic Device Capable of Alternate Data Conveyance Operations Responsive to an Invariable Activation Command,” is directed to a portable electronic device such as “keycards, identification devices, or credit or debit devices such as the so-called smart cards.” Ex. 1001, code (54), code (57), 1:15–19. The portable electronic device is depicted in Figure 2 below:

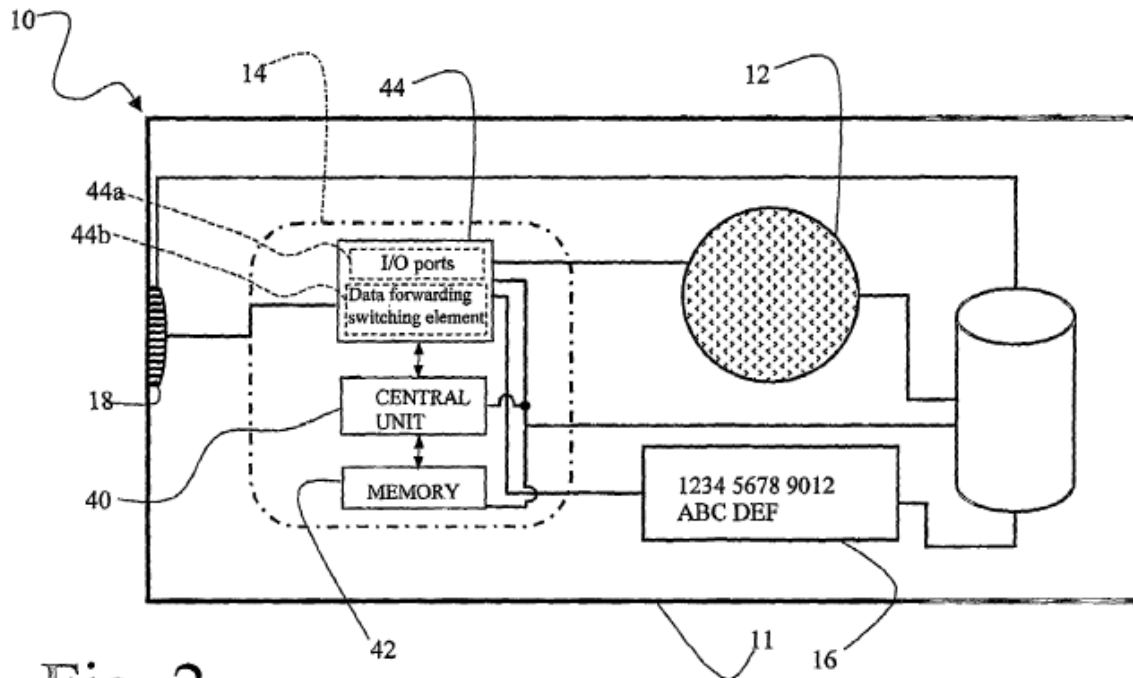


Fig. 2

Id. at 4:3–5, Fig. 2. In Figure 2, the portable electronic device includes control device (12) operatively connected to electronic circuit (14) connected through I/O controller 44, a user interface (16), a power means, and a data transceiver (18).¹ *Id.* at code (57), 1:49–2:14, 4:19–30, 4:58–60. The portable electronic device “can be used for example for monetary transactions or identification purposes.” *Id.* at 4:16–18.

The control device can be a button, PIN keypad, fingerprint scanner, or “any suitable device allowing the portable electronic device holder to selectively trigger a data conveyance operation.” *Id.* at 5:5–8. If the control device includes a PIN keypad, a device holder can “type in a personal identification number (PIN) which will be compared by central unit 40 to a PIN pre-saved in memory unit 42, with a PIN match validating the portable

¹ Quotations from patent documents may omit or de-emphasize bold numerals.

electronic device user and triggering the data conveyance operation.” *Id.* at 5:19–26. The control device is “triggered when the portable electronic device holder has successfully accomplished the necessary steps for control device 12 to issue an activation command, for example when the PIN or fingerprint scan was authenticated.” *Id.* at 5:33–37.

The data forwarding “switching element 44b can comprise a decisional logic circuit” that “directs the data flow towards an appropriate destination” depending on whether the switching element is in “an activated state” or “an inactive state.” *Id.* at 4:26–30, 6:14–25. The state of the switching element is determined “in response to an activation cue being received by transceiver 18 or not” from a remote data exchange device (Figs. 1, 9), such as an ATM or public transportation debit machine. *Id.* at 5:47–54, 6:4–14, 8:32–41. The remote data exchange device may be “any sort of data exchange device . . . able to cooperate with transceiver 18 of device 10.” *Id.* at 5:47–54, 7:55–67. “By default, switching element 44b is in its inactive state” until an activation cue is received. *Id.* at 6:26.

The ’333 patent states that “[t]he exact nature of this data conveyance operation will depend on the state of switching element 44b,” which depends on whether or not the switching element has received an activation cue:

More particularly, if *no activation cue is received* by portable electronic device 10, then switching element remains in its *inactive state*. Upon control device 12 being selectively triggered by the portable electronic device holder, *data will be forwarded from electronic circuit 14 to user interface device 16*, for communicating information to the portable electronic device holder.

However, upon an *activation cue being received* by portable electronic device 10, switching element 44b switches to its *activated state*. If control device 12 is selectively triggered by the portable electronic device holder while switching element

44b is in this activated state, a data exchange will be initiated between portable electronic device 10 and the external data exchange device 9.

Id. at 6:52–65, Fig. 2 (emphasis added). In short, element 44b can switch between alternate data conveyance pathways depending on whether or not an activation cue was received at the time the control device is triggered.

The '333 patent describes how an electronic public transportation debit card would work. If a cardholder wants to check the amount of “pre-stored electronic money” remaining on his transportation card before entering a public transportation station, “switching element 44b is in its inactive state, i.e., not within the activation cue emission range” of a public transportation debit machine located inside the station. *Id.* at 7:55–61, 8:24–27. If the cardholder enters a PIN that is authenticated, then the control device issues an invariable activation command that triggers the switching element to convey “data from electronic circuit 14 . . . to display screen 16 to display the total amount of electronic money remaining in card memory 42.” *Id.* at 8:27–31. Because the switching element is in the inactive state, “[n]o data exchange with an external debit machine would then be attempted by [the] card.” *Id.* at 8:30–31.

When the cardholder enters the station and approaches a public transportation debit machine that “emit[s] an activation cue in the form of a predetermined contactless data transmission,” the transportation card receives the activation cue and “switching element 44b switches to its activated state.” *Id.* at 6:59–61, 7:61–8:2. If the cardholder enters a PIN that is authenticated, then “a data exchange in the form of an electronic money transaction would occur between the payment card and the debit machine” via a communication link, because the switching element is in the

activated state. *Id.* at 5:44–46, 8:2–5, Fig. 1. The cardholder would then be allowed to enter the public transportation system. *Id.* at 8:32–38.

The '333 patent states:

The present invention is thus particularly advantageous, in that the portable electronic device holder needs only trigger [the] control device to *issue an invariable activation command for either the data exchange or the data display to occur*. By means of the switching element and transceiver acting as a cue receiver, both located on portable electronic device, the proper data conveyance within portable transaction device will occur automatically upon this invariable activation command being issued.

Id. at 8:51–59 (emphasis added).

In summary, when a user selectively triggers the control device (e.g., enters a PIN that is authenticated), the control device issues “an invariable activation command . . . that would result in two different possible data conveyance operations” depending on whether the switching element has received an activation cue (activated state) or not received an activation cue (inactive state). *Id.* at 8:32–41; *see also id.* at 5:33–39, 6:42–50, 7:15–17.

D. Illustrative Claim

Petitioner challenges all claims 1–13 of the '333 patent. Claims 1 (device), 10 (system), and 11 (method) are the independent claims. Claims 2–9 depend, directly or indirectly, from claim 1. Claims 12 and 13 depend from claim 11. Claim 1, reproduced below using Petitioner's bracketed identifiers, illustrates the claimed subject matter:

[1(Pre)] A portable electronic device, comprising:
[1(a)] an electronic circuit capable of storing data therein, capable of processing data, and capable of data input and output;
[1(b)] a control device operatively linked to said electronic circuit, with an invariable activation command being issued when said control device is selectively triggered;

[1(c)] a user interface device operatively linked to said electronic circuit;

[1(d)] a data transceiver operatively linked to said electronic circuit, said data transceiver being for exchanging data between said electronic circuit and an external data exchange device, and for receiving a selectively emitted activation cue from a source external to said portable electronic device;

[1(e)] a data conveyance switching element operatively linked to said electronic circuit, said switching element being in an activated state upon an activation cue having been received by said data transceiver, and being in an inactive state when no activation cue was received by said data transceiver; and

[1(f)] power means for providing power to said portable electronic device;

[1(g)] wherein upon said control device being selectively triggered to issue an[] invariable activation command:

if said switching element is in said activated state, a data exchange will be initiated through the instrumentality of said data transceiver for exchanging data between said electronic circuit and an external data exchange device;

[1(h)] if said switching element is in said inactive state, data will be conveyed from said electronic circuit to said user interface device for communicating information to the portable electronic device holder.

Ex. 1001, 9:61–10:26.

E. Prior Art and Asserted Grounds

Petitioner asserts claims 1–13 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 4–10	103(a) ²	McGregor, ³ Palmer ⁴
3, 11–13	103(a)	McGregor, Palmer, Tuttle ⁵

Petitioner relies on the declaration of Michael Buehrer, Ph.D. (Ex. 1003) in support of the Petition. Patent Owner relies on the declaration of Mr. Safwan Zaheer (Ex. 2001) in support of the Preliminary Response.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends:

A person of ordinary skill in the art at the time of the alleged invention of the '333 Patent (“POSITA”) would have had a bachelor’s degree in electrical engineering, computer engineering, or in a similar discipline with at least two years’ of experience with wireless communication devices and networks. More education can substitute for practical experience and vice versa.

Pet. 6 (citing Ex. 1003 ¶¶ 34–36). Patent Owner states that it “agrees with Petitioner on the level of ordinary skill in the art.” Prelim. Resp. 8 (citing Ex. 2001 ¶¶ 27–30).

In determining the level of ordinary skill in the art, various factors

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), includes revisions to 35 U.S.C. § 103 that became effective after the filing of the application that led to issuance of the challenged patent. Hence, this *inter partes* review is governed by the pre-AIA provisions of 35 U.S.C. §§ 102, 103.

³ U.S. Patent Pub. No. 2002/0180584 A1 to McGregor Published Dec. 5, 2002 (“McGregor”) (Ex. 1004).

⁴ U.S. Patent Pub. No. 2003/0226041 A1 to Palmer Published Dec. 4, 2003 (“Palmer”) (Ex. 1005).

⁵ U.S. Patent No. 6,078,791 to Tuttle filed Aug. 6, 1997, issued June 20, 2000 (“Tuttle”) (Ex. 1006).

may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). There is uncontested evidence in the record before us that reflects the knowledge and experience of a POSITA.

We adopt the parties’ agreed level of ordinary skill in the art, which is consistent with the description in the ’333 patent and the prior art of record.

B. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). Claim terms “are generally given their ordinary and customary meaning” as understood by a POSITA at the time of the invention. *Id.* When construing a disputed claim limitation, “we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner “submits that all terms be given their plain and ordinary meaning consistent with the *Phillips* standard.” Pet. 16 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*)). The Petition addresses the plain meaning of “*invariable activation command*” with reference to the ’333 patent specification and prosecution history. *Id.* at 16–19. Patent Owner responds by offering constructions of the recited claim terms “*invariable activation command*” and “*activation cue*.” Prelim. Resp. 11–13.

We determine that no construction of claim terms is necessary to decide whether to institute a trial in this case. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. Asserted Obviousness of Claims 1, 2, 4–10 Over McGregor in View of Palmer

Petitioner contends that claims 1, 2, and 4–10 of the ’333 patent are obvious over McGregor in view of Palmer. Pet. 20–54 (citing Buehrer Declaration Ex. 1003 ¶¶ 78–156). The Petition relies on McGregor as the primary reference and its disclosure of a smart card reader (or wallet) in combination with Palmer’s two-way RF communication system. *Id.* The Petition asserts that the combination of McGregor and Palmer discloses, teaches, suggests or otherwise renders obvious all of the limitations recited in the claims. *Id.*

Patent Owner contends that Petitioner has failed to meet its burden to show a reasonable likelihood that at least one of the challenged claims is unpatentable. Prelim. Resp. 1, 19–53 (citing Ex. 2001 ¶¶ 56–165).

“In an *inter partes* review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ 35 U.S.C. § 316(e), and that burden never shifts to the patentee.” *In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016) (quoting *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015)); *see also Aqua Products, Inc. v. Matal*, 872 F.3d 1290, 1306 (Fed. Cir. 2017 (en banc (quoting *Magnum Oil*))).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). Obviousness is resolved based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). A party who petitions the Board for a determination of obviousness must show that “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)).

We assess Petitioner’s evidence and argument according to the above-referenced obviousness standard. We determine the Petition does not satisfy

the reasonable likelihood of prevailing standard under 35 U.S.C. § 314(a). We begin with an overview of McGregor and Palmer.

1. McGregor

McGregor, titled “Bio-Metric Smart Card, Bio-Metric Smart Card Reader, and Method of Use,” is directed to a “system for increasing transaction security across existing credit card processing infrastructure” by integrating bio-metric verification techniques into a “smart card.” Ex. 1004, code (54), Abstract (code (57)), ¶ 12.⁶ The Petition cites to Figure 4 in McGregor, reproduced below:

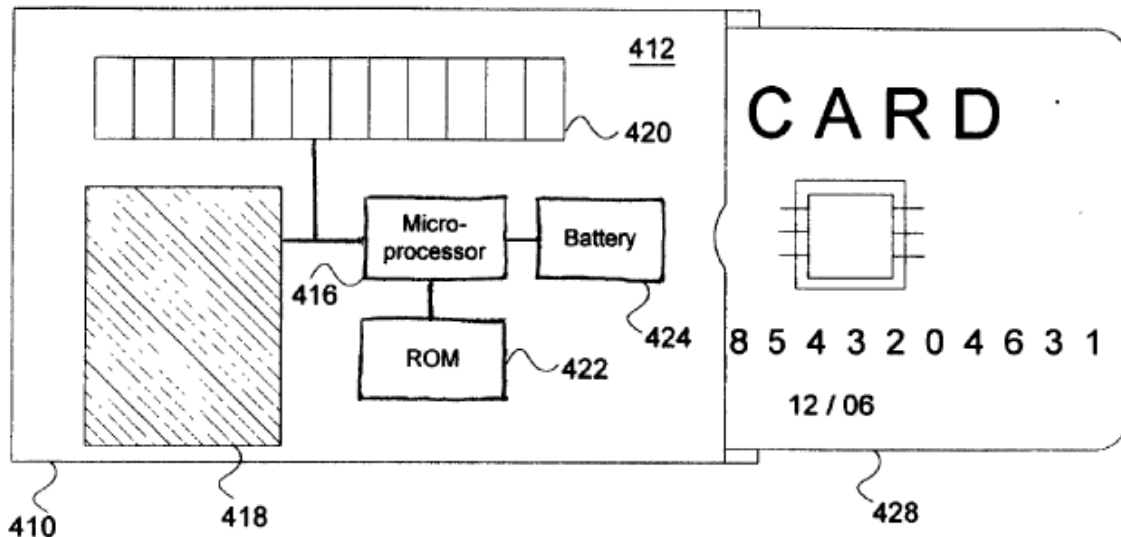


FIG. 4

Pet. 8, 21–23, 25, 36–37, 42 (citing Ex. 1004 ¶¶ 43–44, Fig. 4). Figure 4 depicts a smart card reader or “wallet” 410 for reading a smart card inserted therein (the “wallet embodiment”). Ex. 1004 ¶¶ 43–44. Fingerprint scanner 418 scans a card user’s fingerprint, which triggers the microprocessor to

⁶ We note that McGregor is docketed and cited as Exhibit 1004, but has been marked as “Ex 1003.”

generate a security key code for display in security key display area 420. *Id.* ¶¶ 39, 44.

McGregor discloses several embodiments for communicating the security key code to a credit card authorization service, such as through a card reader, by telephone, or entering the code in a web page interface for an online Internet transaction. *Id.* ¶ 39. In the wallet embodiment of Figure 4, the smart card reader “may include an IR or wireless transmitter to automatically transmit the security code to a transaction network,” such as the transaction network shown in Figure 12A. *Id.* ¶¶ 44, 75–76. The transaction network checks the user’s account information and security key code and returns a status message—accept or decline—back through the network. *Id.* ¶ 76; *see also id.* ¶ 42 (“an authorization signal is returned across network 125 at step 320”).

2. Overview of Palmer

Palmer, titled “Apparatus and Method for Effecting Secure Physical and Commercial Transactions in a Contactless Manner Using Biometric Identity Validation,” is directed to using biometric identity validation to secure transactions in a contactless manner. Ex. 1005, code (54), Abstract, code (57), ¶ 2. An embodiment, depicted in Figure 4, is reproduced below:

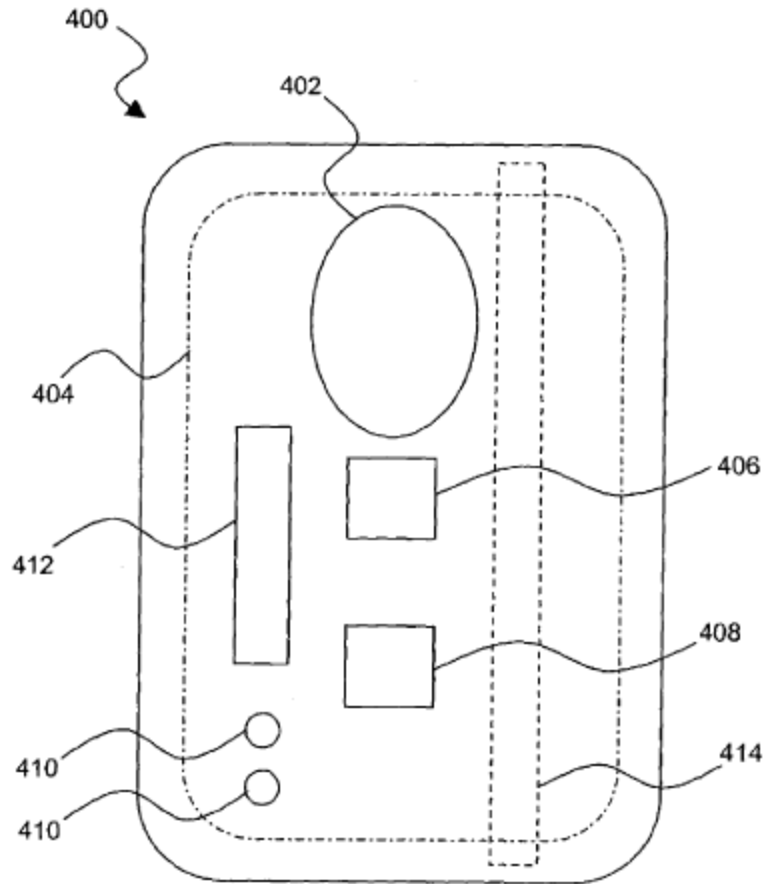


Fig. 4

Id. In Palmer Figure 4, smart card 400 includes fingerprint sensor 402, RF antenna 404, controllers 406 and 408 (ASICs including a microprocessor), function buttons 410, and display 412. *Id.* ¶¶ 30, 32–33. The RF antenna and controller 408 support two-way communication with a card reader for data transfers. *Id.* ¶¶ 27, 33.

In operation, the smart card may be placed within an RF field generated by a “reader/writer device” that powers up the smart card. *Id.* ¶ 50, Fig. 9. A card user places a finger on the fingerprint sensor. *Id.* ¶¶ 50–51. If the user is authenticated, “the device conducts a communication handshake process with the reader/writer device via a

contactless two-way communication link” and executes the transaction. *Id.* ¶ 51. If the user is not authenticated, the device is removed from the RF field, “which powers down the device.” *Id.*

3. *Analysis of Claim 1 in View of McGregor and Palmer*

Petitioner asserts that claim 1 would have been obvious over McGregor and Palmer. Pet. 20–45 (citing Ex. 1003 ¶¶ 77–132). Our analysis of independent claim 1 applies equally to independent claims 10 and 11.⁷ For the reasons articulated below, we determine Petitioner has not established a reasonable likelihood of showing that at least one claim of the ’333 patent is unpatentable as obvious over McGregor and Palmer.

Mapping “a data conveyance switching element” (limitation [1(e)]) onto McGregor-Palmer

The Petition attempts to map the recited “*data conveyance switching element*” (limitation [1(e)]) onto a McGregor “device” placed in an RF field generated by Palmer’s reader/writer device. Pet. 28–31 (citing Ex. 1003 ¶¶ 95–105), 41–42 (citing Ex. 1003 ¶¶ 125–127). The Petition is unclear as to which McGregor device is being referenced, e.g., the smart card of Figure 2, the wallet embodiment of Figure 4, or some combination of embodiments disclosed in McGregor and Palmer. *Id.* Regardless, the proposed modification of McGregor in view of Palmer, as we understand it, is based on conclusory reasoning and appears to be motivated by hindsight rather than the teachings of the applied references. Prelim. Resp. 38–40 (citing Ex. 2001 ¶¶ 97–102).

⁷ Ground 2 challenges independent claim 11 for asserted obviousness over McGregor, Palmer, and Tuttle. The Petition’s reliance on Tuttle for its teaching of distinct data transmitter, data receiver, and cue receiver ports does not alter our analysis for claim 11. Pet. 55–62.

For example, Dr. Buehrer testifies that a:

POSITA would have understood that a series of instructions would be programmed into McGregor's microprocessor to function as a switching element (pursuant to Palmer's teachings), and *as described in the '333 Patent*. See Claim [1(b)]; see '333 Patent, 6:9-14. Accordingly, McGregor's microprocessor is a switching element (1) that is placed into an activated state after receiving a handshake signal (an activation cue) that establishes a communication during the handshake process and (2) that remains in an inactivated state if no reader/writer device is detected (no activation cue).

Ex. 1003 ¶ 127 (emphases added). Dr. Buehrer's citation to the '333 patent, without explaining his mapping of limitation [1(e)] onto McGregor-Palmer beyond a general reference to 10-plus pages of limitation [1(b)] "*control device*" analysis, suggests hindsight reasoning. *Id*; see also Pet. 42 (generally referring to limitation [1(b)]). The Petition's analysis, moreover, does not address why or how McGregor's microprocessor would "accordingly" act as a data conveyance switching element or why a POSITA would want to program McGregor's microprocessor to execute such a switching function in view of Palmer. We find the Petition and Dr. Buehrer's testimony lacking in articulated reasoning supported by rational underpinnings sufficient to support the conclusion that limitation [1(e)] reads on the proposed McGregor-Palmer combination. See *KSR*, 550 U.S. at 418 ("there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

The Petition does assert an obviousness theory within the analysis of the "*control device*" limitation [1(b)]. Pet. 25–35 (citing Ex. 1003 ¶¶ 85–109). The Petition asserts that a "POSITA would have been motivated to implement *McGregor's* device pursuant to *Palmer* such that the security code would be automatically transmitted when the device detects the

existence and availability of an external reader/writer device available to receive the security code.” Pet. 28; *see also id.* at 31 (“A POSITA would have been motivated to implement *Palmer’s* (1) RF field detection and handshake processes and (2) *Palmer’s* transceiver hardware in *McGregor’s* device.”) (citing Ex. 1003 ¶¶ 95–105). We find the Petition’s obviousness theory to be inherently inconsistent and non-specific with regard to the “*data conveyance switching element*” recited in limitation [1(e)].

The Petition asserts that an unspecified embodiment of *McGregor’s* “device,” “equipped with ‘an IR or wireless transmitter,’” would be placed within an RF field generated by “a financial transaction reader/writer device” of *Palmer*. Pet. 28–30 (citing Ex. 1003 ¶ 92; Ex. 1004 ¶ 44; Ex. 1005 ¶¶ 50–51, Fig. 9); 42 (citing Ex. 1003 ¶¶ 125–127). Placement in the RF field generated by *Palmer’s* reader/writer device would allegedly cause *McGregor’s* microprocessor to act as:

a switching element (1) that is placed into an activated state after receiving a handshake signal (an activation cue) that establishes a communication during the handshake process and (2) that remains in an inactivated state if no reader/writer device is detected.

Pet. 42 (citing Ex. 1003 ¶¶ 125–127). That is where the analysis for limitation [1(e)] ends. There is no particular explanation of what the asserted switching function is or what happens when the microprocessor is in an inactive state; i.e., when no reader/writer device or RF field is detected.

To the extent we follow Petitioner’s theory, we agree with Patent Owner that the Petition “lacks specificity as to where each element of the claims of the ’333 Patent is found in the relied upon prior art,” particularly with respect to limitation [1(e)]. Prelim. Resp. 4 (citing 35 U.S.C. § 312(a); 37 C.F.R. § 42.104(b)(4)); *see also SAS Inst.*, 584 U.S. at 357 (“At the

outset, a party must file a petition to institute review, 35 U.S.C. § 311(a), that identifies the challenged claims and the grounds for challenge with particularity, § 312(a)(3).”).

We address below several inconsistencies with the Petition’s switching theory, including why and how McGregor’s security key code would be transmitted to the display area in McGregor’s device when in an “*inactive state*” as recited in limitation [1(h)] (“*in said inactive state, data will be conveyed from said electronic circuit to said user interface device for communicating information to the portable electronic device holder*”).

Inconsistencies in the Petition’s “Switching” Theory

First, the McGregor wallet embodiment (Figure 4) works in a different way than the data conveyance switching element in the ’333 patent. In McGregor, a fingerprint scan triggers a microprocessor to generate a security key code for display on the wallet, and a wireless transmitter “automatically transmit[s] the security code to a transaction network” for authorization. Ex. 1004 ¶ 39. When authorized, McGregor’s wallet embodiment executes the transaction, nothing more. The McGregor wallet embodiment does not disclose, teach, suggest, or benefit from a data conveyance “switch.”

We agree with Patent Owner that “[n]either [] McGregor [n]or Palmer teach or describe a switching element.” Prelim. Resp. 38 (citing Ex. 2001 ¶ 97). As Dr. Zaheer testifies,

the Petitioner does not explain why a POSITA would choose to use the microprocessor as a switching element when a simpler alternative is known. The Petitioner described two approaches for conveying data. The first approach put forth by the Petitioner and its expert is a device that *both displays and transmits its data* (non-switching approach) when an activation cue is received and has no switching element

In the first approach, no switching occurs, and data is sent to both the display and transmitter. . . .

Neither[] McGregor [n]or Palmer teach or describe a switching element.

Ex. 2001 ¶¶ 97–99 (citing Pet. 42; Ex. 1003 ¶¶ 107–108, 125–127). The non-switching approach acknowledged by Petitioner and described by Dr. Zaheer is consistent with the disclosures in McGregor and Palmer. The Petition’s asserted switching approach is not.

Dr. Zaheer testifies that:

[t]he only explanation in the Petition for selecting a switching approach over a non-switching approach as described by the Petitioner is cites to the ’333 Patent. . . .

A POSITA would understand that it is simpler to code conveying data to both data paths (i.e., copying data) rather than coding switching of data paths with all the associated overhead of ensuring data is stopped on one path properly and started on another. Furthermore, the amount of memory required would be reduced by the simpler design.

No software is identified as a switching element in either *McGregor* or *Palmer*. The microprocessor of *McGregor* is not described as doing any switching of data paths. . . .

Next, the Petitioner disregards its dual data conveyance approach when it states, “*McGregor’s* device, modified pursuant to *Palmer’s* processes, satisfies this limitation.” Pet. 42. However, *Palmer’s* process (and similarly *McGregor’s* device) does not have: (1) two data conveyance paths; (2) a switching element; (3) switching code for a microprocessor; or (4) any explanation of why a POSITA would choose one approach over another, except for what is taught in the ’333 Patent.

Id. ¶¶ 100–103. We agree with Dr. Zaheer’s analysis, which is consistent with the disclosure and teachings of McGregor and Palmer.

Second, the Petition’s mapping of the “*data conveyance switching element*” onto a McGregor-Palmer device is based on a flawed assumption.

The Petition posits that McGregor “does not explain how the device determines *whether* to automatically transmit the data [security key code] in lieu of (or in addition to) displaying the data.” Pet. 25 (emphasis added); *see also id.* at 20 (“McGregor doesn’t describe . . . how the system determines *when* to automatically transmit the security key.”), 31 (“Palmer’s process . . . would be implemented to dictate *when* McGregor’s wallet device should ‘automatically transmit the security code to a transaction network.’”) (emphases added). The assumption is flawed because McGregor’s system does not determine “whether” or “when” to transmit the security code; it happens “automatically.”

Contrary to the Petition’s contention, display of the security key code in McGregor is not optional. *See* Pet. 24 (“outputs that security key data (e.g., wirelessly to a transaction network *and/or to the display*”)), 25 (“causing a microprocessor to issue a command to *display data* (e.g., a security keycode) *and/or* to automatically transmit that same data wirelessly”), 34 (“security key code to be *displayed* on the card *and/or* transmitted through a wireless network”), 35 (“*McGregor’s* microprocessor would cause the security key code to be wirelessly *transmitted instead of displaying*”), 42 (“transmitting a security key code to the device’s *display and/or* automatically transmitting the code”). As the Petition itself acknowledges, “*McGregor* teaches that . . . when the security key is created, it is automatically displayed without any additional user input.” Pet. 34–35 (citing Ex. 1003 ¶ 107; Ex. 1004, Fig. 3). The Petition also acknowledges that the displayed security key code is automatically transmitted to the transaction network for authorization (a non-switching approach). Pet. 8 (“Wallet 410 may also ‘include an IR or wireless transmitter to automatically transmit the security code to a transaction network.’”) (citing

Ex. 1004 ¶ 44), 37 (“McGregor teaches that the wallet “may include an IR or wireless transmitter to automatically transmit the security code to a transaction network.”) (citing Ex. 1004 ¶¶ 44, 53). The Petition further acknowledges that McGregor’s device displays the security key code “such that it can be conveyed to a credit card authorization service and used to approve a transaction.” Pet. 7 (citing Ex. 1004 ¶¶ 37–42).

In short, there is no teaching or suggestion in McGregor that the smart card switches between displaying the security key code on a device and transmitting the security key code to a transaction network.⁸

Third, the Petition expressly acknowledges that McGregor’s microprocessor “remains in an inactivated state if no reader/writer is detected.” Pet. 42. The inability of McGregor’s device to detect Palmer’s reader/writer in the asserted “*inactive state*” would mean the McGregor device is not within an RF field needed to activate the device and provide two-way communication to exchange data.⁹ As the Petition states:

⁸The Petition’s assertion that the McGregor device is “equipped with a wireless transceiver” is also inaccurate. Pet. 20. McGregor discloses a transmitter, not “*a data transceiver*” as recited in the ’333 patent claims. Ex. 1004 ¶ 44 (“The wallet may include an IR or wireless transmitter to automatically transmit the security code to a transaction network.”), 69 (same), claim 4 (“a wireless transmitter to transmit the security key to a network device”). McGregor does not teach utilizing a transceiver, and the Petition does not address persuasively why a POSITA would want to replace it with Palmer’s two-way RF communication system.

⁹ The Petition’s reference to Palmer’s disclosure of providing alternate battery power is not consistent with the Petition’s theory that placement of McGregor’s device within the RF field of Palmer’s reader/writer activates the device. See Pet. 12 n.4, 30 n.9 (“*Palmer* expressly contemplates battery powered implementations that do not depend on inductive power”). Moreover, the Petition fails to explain how the proposed McGregor-Palmer

Palmer describes a process through which its device is placed within the RF field of a financial transaction reader/writer device, triggering the authentication process that includes (1) authenticating a user's fingerprint, (2) a handshake communication between the device and reader/writer, and (3) a *two-way communication between the user device and the reader/writer device* furthering a transaction.

Pet. 28–29 (citing Ex. 1003 ¶ 92; Ex. 1005 ¶¶ 50–51, Fig. 9). The Petition fails to explain how such a device would work in the asserted “*inactive state*”—where no reader/writer is detected or two-way communication means provided—to communicate data to a display.

Fourth, Petitioner's assertion, that although “the claims do require transmitting data when an activation cue is received . . . they do not exclude a device that both *displays and transmits* its data when an activation cue has been received,” is confusing and inconsistent with the claim language reciting a data conveyance “switching” element. Pet. 35 (emphasis added). Petitioner's argument, that “whether *McGregor's* device automatically transmits the security key code instead of or in addition to displaying that data does not impact the Proposed Grounds,” is also confusing and inconsistent with both the claim language and how the McGregor device actually works. *Id.* Claim 1 calls for a “*data conveyance switching element*,” but there is no switching between two data conveyance paths when McGregor's device transmits the security key code to the display and “automatically transmit[s]” the security key code to the transaction network for authorization. Ex. 1004 ¶ 44; Ex. 2001 ¶¶ 97–103.

device would work with battery power but no RF field to provide two-way communication.

4. Conclusion

In conclusion, for the reasons given above, the Petition does not adequately support the assertion that McGregor in combination with Palmer discloses, teaches, suggests, or otherwise renders obvious independent claims 1 and 10 (Ground 1). Therefore, we determine that the Petition does not demonstrate a reasonable likelihood Petitioner would prevail in showing the unpatentability of claims 1, 2, and 4–10 as obvious over McGregor in view of Palmer (Ground 1). *See, e.g., Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008) (“[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious.”).

D. Asserted Obviousness of Claims 3 and 11–13 Over McGregor, Palmer, and Tuttle (Ground 2)

The Petition’s obviousness analysis for claim 3, which depends from claim 1, and claims 11–13 (Ground 2) does not address the deficiencies of McGregor and Palmer discussed above regarding independent claims 1, 10, and 11. Pet. 54–64 (citing Ex. 1003 ¶¶ 163–186); *see id.* at 55 (“POSITA would have been motivated to implement the combination of **McGregor** and **Palmer** with distinct data transmitter, data receiver, and cue receiver ports pursuant to the teachings of **Tuttle**.”). As a result, the Petition has not demonstrated a reasonable likelihood Petitioner would prevail in showing that claims 3 and 11–13 are unpatentable over McGregor, Palmer, and Tuttle (Ground 2).

III. CONCLUSION

For the foregoing reasons, we determine Petitioner has not established a reasonable likelihood of prevailing in its challenge to the patentability of

claims 1–13 in the '333 patent. Therefore, we deny institution of *inter partes* review of the challenged claims.

ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied and *inter partes* review is not instituted.

FOR PETITIONER:

Paul Hart
Adam Seitz
ERISE IP LAW
paul.hart@eriseip.com
adam.seitz@eriseip.com

FOR PATENT OWNER:

Robert Hart
Meredith Addy
Gregory Gulliver
ADDYHART P.C.
robert@addyhart.com
meredith@addyhart.com
gbgulliver65@gmail.com