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. IPR2025-01149
U.S. Patent No. 11,176,538

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

TABLE OF CONTENTS

I. INTRODUCTION 1

II. THE '538 PATENT 3

A. CARDWARE'S PROVISIONAL APPLICATION 3

B. THE FIRST ISSUED PATENT IN THE FAMILY 4

C. CARDWARE'S PATENT PORTFOLIO SHIFTS 4

D. DESCRIPTION OF THE '538 PATENT 7

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 '538 Patent 7

2. The Board is Better Suited to Address the Large Number of Patents and the Complexities of the Technology At Issue. 8

B. PO'S REMAINING ARGUMENTS DO NOT JUSTIFY DISCRETIONARY DENIAL 9

1. No Settled Expectations Favor Discretionary Denial 9

2. PO Failed to Identify Any Claim-Construction Issues 12

3. Judge Albright's Median Time to Trial is 34 Months, Consistent with District-Wide Statistics. 12

4. Apple's Sotera+ Stipulation Mitigates Any Remaining Overlap Concerns Between this IPR and the Litigation 14

5. Apple's IPRs were filed months before discovery opened in the district court litigation (Fintiv Factor 3) 16

6. CardWare's Commercialization Claims Are Overstated 17

C. THE LENGTH OF THE CLAIMS AND LIMITED OVERLAP IN CLAIM LANGUAGE SUPPORT THE NEED FOR MULTIPLE PETITIONS 18

IV. CONCLUSION 19

TABLE OF AUTHORITIES

Cases

AlmondNet, Inc. et al. v. Amazon.com Inc. et al. 13
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
Cambridge Indus. USA, Inc. v. Applied Optoelectronics, Inc., IPR2025-00433 (PTAB June 26, 2025) 10
Ingenico Inc. v. IOENGINE, LLC, (Fed. Cir. 2025) 15
IOEngine, LLC v. Roku Inc. 13
Polaris Innovations Limited v. Qualcomm Incorporated et al. 13
Tesla, Inc. v. Intellectual Ventures II LLC, IPR2025-00217 Paper 9 at 2 (PTAB June 13, 2025) 15
Tesla, Inc. v. Intellectual Ventures II LLC, IPR2025-00217, Paper 9 (PTAB June 13, 2025) 9

Statutes

35 U.S.C. §102(g) 15

I. INTRODUCTION

Apple Inc. ("Petitioner") respectfully requests *inter partes* review ("IPR") of claims 1-18 ("Challenged Claims") of U.S. Patent No. 11, 176,538 ("'538 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 '538 Patent is one of six challenged patents in the same family of payment processing patents asserted by CardWare against Apple.[1] There is ample reason to doubt both the validity of these patents and that the examiner considered the most relevant references. In the relevant timeframe, MasterCard and Visa were prolific patent filers and major contributors to the leading global payment standard, EMV (EuroPay, MasterCard, and Visa). *See e.g.,* EX1003, ¶¶45-47. But not one MasterCard or Visa reference can be found cited in the prosecution history or on the face of the '520 Patent. Every one of Apple's IPRs relies on between 1 and 5 Visa or MasterCard references. Had the Examiner considered this art, or conducted a meaning examination, these patents never would have issued.

No settled expectations favor CardWare. The '538 Patent issued on November 16, 2021. CardWare first sent Apple a letter identifying the '538 Patent on October 10, 2023. There is no settled expectation that the four-year-old '538 Patent is valid.

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

The ’538 Patent faced an initial, unsuccessful invalidity challenge in an IPR filed by Samsung approximately one year after it issued. Samsung’s first, early petition does not support discretionary denial here for two reasons. First, a petition “will generally not be discretionarily denied because of an earlier petition for post-grant review [filed before expectations settled] when the [earlier petition] was not instituted.” *See* IPR2025-00454, Paper 11 at 1 (July 11, 2025). This situation, i.e., Samsung’s IPR was filed early in the life of the ’538 Patent, is no different.

Second, neither the Board nor the examiner have considered the art or arguments presented in Apple’s Petition. In the Samsung IPR, the only reason the Board gave for not instituting was that the primary reference, Royyuru, did not teach limitations 1(h) and 1(i). EX1088 (IPR2023-00219, Paper 11 at 18-23). Limitations 1(h) and 1(i) require combining dynamically generated, limited-use payment information with static, limited-use payment information and transmitting the same. As Apple’s Petition shows, these were well-known features of payment systems. Petition at 30-32; *see also* EX1003, ¶¶ 146-149; *see also id*., ¶¶79-87, 122-144. There are no settled expectations in claiming such well-known features.

Further, all six patents CardWare asserts against Apple issued years ***after*** CardWare’s alleged 2017 meeting with Apple and after CardWare made significant shifts in the scope of its patent portfolio, as discussed in detail 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 ("WDTX") 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 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 and ensures this IPR is a true alternative for those invalidity questions which are properly raised in an IPR.

Therefore, the "efficiency and integrity of the [patent] system are best served by" instituting review of the '538 Patent. *Apple Inc. v. Fintiv Inc.,* IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020). The Board's interest in reviewing the Patent Office's error in failing to analyze any 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 that the Director deny Patent Owner's request for discretionary denial.

II. THE '538 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 in collaboration 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 from a "credit card device" 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 to add conspicuously resembles an Apple iPhone, including a circular button labeled "Touch ID button," an iPhone feature released in 2013. EX1067. The new images also refer to a "MASTERCARTE" payment card, with a logo of three overlapping circles.

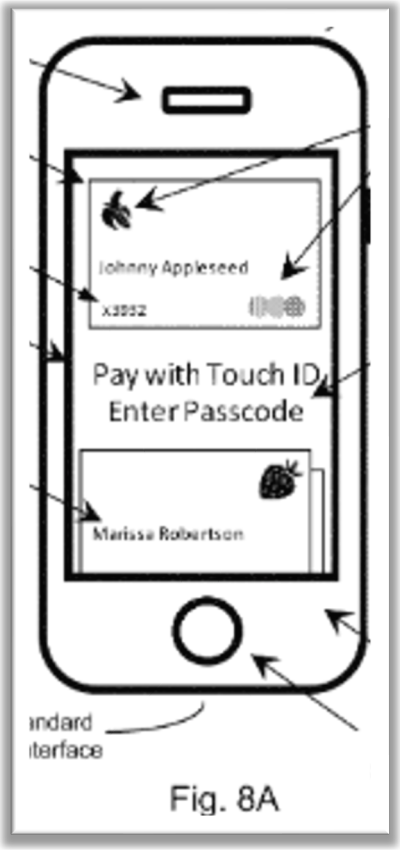

Fig. 8A

The changes to CardWare's patent portfolio were not limited to its specification. CardWare 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. Further, CardWare began including 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, CardWare's shifting claim scope undermines any allegation of settled expectations.

Despite the new claim scope, CardWare's post-2017 patents received limited

[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 U.S. Patent No. 11,328,286 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 applications (see e.g., EX1065, 109-121) (prosecution of the '520 Patent), but those terms are absent from its provisional application or early patents.

scrutiny at the Patent Office. The ’538 Patent received no rejections. *See* EX1002. Of the six challenged patents, five issued without any prior art rejections;[3] most faced only double patenting rejections or restriction requirements. No MasterCard or Visa references were considered by the examiner or are found on t the ’538 Patent’s face.

The first (and only) time MasterCard or Visa references appear in the prosecution history for ***any*** of CardWare’s patents is in the prosecution history of the final patent, U.S. Patent No. 11,620,634, and they were not found by the examiner. While ’634 Patent application pending, CardWare sued Samsung on five patents in this patent family. Samsung provided 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. Buried among the 275+ documents was a single patent assigned to MasterCard, a single patent assigned to Visa, and a handful of news articles relating to MasterCard and Visa payment systems. The examiner did not initial next to any references on the IDS. The ’634 Patent was summarily issued with no further rejections.

[3] The only challenged patent to face a prior art rejection was the ’579 Patent. There, four claims faced an initial prior art rejection and 19 patent claims issued without any prior art rejection. EX1087, 98-102.

D. Description of the ’538 Patent

The challenged claims of the ’538 Patent includes one independent claim directed to a “method of performing a payment transaction” comprising, among other things, “receiving an input at an electronic device corresponding to a priming operation,” authorizing a user from a human input sensor, receiving a request for payment, retrieving a device-specific static limited-use payment information, and dynamically generating a device-specific limited-use payment information. *’538 Patent* (EX1001) at claim 1. The static and dynamically generated payment information are then combined, transmitted via NFC, and validated by an issuer and processor authority. *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 ’538 Patent

The Director has found “it 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). No MasterCard or Visa references appear on the face of the ’538 Patent or were cited by the Examiner during prosecution, even though MasterCard and Visa were the undisputed leaders in payment processing and prolific patent filers. *See* EX1003, ¶¶47, 49, 57-59. MasterCard made mobile contactless payments possible many years

before CardWare's first provisional patent filing. *See* EX1003, ¶¶60-65.

It was not until years later, during prosecution of the '286 Patent, that an examiner first acknowledged the relevance of MasterCard and Visa. EX1072, 145. That examiner searched Google Patents for Assignee(s) Mastercard and Visa, but still did not issue any prior art rejection or cite any prior art reference assigned to MasterCard or Visa. *See* IPR2025-01151, Paper 8 at 9-10. The Examiner materially erred by failing to issue ***any*** prior art rejections during examination of the '520 Patent and, specifically, by failing to consider any of MasterCard or Visa's patent filings.

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.[4] The claims vary in scope and many 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. In addition, 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

[4] Claims 10-20, 22, 23 of the '520 Patent; claims 1, 2, 4, and 10-20 of the '820 Patent; claims 1-23 of the '579 Patent; claims 1-30 of the '538 Patent; claims 1-27 of the '286 Patent, and claims 1-13, 15-53, 55-70, and 72 of the '634 Patent. EX1075.

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)). 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

Apple's petition relies on Lin, Varadarajan, and references assigned to both MasterCard (Smith) and Visa (Hammad), none of which were considered by the Office, in showing that independent claim 1 of the '538 Patent, and its dependent claims 2-5 and 7-18, are invalid over the prior art. The remaining claim of the '538 Patent likewise should never have issued, as Apple's obviousness combination demonstrate. Notably, The Petition relies on an additional reference from MasterCard (Kranzley) to show that claim 6 is invalid. Further analysis of why the Challenged Claims are invalid can be found in the Petition.

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

1. No Settled Expectations Favor Discretionary Denial

The '538 Patent only recently issued, on November 16, 2021. The Director's decisions confirm that Patent Owner therefore has not developed strong settled expectations in the '538 Patent. *See Cambridge Indus. USA, Inc. v. Applied*

Optoelectronics, Inc., IPR2025-00433 (PTAB June 26, 2025). In fact, the timeline here does not support settled expectations for ***any*** of the six patents which are the subject of Apple's IPRs.

Events Pre-Dating the '538 Patent Do Not Support CardWare's Narrative

CardWare's brief relies heavily on events that pre-date not only the issuance of the '538 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 with claims are directed to a magnetic stripe emulation technology. EX1063 (claim 1). 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 of the patents asserted against Apple issues *See* EX1065 (U.S. Patent No. 10,339,520 issued on July 2, 2019).

Events After '538 Issuance Demonstrate a Lack of Settled Expectations

None of these events create settled expectations for the '538 Patent—a patent that had not issued, and is of a different scope from CardWare's pre-2017 patents. To the contrary, the events that do relate to the '538 Patent support an expectation that the '538 Patent is likely unpatentable.

2021: The '538 Patent issues on November 16, 2021

2022: Apple receives a subpoena from Samsung, identifying the ’538 Patent and exploring Apple products as likely ***prior art*** to the ’538 Patent. EX2011.

2023: CardWare sends a letter to Apple identifying the ’538 Patent, listed among 11 other patents, including 5 patents not asserted against Apple and 3 other patents with claims that had already been 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. EX.2007, ¶¶32-33. Apple Pay was announced on September 9, 2014, and made available on October 20. 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 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 “smarter credit cards” and the 19-paragraph specification focused primarily on inductor assemblies and similar hardware. EX1062, [0001].

Over time, CardWare has stretched the scope of its claims to (and beyond) the limit of its original disclosures, in its quest to obtain claims broad enough to cover the phone-based mobile payment technologies of Apple and others that were already on the market. The Board has already noted that claims of the ’286 Patent do not have support in CardWare’s earliest provisional application. *See* FN 2, *supra*. This too weighs against CardWare having “settled expectations” that would weigh against institution here. *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 declined to find any claim terms indefinite. *See* EX2023. Thus, there is no inconsistency with how the claims will be interpreted in this IPR and how they will be interpreted in the district court, and no claim-construction issues weigh against institution.

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 WDTX. The USPTO’s March 24, 2025 Memorandum states that “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 statistics.[5] Applying that time period, 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 v. Roku Inc.,* 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 full year before CardWare filed its suit against Apple. Therefore it is

[5] CardWare's WDTX statistics should be disregarded because they are not current. EX2025 (29 month time to trial from **2008**-2025). *Compare* EX1082 (34 month average from January 2024-2025).

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 the WDTX, which shows the median time to trial for Judge Albright's cases was 34.1 months, just above the median time to trial in civil cases filed in the WDTX: 32.8 months. EX1080, EX1081.[6] Thus, based on Judge Albright's and the WDTX's median time to trial, trial in the parallel proceeding is projected to take place around August 2027—8 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

[6] 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 IPR2025-01151, (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 IPR2025-01151, 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 IPR2025-01151.

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, nor can Apple 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 in the Petition and the district

court, and the IPRs will serve as a "true alternative" to the district court proceeding for those invalidity issues which can be raised in an IPR proceeding.

PO nonetheless argues Apple's *Sotera+* stipulation is "ineffective." Not so. PO's objection amounts to a complaint that the IPRs (and related stipulations) cannot resolve a host of validity questions that Apple is not allowed to raise in this IPR, including §101, §112, and §102(g). PO further complains that Apple's stipulation does not limit what other defendants CardWare 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. Apple's IPRs were filed months before discovery opened in the district court litigation (Fintiv Factor 3)

Apple's IPR Petition was filed on June 24, 2025, more than 5 months before Apple's 1-year bar date. Discovery opened July 29, 2025, *Markman* briefing was not complete until July 17, and the *Markman* occurred on August 28. 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 to-date consists of one hearing and one claim construction order. The following phases of litigation require significantly greater investment, 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 avoid the investment in parallel proceedings if either so chooses.[7]

6. CardWare's Commercialization Claims Are Overstated

As further evidence that there are no settled expectations, there is reason to doubt the extent of CardWare's "commercialization" efforts. CardWare includes two conclusory sentences alleging it has "devoted significant resources to develop and commercialize secure systems for electronic payments…over the last decade-plus." Paper 8, 19. In support, CardWare cites three paragraphs of its complaint. EX2007, ¶¶14-17. Among its purported innovations is "SmartTokenization™ technology." *Id*., ¶15. CardWare filed an "Intent to Use" trademark application on February 28, 2024, for SmartTokenization, but stated it does not currently use the mark. EX1084.

[7] Judge Albright has historically granted joint or unopposed motions to stay the litigation pending resolution of instituted IPR proceedings. EX1083.

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 contains a purported description of CardWare's payment platform but provides no link for a user to sign-up or even contact CardWare for more information. The app does not allow any users to make mobile payments or otherwise practice any of the patent claims. In addition, the app has less than 5 total downloads, though the latest version has been available for over 2 months. EX1086. This further suggests limited commercialization efforts.

C. The Length of the Claims and Limited Overlap in Claim Language Support the Need for Multiple Petitions.

CardWare's complaints regarding multiple petitions are better assessed in the context of a decision on the merits than in the context of discretionary denial. Regardless, the presence of multiple petitions, on its own, is not sufficient to discretionarily deny otherwise strong cases for invalidity. The complexity of the independent claims—with 9-11 limitations each—further supports two petitions. *See* Paper 3 at 4-5. While there is some overlap in the prior art across the two petitions, two different primary references are used for the independent claims to address issues unique to those claims. *Id*. Moreover, all 30 claims (totaling over 3,500 words) of the '538 Patent are asserted in the litigation and instituting only one petition would bifurcate the question of invalidity on the same patent.

CardWare's reference to Apple's use of Lin in its invalidity contentions and a prior petitioner filing a single petition are irrelevant. First, the use of Lin in the litigation will be limited due to Apple's Sotera+ Stipulation. Second, as discussed above, Samsung's petition lacked the requisite rationale to support its obviousness combination. Including adequate rationale for obviousness combinations with multiple primary references, coupled with the differences in claim scope, complexity, and length of the claims, is why two petitions are necessary.

IV. CONCLUSION

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

BY: /s/ Adam P. Seitz
Adam P. Seitz, Reg. No. 52,206
adam.seitz@eriseip.com
ERISE IP, P.A.
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. 11,176,538 to Wyatt ("the '538 Patent")
Exhibit 1002	Prosecution History of the '538 patent ("the Prosecution History")
Exhibit 1003	Expert Declaration of Dr. Clifford Neuman
Exhibit 1004	WIPO Pub. No. 2010/039337 to Lin et al. ("Lin")
Exhibit 1005	U.S. Pub. No. 2010/00125508 ("Smith")
Exhibit 1006	U.S. Pub. No. 2011/0184867 to Varadarajan ("Varadarajan")
Exhibit 1007	U.S. Patent No. 7,740,168 to Hammad et al. ("Hammad")
Exhibit 1008	U.S. Pub. No. 2010/0125509 to Kranzley et al. ("Kranzley")
Exhibit 1009	U.S. Provisional Application No. 60/884,089 ("Hammad '089 Provisional")
Exhibit 1010	Intentionally Left Blank
Exhibit 1011	Intentionally Left Blank
Exhibit 1012	Intentionally Left Blank
Exhibit 1013	Intentionally Left Blank
Exhibit 1014	Intentionally Left Blank
Exhibit 1015	Intentionally Left Blank
Exhibit 1016	Intentionally Left Blank
Exhibit 1017	Intentionally Left Blank
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	"Smart Card Technology: New Methods for Access Control" ("*Smart Card Tech.*")
Exhibit 1036	U.S. Patent No. 5,528,222 ("Moskowitz")
Exhibit 1037	"The Electronic Purse" ("Wenninger")
Exhibit 1038	U.S. Patent 5,594,233 ("Kenneth")
Exhibit 1039	U.S. Patent No. 7,004,385 ("Douglass")
Exhibit 1040	U.S. Pub. No. 2007/0265984 ("Sanantha")
Exhibit 1041	U.S. Pub. No. 2012/0197691 ("Grigg")
Exhibit 1042	U.S. Patent Publication No. 2010/0125509 ("Kranzley")
Exhibit 1043	U.S. Pub. No. 2011/0140841 ("Bona")

Exhibit 1044	U.S. Pub. No. 2014/0019367 ("Khan")
Exhibit 1045	U.S. Pub. No. 2013/0262317 ("Collinge")
Exhibit 1046	"*A Note on the Use of Timestamps as Nonces,*" B. Clifford Neuman, et al., ACM SIGOPS Operating Systems Review, Volume 27, Issue 2, pp. 10 – 14 (April 1993)
Exhibit 1047	U.S. Pub. No. 2002/0174075 ("Mirlas")
Exhibit 1048	U.S. Patent No. 5,903,721 ("Sixtus")
Exhibit 1049	Notice of Sotera Plus Stipulation *CardWare Inc. v. Apple Inc.*, Civil Action No. 1:25-cv-00446
Exhibit 1050	Intentionally Left Blank
Exhibit 1051	Intentionally Left Blank
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	File History of U.S. Patent No. 11,328,286
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
Exhibit 1088	*Samsung Electronics Co. Ltd. v. CardWare, Inc.,* IPR2023-00219, Paper 11

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 10, 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