UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner
v.

CARDWARE INC.,
Patent Owner

Inter Partes Review Case No. IPR2025-01151
U.S. Patent No. 11,328,286

PETITIONER'S CORRECTED OPPOSITION TO PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL

TABLE OF CONTENTS

I. INTRODUCTION 1

II. THE '286 PATENT 3

A. CARDWARE'S PROVISIONAL APPLICATION 3

B. THE FIRST ISSUED PATENT IN THE FAMILY 3

C. CARDWARE'S PATENT PORTFOLIO SHIFTS 3

D. DESCRIPTION OF THE '286 PATENT 6

III. COMPELLING REASONS TO GRANT INSTITUTION 7

A. INSTITUTION OF APPLE'S PETITION FOR *INTER PARTES* REVIEW IS AN APPROPRIATE USE OF BOARD RESOURCES 7

1. The Patent Office Erred in a Way Material to Patentability When it Allowed the '286 Patent 7

2. The Board is Better Suited to Address the Large Number of Patents and the Complexities of the Technology At Issue. 10

B. PO'S REMAINING ARGUMENTS DO NOT JUSTIFY DISCRETIONARY DENIAL 11

1. The '286 Patent Issued in 2022 and No Settled Expectations Favor Discretionary Denial 11

2. PO Failed to Identify Any Claim-Construction Issues 14

3. Judge Albright's Median Time to Trial is 34 Months, Consistent with District-Wide Statistics. 14

4. Apple's Sotera+ Stipulation Mitigates Any Remaining Overlap Concerns Between this IPR and the Litigation 16

5. The '286 Patent Is Only Asserted Against Apple. 18

IV. CONCLUSION 20

TABLE OF AUTHORITIES

CASES

AlmondNet, Inc. et al. v. Amazon.com Inc. et al et al., 6-21-cv-00898, Dkt. 235 (W.D. Tex.).....15

Ingenico Inc. v. IOENGINE, LLC, 136 F.4th 1354, 1367 (Fed. Cir. 2025) 18

IOEngine, LLC v. Roku Inc., 21-cv-01296 Dkt. 309 (W.D. Tex.) 15

Polaris Innovations Limited v. Qualcomm Incorporated et al. 7:24-cv-00296-ADA, Dkt. 31 (W.D. Tex.).....16

PTAB DECISIONS

Anthony Inc. v. Controltec, LLC, IPR2025-00559, Paper 9 (Director Rev. July 16, 2025).....7

Apple Inc. v. Fintiv Inc., IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020).....3, 15, 17, 18, 20

Shenzen Chic Electrics Co., Ltd. v. Pilot Inc., IPR2023-000810, Paper 12 (PTAB Nov. 8, 2023) 10

Tesla, Inc. v. Intellectual Ventures II LLC, IPR2025-00217, Paper 9 (Director Rev. June 13, 2025) 11, 18

STATUTES

35 U.S.C. §102(g).....17

I. INTRODUCTION

Apple Inc. ("Petitioner") respectfully requests *inter partes* review ("IPR") of claims 1-27 ("Challenged Claims") of U.S. Patent No. 11,328,286 ("'286 Patent"). Apple's request is based on compelling obviousness combinations, set forth in detail in the Petition (Paper 1) and summarized as appropriate below.

The '286 Patent is one of six patents in the same family of payment processing patents. All six are asserted by CardWare against Apple in litigation and challenged by Apple in IPRs.[1] There is ample reason to doubt the validity of these patents and to doubt that the initial review conducted by the examiner considered the most relevant references. In the relevant timeframe, there were two undisputed leaders in the payment processing space: MasterCard and Visa. Both were prolific patent filers, and major contributors to the leading global payment standard, EMV (named after EuroPay, MasterCard, and Visa). EX1003, ¶¶45-47. But not one MasterCard or Visa reference can be found cited in the prosecution history or on the face of the '286 Patent. Every one of Apple's IPRs challenging this family of patents relies on between 1 and 5 references assigned to Visa or MasterCard. Had the Examiner considered the pertinent art filed by the leading companies in the payment processing

[1] IPR2025-01145; IPR2025-01146; IPR2025-01147; IPR2025-01148; IPR2025-01149; IPR2025-01150; IPR2025-01151; IPR2025-01152.

space, these patents never would have issued.

There is no settled expectation that the 3-year-old ’286 Patent is valid. The ’286 Patent issued on May 10, 2022, and was the subject of ***two instituted*** PGRs filed by Samsung just a few months later. EX1068, PGR2023-00012 (Paper 14, instituted on 8/11/2023); EX1069, PGR2023-00013 (Paper 14, instituted on 8/11/2023). The PGRs were terminated due to settlement. Further, all six patents CardWare asserts against Apple issued years ***after*** CardWare’s alleged 2017 meeting with Apple and after CardWare significantly altered the scope of its patent portfolio, as discussed below. This history further undermines any settled expectations claim.

CardWare’s remaining arguments are easily disposed of. The average time to trial in the Western District of Texas and Judge Albright’s recent trial statistics support a trial date months ***after*** a final written decision would issue in this case, favoring institution. CardWare’s own exhibits demonstrate that there are no remaining claim-construction disputes that would create any differences between how the claims will be interpreted in this proceeding and the district court. Finally, Apple’s *Sotera-Plus* Stipulation curtails which prior-art invalidity defenses Apple is permitted to raise in district court, limiting Apple to invalidity questions that this Board is statutorily prohibited from addressing, and ensuring that this IPR is a true alternative for those invalidity questions that can be properly raised in an IPR.

The “efficiency and integrity of the [patent] system are best served by”

instituting review of the ’286 Patent. *Apple Inc. v. Fintiv Inc.,* IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020). The Board’s interest in reviewing the examiner’s error in failing to analyze MasterCard or Visa references, the age of the patents, and the lack of settled expectations all weigh strongly against discretionary denial. Accordingly, Apple respectfully requests the Director deny PO’s request for discretionary denial.

II. THE ’286 PATENT

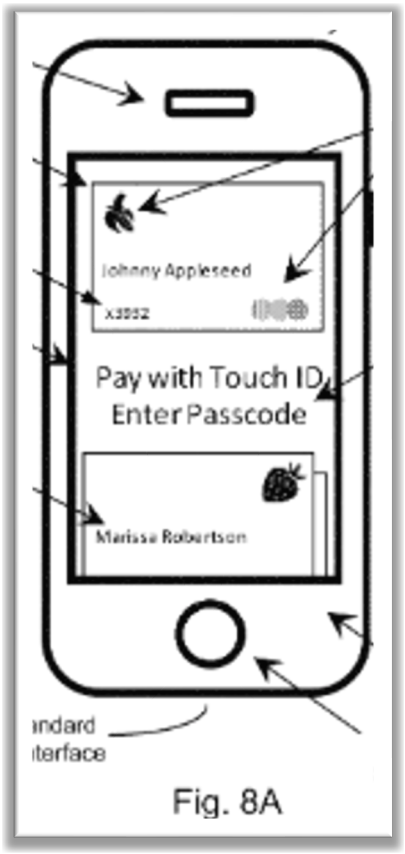
A. CardWare’s Provisional Application

On March 15, 2013—the day before the provisions of the AIA took effect—Mr. David Wyatt filed a 19-paragraph provisional application. EX1062. Mr. Wyatt described a purported invention relating to “credit cards and, more specifically, to more secure, smarter credit cards.” *Id.*, [0001]. The specification primarily described magnetic stripe emulation technology, including an inductor assembly for generating a magnetic field and rate detection assemblies that detect how quickly the user swipes their credit card. *Id.*, [0011]-[0012], claim 1. The specification further mentioned use of “dynamically created credit card numbers.” *Id.,* [0014]-[0015].

B. The First Issued Patent in the Family

On May 5, 2015, the first patent in the family issued—U.S. Patent No. 9,022,286 (the ’286 Patent). EX1063. The claims were again directed to magnetic stripe emulation technology. *See id*., claims 1, 15. This patent is not asserted against, nor challenged by, Apple. CardWare continued to receive patents, but no patents issued to CardWare prior to 2019 have been asserted against Apple (or anyone else).

C. CardWare's Patent Portfolio Shifts



CardWare alleges it met with Apple in 2017. Paper 7 at 15. At that point, ApplePay, launched with MasterCard, had been available for three years. EX1064. After 2017, CardWare's patents began going in a new direction. On December 11, 2018, during prosecution of U.S. Patent No. 10,339,520, CardWare amended its claims previously directed to a "credit card device" to instead refer to an "electronic device" (EX1065, 109-121) and on July 15, 2019, during prosecution of U.S. Patent No. 10,628,820, CardWare added a mobile phone and smartwatch to the specification. EX1066, 174-175, 205-209, 262-268, Figs 8-12. The mobile phone CardWare chose resembles an Apple iPhone, including a circular button labeled "Touch ID button," an iPhone feature released in 2013. EX1067. CardWare chose to use a strawberry and a banana as the exemplary "logos." The new images also refer to a "MASTERCARTE" payment card, with a logo of three overlapping circles.

CardWare also sought a different claim scope after 2017, as evidenced by the fact that CardWare has not asserted any of its pre-2019 patents against Apple (or anyone else) in litigation. After 2017, CardWare began including claim limitations that were not supported by its earliest patent filings, as the Board preliminarily found

in previously instituted PGRs.[2] While Apple did not need to challenge the priority date of CardWare's patents in these IPRs (because the claims are invalid regardless), CardWare's shifting claim scope undermines any allegation of settled expectations.

Despite the new claim scope, CardWare's post-2017 patents received limited scrutiny at the Patent Office. The '286 Patent was subject to a restriction requirement (EX1002, 120-124) but received no other rejections, and no rejections based on any prior art references. Of the six challenged patents, five issued without any prior art rejections; most faced only double patenting rejections or restriction requirements. No MasterCard or Visa references were considered by the examiner during prosecution of the '286 Patent, nor are any found on the face of the '286 Patent.[3]

---

[2] EX1069, PGR2023-00013 (Paper 14 at 9-12); EX1068, PGR2023-00012 (Paper 14 at 10-13) (preliminarily finding insufficient support for at least claim 5 of the '286 in CardWare's provisional application). Limitations such as "static device account number", "device specific" account number" "touch ID button", "biometric sensor", "status" and "receiving a request" also first appeared in CardWare's patent applications (see e.g., EX1065, 109-121) (prosecution of the '520 Patent), but those terms are absent from its provisional application or early patents.

[3] During prosuction of the '579 Patent, four claims faced an initial prior art rejection and 19 patent claims issued without any prior art rejection. EX1087, 98-102.

The first (and only) time MasterCard or Visa references appear in the prosecution history for ***any*** of these patents was during prosecution of the final patent, U.S. Patent No. 11,620,634, and they were not found by the examiner. While the ’634 Patent application was pending, CardWare sued Samsung on five other patents in this patent family. Samsung served invalidity contentions on November 7, 2022. EX1070. The ’634 Patent received a notice of allowance on November 16, 2022, before CardWare informed the examiner of Samsung’s invalidity contentions. EX1071, 452. CardWare filed a RCE with a new IDS on January 12, 2023. EX1071, 1429. The IDS included approximately 275 prior art references, including over 190 non-patent literature references and over 80 patents or patent publications. Buried among the 275+ documents was a single patent assigned to MasterCard, a single patent assigned to Visa, and a handful of 2-4-page news articles relating to MasterCard and Visa payment systems. The examiner did not initial next to any references on the IDS. The ’634 Patent summarily issued with no further rejections.

D. Description of the ’286 Patent

The ’286 Patent includes three independent claims directed to a “payment system” comprising “a payment card device free of any fixed payment numbers visible thereon” and “a computing device.” EX1001 at claims 1, 15, 20. The computing device must “generate” and “convey” “at least a portion of a limited-use card payment information,” so that a “card issuer authority” can reject the

transaction or validate the card payment information. *Id.*

III. COMPELLING REASONS TO GRANT INSTITUTION

A. Institution of Apple's Petition for *Inter Partes* Review is An Appropriate Use of Board Resources

1. The Patent Office Erred in a Way Material to Patentability When it Allowed the '286 Patent

"[I]t is an appropriate use of Office resources to review" where "Petitioner appears to show a material error by the Office." *Anthony Inc. v. Controltec, LLC,* IPR2025-00559, Paper 9 (Director Rev. July 16, 2025). The Examiner materially erred by failing to issue ***any*** prior art rejections during examination of the '286 Patent and by failing to consider MasterCard and Visa's patent filings in particular. No MasterCard or Visa references appear on the face of the '286 Patent, and no MasterCard or Visa references were cited by the Examiner during prosecution of the '286 Patent, even though MasterCard and Visa were the undisputed leaders in the patent processing space and prolific patent filers. *See* EX1003, ¶¶47, 49, 57-59.

MasterCard developed and patented mobile contactless payment technologies many years before CardWare's first provisional patent filing. EX1003, ¶¶60-65. The Collinge reference relied on in this Petition claims priority to over 430 pages of provisional applications filed by MasterCard from April 2, 2012 – February 7, 2013, including a hundred-page technical specification for the Remote-SE Mobile *PayPass* product. EX1005, 1006, 1007, 1008. This stands in stark contrast to the 19-***paragraph*** provisional CardWare filed on March 15, 2013. EX1062.

During prosecution of the ’286 Patent, the examiner issued a notice of allowance after an initial restriction requirement, but without any other rejections. EX1002, 145. The applicant filed an RCE and an amended IDS statement, still including no MasterCard or Visa references. *Id.,* at 177. In response the examiner finally, in 2022, searched for MasterCard and Visa art. He searches in Google Patents for Assignee(s) Mastercard and Visa but he still did not issue any rejections or cite any prior art reference assigned to MasterCard or Visa. EX1002, 529. Running the examiner’s MasterCard search with CardWare’s provisional priority date (March 15, 2013) provides 168 results. EX1073. Result 14 leads to[4] the Collinge MasterCard reference used as the primary reference in the ’286 IPR Petition.[5]

Collinge is material to patentability of the ’286 Patent. The Examiner ran his searches on March 22, 2022, then issued a notice of allowance, stating:

> None of prior art teaches a payment system comprising a payment card device free of any fixed payment numbers visible thereon and operable for use in payment card reader equipment [claim 1(a)], the processor is operable to

---

[4] Specifically, result 14 is European Patent Specification EP2835004B1 to Collinge. *See* EX1074 (claiming priority to US2013/13827042 to Collinge).

[5] Result number 15 is the patent that issued from the MasterCard reference Kranzley, US 2010/0125509, a reference whose teachings are relevant to claims 10 and 16 of the ’286 Patent. *Petition* (Paper 1), at 81-84.

> generate at least a portion of a limited-use card payment information for use by an authenticated card user [claim 1(f), 15(c)], a card issuer authority is operable to reject as invalid a transaction attempt outside of its limitations of use [claim 1(h), 15(g)], wherein a card issuer authority is operable to validate a card payment information as authentic when received from at least one of an authenticated users payment card, and an authenticated users computing device [claim 1(i), 15(h)], and wherein the card issuer authority is operable to permit the authentic transactions to complete [claim 1(j), 15(h)], and wherein the computing device is to receive, store, display and transmit issuer-provided payment information, associated with, but not depicted on, the payment card device [claim 20(d)]; wherein the processor is operable to dynamically generate at least a portion of a limited-use payment information for use by an authenticated card user [20(e)], and to combine said at least a portion of the limited-use payment information with at least said static device account number to create combined payment information [claim 20(f)]; wherein the computing device is operable to convey said combined payment; information via an interface of the computing device [claim 20(g)]; and wherein the computing device is operable to receive information, from an issuer, in response to the conveyed combined payment information, indicating that a payment transaction is valid [claim 20(h)] along with other limitations recited in the claims.

EX1002 at 521-522. The first limitation identified by the examiner includes printed subject matter, and the remaining limitations are taught by Collinge (Paper 1, 32-33, 40-41, 71-72) or Collinge in view of Smith, both MasterCard references. Paper 1, 72-73. Therefore, the examiner materially failed by failing to issue a prior art

rejection over Collinge, after his Google Patents search. *See Shenzen Chic Electrics Co., Ltd. v. Pilot Inc*., IPR2023-000810, Paper 12 at 21 (PTAB Nov. 8, 2023) (where a reference located by the examiner taught or suggested all of the limitations of the challenged claims, the examiner's first-action allowance was "an error or oversight by the Patent Office."); *Harbor Freight Tools USA Inc., Champion Power Equipment, Inc.,* IPR2025-00805, Paper 20 at 3 (PTAB Sept. 19, 2025) ("the Examiner overlooked [the prior art reference's] teachings, thus…the Office erred in a manner material to the patentability of the claims.").

2. The Board is Better Suited to Address the Large Number of Patents and the Complexities of the Technology At Issue.

The IPRs filed by Apple collectively cover six patents and 196 claims. Of those, 174 are currently asserted against Apple in litigation. EX1075, EX2015. The claims of the six challenged patents require a diverse range of **hardware,** (such as NFC readers, biometric sensors, motion rate detection array, inductor coils, optical sensor array, accelerometers, touch sensor arrays, etc.), **applications** (NFC transactions, online transactions, ATM transactions, cryptocurrency transactions, etc.) **secret information (or keys) shared** or not shared between a variety of entities in the transaction, and **user interface features** (requiring various transaction-related images to be displayed (or absent)). Further, many claims require an understanding of the technical details of how payment systems are set up (including the respective roles of banks, issuers, payment processing authorities, etc.), and how cryptography

is used in payment systems. The "Board is better suited to review a large number of patents involving diverse subject matter" and technical claim limitations, and for this additional reason, referral to the Board is appropriate. *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217, Paper 9 (PTAB June 13, 2025).

3. Apple has Shown the Challenged Claims are Likely Invalid

The MasterCard reference Collinge teaches every limitation of the broadest claim of the '286 Patent other than "a payment card device that is ***free of any fixed payment numbers disposed thereon***." Petition, 19-41 (claim 15). The Board has already preliminarily agreed that the emphasized language above is directed to printed subject matter and entitled to no patentable weight. EX1068 (PGR2023-00012, Paper 14), 24-26. Had the examiner considered the relevant art from MasterCard, the broadest claim of the '286 Patent would never have issued.

The remaining claims of the '286 Patent likewise should never have issued, as Apple's Petition demonstrates. Notably, the Petition relies on two further MasterCard references (US2010/0125508 to Smith and US 2010/0125509 to Kranzley) and a Visa reference (US Patent No. 8,103,588 to Patterson).

B. PO's Remaining Arguments Do Not Justify Discretionary Denial

1. The '286 Patent Issued in 2022 and No Settled Expectations Favor Discretionary Denial

The '286 Patent issued recently, in May of 2022. The Director's decisions confirm that Patent Owner therefore has not developed strong settled expectations

in the ’286 Patent (or ***any*** of the six challenged patents).

Events Pre-Dating the ’286 Patent Do Not Support CardWare’s Narrative

CardWare’s brief relies heavily on events that pre-date not only the issuance of the ’286 Patent, but the issuance of ***any*** patent asserted against Apple:

2013: CardWare files a 19-paragraph provisional patent application. The specification is primarily focused on a credit card with a dynamic magnetic strip.

2015: CardWare’s first patent issues. The patent claims are directed to a magnetic stripe emulation technology. EX1063. Apple is not accused of infringing this patent, or any other patents that issued before 2019.

2017: CardWare alleges it met with Apple.

2019: The first patent asserted against Apple issues. *See* EX1065 (U.S. Patent No. 10,339,520 issued on July 2, 2019).

Events After ’286 Issuance Demonstrate a Lack of Settled Expectations

None of these events create settled expectations for the ’286 Patent—a patent that had not issued, and is of a different scope from CardWare’s pre-2017 patents. The events that do relate to the ’286 Patent support an expectation that the ’286 Patent is likely unpatentable.

2022: The ’286 Patent issues on May 10, 2022. EX1001.

2022: The ’286 Patent is found ***likely unpatentable*** in two PGR institution decisions, which settle in 2023. EX1068; EX1069.

2022: Apple receives a subpoena from Samsung, identifying the ’286 Patent and exploring Apple products as likely ***prior art*** to the ’286 Patent. EX2011.

2023: CardWare sends a letter to Apple identifying the ’286 Patent, a patent already found likely unpatentable. EX2013.

2024: CardWare sues Apple for patent infringement.

The History of Apple Pay Further Undermines a Settled Expectations Claim

CardWare accuses Apple Pay and/or Apple Wallet-enabled computing devices of patent infringement. EX2007, ¶¶32-33. Apple Pay was announced on September 9, 2014, and made available on October 20, 2014. EX1064. At the time, CardWare had no issued patents. The CardWare patents now asserted against Apple issued in 2019-2023, ***five to nine years*** after the public release of Apple Pay.

CardWare’s first allegation that Apple needed a license to the CardWare patents at issue in the underlying litigation patents came in 2023, ***nine years*** after the release of Apple Pay. EX2013. By CardWare’s own allegations, it did not have any patents applicable to Apple Pay in 2017 when it met with Apple.

Further, CardWare’s articulation of what, exactly, it claims to have invented has continually evolved. Its provisional application listed the field of invention as “credit cards and, more specifically, to more secure, smarter credit cards” and the 19-paragraph specification focused primarily on inductor assemblies generating a programmed magnetic field and similar hardware. EX1062, [0001]. Over time,

CardWare stretched the scope of its claims beyond the limit of its original disclosures to obtain claims broad enough to cover mobile payment technologies that were already on the market. The Board has already found claims of the '286 Patent are unsupported by CardWare's earliest provisional application. *See* FN 2, *supra*. This too weighs against "settled expectations." *See* S. REP. 110-259, at 21 ("The Committee is aware, however, that patents may be asserted as covering uses and products that were not originally envisioned, or that an alleged infringer may well not have imagined possible, simply from the reading of the patent claims. With calculated infringement at one end of the spectrum, and devious claiming at the other end, the possibilities for mischief and disagreement are considerable.")

2. PO Failed to Identify Any Claim-Construction Issues

Before PO filed its discretionary denial brief, Judge Albright issued a claim-construction order declining to find any claim terms indefinite. Exhibit 2023. Thus, PO has not identified any inconsistency in how the claims will be interpreted here and in the district court, and no claim-construction issues support denial.

3. Judge Albright's Median Time to Trial is 34 Months, Consistent with District-Wide Statistics.

The underlying litigation is pending before Judge Albright in the Western District of Texas. The USPTO's March 24, 2025 Memorandum states that "in applying *Fintiv,* the Board may consider any evidence that the parties make of record that bears on the proximity of the district court's trial date[.]" The current median

time from filing to trial in patent cases before Judge Albright is ~34 months, consistent with the district-wide time to trial statistics.[6] Applying that time period to the parallel litigation, the final written decision in this proceeding is due ***8 months prior*** to when the parallel litigation will go to trial.

On May 20, 2025, Judge Albright entered a scheduling order setting trial for July 28, 2026. EX2003. However, Judge Albright's busy docket is regularly the case of trial re-scheduling. *See e.g., AlmondNet, Inc. et al. v. Amazon.com Inc. et al.,* 6-21-cv-00898, Dkt. 235 (delaying trial from February 5, 2024, to June 10, 2024—docket entry stating "trial date of 2/5 cannot be maintained due to the Court's schedule"); Dkt. 238 (Order) (EX1076); *IOEngine, LLC vInc.,* 6:21-cv-01296 Dkt. 309 (Judge Albright explaining that due to trial date conflicts, "it makes more sense" to move the October 16, 2023, trial setting to the spring of 2024 because of the Court's trial schedule) (EX1077). In fact, in this case, Judge Albright has two patent trials scheduled the week of July 28, 2026. *See Polaris Innovations Limited v. Qualcomm Incorporated et al.,* 7:24-cv-00296-ADA, Dkt. 31. EX1078 (scheduling order); EX1079 (complaint). The *Polaris* case was filed on November 19, 2024, a

[6] CardWare's WDTX statistics should be disregarded because they are not current. EX2015 (29 month time to trial from **2008**-2025). *Compare* EX1082 (34 month average from January 2024-2025).

full year before CardWare filed its suit against Apple. Therefore, it is likely that the *Polaris* case will receive priority, which would force the CardWare trial to move.

CardWare argues the trial date will not be moved except in extreme situations. But a review of all recent patent trials before Judge Albright (going back to January 2024) shows that trial dates are regularly moved. Of the 17 jury trials that took place in Judge Albright's court since January 2024, cases, none went to trial on the originally scheduled trial date. EX1080.

This is borne out by the most recent statistics for WDTX, which show the median time to trial for Judge Albright's cases was 34 months, just above the median time to trial in WDTX civil cases: 32.8 months. EX1080, EX1081.[7] Thus, based on Judge Albright's and WDTX's median time to trial, trial in the parallel proceeding here is projected to take place around August 2027—eight months after a FWD.

This evidence shows there is "a high likelihood" the final written decision will issue months before trial. Thus, *Fintiv* Factor 2 weighs against discretionary denial.

4. Apple's Sotera+ Stipulation Mitigates Any Remaining Overlap Concerns Between this IPR and the Litigation.

To mitigate the possibility of overlap with the parallel litigation, Apple filed

[7] Patent Owner's time to trial statistics go back to the very beginning of Judge Albright's time on the bench, and are therefore less useful in evaluating what is likely to happen ***in this case*** based on the ***current*** state of Judge Albright's docket.

a broadened *Sotera*+ stipulation. If the PTAB institutes this proceeding, Apple's stipulation precludes it from pursuing in the parallel litigation:

> (i) the specific grounds raised in [petition], (ii) any other grounds that could have reasonably been raised before the PTAB in that instituted proceeding (i.e., any ground that could have reasonably been raised under §§ 102 or 103 on the basis of prior art patents or printed publications), (iii) any ground based on a combination of system prior art and the references asserted as part of a ground raised in [petition], as reflected in the table summarizing the Statutory Grounds for Challenges on page 5 of the Petition, or (iv) any ground based on a system which corresponds to a patent or printed publication asserted as part of a ground raised in [petition].

Thus, Apple's stipulation negates concerns that any issue before the Board in this proceeding will be relitigated in the parallel proceeding. *Fintiv* Factor 4, therefore, weighs strongly against discretionary denial. *See, e.g.*, *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217 Paper 9 at 2 (PTAB June 13, 2025) (finding that Tesla's broad *Sotera*+ stipulation "counsel[s] against discretionary denial").

Apple's *Sotera*+ stipulation allows Apple to rely on its own ***products and systems*** in the litigation to demonstrate that Apple invented the claimed subject matter first under 35 U.S.C. §102(g) and Apple can use its own patents or patent publications as evidence of Apple's prior invention. In the IPRs, Apple does not and cannot raise a §102(g) defense, rely on its own system art, or allege that a claimed

invention was "known or used by others, on sale, or in public use." *Ingenico Inc. v. IOENGINE, LLC,* 136 F.4th 1354, 1367 (Fed. Cir. 2025). Therefore, there will be no overlap between the issues raised here and in the district court, and the IPRs will serve as a "true alternative" to the district court proceeding.

PO nonetheless argues Apple's broadened *Sotera+* stipulation is "ineffective." Not so. PO's objection amounts to a complaint that the IPRs (and related stipulations) cannot also resolve a host of validity questions that Apple is not allowed to raise here, including §101, §112, and Apple's §102(g) defense. PO further complains that Apple's stipulation does not limit what other defendants in other cases do. In CardWare's view, a stipulation is only effective if the patent's validity cannot be challenged again by anyone for any reason in any forum. That is not the standard. *See e.g.,* March 24, 2025 Memorandum (discussing Sotera stipulations where the Petition stipulates not to pursue "any ground raised or that could have been reasonably raised ***in the IPR***/PGR" as "highly relevant") (emphasis added). Apple's stipulation prevents the same invalidity questions from being considered in two forums and weighs strongly against discretionary denial here.

5. The '286 Patent Is Only Asserted Against Apple.

The '286 Patent is not asserted against Google. Therefore, PO's repeated references to the Google litigation are a red herring and irrelevant to discretionary denial of this IPR. *See*, Paper 7, 5 and 13 (time to trial in Google case), 6 (activity in

Google case), 9 and 11 (Google's invalidity contentions).

6. Apple's IPRs were filed months before discovery opened in the district court litigation (Fintiv Factor 3)

Apple filed this IPR Petition on June 20, 2025, more than 5 months before Apple's 1-year bar date. Discovery in the underlying district court case did not open until July 29, *Markman* briefing was not complete until July 17, and the district court did not hold its Markman hearing until August 28, 2025. EX2003, EX2004. As of the filing of this brief, no fact depositions have been scheduled or taken. The Board's decision on whether to institute is expected on approximately January 10, 2026, well before the scheduled close of fact discovery on February 24, 2026.

The district court's investment in the underlying litigation to-date consists of one hearing, and one opinion on claim construction. The investment of the Court and the Parties to the litigation in the following phases of litigation are significantly greater, as expert discovery opens, dispositive briefing is filed, and the parties begin to prepare for trial. If Apple's IPRs are instituted, Apple plans to request a stay of the litigation. This allows for CardWare or the Court to optionally avoid the investment in parallel proceedings if either so chooses.[8]

7. CardWare's Commercialization Claims Are Overstated

As further evidence that there are no settled expectations, there is reason to

[8] Judge Albright grants joint or unopposed motions to stay pending IPR. EX1083.

doubt the extent of CardWare's "commercialization" efforts. CardWare's brief includes a conclusory allegation that resources have been spent on commercialization. Paper 7, 19. In support, CardWare cites three paragraphs of its complaint against Apple. EX2007, ¶¶14-17. Paragraph 15 of the Complaint states that CardWare's innovations include its "SmartTokenization™ technology." CardWare filed an "Intent to Use" trademark application on February 28, 2024 for this mark, but stated it does not currently use the mark. EX1084.

Further, CardWare's current "Card+" app has no payment features. EX1085. Instead, it allows users to check links and text for "Phishing." *Id.* An informational "Product Gallery" page purportedly describes CardWare's payment platform but provides no link for a user to sign-up or even contact CardWare for more information. *Id.* The app does not allow any users to make mobile payments or otherwise practice any of the patent claims at issue. In addition, the app has less than 5 total downloads, though the latest version has been available for over two months. EX1086. This further suggests limited commercialization.

IV. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests *inter partes* review of the Challenged Claims.

Respectfully submitted,

ERISE IP, P.A.

BY: /s/ Adam P. Seitz
Adam P. Seitz, Reg. No. 52,206
adam.seitz@eriseip.com
7015 College Boulevard, Suite 700
Overland Park, Kansas 66211
(913) 777-5600 Telephone
(913) 777-5601 Facsimile

COUNSEL FOR PETITIONER

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 11,328,286 ("*'286 Patent*")
Exhibit 1002	File History of the '286 Patent ("*'286 File History*")
Exhibit 1003	Declaration of Dr. Neuman ("*Dec.*")
Exhibit 1004	U.S. Patent Publication No. 2013/0262317 to Collinge et al. ("*Collinge*")
Exhibit 1005	U.S. Provisional Patent Application No 61/619,095 to Collinge et al. ("*'095 Provisional*")
Exhibit 1006	U.S. Provisional Patent Application No 61/635,248 to Collinge et al. ("*'248 Provisional*")
Exhibit 1007	U.S. Provisional Patent Application No 61/735,383 to Collinge et al. ("*'383 Provisional*")
Exhibit 1008	U.S. Provisional Patent Application No 61/762,098 to Collinge et al. ("*'098 Provisional*")
Exhibit 1009	U.S. Patent Publication No. 2011/0140841 to Bona et al. ("*Bona*")
Exhibit 1010	U.S. Patent Publication No. 2010/0125508 to Smith ("*Smith*")
Exhibit 1011	US. Patent No. 8,103,588 to Patterson ("*Patterson*")
Exhibit 1012	WIPO International Publication No. WO 2010/039337 to Lin et al. ("*Lin*")
Exhibit 1013	U.S. Patent Publication No. 2010/0125509 to Kranzley et al. ("*Kranzley*")
Exhibit 1014	U.S. Patent Publication No. 2013/0068366 to Eng ("*Eng*")
Exhibit 1015	U.S. Patent Publication No. 2011/0282785 to Chin ("*Chin*")
Exhibit 1016	U.S. Patent Publication No. 2013/0097040 to Fisher ("*Fisher*")
Exhibit 1017	U.S. Patent No. 7,740,168 to Hammad ("*Hammad*")
Exhibit 1018	Intentionally Left Blank
Exhibit 1019	Intentionally Left Blank
Exhibit 1020	IBM, *The Magnetic Stripe*, IBM, https://www.ibm.com/history/magnetic-stripe. ("*IBM*")
Exhibit 1021	Vedat Coskun, Near Field Communication: Theory To Practice (John Wiley & Sons, 1st ed. 2012) ("*Coskun*")
Exhibit 1022	MagTek, Magnetic Stripe Card Standards, (MagTek Inc. eds., 2011) ("*MagTek*")
Exhibit 1023	EMVCo, LLC, EMV Integrated Circuit Card Specifications for Payment Systems: Book 2 – Security and Key Management (EMVCo, LLC eds., Version 4.3 2011) ("*EMV*")
Exhibit 1024	Klaus Finkenzeller, RFID Handbook (John Wiley & Sons, 3rd ed. 2010) ("*Finkenzeller*")

Exhibit 1025	MasterCard, *MasterCard PayPass ™ in Action*, MASTERCARD (Jun. 11, 5:35 PM), https://www.mastercard.com/us/company/en/ourbusiness/paypass_in_action.html#:~:text=MasterCard%20PayPass%E2%84%A2%20in%20Action&text=Developed%20to%20replace%20the%20need,the%20way%20they%20view%20cash. ("*PayPass*")
Exhibit 1026	Smart Card Alliance, EMV And NFC: Complementary Technologies That Deliver Secure Payments And Value-Added Functionality (Smart Card Alliance, Inc. eds., 2012) ("*Smart*")
Exhibit 1027	U.S. Patent Publication No. 2012/0011058 to Pitroda et al. ("*Pitroda*")
Exhibit 1028	MasterCard, *MasterCard Approved Mobile Devices*, MASTERCARD (Aug. 3, 2012), http://www.mastercard-mobilepartner.com/docs/MasterCard_Approved_Mobile_Devices.pdf, [https://web.archive.org/web/20120906234255/http://www.mastercard-mobilepartner.com:80/docs/MasterCard_Approved_Mobile_Devices.pdf] ("*MasterCard Mobile Partner*")
Exhibit 1029	U.S. Patent Publication No. 2013/0054474 to Yeager ("*Yeager*")
Exhibit 1030	EMVCo, LLC, *EMV Chip At-a-Glance: Enabling Seamless and Secure Contact and Contactless Payments Around the World*, EMVCO (2002), https://www.emvco.com/wp-content/uploads/2022/09/EMV%C2%AE-Chip-At-A-Glance-EMVCo-eBook.pdf ("*EMVCo*")
Exhibit 1031	Scoping SIG & Tokenization Taskforce PCI Security Standards Council, PCI Data Security Standard (PCI DSS) – Information Supplement: PCI DSS Tokenization Guidelines (pci Security Standards Council eds., Version 2.0 2011) ("*PCI SSC*")
Exhibit 1032	Alessandro Vizzarri et al., Security in Mobile Payments (2013) ("*Vizzarri*")
Exhibit 1033	U.S. Patent Publication No. 2008/00110983 to Ashfield ("*Ashfield*")
Exhibit 1034	Intentionally Left Blank
Exhibit 1035	WIPO International Publication No. WO 1994/17498 to Labaton et al. ("*Labaton*")
Exhibit 1036	Geoffrey R. Gerdes et al., The 2013 Federal Reserve Payment Study – Recent and Long-Term Trends in the United States: 2003-2012 (Federal Reserve System, Rev. 2014) ("*Study Summary*")

Exhibit 1037	Geoffrey R. Gerdes et al., The 2013 Federal Reserve Payment Study – Recent and Long-Term Trends in the United States: 2000-2012 (Federal Reserve System, 2014) ("*Study*")
Exhibit 1038	ConsumerWorld, *Two Months After the Deadline, Most Major Retailers Still Can't Read Chipped Credit Cards,* CONSUMERWORLD (Dec. 7, 2015), https://www.consumerworld.org/pages/creditcardreaders.htm ("*ConsumerWorld Survey*")
Exhibit 1039	Ann Cavoukian, *Mobile Near Field Communications (NFC)") "Tap 'n Go" Keep it Secure & Private*, IPC (2011), https://www.ipc.on.ca/sites/default/files/legacy/Resources/mobile-nfc.pdf ("*Cavoukian*")
Exhibit 1040	Annika Paus, Near Field Communication in Cell Phones (2017) ("*Paus*")
Exhibit 1041	Ashis K. Mahapatra, *Touch Screen Systems*, ORISSA REVIEW (2005), https://magazines.odisha.gov.in/orissareview/jun2005/engpdf/touch_screen_system.pdf ("*Mahapatra*")
Exhibit 1042	U.S. Patent Publication No. 2006/0097991 to Hotelling et al. ("*Hotelling*")
Exhibit 1043	U.S. Patent Publication No. 2008/0122796 to Jobs et al. ("*Jobs*")
Exhibit 1044	U.S. Patent No. 10,181,121 ("*Roberts*")
Exhibit 1045	U.S. Patent Publication No. 2013/0151292 to Van Deloo et al. ("*Deloo*")
Exhibit 1046	U.S. Patent Publication No. 2006/0186195 to Gray ("*Gray*")
Exhibit 1047	U.S. Patent Publication No. 2014/0006276 to Grigg et al. ("*Grigg*")
Exhibit 1048	Anup K. Ghosh & Tara M. Swaminatha, *Software Security and Privacy Risks in Mobile E-Commerce*, 44 CACM 51 (2001) ("*Ghosh*")
Exhibit 1049	Josh Constine, *Bump Pay Lets You PayPal Someone With A Tap, But Only In-Person*, TECHCRUNCH (Mar. 29, 2012, 5:01 AM), https://techcrunch.com/2012/03/29/bump-pay/#:~:text=Now%20it's%20as%20easy%20as,to%20anyone%20in%20arm's%20reach. ("*Tech*")
Exhibit 1050	U.S. Patent Publication No. 2009/0083850 to Fadell et al. ("*Fadell*")
Exhibit 1051	Notice of Sotera Plus Stipulation *CardWare Inc. v. Apple Inc.*, Civil Action No. 1:25-cv-00446
Exhibit 1052	Intentionally Left Blank
Exhibit 1053	Intentionally Left Blank

Exhibit 1054	Intentionally Left Blank
Exhibit 1055	Intentionally Left Blank
Exhibit 1056	Intentionally Left Blank
Exhibit 1057	Intentionally Left Blank
Exhibit 1058	Intentionally Left Blank
Exhibit 1059	Intentionally Left Blank
Exhibit 1060	Intentionally Left Blank
Exhibit 1061	Intentionally Left Blank
Exhibit 1062	U.S. Patent Application No. 61/894,891
Exhibit 1063	U.S. Patent No. 9,022,286
Exhibit 1064	"Apple Announces Apple Pay" Press Release (Sept. 9, 2014), https://web.archive.org/web/20170806100808/https://www.apple.com/newsroom/2014/09/09Apple-Announces-Apple-Pay/
Exhibit 1065	File History of U.S. Patent No. 10,339,520
Exhibit 1066	File History of U.S. Patent No. 10,628,820
Exhibit 1067	"Apple Announces iPhone 5s" Press Release (Sept. 10, 2013), https://www.apple.com/newsroom/2013/09/10Apple-Announces-iPhone-5s-The-Most-Forward-Thinking-Smartphone-in-the-World/
Exhibit 1068	*Samsung Electronics Co., Ltd. v. CardWare Inc.*, PGR2023-00012, Paper 14 (PTAB, Aug. 11, 2013) (Institution Decision)
Exhibit 1069	*Samsung Electronics Co., Ltd. v. CardWare Inc.*, PGR2023-00013, Paper 14 (PTAB, Aug. 11, 2013) (Institution Decision)
Exhibit 1070	*CardWare Inc.* v. *Samsung Electronics Co., Ltd.*, Civ. No. 2:22-cv-00141-JRG-RSP, Dkt. 35 (Nov. 22, 2022) (Notice of Compliance, Invalidity Contentions)
Exhibit 1071	File History of U.S. Patent No. 11,620,634
Exhibit 1072	Intentionally Left Blank
Exhibit 1073	Search Recreation, Googlepatents.com
Exhibit 1074	European Patent No. EP 2,835,004 B1
Exhibit 1075	Infringement Contentions from *CardWare Inc. v. Apple Inc.,* Civ. No. 7:24-cv-00279-ADA (Feb. 10, 2025)
Exhibit 1076	*AlmondNet, Inc. et al. v. Amazon.com Inc. et. al,* Civ No. 21-cv-008980-ADA, Dkt. 238 (Jan. 5, 2024) (Order Canceling Trial)
Exhibit 1077	*IOEngine, LLC v. Roku Inc.,* Civ. No. 6:21-cv-1296, Dkt. 309 (Sept. 23, 2023) (Hearing Transcript)
Exhibit 1078	*Polaris Innovations Ltd. v. Qualcomm Inc., et al,.* Civ. No. 7:24-cv-00296-ADA, Dkt. 31 (Mar. 10, 2025) (Scheduling Order)
Exhibit 1079	*Polaris Innovations Ltd. v. Qualcomm Inc., et al,.* Civ. No. 7:24-cv-00296-ADA, Dkt. 1 (Nov. 19, 2024) (Complaint)

Exhibit 1080	Docket Navigator, Albright Trial List
Exhibit 1081	U.S. District Court – Judicial Caseload Profile
Exhibit 1082	Docket Navigator, WDTX Time to Trial
Exhibit 1083	Docket Navigator, Stipulated/Agreed Motions to Stay, Albright
Exhibit 1084	Trademark Status & Document Retrieval Report, Mark: SMARTTOKENIZATION (Application Filing Date: Feb. 28, 2024)
Exhibit 1085	Card+ App Screenshots
Exhibit 1086	Google Play Store Listing, Card_ V5L by CardWare
Exhibit 1087	File History of U.S. Patent No. 10,810,579

CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.105(a)

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b), the undersigned certifies that on October 16, 2025, a complete and entire copy of this *Opposition to Patent Owner's Request for Discretionary Denial* and Exhibits were served via electronic filing with the Board and via Electronic Mail on the following practitioners of record for Patent Owner:

Matthew G. Berkowitz (mberkowitz@reichmanjorgensen.com)
Patrick R. Colsher (pcolsher@reichmanjorgensen.com)
Khue V. Hoang (khoang@reichmanjorgensen.com)
Yue (Joy) Wang (ywang@reichmanjorgensen.com)
Timothy A. Trost (ttrost@reichmanjorgensen.com)
RJ_CardWare_AppleIPR@reichmanjorgensen.com

Respectfully submitted,

ERISE IP, P.A.

BY: /s/ Adam P. Seitz

Adam P. Seitz, Reg. No. 52,206
adam.seitz@eriseip.com
7015 College Boulevard, Suite 700
Overland Park, Kansas 66211
(913) 777-5600 Telephone
(913) 777-5601 Facsimile

COUNSEL FOR PETITIONER