

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MASTERCARD INCORPORATED AND MASTERCARD
INTERNATIONAL INCORPORATED.,

Petitioner,

v.

OV LOOP, INC.,

Patent Owner.

Case IPR2023-01290

Patent 10,032,171

**PATENT OWNER'S
PRELIMINARY RESPONSE
UNDER 37 C.F.R. §42.107**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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2002	Declaration of Diane S. Rice in support of Motion for <i>Pro Hac Vice</i> Admission
2003	Declaration of Darrell Atkinson in support of Motion for <i>Pro Hac Vice</i> Admission
2004	Wikipedia Article – Host Card Emulation
2005	NFCW Article, “SimplyTapp proposes secure elements in the cloud”, dated Sept. 19, 2012
2006	Android KitKat (https://developer.android.com/about/versions/kitkat)
2007	NFCW Article, “Google gets around the carriers with Host Card Emulation for NFC payments”, dated Oct. 31, 2013
2008	Visa Inc. Press Release - Visa to Enable Secure, Cloud-Based Mobile Payments

Patent Owner OV Loop, Inc. (“OV Loop” or “Patent Owner”) respectfully submits this Preliminary Response to Mastercard Incorporated’s and Mastercard International Incorporated’s (“Mastercard” or “Petitioner”) above-captioned Petitioner for *inter partes* review of United States Patent No. 10,032,171 (“the ’171 patent”).

Mastercard’s petition, which is the second petition Mastercard filed on the same day challenging claims 1-33 of the ’171 patent, should not be instituted. It is based primarily on two piece of prior art that were considered by the Examiner during the extensive prosecution history of the ’171 patent and that are cited on the face of the ’171 patent. The Petition also relies in part on a set of industry standards that were cited in the file history as well. Petitioner’s arguments here are not new, and they are not reasonably likely to succeed.

I. INTRODUCTION

The ’171 patent was invented by Douglas Yeager who is a pioneer in the secure payments space who has been widely recognized for his contributions to the field and credited as the inventor of a technique called Host Card Emulation (HCE). EX2004. HCE has been described as a technique that “enables near field communication (NFC) information

transfer between a terminal configured to exchange NFC radio information with an NFC card and a mobile device application configured to act or pretend to emulate the functional responses of an NFC card. HCE requires that the NFC protocol be routed to the main operating system of the mobile device instead of being routed to a local hardware-based secure element (SE) chip configured to respond only as a card, with no other functionality.” EX2004. Mr. Yeager was the founder of a company called SimplyTapp, aimed at commercializing HCE and NFC cloud based payments. EX2005. Mr. Yeager’s HCE technique, has been widely praised in the payment technology industry and was officially adopted into the Android KitKat operating system in 2013. EX2006; EX2007. Even competitors in the payment space, such as Visa, were quick to praise and adopted HCE. “The Android HCE feature provides us with a platform to evolve the Visa PayWave standard, support the development of secure, cloud-based mobile applications, while at the same time offer greater choice to our clients.” EX2008, 1. “Visa's move to enable NFC payments with Android devices is welcome news and will guide the way for the payments industry.” *Id.*, 2.

Mr. Yeager's company SimplyTapp was later acquired by Patent Owner OV Loop. Using the technology described in the '171 patent, Patent Owner has been developing software to implement a full digital wallet solution along with hardware supporting various forms of contactless payments. The '171 patent has been cited in patent applications assigned to companies such as Paypal, Ebay Inc., Intuit Inc., Capital One Services, LLC, Square Inc., and Groupon Inc.. *See, e.g.*, U.S. Patent No. 10,380,577; Intl. Pub. No. WO2009/017754; U.S. Patent No. 10,275,752; and U.S. Patent No. 10,546,444.

The '171 patent teaches and claims a foundational technique for enabling contactless payments using a mobile device. As the specification explains, some payment technologies rely on a microchip called a Secure Element ("SE") embedded into a payment card, cellular phone, or other mobile device. EX1001, 1:34-38. To use a payment card equipped with a Secure Element, an interrogator or reader must interact electrically with the SE. *Id.*, 1:50-52. With conventional secure element payment systems, the user is required to have physical possession of a "card" (e.g., a physical card or a mobile device with a secure element microchip) that matches the authorization capabilities of a merchant's system where a

purchase is made. *Id.*, 1:57-60. In this conventional approach, prior to a card being issued, the SE is typically injected with personalization or “credential” data that is generated from a hardware security module (HSM). EX1002, 804. The HSM typically injects a permanent cryptographic key into the SE that is used throughout the life of the SE. *Id.* During a typical interrogation, a POS terminal sends a command communication to the SE requesting a cryptogram, which the SE generates using the permanent cryptographic key. However, this technique is limited because many mobile devices do not have an SE microchip, and even if they do, the SE may be limited in the number of card specifications or accounts that it can support. *Id.*

Petitioner has the burden of proof here. 35 U.S.C. §316(e); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable”) (*citing* 35 U.S.C. § 312(a)(3) (2012) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). Mastercard’s Petition must contain evidence to show “that there is a reasonable likelihood that the petition would prevail.” 35

U.S.C. § 314(a). It does not. And the Board must not institute to fill gaps in a Petition or to identify evidence where Mastercard failed to do so. The Board routinely and properly dismisses defective Petitions like Mastercard's at the outset, as it should do here.

II. OVERVIEW

A. The '171 Patent

The '171 patent describes a technique to enable contactless payments using a mobile device without requiring an SE but still utilizing existing POS terminal hardware. Instead of relying on a pre-programmed Secure Element that is directly interrogated by the POS terminal, the '171 patent discloses a mobile device that includes an application running in an operating system and a technique to allow the mobile application to be interrogated by an electronic reader (*e.g.*, a POS terminal) for digital credential data associated with the payment account. EX1001, 17:46-63. Using a different communications channel, the mobile device can interact with a remote authorization server to facilitate access to digital credential data from a remote hosted SE. *Id.* Instead of relying on a track data with an account identifier and associated cryptographic key injected onto an SE, the mobile application

is able to access the track data with an account identifier and associated cryptographic key from the remote SE. *Id.* The mobile device is thus able to complete a secure transaction without having to utilize (or ever access) an SE on the mobile device. *See, e.g., id.*, cl. 1..

B. Claim Construction

For purposes of *inter partes* review, disputed claim terms are construed to give them “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *See* 83 Fed. Reg. 51341 (Oct. 11, 2018) (adopting the standard of *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005)). The proper construction is considered in the context of, and must be consistent with, the specification—and the claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *See, e.g., Phillips*, 415 F.3d at 1313.

Petitioner offers two alternative constructions for "at least one response application data protocol unit containing the response cryptogram and an account identifier for the account" (hereinafter, the “R-ADPU Term”) but asserts that it is not necessary for the Board to

construe the term. Pet., 24-25. Patent Owner does contend that any terms require construction to find that all grounds in Petitioner's challenge fail.

C. Person of Ordinary Skill in the Art

The field of technology for the '171 patent is secure payment systems. A person of ordinary skill in the art of the subject matter of the '171 patent would have the equivalent of an undergraduate degree in electrical and computer engineering (or a related field) and approximately two years of work experience in the field of secure payment system. Additional education in the field could be substituted for industry experience, and vice versa.

D. Obviousness

Whether a patent claiming a combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). To reach this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness

requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.* “To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016); *see In re NuVasive, Inc.*, 842 F.3d at 1383 (stating that “conclusory statements” amount to an “insufficient articulation[] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’”).

III. INSTITUTION SHOULD BE DENIED BECAUSE PETITIONER HAS FAILED TO SHOW A REASONABLE LIKELIHOOD OF SUCCESS AS TO ANY CHALLENGED CLAIM

A. Petitioner fails to show that any challenged claim is rendered obvious in Ground 1

1. [1.A-4]: “[the application configured to] generate cryptograms requested during interrogations over the first communications channel using the data associated with the account received from the remote computer system, wherein the application does not access a permanent cryptographic key issued for the digital credential during the interrogations”

This limitation relates in part to how the application is “configured to generate cryptograms requested during interrogations over the first first communications channel.” EX1001, cl.1. The Petition fails to show that White discloses this element. In particular, as explained below, it fails to demonstrate that the POS terminal in White requests pay numbers during interrogations over the first communications channel.

Petitioner alleges that White’s “payment number” is a cryptogram. Pet., 41. And Petitioner cites to a portion of White disclosing that “in alternate embodiments, the payment number is routed through network

144 or through point-of-sale device **120**.” Pet., 41 (citing EX1013, 5:10-12). But these statements in White only demonstrate that the payment number may be “routed through” the point-of-sale device. They do not disclose that the point-of-sale device in White ever makes a ***request*** for a cryptogram.

Petitioner tries to correct this plain deficiency with flawed attorney argument, but it fails. Petitioner argues: “because the cryptogram (‘payment number’) may be communicated to the POS terminal ... the cryptogram is information extracted by POS and is therefore cryptogram ‘requested during interrogations over the first communications channel.’” (Pet. 41-42) (internal citations omitted). Petitioner appears to be arguing, purely based on attorney argument, that if White’s payment number is ***communicated*** to the POS terminal, it must have been done so in response to ***request*** from the POS during interrogation. There is simply no evidence of this in White, which never uses the word “interrogation” and never discusses any request made by the POS to the mobile device. *See generally* EX1013.

Petitioner’s citation to 6:3-5 of the ’171 patent does nothing to remedy Petitioner’s flaw here. Pet. 42. The ’171 patent’s use of the word

“interrogator” is by no means a definition of “interrogation.” Even if it were, it doesn’t say anything about a “request,” much less about interrogation requiring a “request.” EX1011, 6:3-7 (“Cards containing an SE are typically presented to an RFID (Radio Frequency Identification) reader device as the interrogator that extracts the information from the card and delivers the data to the POS terminal and then forwarded by the POS terminal on to a card processor for authorization.”). Because White does not disclose “cryptograms requested during interrogations” from the POS terminal, Petitioner’s contention that limitation [1.A-4] is disclosed by White cannot succeed.

Petitioner then appears to present an argument that this limitation could also be met if: a POSITA chose to (1) implement White to conduct EMV transactions, (2) implement White’s “one time digital key” as an EMV Session Key, and then (3) implement White’s “payment number” as an EMV Application Cryptogram. Pet., 42. In order to demonstrate obviousness, it is not enough for Petitioner to simply identify separate disclosures in the art and combine them together to fit the claims. Rather, an obviousness analysis requires some reasoning as to why a POSITA

would combine the references in the proposed manner with a reasonable expectation of success.

Here, Petitioner offers only a cursory explanation of why a POSITA would be motivated to implement White to conduct transactions according to EMV specifications. Pet., 30-31. But, implementing according to EMV specifications is only the first step. As Petitioner admits, having chosen to implement White to conduct EMV transactions, a POSITA would then have to separately choose to implement White's "one time digital key" as an EMV Session Key. Petitioner presents no explanation of this. Pet., 42. And finally, even if a POSITA made these first two choices, Petitioner has not shown why a POSITA would then choose to implement White's "payment number" as an EMV Application Cryptogram. Pet., 42. Instead of articulating a motivation for this string of choices, Petitioner simply says the entire sequence would have been "straightforward." *Id.* Petitioner's expert also provides no explanation as to why a POSITA would have chosen to implement its features in the proposed manner, instead simply repeating Petitioner's assertion that the proposed implementation of White would have been "straightforward." *Id.* Thus, neither Petitioner nor its expert has

provided legally sufficient explanation for the combination/modification of references it proposes. For this reason, its obviousness argument as to claim 1 is not reasonably likely to succeed.

Accordingly, Petitioner has not shown any reasonable likelihood of success in showing that claim 1 is anticipated or obvious in Ground 1. Because Petitioner has failed to show that this limitation of independent claim 1 is disclosed by White or that it would have been obvious, its arguments in Ground 1 as to each of the challenged claims that depend from claim 1 (i.e., claims 2 through 16) also fail.

2. [1.C]: “receiving by the application, from the remote computer system, over the wireless network, the first set of data associated with the account, the first set of data associated with the account usable by the application to formulate an application protocol data unit response, the first set of data comprising a first non-permanent cryptographic key associated with the account;”

There is no dispute that an “application protocol data unit response” is not disclosed in White, and Petitioner makes no mention of this element in its discussion of White in regards to limitation [1.C]. Pet.

43 (first para.). Accordingly, Petitioner must rely on “a POSA implementing White to carry out EMV transactions” in an attempt to satisfy this limitation.

As it did for limitation [1.A-4], Petitioner relies on “a POSA implementing White to carry out EMV transactions.” Pet., 43. Petitioner argues that such a POSITA would “understand that a Session Key . . . would be an obvious way to implement White’s “one-time digital key.” *Id.*, 43. Petitioner then proceeds to describe how Application Cryptograms are generated according to the EMV standards. However, Petitioner never explains why a POSITA would find it obvious that White’s one-time digital key could (or should) be implemented as an EMV Session Key. Pet., 43. Petitioner’s expert offer no explanation either. EX1008, 76-77.

Petitioner’s strategy here of simply assuming that a POSITA would be motivated to implement White according to EMV standards, and further assuming particular implementation details without any explanation as to why those details would have been chosen is repeated throughout Ground 1. For example, Petitioner takes the same approach for limitation [1.D] (Pet. 44), [1.E] (*id.*), [1.E-1] (*id.*, 45), [1.E-2] (*id.*, 46), and [1.E-3] (*id.*). In none of these instances does Petitioner provide any

legally sufficient explanation as to why a POSITA would be motivated to combine the references in the manner proposed.

For all of these reasons, Petitioner fails to demonstrate any reasonable likelihood that claim 1 is obvious under Ground 1. Because Petitioner has failed to show that claim 1 is disclosed by White or that it would have been obvious, its arguments in Ground 1 as to each of the challenged claims that depend from claim 1 (i.e., claims 2 through 16) also fail. Petitioner also basis its entire analysis for claim 17 on its analysis of these similar limitations from claim 1. *See Pet.*, 52-53. Accordingly, Ground 1 fails to demonstrate any likelihood of unpatentability of claim 17 or its dependents claims.

B. Petitioner fails to show that any challenged claim is rendered obvious in Ground 2

Petitioner devotes nearly five full pages of its Petition to its effort to demonstrate that there were only a finite number of solutions available to a POSITA implementing Mellqvist to conduct EMV credit card transactions. *Pet.*, 69-73. Petitioner's analysis here is a purely hindsight driven effort to reconstruct the claim limitations.

Petitioner's assertion that there are a finite number of solutions available to a POSITA motivated to implement Mellqvist to support EMV credit card purchases is absurd. For example, Petitioner lists at least eight different types of data that Petitioner divides into three categories based on (1) who the data is provided to, (2) whether the data is knowable prior to a transaction, and (3) whether the data is to be provided by the "Card." Pet. 70; EX1008, ¶152. But these three categories are not the only ones possible; they are just the three categories the Petitioner has chosen for grouping the data. There could be many more possible groups dividing these eight items.

Based on the three categories of data it has created, which is entirely arbitrary, Petitioner then asserts that there are only three ways to implement Mellqvist to carry out EMV credit card transactions. But these three ways are only a small fraction of what is possible. For example, Petitioner says that one option is to "have remote secure elements 171-174 provide all items" in Petitioner's second and third data categories and then have the user device relay interrogation messages between the remote secure element and the POS terminal. But why would a POSITA be required to utilize a remote secure server for "all

items?” Another possibility, for sure, is to have the remote secure elements provide only some of the data items listed in Petitioner’s second two categories. Or, only one item. And that item could be any one of the listed items.

What quickly becomes apparent is that there aren’t just three solutions, as Petitioner contends. There are many more. For this reason, Petitioner’s attempt in Ground 2 to show that its proposed combination of Mellqvist with the EMV standards was obvious cannot stand scrutiny.

Even if Petitioner were correct in its assertion that there were only a finite number of solutions available to implement Mellqvist to support EMV credit card payments, in the remainder of Ground 2, Petitioner relies upon yet additional layers of obviousness.

For example, in its discussion of limitation [1-A.3], Petitioner contends that a POSITA would have “also found it obvious to configure application of portable device 190 to request, from remotely hosted secure elements, a Session Key.” Yet Petitioner’s only explanation as to why this choice would have been obvious is the unhelpful comment that it is “for similar reasons as explained for [1.A-3] of Ground 1 and in Part IX.C.1.” Pet., 75. This is an entirely insufficient explanation of its basis for

asserting obviousness. Ground 1 is based on a different reference, White, and Petitioner offers no explanation as to how its arguments for obviousness based on White would apply here to Mellqvist. Petitioner also gives no indication as to how its present arguments are “similar” to those previously presented, or how they might be different. *Id.*

Petitioner repeats essentially the same inadequate explanation of its basis for asserting obviousness in its discussion of limitation [1.A-4]. And, for the same reasons, it is insufficient.

For all of these reasons, Petitioner’s obviousness assertions as to claim 1 do not successfully demonstrate a reasonable likelihood of success. Petitioner’s failure as to claim 1 also means that the challenged dependent claims (2-16) have not been shown to be unpatentable. And, since Petitioner’s claim 17 arguments cite back to and depend on its arguments as to claim 1, Petitioner’s assertions as to claim 17, and all of its dependents also fail.

IV. THE BOARD SHOULD DENY INSTITUTION UNDER §325(d)

The Board should exercise its discretion under 35 U.S.C. § 325(d) to deny institution. The Board “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.”

35 U.S.C. § 325(d). As the Board explained in *Advanced Bionics*,

[U]nder § 325(d), the Board uses 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 Petition has demonstrated that the Office erred in a manner material to the patentability of the challenged claims. If a condition in the first part of the framework is satisfied and the Petition fails to make a showing of material error, the Director generally will exercise discretion not to institute inter partes review.

Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate GmbH, IPR2019- 01469, Paper 6 at 8-9 (PTAB Feb. 13, 2020) (precedential). “If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability. At bottom, this framework reflects

a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

“In evaluating whether to exercise our discretion when the same or substantially the same prior art or arguments previously were presented to the Office under section 325(d), we have weighed some common *non-exclusive* factors:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relied on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of

the prior art or arguments.”

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17-18 (§ III.C.5) (PTAB Dec. 15, 2017) (“*Becton, Dickinson*”) (informative, precedential as to § III.C.5). “If, after review of factors (a), (b), and (d), it is determined that the same or substantially the same art of arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.” *Advanced Bionics* at 10.

A. *Advanced Bionics* Step 1 (*Becton, Dickinson* Factors (a), (b), and (d)): The Same or Substantially the Same Prior Art or Arguments Were Previously Presented to the USPTO

Petitioner admits that both White and Mellqvist were cited on the face of the '171 patent, so there is no question that these references were presented to the USPTO. Petitioner also asserts in its Explanation of Parallel Petitions paper that “the 1290 Petition relies on U.S. Patent No. 8,374,916 (“White”) and U.S. Patent Pub. No. 2010/0153721 A1 (“Mellqvist”) as *primary references*. . . .” Paper 3 at 3 (emphasis added). In the same paper, Petitioner includes a table listing the “Base

References Used for Grounds,” in which only White and Mellqvist are listed for the present Petition.

Ranking	Petition	Claims	Assumed Priority Date	Base References Used for Grounds
#1	1289	1–33	Aug. 30, 2012	Ground 1: Collinge Ground 2: Fiske
#2	1290	1–33	Aug. 30, 2011	Ground 1: White Ground 2: Mellqvist

Paper 3, 2.

Petitioner’s statement that White and Mellqvist “do not appear to have been considered substantively by the examiner” is of no moment. “Previously presented art includes art made of record by the examiner, and art provided to the Office by the applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.” *Advanced Bionics* at 8; *see also, e.g., Biocon Pharma Ltd. v. Novartis Pharms. Corp.*, IPR2020-01263, Paper 12 at 9 (PTAB Feb. 16, 2021) (“[W]e accept that the Examiner considered [the prior art reference] because it is listed on the IDS and the Examiner signed the IDS with the statement ‘all references considered except where lined through.’”); *Vital Connect, Inc. v. Bardy Diagnostics, Inc.*, IPR2023-00381, Paper 7 at 14 (PTAB July 11, 2023) (Because “Oster was listed in

an information disclosure statement (IDS),” “appears on the face of the [challenged patent],” and “[t]he examiner also certified that he considered all references listed in the IDS ‘except where lined through,’ and Oster is not lined through,” “[t]here can be no dispute that Oster was before the Office.”). Thus, Petitioner cannot dispute that the Examiner of the ’171 patent application considered White and Mellqvist.

Petitioner also alleges that the EMV Standards were not presented to the USPTO during prosecution. Pet., 19. Yet, Petitioner ignores that although the EMV Specifications do not appear on the face of the ’171 patent, the file history still demonstrates that the Examiner was aware of the substantive disclosures of the EMV Specifications.

The Board has consistently held that incorporation by reference is sufficient to demonstrate that the Examiner was aware of the substantive disclosure of the reference and satisfies step one of the *Advanced Bionics* framework. *See Monolithic Power Sys., Inc. v. Volterra Semiconductor LLC*, IPR2020-01348, Paper 19 at 11-12 (Mar. 4, 2021); *Free Stream Media Corp. v. Alphonso Inc.*, IPR2019-00762, 2019 WL 4200650, at *5 (Sept. 4, 2019); *see also Universal Imaging Indus., LLC v. Lexmark Int’l, Inc.*, IPR2019-01387, 2020 WL 959375, at *5 (Feb. 27,

2020). Here, the evidence that the Examiner was aware of the EMV Specifications is more than sufficient.

First, Patent Application Publication US2008/0040285 to Wankmueller, which is cited on the face of the '171 patent and was cited by the Examiner (EX1001, 2) expressly incorporates the “EMV Integrated Circuit Card Specifications for Payment Systems” by reference. U.S. Patent Application Publication US2008/0040285 at (“EMV Integrated Circuit Card Specifications for Payment Systems” promulgated by EMVCo. LLC. available on the Internet at <http://www.emvco.com>, which specifications are hereby incorporated by reference in their entirety.”). As Petitioner’s expert readily acknowledges, “[t]he EMV ICC Specification (version 4.2), Exs[1019] to [1022], and Contactless Specification (version 2.1), Exs[1023] to [1029], collectively referred to herein as ‘EMV,’ [are] published by EMVCo, LLC (‘EMVCo’).” EX1008, ¶ 40. And, as Petitioner admits,

EMV® Contactless Specifications for Payment Systems” version 4.2, Books A to D (“Contactless Specification”), Exs[1023]-[1029], which incorporates by reference and refers to “EMV Integrated Circuit Card Specifications for Payment Systems” version 2.1, Books 1 to 4 (“ICC Specification”),

Exs[1019]-[1022], (collectively “EMV Specifications,” hereinafter “EMV”) are industry specification documents published as of April 6, 2011, and June 27, 2008, respectively.

Pet., 16. Thus, Books A to D of the EMV Contactless Specifications for Payment Systems—which Petitioner submits as Exhibits 1023-1029—expressly incorporate by reference Exhibits 1019-1022, which are referred to as Books 1 to 4 of the EMV Integrated Circuit Card Specifications for Payment Systems. Petitioner’s declarant, Mr. Byrne, who attests to have been a board member of EMVCo from July 1, 2006 to October 28, 2011 EMVCo, states that “ICC Version 4.2 Specifications and the Contactless Version 2.1 Specifications were made publicly available no later than June 27th 2008 and April 6th, 2011, respectively, for free download from the EMVCo website (<https://www.emvco.com>). EX1018, 5. The same EMV Integrated Circuit Card Specifications (Books 1-4) were also cited in a document submitted by the Examiner during prosecution of the ’171 patent. EX1002, 892.

Second, the ’171 patent itself describes the EMV contactless specifications. For example, the patent describes that “[t]he details

of an interrogation between a point-of-sale and a digital credential, card, SE representation, and mobile device are defined in ‘card specifications’ and implemented in point-of-sale terminals. Examples of these card specifications at the time of this filing are MASTERCARD PAYPASS-Mag Stripe v3.3, **Contactless EMV**, DISCOVER NETWORK RF Contactless Specification-Supplement Guide For Functional Support, AMEX ALIS v1.7, and VISA Contactless Payment Specification v2.0.2.” EX1001, 26:50-58 (emphasis added).

B. *Advanced Bionics* Step 2 (*Becton, Dickinson* Factors (c), (e), and (f)): Petitioner Has Made No Showing of Material Examiner Error

Although Petitioner admits that the two references it relies on as “primary references” (Paper 3, 3) were cited on the face of the ’171 patent, Petitioner largely ignores this step based on its contention that the EMV Specifications were not presented to the USPTO during prosecution. Pet., 19. Accordingly, rather than expressly address the specific aspects of the prosecution history that demonstrate material error by the Examiner, Petitioner simply refers to the remainder of the Petition, which it says

“shows below how the claims are invalid in view of the art, which arguments were not addressed during prosecution.” This is a complete failure by Petitioner to address Step 2 in the *Advanced Bionics* analysis. Petitioner does not identify even a single instance of material error by the Examiner. Petitioner’s implication that its entire Petition is evidence of material error is ludicrous, and it is a waste of the Board’s resources to comb through every argument presented in the Petition and the complete 1,000+ page file history to determine whether Petitioner’s suggestion has any merit.

V. CONCLUSION

As detailed above, Petitioner has not met its burden to present its arguments and evidence of unpatentability with particularity. 35 U.S.C. §316(e); *Harmonic*, 815 F.3d at 1363 (“the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable”). Petitioner’s failures relate to every challenged claim of the ’171 patent, which leaves no possibility of success on the merits. Institution should be denied.

Respectfully submitted,

Dated: December 29, 2023

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CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))

The undersigned hereby certifies that the word count in this Patent Owner Preliminary Response is 5,012 words, as counted by the word-processing program Microsoft Word that was used to generate this Patent Owner Preliminary Response, where such word count excludes the table of contents, table of authorities, mandatory notices, certificate of service, appendix of exhibits, claim listing, and this certificate of word count. This Patent Owner Preliminary Response is in compliance with the 14,000-word limit set forth in 37 C.F.R. § 42.24(b)(1).

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that the above document was served on December 29, 2023, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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