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Attorneys for Defendant,
APPLE INC.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

(SAN JOSE DIVISION)

CPC PATENT TECHNOLOGIES PTY LTD.,

Plaintiff,

v.

APPLE INC.,

Defendant.

Case No. 5:22-cv-02553-EJD-NC

DEFENDANT APPLE INC.'S NOTICE OF MOTION AND MOTION TO STAY PENDING *INTER PARTES* REVIEW

Date: November 10, 2022
Time: 9:00 a.m.
Courtroom: 4
Judge: Hon. Edward J. Davila

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NOTICE OF MOTION AND MOTION

TO ALL PARTIES AND THEIR ATTORNEYS OF RECORD:

PLEASE TAKE NOTICE that on November 10, 2022 at 9:00 a.m., or as soon thereafter as the matter may be heard, in the courtroom of the Honorable Edward J. Davila located in the United States District Court for the Northern District of California, San Jose Courthouse, Courtroom 4, 5th Floor, 280 South First Street, San Jose, CA 95113, Apple will and hereby does move for an order staying all proceedings in this action pending final resolution of the pending *inter partes* review ("IPR") proceedings relating to U.S. Patent Nos. 9,665,705 ("'705 Patent") and 8,620,039 ("'039 Patent") (collectively, the "Asserted Patents") before the Patent Trial and Appeal Board, including any appeals therefrom. Apple has filed, concurrently herewith, an Administrative Motion to Shorten Time for Hearing of this Motion.

As set forth in the accompanying Memorandum of Points and Authorities, all factors weigh in favor of a stay – the case is still at an early stage, the two IPR petitions will likely significantly simplify or moot many issues before this Court, and a stay will not prejudice Plaintiff CPC Patent Technologies PTY Ltd. ("CPC").

This Motion is based on this Notice, the accompanying Memorandum of Points and Authorities, the Declaration of Seth M. Sproul, and supporting documents, on such matters as may be judicially noticed, on any oral argument the Court may hear, and on such other and further information as the Court may consider.

Counsel for Apple has conferred with counsel for CPC with respect to the subject of this Motion. CPC opposes the relief sought by this Motion.

MEMORANDUM OF POINTS AND AUTHORITIES

I. INTRODUCTION

This is an early-stage patent infringement case in which Apple has challenged all of the asserted claims by petitioning the Patent Trial and Appeal Board to institute *inter partes* review relating to the Asserted Patents in this case, U.S. Patent Nos. 9,665,705 and 8,620,039.[1] To avoid unnecessary or duplicative effort, this case should be stayed pending the PTAB's issuance of final written decisions on the IPR petitions filed by Apple and the final resolution of any appeals.

A stay now is the prudent, efficient course for managing this case. Each of the three relevant factors weighs in favor of a stay. First, this litigation is still in its early stages. The case was recently transferred from another district where the case was mid-stream: There is no schedule in place, fact discovery is not complete, no depositions as part of fact discovery have been taken, expert discovery has not begun, and a trial date has not been set. Although claim construction is complete, a substantial amount of work remains before the case is ready for trial. Second, a stay could dramatically simplify the issues in question because all asserted claims of the Asserted Patents are being challenged through IPRs. If the PTAB cancels these claims, this case is moot. Even if some of the asserted claims survive IPRs, a final determination from the PTAB would narrow the claims CPC could assert, the invalidity arguments that Apple could raise, or both. Third, CPC will not suffer any prejudice or tactical disadvantage as the result of a stay. CPC is a non-practicing entity that does not make or sell any products covered by the Asserted Patents. Nor does CPC compete with Apple. Any conceivable harm CPC may suffer from a stay can be remedied with monetary damages.

Accordingly, all three factors strongly favor staying this case pending IPRs.

[1] The '705 Patent is being challenged in IPR 2022-00602, filed February 23, 2022. Sproul Decl. Ex. B. The '039 Patent is being challenged in IPR 2022-00600, filed on February 23, 2022. Sproul Decl. Ex. C.

II. BACKGROUND

On February 23, 2021, Plaintiff CPC Patent Technologies PTY Ltd. ("CPC") filed a complaint in the United States District Court for the Western District of Texas, before Judge Alan Albright, asserting the following patents against Apple: U.S. Patent Nos. 9,665,705 ("'705 patent"), 8,620,039 ("'039 patent"), and 9,269,208 ("'208 patent"). ECF 1. CPC alleged that certain Apple products equipped with Touch ID and Face ID, along with Apple Card loaded into Apple Wallet, infringed these three patents. *See id.* From February 15, through March 16, 2022, CPC withdrew all claims in the '208 patent, withdrew all but one claim in the '039 patent, and withdrew all but six claims in the '705 patent, thus narrowing the case. *See* ECF 80; *see also* Sproul Decl. Ex. A (George Summerfield 3/16/22 Email). As a result, only the '705 and '039 Patents remain in the case.

A. Status of the IPRs

On February 23, 2022, Apple filed IPRs on all originally asserted claims. Sproul Decl. Ex. B, IPR 2022-00602, Paper No. 1 ('705 Patent Petition); Ex. C, IPR 2022-00600, Paper No. 1 ('039 Patent Petition). CPC's preliminary responses, if it chooses to file them, are due between June and July 2022. 37 CFR § 42.107. The PTAB's institution decisions on IPRs related to both Asserted Patents are due between September and October 2022. *See* 35 U.S.C. § 314(b); 37 CFR § 42.107. If instituted, the PTAB's final written decisions will be due no later than a year after the date of institution, *i.e.*, between September and October 2023. *See* 35 U.S.C. § 316(a)(11).

B. Procedural Posture

On May 4, 2021, Apple filed a Motion to Transfer venue to the Northern District of California. ECF 22. Judge Albright denied Apple's Motion to Transfer on February 8, 2022. ECF 74. On February 10, 2022, a *Markman* hearing was held and Judge Albright construed terms of the Asserted Patents. ECF 76. On March 9, 2022, Apple submitted a petition for a writ of mandamus directing the United States District Court for the Western District of Texas to transfer this case to the United States District Court for the Northern District of California. *See* ECF 83. On April 6, 2022, with sixteen weeks of fact discovery remaining, CPC filed a Motion for Partial Summary Judgment of infringement of claim 1 of the '705 Patent. ECF 86. On April 13, 2022, Apple filed a

notice of unopposed extension of deadline to file a response to CPC's Motion for Partial Summary Judgment on May 4, 2022. ECF 90. On April 22, 2022, the Federal Circuit granted Apple's mandamus petition and directed transfer to the Northern District of California. ECF 92. On May 6, 2022, CPC filed a notice of CPC's Motion for Partial Summary Judgment with a hearing date of November 17, 2022. ECF 113.

Although the Initial Case Management Conference has been set for August 11, 2022, no schedule has been entered, and no deadlines have been set for fact discovery, expert discovery, or trial. *See* ECF 111. CPC has not served updated infringement contentions to conform with this Court's Patent Local Rules. With the exception of depositions on venue issues, no depositions have been taken.

III. LEGAL STANDARD

A court's "power to stay proceedings is incidental to the power inherent in every court to control the disposition of the causes on its docket with economy of time and effort for itself, for counsel, and for the litigants." *Landis v. N. Amer. Co*., 299 U.S. 248, 254-55 (1936); *see also Clinton v. Jones*, 520 U.S. 681, 706 (1997) ("The District Court has broad discretion to stay proceedings as an incident to its power to control its own docket."). District courts have ample "authority to order a stay pending conclusion of a PTO reexamination." *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1426-27 (Fed. Cir. 1988) (citing *Landis*, 299 U.S. at 254).

In this district, there is a "liberal policy in favor of granting motions to stay proceedings pending the outcome of USPTO reexamination or reissuance proceedings." *PersonalWeb Techs., LLC v. Facebook, Inc.*, No. 5:13-CV-01356-EJD, 2014 WL 116340, at *3 (N.D. Cal. Jan. 13, 2014) (internal citations omitted); *see also Pragmatus AV, LLC v. Facebook, Inc.*, No. 11-cv-02168-EJD, 2011 WL 4802958 at *2 (N.D. Cal. Oct. 11, 2011). This Court has stayed actions even when IPRs have not yet been instituted. *Viavi Sols. Inc. v. Platinum Optics Tech. Inc.,* No. 5:20-CV-05501-EJD, 2021 WL 1893142, at *1 (N.D. Cal. May 11, 2021) ("a stay pending the PTAB's decision on whether to institute IPR petitions will promote efficiency by avoiding the expenditure of limited judicial resources between now and when the last PTAB institution decision will be rendered"); *see*

also Finjan, Inc. v. Symantec Corp., 139 F.Supp.3d 1032, 1037 (N.D. Cal. 2015) ("Were the Court to deny the stay until a decision on institution is made, the parties and the Court would expend significant resources on issues that could eventually be mooted by the IPR decision"); *Regents of Univ. of Minnesota v. LSI Corp*., No. 5:18-CV-00821-EJD, 2018 WL 2183274, at *4 (N.D. Cal. May 11, 2018).

The Court should "examine three factors when determining whether to stay a patent infringement case pending review or reexamination of the patents: (1) whether discovery is complete and whether a trial date has been set; (2) whether a stay will simplify the issues in question and trial of the case; and (3) whether a stay would unduly prejudice or present a clear tactical disadvantage to the nonmoving party." *PersonalWeb Techs, LLC v. Apple Inc.*, 69 F. Supp. 3d 1022, 1025 (N.D. Cal. 2014) (citations and quotations omitted); *see also Viavi*, 2021 WL 1893142 at *1.

IV. ARGUMENT

The Court should stay this action pending IPRs because all three factors weigh in Apple's favor. *First,* this litigation is still in its early stages: the case was recently transferred from another district, there is no schedule in place, fact discovery is not complete, expert discovery has not begun, a trial date has not been set, and there is a substantial amount of work remaining before the case is ready for trial. *Second*, a stay could dramatically simplify the issues in question because all asserted claims of the Asserted Patents are being challenged in the IPR petitions. *Third*, CPC will not suffer any prejudice or tactical disadvantage as the result of a stay. CPC is a non-practicing entity that does not compete with Apple and that does not make or sell any products covered by the Asserted Patents.

A. A Stay Is Appropriate Because Discovery Is in Its Early Stages and No Trial Date Has Been Set

The early stage of litigation strongly favors a stay. This factor concerns whether the bulk of the work in the case lies ahead or in the past. *See, e.g., Viavi*, 2021 WL 1893142, at *1 ("There is substantial work remaining before the case is ready for trial."); *see also PersonalWeb Techs., LLC v. Facebook, Inc*., 2014 WL 116340, at *3 (finding this factor weighs in favor of a stay where "a claim construction order has been issued and the close of fact discovery is fast approaching" but "a

substantial portion of the work—expert discovery, summary judgment, pre-trial preparation, and trial itself—lies ahead."). In particular, courts consider whether fact discovery is complete, expert discovery has begun, depositions have taken place, a trial date has been set, and a substantial amount of work remains before the case is ready for trial. *See Viavi*, 2021 WL 1893142, at *1 ("Here, all of the factors above favor staying this case. First, fact discovery is in its early stages, expert discovery has not begun, and a trial date has not been set."); *see also Finjan*, 139 F. Supp. 3d at 1034 ("While the parties have engaged in some written discovery and document production, no depositions have been taken and no deadlines associated with expert discovery, summary judgment, pre-trial motions, and trial have been set.").

This case is in its early stages and there is a substantial amount of work remaining before the case is ready for trial. Thus, this factor weighs in favor of granting a stay. Fact discovery is far from complete. Except for three short depositions solely on venue issues, neither party has taken any depositions. Although the parties have begun producing documents and exchanging written discovery, the parties have only engaged in limited discovery and the resources spent on that work are a fraction of what would be required for the still-to-come depositions and expert discovery.

Transfer to this district introduces additional procedural requirements that tip this factor further in favor of a stay. The parties exchanged initial infringement and invalidity contentions while the case was in Texas. *See* ECF 37. However, the parties will need to provide amended or updated contentions to comply with the requirements of the Patent Local Rules in this district, and will also need to complete the corresponding document productions associated with those deadlines. *See Anza Technology v. Xilinx, Inc.*, No. 5:17-cv-06302-LHK, Dkt. No. 65 at 2-3, 71 (N.D. Cal. Feb. 7, 2018) (granting a stay in a case where, as here, infringement and invalidity contentions were exchanged in accordance with a transferor court's patent rules prior to transfer).

This factor also weighs in favor of a stay because there has not yet been any expert discovery, and there is no schedule in place for expert discovery, dispositive motions, or trial. None of these dates will be set until the Initial Case Management Conference, which is scheduled to occur on August 11, 2022. Until that date, it is unlikely that the Court will have expended any resources on

this case, further strengthening the efficiencies that a stay would provide. Thus, the Court has yet to expend significant resources on this case, and a stay will not disrupt any pre-existing case management plan.

Courts in this district have stayed cases that are much further along than this one. For example, in *PersonalWeb Techs., LLC v. Facebook, Inc.*, the court granted a stay pending IPRs even after "[t]he parties and courts ha[d] already invested significant time and effort into these matters" in that "a claim construction order ha[d] been issued and the close of fact discovery [was] fast approaching." 2014 WL 116340 at *3. Even though just over a week of fact discovery remained when the stay was granted, the court reasoned that "a substantial portion of the work—expert discovery, summary judgment, pre-trial preparation, and trial itself—l[ay] ahead." *Id.* Thus, the court concluded, the stage-of-case factor weighed "slightly in favor of a stay." *Id.* at *4. This case is less advanced than *PersonalWeb Techs., LLC v. Facebook, Inc.*

The stage of the case here thus strongly favors granting a stay pending IPRs because the bulk of the work lies ahead. *See Viavi*, 2021 WL 1893142, at *1 ("There is substantial work remaining before the case is ready for trial."). There is no schedule in place, fact discovery is not complete, no depositions as part of fact discovery have been taken, expert discovery has not begun, and a trial date has not been set. The Court has yet to expend significant resources on this case so a stay will not disrupt any pre-existing case management plan. Indeed, fact discovery is effectively stayed, and substantial work remains before this case is ready for trial. This factor strongly favors a stay.

B. The Patent Office Proceedings Will Simplify The Issues

The second factor – simplification of issues and conservation of judicial and party resources – likewise weighs in favor of a stay. Courts in this district have recognized the significant efficiency that can result from an early stay even where the PTAB has not yet instituted its review. *Viavi*, 2021 WL 1893142 at *1 ("a stay pending the PTAB's decision on whether to institute IPR petitions will promote efficiency"). Indeed, this district has a liberal policy of granting stays pending reexamination in the interest of judicial economy, which has frequently led to pre-institution stays. *See, e.g., PersonalWeb Techs., LLC v. Facebook, Inc*., 2014 WL 116340, at *3 (finding there is a

"liberal policy in favor of granting motions to stay proceedings pending the outcome of USPTO reexamination or reissuance proceedings."); *Finjan*, 139 F.Supp.3d at 1037 (N.D. Cal. 2015) ("Accordingly, the Court finds that staying the case pending the PTO's decision whether to institute IPR is the most efficient use of resources at this juncture."); *Regents of Univ. of Minnesota*, 2018 WL 2183274, at *4 (entering pre-institution stay); *Evolutionary Intel*., 2013 WL 6672451, at *7 (finding that this district's liberal policy favoring stays pending reexamination warrants a stay even if the Patent Office is still considering whether to grant a party's reexamination request); *Anza Tech*., 2018 WL 4859167, at *2 ("Therefore, staying the case pending the resolution of the petitions and the IPRs, if instituted, could simplify the case because the PTAB could cancel or amend some or all of the asserted claims."). In *Viavi*, this Court found that "a stay pending the PTAB's decision on whether to institute IPR petitions will promote efficiency by avoiding the expenditure of limited judicial resources between now and when the last PTAB institution decision will be rendered." 2021 WL 1893142, at *1.

The same efficiencies will be found here if a pre-institution stay is granted. A stay pending the PTAB's decision on whether to institute Apple's IPR petitions will enhance efficiency by potentially avoiding the expenditure of judicial resources between now and when the PTAB institution decision will be rendered. *Evolutionary Intel. LLC v. Yelp Inc*, No. C-13-03587 DMR, 2013 WL 6672451, at *7 (N.D. Cal. Dec. 18, 2013). For that reason, "it is not uncommon for courts to grant stays pending reexamination prior to the PTO deciding to reexamine the patent," and this court has consistently granted stays prior to IPR institution decisions. *Anza Tech., Inc. v. Toshiba Am. Elec. Components Inc*., No. 17-CV-07289-LHK, 2018 WL 4859167, at *2 (N.D. Cal. Sept. 28, 2018). Due to the schedule being vacated upon transfer, this case is effectively stayed pending the case management conference currently set for August 11, 2022. Entering a stay at this time would confer minimal, if any, burden on CPC as institution decisions are anticipated starting in September 2022. Further efficiencies will be found if the PTAB cancels all claims at issue because there will be no need for the Court to consider any issue relating to the Asserted Patents. Even if only some of the asserted claims are cancelled, the IPR process will "simplify the issues and streamline the

litigation by reducing claim construction disputes and minimizing the number of claims that the parties need to address." *Tire Hanger Corp. v. My Car Guy Concierge Servs. Inc*., No. 5:14-cv-00549-ODW, 2015 WL 857888, at *2 (C.D. Cal. Feb. 27, 2015).

Here, there is a strong likelihood that the PTAB will institute the IPRs based on the substantial evidence presented in Apple's petitions. Apple's IPR petitions challenge each of CPC's asserted claims and establish that those claims are not patentable in light of the prior art. A case is rendered moot if the PTAB finds that the challenged claims are not patentable. *See Fresenius USA, Inc. v. Baxter Int'l, Inc*., 721 F.3d 1330, 1340 (Fed. Cir. 2013) ("when a claim is cancelled, the patentee loses any cause of action based on that claim, and any pending litigation in which the claims are asserted becomes moot"). Thus, this entire action will be rendered moot if the PTAB cancels all the claims, and even if the PTAB cancels a portion of the claims, the scope of the litigation will be significantly reduced. *See Nichia Corp. v. Vizio, Inc*., SACV 18-00362 AG (KESx), 2018 WL 2448098, at *2 (C.D. Cal. May 21, 2018) ("If the PTAB cancels all of the asserted claims, this action will be rendered moot. If the PTAB cancels or narrows a portion of the asserted claims, the scope of this litigation may be significantly reduced.").

Statistics from the PTAB provide further proof that IPRs are likely to dispose of or narrow this case. According to PTAB statistics, in 2021, the PTAB instituted review for sixty-six percent (66%) of patents on which IPRs were filed. Sproul Decl., Ex. D (March 2022 PTAB Statistics). Additionally, for the period from October 1, 2021, to March 31, 2022, the PTAB instituted review for sixty-two percent (62%) of IPR petitions when the challenged technology related to electrical or computer-based technology. *Id.* Also, for the period from October 1, 2021, to March 31, 2022, IPR petitions that reached final written decision resulted in the cancellation of at least some instituted claims in eighty-five percent (85%) of cases, and resulted in cancellation of all instituted claims in sixty-seven percent (67%) of cases. *Id.* Apple's success rate in challenging patents through IPRs has been even higher. *See* Sproul Decl., Ex. E [Lex Machina Statistics] (eighty-six percent (86%) of Apple-filed IPRs resulting in final determination result in cancellation of some claims, and

seventy percent (70%) result in cancellation of all instituted claims). Thus, PTAB statistics further demonstrate that IPR petitions are virtually certain to narrow the issues in this case.

The prospect of simplification, however, does not depend on Apple's prevailing on all, or even any, claims in the IPR due to estoppel. If the IPR is instituted and proceeds to a final written decision, Apple will be estopped from re-arguing invalidity to the jury based on grounds that were "raised or that reasonably could have been raised during [the] *inter partes* review." 35 U.S.C. § 315(e)(2); *see also* Sproul Decl. Ex. B at 57; Sproul Decl. Ex. C at 52. Further, the fact that the PTAB had upheld certain claims would "assist in streamlining the presentation of evidence and benefit the trier of fact by providing the expert opinion of the PTO." *PersonalWeb Techs., LLC v. Facebook, Inc*, 2014 WL 116340, at *4. Under this scenario, there would be fewer prior art grounds that could be raised, and the Court would benefit from the PTAB's analysis and any potential disclaimers made by CPC in the IPR proceedings. *See Finjan*, 139 F. Supp. 3d at 1036 ("Staying the case pending the outcome of IPR could simplify the case by rendering some or all of Finjan['s] infringement claims moot, estopping Symantec from asserting any arguments it raised or reasonably could have raised in the IPR, and providing the Court with PTAB's expert opinion on the claims at issue.")

In sum, regardless of the outcome of the IPRs, they will simplify the issues in this case and reduce the burden on the Court and parties. Thus, this factor also strongly favors a stay.

C. CPC Will Suffer No Undue Prejudice or Tactical Disadvantage From A Stay

The lack of undue prejudice to CPC also favors a stay. CPC is a non-practicing entity that licenses its intellectual property and does not make any products that practice the patented technologies. CPC is a wholly owned subsidiary of Charter Pacific Corporation Limited ("Charter Pacific"). ECF 2. Charter Pacific's website states: "Charter Pacific is a diversified investment company with a focus on the global commercialization of Australian Biometric technology." Sproul Decl. Ex. F. Accordingly, CPC does not compete directly with Apple and would not suffer any competitive harm from a stay. *Cypress Semiconductor Corp. v. LG Elecs., Inc.*, No. 13-cv-04034-

SBA, 2014 WL 5477795, at *2-3 (N.D. Cal. Oct. 29, 2014); *IXI Mobile (R & D) Ltd. v. Samsung Elecs. Co Ltd*, No. 15-CV-03752-HSG, 2015 WL 7015415, at *4 (N.D. Cal. Nov. 12, 2015).

Nor can CPC argue that it would be unduly prejudiced merely because it may be delayed in enforcing its patent rights against Apple. "Courts have repeatedly found no undue prejudice unless the patentee makes a specific showing of prejudice beyond the delay necessarily inherent in any stay." *PersonalWeb Technologies, LLC v. Apple Inc.*, 69 F. Supp. 3d at 1029; *Twilio, Inc. v. TeleSign Corp.*, No. 16-CV-06925-LHK, 2018 WL 1609630, at *2 (N.D. Cal. Apr. 3, 2018) ("The delay inherent to the reexamination process does not generally constitute, by itself, undue prejudice."). This is because, unless "the parties are direct competitors and . . . the plaintiff's competitive position would be prejudiced by a stay," a plaintiff "can be fully restored to the status quo ante with monetary relief." *Finjan*, 139 F. Supp. 3d at 1038; *see DSS Tech. Mgmt., Inc. v. Apple Inc.*, No. 14-cv-05330-HSG, 2015 WL 1967878, at *4 (N.D. Cal. May 1, 2015). CPC faces no harm to its competitive position and thus can claim no prejudice from a stay.

Finally, there is no risk of an indefinite or unbounded stay. The expedited and time-bounded nature of the IPR process would minimize any prejudice alleged by CPC. Subject to very narrow exceptions, the PTAB is required by statute to complete proceedings "not later than 1 year after" the IPR is instituted. 35 U.S.C. 316(a)(11); *see, e.g., Advanced Micro Devices, Inc. v. LG Elecs., Inc.*, No. 14-CV-01012-SI, 2015 WL 545534, at *4 (N.D. Cal. Feb. 9, 2015) (finding no prejudice due to "expedited IPR resolution"). Here, the PTAB will issue its decision between September and October 2023.

In short, this factor favors a stay. CPC is a non-practicing entity that does not compete directly with Apple and would not suffer any competitive harm from a stay. A mere delay in enforcing its patent rights does not unduly prejudice CPC, and any conceivable harm CPC may suffer from a stay can be remedied with monetary damages. Additionally, there is no risk of an indefinite stay because the PTAB will issue its decision between September and October 2023. Thus, the lack of undue prejudice to CPC weighs heavily in favor of granting Apple's motion.

D. CPC's Motion for Summary Judgment Does Not Weight Against a Stay

CPC's Motion for Partial Summary Judgment is premature. Prior to the transfer of this case and with sixteen weeks of fact discovery remaining, CPC filed an early motion for partial summary judgment of a single claim of the '705 Patent. ECF 86. Apparently, CPC filed its motion prematurely for strategic reasons, and not because it believed it could prevail.[2] Indeed, CPC has not taken a single deposition relating to the operation of the accused Apple products and fact discovery is not anywhere near completion.

That CPC filed a Motion for Partial Summary Judgment a little more than two months into the fact discovery period should not weigh against a stay because the bulk of the work in this case lies ahead. *See supra* § IV.A. As discussed above, there is no schedule in place, fact discovery is not complete, no depositions as part of fact discovery have been taken, expert discovery has not begun, a trial date has not been set, and a substantial amount of work remains before this case is ready for trial. Further, Courts in this district will stay cases pending summary judgment. *See, e.g., Viavi,* 2021 WL 1893142, at *1 (granting defendant's Motion to Stay Pending *Inter Partes* Review and continuing hearing on defendant's motion for summary judgment); *Walters v. Alameida,* No. C-04-0818-RMW, 2008 WL 786851, at *1 (N.D. Cal. Mar. 20, 2008) (staying discovery until threshold question of qualified immunity is decided). For example, in *Viavi,* the defendant moved for an order staying the case pending a ruling on its Motion for Summary Judgment and, if any part of the case remained after that ruling, a stay pending final resolution of three pre-institution IPRs. 2021 WL 1893142, at *1. The court granted the defendant's Motion to Stay Pending *Inter Partes* Review and continued the hearing date for the defendant's motion for summary judgment. *Id.* at 2. Here, unlike in *Viavi,* CPC's Motion for Partial Summary Judgment has not been fully briefed. Due

[2] Apple anticipates filing summary judgment motions of noninfringement on both outstanding patents. Under this Court's Standing Order for Civil Cases, Sec. V.C, the parties must coordinate cross motions. Apple must therefore file its motion at the same time it opposes CPC's motion for summary judgment.

to the transfer of the case, Apple has not yet responded to CPC's motion, and Apple should not be required to until at least this motion is decided.[3]

In short, CPC's summary judgment should not weigh against a stay. It was filed before CPC took a single deposition on the operation of the accused products and will require additional, significant work from the parties and the Court before resolution. A stay will prevent further, unnecessary work that may not be needed if the IPRs are successful.

V. CONCLUSION

Because the relevant factors support a stay of this action pending resolution of Apple's IPR petitions, Apple respectfully requests that the Court grant its motion to stay the present action pending final, non-appealable resolution of Apple's IPRs related to the '705 and '039 Patents.

Dated: June 14, 2022

FISH & RICHARDSON P.C.

By: /s/ *Seth M. Sproul*
Seth M. Sproul
Attorneys for Defendant
APPLE INC.

[3] Separately, Apple is moving for expedited treatment of this motion to address the upcoming summary judgment response deadline. Resolution of the instant motion prior to any further briefing will benefit the Court and the parties by avoiding significant expenditures of money and resources for summary judgment motions that may very well be mooted by resolution of the IPR petitions.

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Attorneys for Defendant,
APPLE INC.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

(SAN JOSE DIVISION)

CPC PATENT TECHNOLOGIES PTY LTD.,

Plaintiff,

v.

APPLE INC.,

Defendant.

Case No. 5:22-cv-02553-EJD-NC

DECLARATION OF SETH M. SPROUL IN SUPPORT OF DEFENDANT APPLE INC.'S MOTION TO STAY PENDING *INTER PARTES* REVIEW

I, Seth McCarthy Sproul, hereby declare and state as follows:

1. I am a principal in the law firm of Fish & Richardson P.C., counsel of record for Defendant Apple Inc. in the above-captioned matter. I have personal knowledge of all the facts contained herein and, if called as a witness, I could and would testify competently thereto.

2. Attached as Exhibit A is a true and correct copy of an email dated March 16, 2022 that I received from George Summerfield regarding the '208 Patent.

3. Attached as Exhibit B is a true and correct copy of Apple's IPR 2022-00602 Petition for the '705 Patent.

4. Attached as Exhibit C is a true and correct copy of Apple's IPR 2022-00600 Petition for the '039 Patent.

5. Attached as Exhibit D is a true and correct copy of the Patent Trial and Appeal Board's March 2022 Trial Statistics, which are also available at https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2022_q2__roundup.pdf.

6. Attached as Exhibit E is a true and correct copy of IPR statistics related to Apple obtained through Lex Machina.

7. Attached as Exhibit F is a true and correct copy of the "About Us" section of Charter Pacific's webpage, which is also available at https://www.charpac.com.au/about-us/.

I declare under the penalty of perjury of the laws of the United States of America that the foregoing is true and correct. Executed on June 14, 2022, in Boulder, Colorado.

Dated: June 14, 2022

FISH & RICHARDSON P.C.

By: /s/ *Seth M. Sproul*
Seth M. Sproul

EXHIBIT A

Jeff Burton

From: Summerfield, George <George.Summerfield@klgates.com>
Sent: Wednesday, March 16, 2022 10:59 AM
To: Service – FR Apple/CPC
Cc: KLG_US_Charter Pacific
Subject: Final Contentions

[This email originated outside of F&R.]

Counsel -

In advance of the contentions that are due today, CPC is notifying you that it will not be asserting claim 10 of the '208 Patent. In addition to obviating the need to prepare contentions for the '208 Patent, this also resolves the one remaining claim construction issue.

Please let me know if you have questions.

George

EXHIBIT B

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

CPC Patent Technologies PTY, LTD.,

Patent Owner

Inter Partes Review Case No. IPR2022-00602
U.S. Patent No. 9,665,705

PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,665,705

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I. INTRODUCTION

Petitioner Apple Inc. ("Petitioner") requests *Inter Partes* Review ("IPR") of Claims 1, 4, 6, 10-12, and 14-17 (collectively, the "Challenged Claims") of U.S. Patent No. 9,665,705 ("the '705 Patent"). The purportedly distinguishing features of the Challenged Claims were (1) emitting a "secure" access signal in a secure access system; and (2) enrolling a new user's fingerprint by providing control information via a sequence of presses of certain amount and duration. Both features were well-known before the '705 Patent, rendering the Challenged Claims obvious. IPR of the Challenged Claims should thus be instituted.

II. SUMMARY OF THE '705 PATENT

A. Description of the Alleged Invention

The '705 Patent describes a secure access system. At a transmitter subsystem, a biometric (e.g., fingerprint) is received by a sensor, matched against a stored fingerprint, and an accessibility attribute is outputted. A secure access signal carrying information corresponding to the accessibility attribute is transmitted to a receiver subsystem for providing access to a controlled item. *'705 Patent*, Abstract, 5:57–6:20, 6:67–7:3, 8:24-38, FIG. 2.

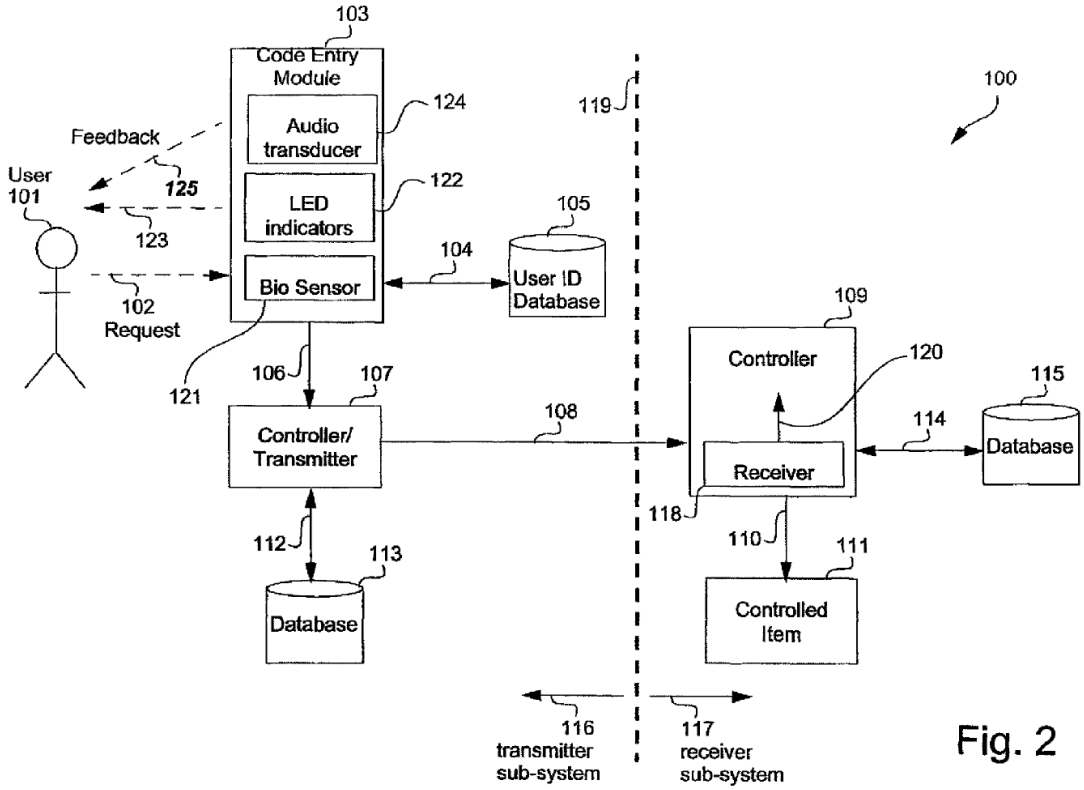


Fig. 2

The sensor may receive a series of fingerprint presses of a certain duration that are compared to stored control signals. *'705 Patent*, 10:56–11:12.

B. Summary of Unpatentability of the Challenged Claims

Access systems sending a biometric "secure access signal" were well-known as of August 2003. *Mathiassen* teaches a secure access system for unlocking car doors, where a portable control emits an encrypted, single-use command. *Mathiassen's* portable control includes a fingerprint sensor for authenticating a user to lock/unlock car doors. *Mathiassen* also teaches a user-input series of fingerprint representations to instruct various commands. Upon matching a live fingerprint against a stored fingerprint, car door locks are opened.

Mathiassen teaches portable door control outputting an encrypted command to grant access to the car door locks. *McKeeth* teaches outputting other signals indicating when a user is under duress or when a user is unauthorized, i.e., to instruct duress access or alert access.

Although *Mathiassen* teaches inputting a command via a series of fingerprint representations, *Mathiassen* does not teach determining a duration of each entry. *Anderson* teaches inputting an access code including fingerprint presses of varying duration.

Modifying *Mathiassen's* portable control to output information indicating duress access and alert access, in addition to *Mathiassen's* taught grant access, and further modifying *Mathiassen* to determine a *duration* of the taught series of entries, would have been obvious to a POSITA.

C. Priority Date of the Challenged Claims

The '705 Patent was filed on January 19, 2016, as U.S. Patent Application No. 15/000,818, which claims priority to U.S. Patent No. 9,269,208 (for which an IPR is filed commensurately herewith), which claims priority to PCT/AU2004/001083, filed August 13, 2004, now U.S. Patent No. 8,266,442. *'705 Patent* (Ex. 1001), (63). The '705 Patent further lists priority to AU2003904317, filed August 13, 2003. *'705 Patent,* (30).

For this IPR *only*, Apple applies August 13, 2003, as the priority date for the Challenged Claims.

D. Level of Skill of a POSITA

A POSITA at the time of the '705 Patent (August 13, 2003) would have had at least a bachelor's degree in computer engineering, computer science, electrical engineering, or a related field, with at least one year of experience in the field of human-machine interfaces and device access security. Additional education or experience might substitute for the above requirements. *Dec.,* 31-35.[1]

III. REQUIREMENTS FOR IPR UNDER 37 C.F.R. § 42.104

A. Grounds for Standing Under 37 C.F.R. § 42.104(a)

Apple certifies the '705 Patent is available for IPR and Apple is not barred or estopped from requesting IPR challenging the claims of the '705 Patent. Apple is not the owner of the '705 Patent, has not filed a civil action challenging the validity of any claim of the '705 Patent, and this Petition is filed less than one year after Apple was served with a complaint alleging infringement of the '705 Patent.

B. Identification of Challenge Under 37 C.F.R. § 42.104(b) and Relief Requested

In view of the prior art and evidence presented, the Challenged Claims of the '705 Patent are unpatentable and institution should be granted. 37 C.F.R. § 42.104(b)(1); 37 C.F.R. § 42.104(b)(2).

[1] All citations to "*Dec.*" are to Ex. 1003, Declaration of Dr. Andrew Sears.

Proposed Grounds of Unpatentability
Ground 1: Claims 1, 4, 6, 10-12, and 14-17 are **obvious** under § 103(a) over *Mathiassen* (Ex. 1004) in view of *McKeeth* (Ex. 1005) and *Anderson* (Ex. 1006)

Sections V-VII identify where each element of the Challenged Claims is found in the prior art. 37 C.F.R. § 42.104(b)(4). The exhibit numbers of evidence relied upon to support the challenges are provided above and the relevance of evidence to the challenges raised is provided in Section IV. 37 C.F.R. § 42.104(b)(5). Exhibits 1001-1080 are also attached.

C. Claim Construction Under 37 C.F.R. § 42.104(b)(3)

Here, claims are interpreted under the same standard applied by Article III courts (i.e., the *Phillips* standard). 37 C.F.R. § 42.100(b); 83 Fed. Reg. 197 (Oct. 11, 2018); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). With the exceptions discussed below, Petitioner applies the plain and ordinary meaning of all claim terms. Petitioner does not waive any argument in any litigation that claim terms in the '705 Patent are indefinite or additional terms need construction.

In the related district court litigation, a *Markman* Order was entered February 10, 2022. (Ex. 1077). The Parties also agreed to certain constructions in a Joint Claim Construction Statement (JCCS). (Ex. 1074). For purposes of this IPR, Apple applies the District Court's constructions from the *Apple* litigation and constructions agreed to by the Parties (Ex. 1074) that are not otherwise plain and ordinary meaning, shown in the chart below.

Claim Term	***Construction***
Claims 1, 4, 10-12, 14-17: "database" **Agreed-Upon Construction, Ex. 1074**	"Organized structure of data" (Ex. 1074, 3)
Claims 1, 11, 14-17: "conditional access" **Agreed-Upon Construction, Ex. 1074**	"Access based on accessibility attribute" (Ex. 1074, 3)
Claims 1, 10-12, 14-17: "biometric signal" **Agreed-Upon Construction, Ex. 1074**	"Physical attribute of the user (i.e., fingerprint, facial pattern, iris, retina, voice, etc.)" (Ex. 1074, 3)
Claims 1, 10-11, 14-17: "accessibility attribute" **Court's Construction, Ex. 1077**	"attribute that establishes whether and under which conditions access to the controlled item should be granted to a user" (Ex. 1077, 2-3)

IV. THE CITED REFERENCES ARE ANALOGOUS PRIOR ART

Mathiassen, a U.S. patent application filed December 18, 2002, and published June 24, 2004, qualifies as prior art under § 102(e). *Mathiassen* teaches a secure access system transmitting wireless signals providing access to a controlled item. *Mathiassen,* [0175-0186]. *Mathiassen* teaches enrolling an administrator's biometric and inputting a series of fingerprint representations instructing a command. *Mathiassen*, [0162-0165], [0192]. Because *Mathiassen,* like the '705 Patent, discloses a system providing secure access to a controlled item, *Mathiassen* is in the

same field of endeavor and is pertinent to the '705 Patent's problem to solve. *Dec.,* 81-88. *Mathiassen* is analogous art.

McKeeth, a U.S. patent filed February 23, 2000, and issued July 20, 2004, qualifies as prior art under § 102(e). *McKeeth* teaches a computer system granting access and issuing an alert when a user is under duress or denying access when a user is unauthorized. *McKeeth,* 4:28-35, 5:48-53. Because *McKeeth*, like the '705 Patent, discloses a system for providing or denying access, *McKeeth* is in the same field of endeavor and is pertinent to the problem to the '705 Patent's problem to solve. *Dec.,* 89-93. *McKeeth* is analogous art.

Anderson, a U.S. patent filed September 1, 1999, and issued January 21, 2003, qualifies as prior art under § 102(e). *Anderson* teaches inputting a fingerprint code to a touch interface via "temporal variations." *Anderson*, 7:1-39. Because *Anderson,* like the '705 Patent, discloses providing a series of biometric entries authenticating a user and enabling a function, *Anderson* is in the same field of endeavor and is pertinent to the '705 Patent's problem to solve. *Dec.,* 94-100. *Anderson* is analogous art.

V. *MATHIASSEN'S* ARCHITECTURE OVERVIEW

Mathiassen teaches an integrated circuit (IC) as the "core device" of the secure access system that contains a processor 2. *Mathiassen,* [0048, 0050]. The processor 2 executes "program code, e.g., administrative software" stored in non-volatile

memory 7/7A on the IC 1. *Id.* This administrative software includes algorithms for providing secure access, such as a matching and SKG algorithm. *Mathiassen,* [0050, 0072, 0076]. Movement analyzing and translation software are additionally described as providing secure access. *Mathiassen,* [0192]. A POSITA would have understood the analyzing and translation software, like the administrative software, are executed by processor 2. *Mathiassen,* [0192], *Dec.* 108.

The '705 Patent uses the terms "processor" and "controller" interchangeably. *Compare '705 Patent*, 6:7 (describing "controller 107"), *with* 14:33-37 (describing "processor modules 107"), 15:6-9, Fig. 10, 6:4 (describing "controller/transmitter 107"). A POSITA would have understood controllers 107,109 are functionally equivalent to a processor(s). *Dec.,* 109-111. The '705 Patent describes the controllers 107, 109 primarily in terms of functions performed. *'705 Patent*, 6:2–6:9; *Dec.,* 110. Thus, *Mathiassen's* processor teaches or renders obvious the controllers described and claimed in the '705 Patent. *Dec.* 111.

Apple applies this Section V discussion for each claimed "controller" to avoid repetitive mapping.

VI. GROUND 1: THERE IS A REASONABLE LIKELIHOOD CLAIMS 1, 4, 6, 10-12, AND 14-17 ARE OBVIOUS OVER THE COMBINATION OF *MATHIASSEN*, *MCKEETH*, AND *ANDERSON*

A. Claim 1

1. Claim 1(Pre)

To the extent the preamble is limiting, *Mathiassen* teaches a system for providing secure access to a controlled item. *Mathiassen,* Abstract. *Mathiassen* teaches a "portable access device…for allowing only authorized users access to, an access-limited apparatus, device, network or system…." *Mathiassen*, [0016], Abstract. *Mathiassen* discloses access-limited apparatus ("controlled items") including a USB interface ([0054]), hotel safe ([0119]), medicine cabinet ([0122-0123]), and portable control 20 for unlocking a car ([0145-0147]). Each access-limited item disclosed in *Mathiassen* is a "controlled item," as claimed, as access to the item is limited to "authorized users." *Mathiassen*, [0047]; *Dec.,* 112-113.

Mathiassen teaches a "system" implementing the "method of providing secured access control." *Mathiassen*, Abstract. Integrated circuit (IC) 1 couples with a "biometric sensor" for performing secure access control. *Mathiassen*, [0048-0050], FIGs. 2A-2B; *Dec.,* 114 (opining the IC is also used for the portable remote door control 20, described in *Mathiassen*, [0147]). The IC includes components, such as processor 2 and non-volatile memory 7,7A,7E, and function blocks, such as pre-processing block 5C for processing the biometric and encryption blocks 8,8B,8C.

Id. In some embodiments, the IC is coupled with a network [0053], while in other embodiments IC is used in "stand-alone applications," such as "within a car" [0108].

In stand-alone applications, such as portable control 20, *Mathiassen's* "system" includes fingerprint sensor 5 and transceiver 27 (both housed in unit 20), and ignition control 15 (including IC 1), a central car computer, door locks, and transceivers of the central car computer and door locks (each of which resides in the car). *Mathiassen*, [0167-0168], [0186-0188]. Portable control 20 connects to the ignition control via the central computer's transceiver:

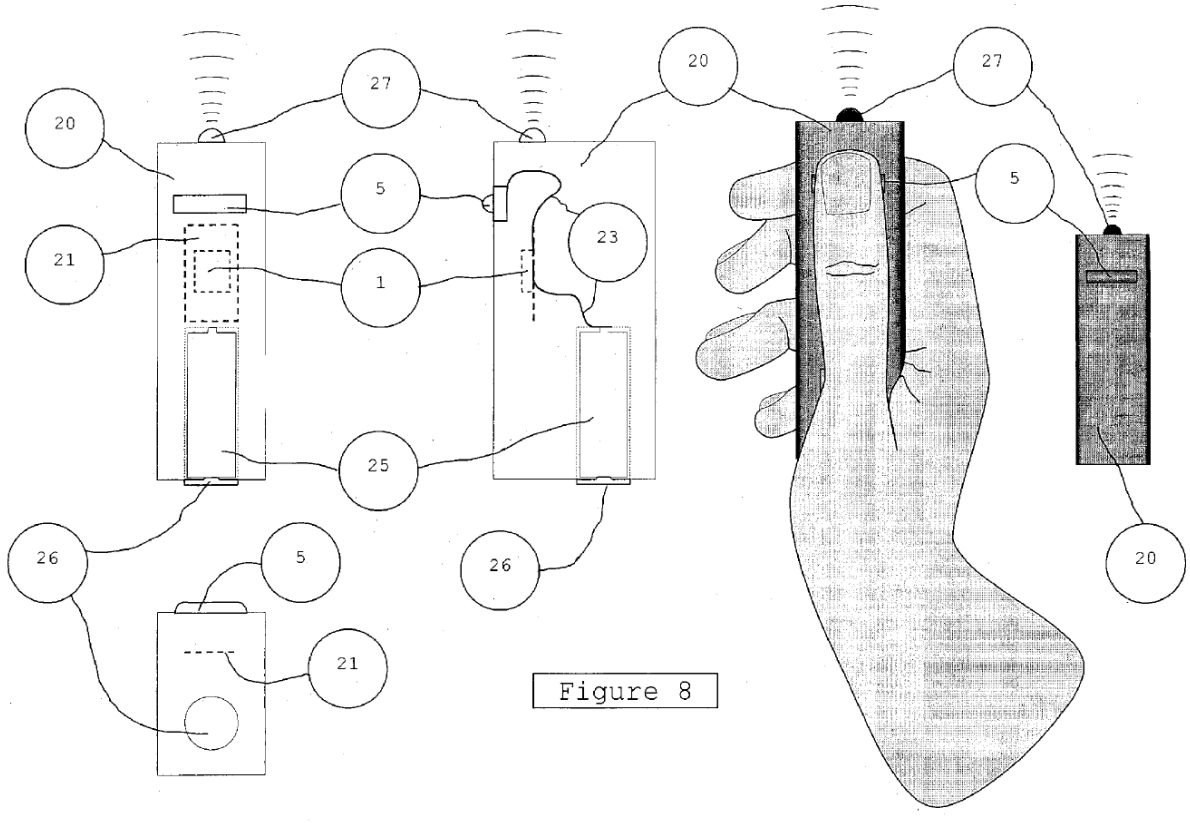


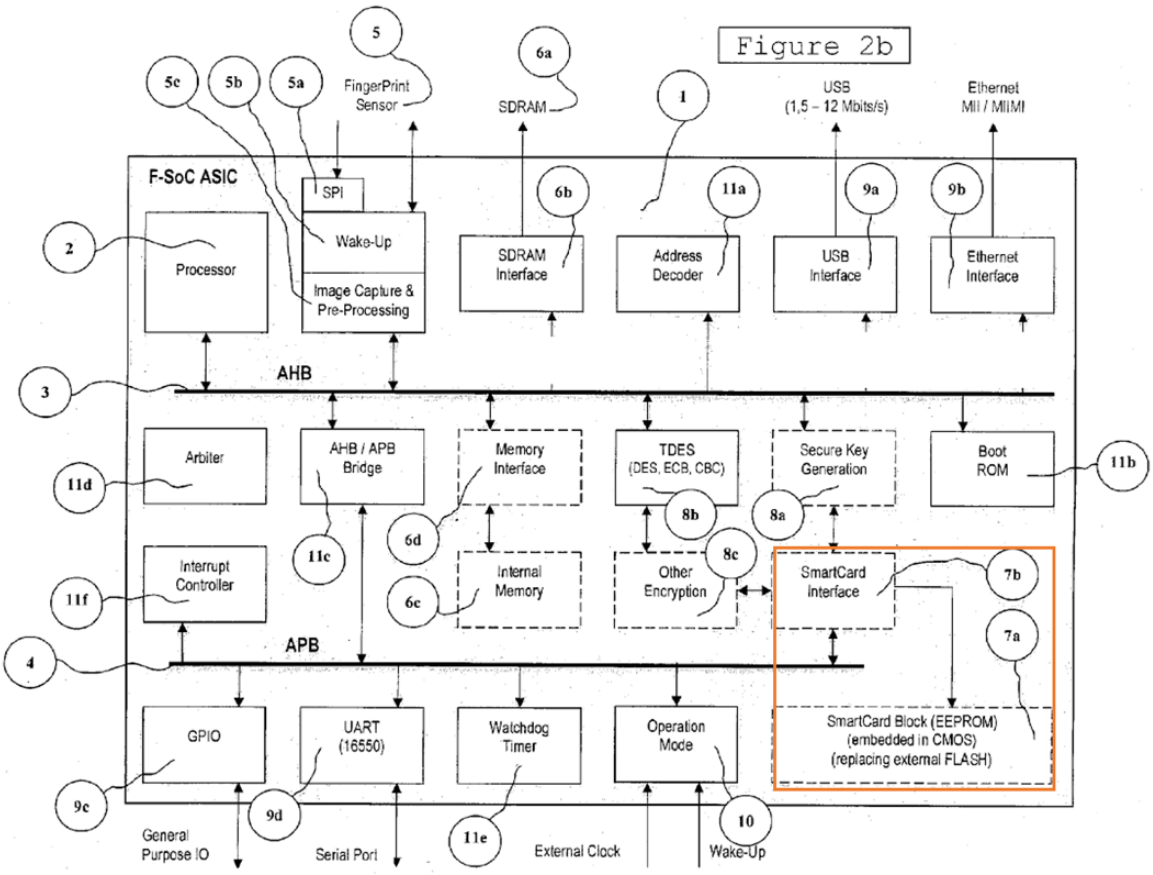
Figure 8

Mathiassen, Fig. 8, [0147], [0149], [0186]; *Dec.,* 115-116.

Claim 1's mapping relies on *Mathiassen's* portable control 20 embodiment of *Mathiassen*, where the "controlled item" is *Mathiassen*'s car door locks in the "central locking system." The portable control remotely controls the door locks. *Mathiassen*, [0145]; *Dec.,* 117. *Mathiassen's* IC 1 ([0048-0050]) is used in each embodiment, including the car door lock embodiment. *Dec.,* 117 (*citing Mathiassen*, [0146], FIG. 2B). An internal motivation to combine from other embodiment details with the car door embodiment is provided below.

2. Claim 1(a)

Under the agreed claim construction, "database" is an "organized structure of data." *See* Section III.C. *Mathiassen* teaches a "memory comprising a database of biometric signatures," as claimed, namely non-volatile memory 7,7A of IC residing in portable control 20 storing one or more master minutiae tables of fingerprint representations (i.e., "a database of biometric signatures"):



Mathiassen, [0147], Fig. 2B, [0050].

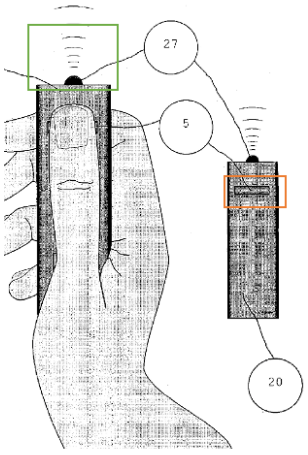
The IC generates minutiae by reducing images captured when a user places finger(s) on the fingerprint sensor. *Mathiassen,* [0162-164], [0190]. A POSITA would have understood master minutiae tables contain biometric signatures of car users. *Dec.,* 118-121. *Mathiassen* teaches the master minutiae tables are fingerprint representations taken from "raw images" of the fingerprint applied to the fingerprint sensor. *Mathiassen*, [0049-0050]; *Dec.,* 119. The "fingerprint representations" are stored as "minutiae" in non-volatile memory 7,7A,7E. *Mathiassen*, [0050]. Because the master minutiae tables represent the user's fingerprint(s), and because

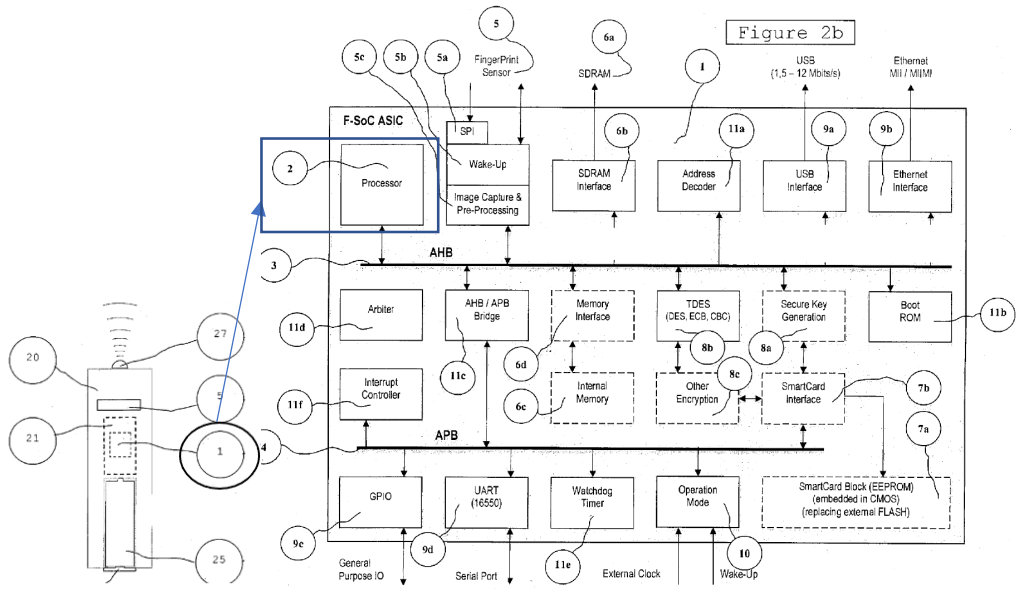
fingerprints provide "secure identification by biometrics," a POSITA would have understood *Mathiassen's* master minutiae tables comprise biometric signatures. *Mathiassen*, [0005]; *Dec.,* 119-121.

Mathiassen's master minutiae tables stored in memory 7,7A is a "database" of biometric signatures because a POSITA would have understood tables form an "organized structure of data." *Dec.,* 122.

3. Claim 1(b)

Mathiassen teaches a transmitter subsystem, namely transceiver 27, fingerprint sensor 5, processor 2 (of IC 1), and non-volatile memory 7,7A (of IC), each housed in portable control 20:





Mathiassen, Figs. 8, 2B (illustrating IC 1 containing processor 2), [0147-0149].

The collective transceiver 27, fingerprint sensor 5, processor 2, and memory 7,7A is a "transmitter subsystem" because the components transmit a signal to a receiver subsystem. Transceiver 27 transmits a command issued by processor 2, such as "open door." *Mathiassen*, [0185-0188]; *Dec.,* 123-126.

4. Claim 1(b1)

Under the agreed construction, the claimed "biometric signal" is construed as "a physical attribute of a user (i.e., fingerprint, facial pattern, iris, retina, voice, etc.)." *See* Section III.C.

Mathiassen's "fingerprint sensor 5" satisfies the claimed "biometric sensor configured to receive a biometric signal," because it detects a finger on the sensor and "triggers the wake-up" of components in IC 1 to process raw images of the fingerprint. *Mathiassen*, [0049]; *Dec.,* 127-128. A POSITA would have understood

"captured raw images from the sensor" ([0049]) and/or processed "intermediate fingerprint data" ([0050]) are "biometric signals" because each indicates a fingerprint received by the fingerprint sensor. *Dec.,* 128.

Specifically, *Mathiassen* teaches the car owner "access[ing] the car" by "swip[ing] his finger across the sensor (5) of the portable door control (20)" to thereby receive a biometric signal, as claimed. *Mathiassen*, [0175-0176]. The sensor's pre-processing block 5C "reduce[s] the captured fingerprint image to a reduced intermediate format," and the processor "reduce[s] the captured and pre-processed fingerprint image to compact master minutiae format." *Mathiassen*, [0177-0179], [0050]; *Dec.,* 129.

5. Claim 1(b2)

The Court construed "accessibility attribute" to mean "attribute that establishes whether and under which conditions access to the controlled item should be granted to a user." *See* Section III.C. *Mathiassen* as modified by *McKeeth* teaches or renders obvious Claim 1(b2).

a) "a transmitter sub-system controller configured to"

Mathiassen's processor 2 of the IC 1 in the portable door control 20 teaches a "transmitter sub-system controller," as claimed. *See* Section V; *Dec.,* 132. *Mathiassen's* processor 2 of the IC 1 is mapped as part of the transmitter sub-system, as discussed for Claim 1(b). *See* Section VI.A.5.3. As discussed in the following

Sections VI.A.5.b-c, the processor of the IC of the portable door control receives the biometric signal from a user, matches the biometric signal to a stored biometric signal, and outputs an accessibility attribute, e.g., a command to open the door responsive to a car owner/administrator requesting access. Thus, the processor is "configured to" perform the claimed step(s) of Claim 1(b2).

b) "match the biometric signal against members of the database of biometric signatures"

As discussed for Claim 1(a), a POSITA would have understood *Mathiassen's* memory in portable control comprises a "database of biometric signatures," namely stored master minutiae tables. *Mathiassen* teaches processor 2 is "configured to match the biometric signal…" by matching a received biometric signal against these stored minutiae tables (i.e., the claimed "members of the database"). Upon a user swiping their finger across the fingerprint sensor of the portable control [0175-0176], the pre-processing block 5C and processor collectively reduce the fingerprint image to a compact master minutiae format [0178-0179]. The processor (of IC of portable control 20) "compare[s] this access minutiae table with the master minutiae table(s) pre-stored at time of enrolment in non-volatile memory (7A)." *Mathiassen,* [0179-0182], [0050]; *Dec.,* 134-135. Therefore, *Mathiassen* teaches processor of portable control is configured to match the user's biometric signal (raw images reduced to access minutiae) against members of the database of biometric signatures (stored master minutiae tables). *Dec.,* 131, 133-135.

Mathiassen teaches if there is a "match" between the access minutiae table and the pre-stored master minutiae table(s), "the processor will proceed to open (or lock) the car doors." *Mathiassen*, [0180-0182]; *Dec.,* 136. Upon a match of the access and stored master minutiae, the processor issues an "open door" command to the encryption block 8B,8C [0185], and the encryption block encrypts the command using a temporary password.

c) "to thereby output an accessibility attribute"

Applying the Court's construction, *Mathiassen's* "open door" command as modified by *McKeeth's* teaching of duress and alert conditions teaches or renders obvious outputting an accessibility attribute, as claimed. *Dec.* 137-171.

Mathiassen and *McKeeth* each teaches **whether** access is granted. In *Mathiassen*, access *is granted* (as opposed to denied) by opening (i.e., unlocking) the car doors. *Mathiassen*, [0181-0182]; *Dec.,* 139. The issued "open door" command indicates "whether" access should be granted. *Mathiassen* teaches the open door command is issued in response to access minutiae matching a stored biometric signature of the car owner/administrator. *Mathiassen,* [0182]; *Dec.,* 139. In contrast, if the processor 2 does not find a match, then no access will be granted because "the process will be aborted." *Mathiassen,* [0181]. Thus, the "open door" command indicates that access should be granted.

In *McKeeth*, access is granted where "there is a match between the input and security information." *McKeeth*, 3:65-67, 3:11-28 (describing different types of input security information, including a fingerprint scan). "If the input and security information do not match, the compare circuit issues a 'flag' signal indicating denial of access by the user." *McKeeth*, 4:2-4.

Mathiassen and *McKeeth* also each teaches **under what conditions** access is granted. Specifically, both references teach outputting an accessibility attribute upon there being a match of a live or access biometric signal, and *McKeeth* teaches outputting both a duress instruction and an alert instruction when there is no match. As background, Dr. Sears notes the '705 Patent describes one of the accessibility attributes to be an "access attribute (granting unconditional access)." *'705 Patent,* 8:28-30, *Dec.* 138. The '705 Patent also describes that upon matching an access biometric signal with a stored signal, access to the controlled item is provided. *Id.* at 12:15-24. In the '705 Patent, the biometric signal provided by the user determines which category of access is provided, e.g., access, duress access, or alert access. *Id.* at 11:40-55, 12:13-41. Dr. Sears explains that because the biometric signal itself, e.g., the user's fingerprint, determines which category of access is provided, then in the instances where the user is simply granted access without any conditions, e.g., a duress condition, then per the '705 Patent, 12:15-24, access is going to be instructed and granted. *Dec.* 138.

In *Mathiassen,* when the processor 2 of the portable door control 20 matches the owner's access minutiae table to a pre-stored master minutiae table, the "open door" command is issued to the encryption block to grant unconditional access. Per Dr. Sears, because the user is the car owner/administrator and is requesting access to the car's central locking system, a POSITA would have understood the access that is granted is unconditional access. *Dec.,* 138, 140-141 (explaining *Mathiassen's* administrator has full access, and comparing to the *'705 Patent*, 8:28-30, describing "access attribute" as "granting unconditional access").

Dr. Sears opines *Mathiassen's* teaching is substantially similar to the "access" accessibility attribute described in the '705 Patent. Specifically, *Mathiassen* teaches matching a car owner's/administrator's access minutiae to stored minutiae and responsively issuing an "open door" command. Similarly, the '705 Patent describes checking the biometric signal against the signatures in the database (step 607, 12:15-16), and if there is a match, then directing the controller to provide access. *'705 Patent*, 12:15-24; *Dec.,* 142.

Thus, *Mathiassen* teaches the "open door" command includes outputting an accessibility attribute indicating "under which conditions." Specifically, *Mathiassen* teaches providing full access to the car's central locking system based on the matching of the access minutiae to the car owner/administrator's pre-stored master

minutiae table and in response to the car owner/administrator requesting access to the car door locks, thereby issuing the "open door" command.

McKeeth also teaches the claimed outputting an accessibility attribute that indicates **under what conditions** access is granted. Specifically, *McKeeth* teaches granting access with certain conditions, such as a **duress** condition or an **alert** condition. *McKeeth* teaches a user requesting access provides their fingerprint for authorization. *McKeeth*, 3:38-42, 3:52–4:4. The user may also be required to perform a geometric pattern to indicate normal access (i.e., *not* indicating duress or an alert). *McKeeth*, 4:10-27. If the user does not perform the geometric pattern, then the system determines the user is under duress. *McKeeth*, 4:28-43. The system grants limited access to the user while also sending a security alert to security personnel. *Id. McKeeth* teaches issuing a "flag signal" to indicate the duress condition. *McKeeth*, 4:23-27. Thus, *McKeeth* teaches granting access to the user (whether access is granted) and that access is granted under certain conditions (e.g., is limited access and an alert is sent). Thus, *McKeeth's* outputting of a duress instruction to the controlled item based on the user's biometric signature (specifically, the matching of the biometric signature without completing the implicit input, 4:5-43) and issuing a flag signal satisfies the claimed outputting an accessibility attribute. *Dec.,* 143-146. As discussed below, it would have been obvious to a POSITA to modify *Mathiassen's* portable door control to issue a duress condition in response to a

received biometric signature (i.e., access minutiae) from the user inputted for the purpose of indicating a duress situation.

McKeeth also teaches an alternative embodiment where if the user attempts to authenticate themselves via their fingerprint but does not perform a stored pattern, the system *denies* access and generates a security alert to the responsible authorities. *McKeeth*, 5:48-53. Although access is not granted, a POSITA would have understood that by transmitting an access signal that instructs denying access and generating a security alert, the system is also outputting an "accessibility attribute." *Dec.,* 147-148 (noting the '705 Patent describes a similar functionality as an "alert attribute" that is a type of accessibility attribute); *'705 Patent*, 8:32-35, 12:25-41, Claim 5 (describing denial of access and sounding an alert "if the accessibility attribute comprises an alert attribute"). Therefore, *McKeeth* teaches outputting an alert condition in response to a user's inputted biometric signature not matching a stored biometric signature. As discussed below, it would have been obvious to a POSITA to modify *Mathiassen's* portable door control to issue an alert condition in response to a received biometric signature, i.e., access minutiae, from the user that does not match a stored biometric signature, i.e., stored minutiae.

The collective teachings of *Mathiassen* and *McKeeth* thus teach outputting an accessibility attribute, where the accessibility attribute may be one of an access attribute (*Mathiassen* and granting access to a car owner/administrator), a duress

attribute (*McKeeth* and granting limited access along with a security alert), and an alert attribute (*McKeeth* and denying access along with a security alert).

d) Motivation to Combine *McKeeth* with *Mathiassen*

A POSITA would have been motivated and found it obvious to modify *Mathiassen's* portable door control processor to output a duress or an alert accessibility attribute, as taught by *McKeeth*, in addition to outputting an accessibility attribute granting access to the car owner/administrator by unlocking a car door lock unconditionally, as otherwise taught by *Mathiassen*. *Dec.,* 149-171. In the modified *Mathiassen*, the emitted commands (i.e., secure access signal) are capable of conveying information dependent upon the accessibility attribute (as recited for Claim 1(b3)), including conveying an access instruction (taught by *Mathiassen*), a duress instruction (taught by *McKeeth*), or an alert instruction (also taught by *McKeeth*).

Mathiassen's portable door control 20 already increases car owner security by requiring biometric authorization prior to unlocking a car door, indicating to a POSITA increased safety was an intended goal of the system. *Mathiassen,* [0145]; *Dec.,* 150. *Mathiassen* discusses preventing "theft or non-authorized use of the car," stating that "[t]he automotive industry is emphasizing secure access by blocking non-authorized users access to the car." *Id.* Thus, a POSITA would have been motivated to output accessibility attributes to indicate duress access or alert access

to increase security and block non-authorized use. *Dec.,* 149, 151-161. Providing access in car control systems for users in duress situations was well-known in the prior art. *Dec.,* 151-156. Allowing for access to a car while in duress while sending an alert dissuades an assailant from immediate harmful action to the car owner. *Dec.,* 151-155.

Mathiassen teaches the importance of denying unauthorized access to a vehicle. *Mathiassen,* [0145]; *Dec.,* 157. A POSITA would have found it obvious and been motivated when denying access to additionally alert security personnel, as taught by *McKeeth*. *Dec.,* 157-161. A POSITA would have appreciated when a carjacker found a stolen/lost portable door control, the car owner would have wanted authorities to be notified swiftly. *Id.* Vehicle security systems denying access by locking car doors and concurrently alerting security personnel were well-known in the art. *Dec.,* 159-161.

Modifying *Mathiassen's* issued command to include information conveying a duress or an alert accessibility attribute, as taught by *McKeeth*, would have had a reasonable expectation of success. *Mathiassen* teaches the hardware/software for receiving, storing, and matching access minutiae against stored minutiae tables and contemplates the user enrolling multiple fingers and instructing multiple commands via a series of finger movements. *Mathiassen*, [0180-0182], [0050], [0164], [0173], [0192]. *Mathiassen* recognizes denying access when the access minutiae do not

match the stored master minutiae. *Mathiassen*, [0181]. Modifying *Mathiassen* to enroll a second finger, or series of finger movements, to indicate duress is a simple programming extension of *Mathiassen's* taught techniques and would require only enrolling a second fingerprint or finger movement (already taught in *Mathiassen*, [0192]) and encoding another command (i.e., the "issue security alert" information) in the transmitted signal. *Dec.,* 162-171.

6. Claim 1(b3)

a) "a transmitter configured to emit"

Mathiassen teaches a "transmitter," namely transceiver 27 of portable control 20. *Mathiassen,* [0147]. The transceiver 27 of portable door control 20 is "configured to emit a secure access signal conveying information dependent upon said accessibility attribute," as claimed, because it "wirelessly transmits" the encrypted "open door" command that conveys the access the user will be granted, as discussed further below. A POSITA would have understood *Mathiassen's* transceiver 27 of portable control is at least equivalent to a "transmitter" because it "transmits" an encrypted command to "transceivers of the door locks and the central car computer." *Mathiassen,* [0186], *Dec.,* 172-173.

b) "a secure access signal"

The secure access signal in the '705 Patent is described as a rolling code. *'705 Patent*, 6:4-9,6:39-46. Rolling codes use a different code each time the access signal is transmitted, with such "achieved by encrypting the data from the controller

107…." *'705 Patent,* 6:47-53; *Dec.,* 174-175. "[S]uccessive transmissions" are modified using a code/look-up table known to both transmitter and receiver sub-systems, "resulting in a non-repeatable data transfer…." *Id.* at 6:47-60. A "secure access signal" has a non-repeatable, non-replayable, and encrypted code allowing single-use transmission. *Dec.,* 174-176.

Mathiassen teaches transceiver 27 emits a "secure access signal" generated by the processor (portable control 20 IC's processor), namely an encrypted command, such as an "open door" command, usable for a single transaction. *Mathiassen*, [0182-0188], [0050]; *Dec.,* 177-182 (opining *Mathiassen's* "command" is a "signal," as claimed). *Mathiassen's* IC processor generates a secure key (SKG) at SKG block 8A upon matching access minutiae (live fingerprint representations) to stored master minutiae. *Mathiassen*, [0050], [0182-0184]; *Dec.,* 178. Next, a temporary password or key is generated. *Mathiassen*, [0050], [0183-0184]. The IC processor then encrypts a command, such as "open door," with the temporary password or key. *Mathiassen*, [0050], [0185]. Transceiver 27 wirelessly transmits the encrypted command to a transceiver at central car computer. *Mathiassen*, [0186-0188]; *Dec.,* 178. The central car computer or ignition control's resident IC fetches the seed to generate the same temporary password for decrypting the received command. If a valid and authenticated command was sent, a command to open the

car door locks is sent from the transceiver at central car computer to the door locks. *Mathiassen*, [0187-0188]; *Dec.,* 179-181.

Mathiassen's pseudo-random, identical password generated by the SKG block to encrypt and decrypt the "open door" command renders the command non-repeatable and non-replayable. *Dec.,* 182-183. *Mathiassen* discloses the SKG algorithm is run on a processor in both the portable IC (transmitter subsystem) and the central car computer or ignition control (within the receiver subsystem, *see* Claim 1(c2)), such that the transmitter IC and receiver IC generate the same key or password based on the identical seed. *Mathiassen*, [0050], [0187-0188]. "The SKG algorithm may be constructed to produce a pseudo-random identical key on both computers (2 and 30) that…**alternatively changes for each transaction**." *Mathiassen*, [0050].

Because *Mathiassen* teaches the key used to encrypt the command sent from the portable control to the ignition control/car computer changes for each transaction, the encrypted command is non-repeatable and non-replayable. *Dec.,* 182-183. Therefore, *Mathiassen* teaches a "secure access signal," with the transceiver 27 of portable control "configured to emit a secure access signal" (i.e., wirelessly transmit the encrypted command). *Mathiassen,* [0186]; *Dec.,* 183.

c) Secure access signal "conveying information dependent upon said accessibility attribute"

Mathiassen alone and as modified by *McKeeth* teaches that the emitted secure access signal conveys information dependent upon the accessibility attribute. Specifically, *Mathiassen* teaches the emitted "open door" command (the claimed "secure access signal") conveys information instructing access of the car door locks, substantially similar to the '705 Patent's system directing the controller in the receiver subsystem to provide access to the controlled item. *'705 Patent*, 12:16-24; *see* Claim 1(b2) Mapping. The information conveyed in the encrypted "open door" command is the access to be granted. When the instruction by the user is to open the car door locks, and the user's access minutiae or matched against stored minutiae, then the information conveyed in the secure access signal is information to grant access. This information is "dependent upon" the "accessibility attribute" (i.e., the grant access to the car owner/administrator) because the information results from determining the user's access to be granted and the encryption of that access information with a valid, temporary password from the SKG block. *Dec.,* 184-185.

As similarly mapped for Claim 1(b2), *Mathiassen* modified by *McKeeth* also teaches Claim 1(b3), as the modified *Mathiassen* processor of portable control issues an encrypted command (i.e., "secure access signal") conveying duress access or alert access. The transceiver 27 then emits a secure access signal to instruct a duress signal or an alert signal. The encrypted command transmitted by the transceiver conveys a

command including an accessibility attribute to open the car door locks and issue a silent security alert (for a duress signal) or to deny opening the car door locks and issuing an alert (for an access signal), as taught by *McKeeth*. *Dec.* 186. A motivation to combine *Mathiassen* and *McKeeth* was provided in the Claim 1(b2) mapping (*see* Section VI.A.5.d).

7. Claims 1(c) and 1(c1)

Mathiassen teaches a receiver sub-system comprising the central car computer and door lock transceivers, the central car computer, and ignition control 15. *Mathiassen,* [0186-0188]. The central car computer includes a transceiver receiving the signal (the "open door" command) from portable control, and the door locks include a transceiver receiving the relayed and authenticated open door command. *Dec.,* 187-189; *Mathiassen*, [0149], [0167], [0186-0187]. A "transceiver" is well understood to include a receiver. *Dec.,* 190. Therefore, because *Mathiassen* teaches, at the least, a transceiver (both a central car computer and door locks) including a receiver, *Mathiassen* teaches a receiver sub-system, as claimed. *Dec.,* 191.

Mathiassen teaches the receiver sub-system (the transceivers, the central car computer, and ignition control) include a receiver sub-system controller, as claimed. As discussed at Section V, a POSITA would have understood a processor performing the claimed function of receiving the signal and providing conditional access is at least equivalent to the claimed "controller." *Dec.,* 192-197. *Mathiassen*

teaches or renders obvious a receiver sub-system controller, namely the processor of the ignition control or central car computer, individually or collectively.

In more detail, *Mathiassen* teaches two implementations: a first implementation in which the ignition control decrypts and authenticates the received command, and a second in which the central car computer decrypts and authenticates the command. *Dec.,* 193-197. Both the central car computer and ignition control include processors. *Mathiassen*, [0187-0188]; *Dec.,* 193-194, 196-197. In the first implementation, *Mathiassen* teaches a "receiver sub-system controller," namely the respective processors of ignition control and central car computer, either individually or collectively. When decryption and authentication is performed by the ignition control, the ignition control's processor (on IC 1) receives the command, performs the decryption, and if the decrypted message is valid and authenticated, a similar encrypted command is relayed to the door locks by the car computer providing conditional access. *Mathiassen*, [0187]; *Dec.,* 194-195. Alternatively, the ignition control's processor receives the command, and the central car computer's processor provides conditional access because it relays the similar encrypted door command to the door locks. *Id.*

In the second implementation, the car computer's processor receives the signal for performing the decryption/authentication and provides conditional access

by transmitting a similar command to the car door locks. *Mathiassen*, [0186], [0188], *Dec.* 196-197.

8. Claim 1(c2)

Under the agreed construction, "conditional access" is "access based on accessibility attributes." *See* Section III.C. *Mathiassen's* processor of ignition control or central car computer provides conditional access to the controlled item, namely, car door locks, dependent upon the accessibility attribute in the secure access signal. The relayed "open door" command sent to the door locks ([0187]) provides "access based on the accessibility attribute," as claimed, to the car door locks, because the access is provided based on the user being the car owner/administrator and requesting access via its biometric signature to the car door locks, such that the conditional access in this instance is simply grant unconditional access to an administrator. *'705 Patent*, 8:24-31; *Dec.,* 198-199; *Mapping for Claim 1(b3).*

Additionally, *Mathiassen* teaches access being provided "dependent upon said information" in the secure access signal, such as "open doors" or "lock doors." Because *Mathiassen's* commands specifically instruct a function (i.e., open door locks vs. lock door locks), the command (i.e., the "secure access signal") includes information specific to the instructed function. *Mathiassen,* [0167]; *Dec.,* 200. A POSITA would thus have understood access is granted, i.e., the car doors are

opened/unlocked, dependent upon information in the "open door" command that is relayed to the transceivers of car door locks by processor of the ignition control and/or central car computer. *Mathiassen*, [0167], [0182], [0185]; *Dec.,* 200.

As similarly mapped for Claim 1(b2-b3), *Mathiassen's* processor of IC 1 in portable door control, as modified by *McKeeth*, issues a duress or alert command that indicates what access to provide because it is determined based on the accessibility attribute being either a duress or an alert attribute. *Dec.* 201. The encrypted command transmitted by the transceiver conveys a command including a duress accessibility attribute to open door locks and issue a silent security alert or an alert attribute to deny opening locks and issuing an alert, as taught by *McKeeth*. A motivation to combine *Mathiassen* and *McKeeth* was provided in Claim 1(b2).

9. Claim 1(d)

As mapped at Claim 1(b2), *Mathiassen* teaches a transmitter sub-system controller, namely processor 2 of IC 1 in portable door control. *Mathiassen,* [0050], [0147], *Dec.,* 202.

10. Claim 1(d1)

The court found the claim term "at least" modifies "one of the number of said entries" and that the claim requires "a duration of each said entry." (Ex. 1077, 2). Under the Court's construction, *Mathiassen* (as modified by *McKeeth*) and further modified by *Anderson* teaches Claim 1(d1).

a) *Mathiassen's* Teachings

Mathiassen teaches processor 2 of portable control receives a series of entries of the biometric signal. *Mathiassen* teaches the portable door control receiving a biometric signal (i.e., fingerprint). *Mathiassen,* [0176]; *Dec.,* 204. Additionally, *Mathiassen* teaches the processor 2 of IC 1 in portable door control receiving reduced fingerprint images generated from the fingerprint sensor 5, which are reduced to master minutiae tables, indicating to a POSITA the processor 2 is configured to receive a biometric signal. *Mathiassen,* [0179], [0050], [0164], FIG. 2B; *Dec.,* 204.

Mathiassen also teaches or renders obvious receiving "a series of entries." *Dec.,* 205-210. *Mathiassen* teaches storing "**a series of consecutive fingerprint representations** generated by the fingerprint sensor signal capture and pre-processing block (5C))" that comprise various "finger movements across the sensor in two dimensions." *Mathiassen*, [0192], Claim 20. The finger movements are categorized according to predefined sets of movements, which translate to a particular command. *Id.*; *Dec.*, 205-208. The finger movements may be a touch/no-touch finger movement, and predefined sets of these touch/no-touch movements correspond to particular commands to control the device. *Id. Mathiassen's* finger movements thus constitute a "series" because these movements are formed by a number of things or events of the same class coming one after the other in spatial or

temporal succession, namely a number of touch/no touch movements coming sequentially. *Mathiassen,* [0192] (describing "finger movement sequences").

Mathiassen also teaches the touch/no-touch finger movements may be applied to a portable device, indicating to a POSITA the series of finger movements are used in portable control 20 or that such would be obvious. *Id. Mathiassen* does not indicate the portable device includes any buttons to instruct open door versus lock door commands, further indicating to a POSITA *Mathiassen* contemplates instructing commands using the taught series of finger movements and corresponding command table. *Dec.,* 207-209. Thus, a POSITA would have understood *Mathiassen's* portable control 20 receives a series of entries of biometric signals or that such is obvious. *Dec.,* 209. Because the series of fingerprint movements are measured, categorized, and translated via "program modules," a POSITA would have understood the processor 2 of the portable door control is configure to "receive a series of entries of the biometric signal," as claimed. *Mathiassen,* [0192], *Dec.,* 210.

b) *Anderson's* Teachings

Although *Mathiassen* teaches processor 2 of portable control receiving a series of entries of a fingerprint (biometric signal), *Mathiassen* does not teach characterizing the series based on a "duration" of each entry. In related art, *Anderson*

teaches characterizing a series of entries according to at least one of the number of said entries and a duration of each said entry.

Anderson teaches inputting an access code at a fingerprint sensor that is a "series of pressure pulses having varying durations." *Anderson*, 6:45-48, Abstract, 7:40-47. The inputted series of finger presses are encoded and compared to a stored code, and if there is a match, "the code may be used to enable a function," such as "allowing access to a restricted area." *Anderson*, 2:4-21, 5:58–6:39, 7:4-7 (disclosing the access code may be entered on an optical sensor for simultaneously verifying the user's fingerprint), FIGs. 3A-3B; *Dec.,* 212.

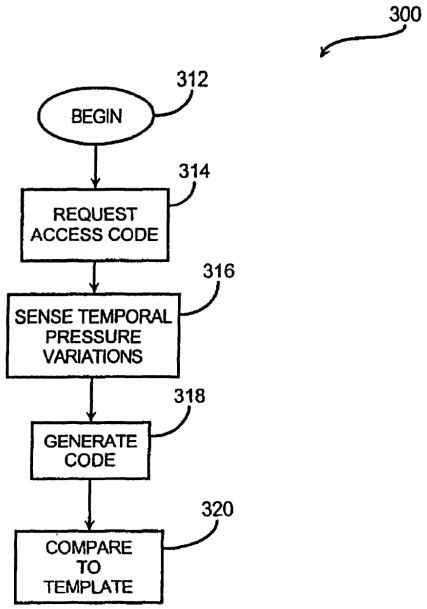


FIG. 3A

In *Anderson*, the pressure magnitude is not detected but the timing of each fingerprint press is determined: "[i]n such an embodiment, the touch interface would

not detect variations in pressure magnitude or intensity." *Anderson*, 7:28-34, FIG. 4A; *Dec.,* 213-216. The sensor recognizes pressure was applied for a particular duration. *Id.* Figure 4A illustrates each finger press, where the applied pressure (bar height) is consistent because the magnitude of the finger pressure is not detected, but at least some of the presses have a different duration (bar width). *Dec.,* 215-216, 218.

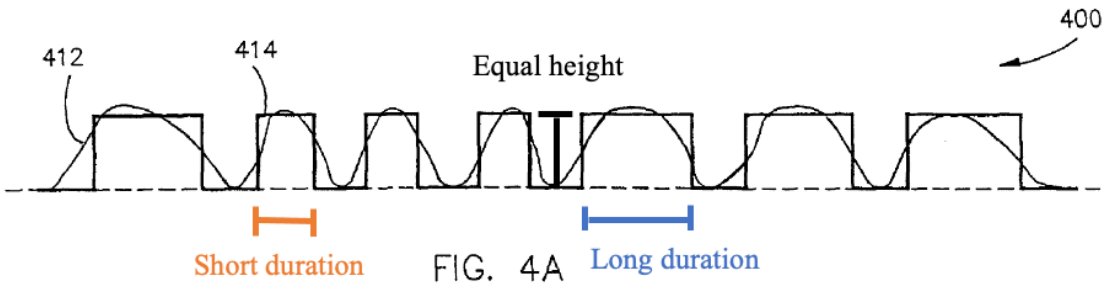


FIG. 4A

Anderson thus teaches a user entering an access code comprising a series of entries of the fingerprint and a duration the user applied pressure for the fingerprint. *Id.*

Anderson further teaches characterizing the access code based on a number of the entries of the biometric signal and a duration of each entry for comparison to the stored code. *Anderson*, 6:22-36. *Anderson* teaches the temporal pressure applications generating a code compared to a stored code to authorize access. *Id.* For the codes to match, at least some (likely all) of the user's entered finger pressure pulses and a duration of the pulse would need to be characterized for matching against the stored code. *Dec.,* 219.

c) Motivation to Combine *Anderson* with *Mathiassen-McKeeth*

A POSITA would have been motivated and found it obvious to modify *Mathiassen's* processor 2 of the portable control (as otherwise modified by *McKeeth*) to characterize a series of pressure pulses by the number of pulses and duration of each pulse, as taught by *Anderson*. *Dec.,* 220-225. In *Mathiassen*, the series of directional finger movements instruct a particular command. *Mathiassen,* [0192]; *Dec.,* 221. A POSITA would have found it obvious to substitute or modify such directional finger movements with a series of presses of varying duration, as taught by *Anderson*, for instructing a command at the portable device 20. *Dec.,* 222-223. When a user holds a key fob, pressing a finger against the fingerprint sensor to apply pressure of varying durations is simpler than *Mathiassen's* directional movements. *Dec.,* 222. Additionally, receiving a command via pressure/duration pulses simplifies processing required to capture quality fingerprint images compared to directional movement of the finger on the sensor. *Dec.,* 223. Alternatively, it would have been obvious to add *Anderson's* access code method of detecting pressure pulses and varying duration to *Mathiassen's* processor of the portable control that uses finger movements to instruct a command because another access code method may be desirable under some use conditions, as discussed above. *Dec.,* 222.

There would have been a reasonable expectation of success in modifying *Mathiassen's* processor 2 in control 20, because it executes software and directs hardware for detecting and categorizing directional movement and touch/no touch. *Mathiassen,* [0192]; *Dec.,* 224-225. *Mathiassen's* processor is already operable to detect a finger press because it receives the fingerprint representations, in the form of captured raw images, from the fingerprint sensor. *Id.* The modification therefore only requires simple programming techniques (e.g., modification of the disclosed translation program to count the number and duration of a "touch" or "no touch") that were within a POSITA's expertise.

11. Claim 1(d2)

Mathiassen alone or *Mathiassen* (modified by *McKeeth*) and *Anderson* teaches Claim 1(d2). As discussed for Claim 1(d1), *Mathiassen's* processor uses "translational means" to categorize the finger movements "according to predefined sets of finger movement sequences" and translates these categorized finger movements, with reference to a command table, to control signals for generating a command to control the device. *Mathiassen,* [0192]. A POSITA would have understood this translation of the predefined finger movements as teaching or rendering obvious "mapping" the predefined set of finger movements to an instruction, as claimed. *Mathiassen*, [0192]; *Dec.,* 226-229.

A POSITA would have found obvious the processor of IC (the claimed "transmitter sub-system controller") performs the claimed "map" operation. *Dec.,* 230. A POSITA would have understood the IC's processor, referencing the fingerprint sensor image capture and pre-processing block 5C, performs the claimed mapping or that such is obvious. *Dec.,* 230. The processor executes the software translation program that analyzes/categorizes finger movements and uses the command table to determine the corresponding instruction. *Mathiassen,* [0192]. The processor executes the software translation program that analyzes/categorizes the finger movements and refers to the command table to determine the instruction corresponding to the input series. *Id.*

12. Claim 1(d3)

Mathiassen teaches the processor of the portable control's IC "populate[s] the database." *Mathiassen* teaches "providing secured access control" begins with enrolling an administrator (e.g., car owner). *Mathiassen*, Abstract, [0162-0167]; *Dec.,* 231, 233. IC processor, with reference to the pre-processing block 5C, populates the database of biometric signatures by generating master minutiae tables for "one or more" fingers for at least one user of the car. *Mathiassen*, [0164]. As discussed for Claim 1(a), each master minutiae table includes information for a user's fingerprint, and one or more master minutiae tables is a *database* of biometric signatures stored in memory 7,7A. *Dec.,* 231.

Mathiassen alone or *Mathiassen* (as modified by *McKeeth*) in combination with *Anderson* further teaches or renders obvious the population of the database is "according to the instruction." *Mathiassen* teaches enrolling a user's biometric signature for accessing (e.g., opening) door locks. *Mathiassen*, [0131]. The first enrolled user is the "system administrator" who "enroll[s] one or more of his fingers on the portable door control unit (20)." *Mathiassen*, [0162-0164]. *Mathiassen* recognizes the car owner/administrator may enroll other users. *Mathiassen*, [0190], [0131]; *Dec.,* 234-235.

Mathiassen discloses, for the medicine cabinet embodiment, the administrator initiates enrollment of "the next user" by "authenticating himself by his fingerprint." *Mathiassen,* [0131]. As with enrolling the administrator, enrolling new users includes the processor, with pre-processing block 5C, creating master minutiae tables subsequently stored in memory 7,7A,7C, i.e., the "populating the database." *Mathiassen*, [0071]; *Dec.,* 236-238.

A POSITA would have found it obvious and been motivated to apply *Mathiassen's* enrollment process taught for the medicine cabinet embodiment to the portable door control for car door locks because *Mathiassen* teaches enrollment of an administrator for the portable door control embodiment and that the administrator may desire to enroll other users. *Mathiassen*, [0162-0164], [0190]; *Dec.,* 239-240. For the car owner/administrator to enroll other users via the portable control, the

portable control's processor would need to recognize when the car owner/administrator initiates enrollment, similar to the medicine cabinet embodiment. *Dec.,* 239. *Mathiassen* teaches or renders obvious initiating enrollment by the car owner/administrator authenticating themselves via their fingerprint and IC processor subsequently populating the database with master minutiae tables for the new user. *Dec.,* 239.

Mathiassen does not directly teach enrollment is initiated via a *series* of fingerprint entries but rather enrollment is initiated via the administrator's fingerprint. *Mathiassen*, [0131]; *Dec.,* 241. However, as discussed for Claim 1(d2), *Mathiassen* teaches instructing a particular command with a series of fingerprint representations, and *Anderson* teaches enabling a requested function via a series of fingerprint pulses of varying durations. *Mathiassen*, [0192]; *Anderson*, 6:37-54, 7:28-34. A POSITA would have found it obvious and been motivated to modify *Mathiassen's* disclosed enrollment process initiated by an administrator's fingerprint to instead initiate enrollment with a series of fingerprint presses of particular durations, as taught by *Anderson*. *Dec.,* 241-245. For example, in embodiments utilizing portable devices, such as portable door control 20, it would have been obvious to allow instructing commands via various finger movements. *Dec.,* 242-243. *Mathiassen* teaches or renders obvious the processor of a portable device executing programs for categorizing various series of finger movements into

commands. *Mathiassen*, [0192]. *Mathiassen* also teaches requiring owner input to enroll new user fingerprints on the portable control, indicating to a POSITA that an instruction was invoked at least by a specific type of entry. *Mathiassen,* [0165], [0190]; *Dec.,* 243-244. Thus, allowing for a user, such as an administrator, to differentiate commands is also taught. *Id.* It would have been desirable to apply such differentiation to an administrator instructing enrollment of a new user versus instructing access by the administrator. *Dec.,* 245 (*citing* Ex. 1010 (*Bradford*), 14:21-41 (discussing an administrator entering two fingertips' worth of fingerprint data in succession to be allowed access to certain privileged screens for registering a new user)).

Because (1) *Mathiassen* teaches initiating enrollment of a new user via entering a fingerprint and processor of portable door control authenticating that fingerprint, (2) *Mathiassen* teaches processor translating various respective finger movement sequences into commands to instruct certain functions, and (3) *Anderson* teaches an access code comprising pressure pulses of varying durations, it would have been obvious to modify *Mathiassen's* processor (as otherwise modified by *McKeeth*) to populate a database according to an instruction, where an exemplary instruction is an instruction to enroll a new user. *Dec.,* 245, 234.

To the extent CPC contends the claimed "according to the instruction" means populating the database with a series of entries corresponding to a particular

instruction, *Mathiassen* teaches such. Specifically, as discussed, *Mathiassen* teaches "[t]ranslation means…[that] analyzes and categorizes the omni-directional finger movements across the fingerprint sensor **according to predefined sets of finger movement sequences**" and then implementing specific commands by reference to a command table translating the categorized finger movements into control signals. *Mathiassen*, [0192]; *Dec.*, 246. Therefore, *Mathiassen* teaches a database of biometric signatures each representative of a particular instruction.

13. Claim 1(e)

Mathiassen teaches the controlled item is a "locking mechanism of a physical access structure," (i.e., the physical car door locks of the central locking system). *Mathiassen,* [0187]; *Dec.,* 247.

B. Claim 4

Mathiassen, McKeeth, and *Anderson* render obvious Claim 1.

See Mapping for Claim 1(a). *Mathiassen* teaches a database of biometric signatures located in the transmitter sub-system, namely master minutiae tables of fingerprint representations located in memory 7A/7B of portable car control 20. *Dec.,* 248-249.

C. Claim 6

1. Claim 6(a)

Mathiassen, *McKeeth*, and *Anderson* render obvious Claim 1.

Mathiassen teaches the biometric sensor 5 authenticates the identity of a user via their fingerprints by matching an access minutiae against stored master minutiae tables. *Mathiassen*, Abstract, [0053]; *Dec.,* 251-252.

2. Claim 6(b)

Mathiassen's transceiver 27 of portable door control 20, as modified by *McKeeth,* is configured to transmit information capable of granting access dependent upon the user's inputted biometric signal, i.e., "request from the user." The information "capable of granting access" is included in an encrypted command "wirelessly transmitted" to the ignition control and/or central car computer. *Mathiassen,* [0186-0188]; *see Claim 1(b3) Mapping*. Signals are transmitted from the portable door control 20 dependent upon a user swiping "his finger across the sensor (5)" and "provided the processor (2) established a match between the access attempt and one of the resident master minutiae tables," indicating to a POSITA the secure wireless signal is transmitted "dependent upon a request from the user and the authentication of the user identity." *Mathiassen,* [0176-186]; *Dec.,* 253-256.

The transmitted encrypted command contains "information capable of granting access to the controlled item." The encrypted command of *Mathiassen-McKeeth* grants different types of access (i.e., grants access, grants duress access, or grants alert access when no authentication occurs), when decrypted and authenticated by the ignition control or central car computer. *Claim 11(Pre3)(d).*

These commands grant unconditional access, grant access and issue a silent alert, or deny access and sound an alarm. *Claim 11(Pre3)(d).*

3. Claim 6(c)

The '705 Patent does not describe or identify a "control panel." *Dec.* 257. Based on the claimed function, *Mathiassen's* IC of ignition control 15 is a control panel configured to receive the information (i.e., receiving the secure wireless signal containing the access information) and provide the secure access requested. *Mathiassen,* [0186-187], *Dec.,* 257-258. A POSITA would have understood or found obvious the IC of ignition control performs the function and is a "control panel." *Dec.,* 258-259.

D. Claim 10

1. Claim 10(Pre)

See Claims 1(b) ("transmitter subsystem"), 1(Pre) ("for operating in a system…").

2. Claim 10(a)

See Claim 1(b1).

3. Claim 10(b)

See Claim 1(b2).

4. Claim 10(c)

See Claim 1(b3).

5. Claim 10(d)

See Claim 1(d).

6. Claim 10(d1)

See Claim 1(d1).

7. Claim 10(d2)

See Claim 1(d2).

8. Claim 10(d3)

See Claim 1(d3).

9. Claim 10(e)

See Claim 1(e).

E. Claim 11

1. Claim 11(Pre1)

To the extent the preamble is limiting, *Mathiassen* teaches a method for providing secure access to a controlled item, such as providing secure access to a central locking system in a vehicle. *Claim 1(Pre) Mapping* (mapping a system for performing the "method" of providing secure access); *Dec.,* 269; *Mathiassen,* Abstract, [0018], [0145-0147].

2. Claim 11(Pre2)

See Claim 1(a).

3. Claim 11(Pre3)

See Claim 1(b)-1(b3). Regarding the claimed "capable of granting access to the controlled item," *Mathiassen* in view of *McKeeth* teaches "granting access to the controlled item." The transmitter (i.e., transceiver) of *Mathiassen's* modified portable control 20 is capable of granting access, duress access, and alert access to the controlled item (i.e., car door locks).

Mathiassen teaches transmitter of transceiver at the portable control sending an open door command to the vehicle, and the ignition control and/or central car computer receiving the encrypted open door command and unlocking the car door locks (i.e., "controlled item") after the received command is decrypted and authenticated. *Mathiassen,* [0187]; *see Claims 1(c2), 6(b) Mapping.* A POSITA would have understood opening door locks provides access to the car door locks via the car's "central locking system" when the car owner/administrator requests access. *Mathiassen*, [0145]; *Dec.,* 272-275, 278-280.

Mathiassen modified by *McKeeth* teaches processor outputting an accessibility attribute in the secure access signal (i.e., encrypted command) indicating to grant a user access when under duress and signal a silent alarm or deny access and sound an alarm. A POSITA would have understood granting access to the car door locks and issuing a security alarm, as taught by *McKeeth*, when the user is under duress is "granting access to the controlled item." *Dec.,* 276, 281. A

POSITA would also have understood that locking up or otherwise denying access to the car door locks is a type of access that prevents non-authorized use of the car door locks. *Dec.,* 277, 282. *Claim 1(b3).*

4. Claim 11(Pre4)

See Claim 1(b3), 1(c)-(c2). *Dec.,* 283-286.

5. Claim 11(a)

Mathiassen teaches populating the database of biometric signatures, namely generating master minutiae tables of fingerprint representations (i.e., "database of biometric signatures") and storing the tables in memory 7/7A/7C during enrollment. *See Claim 1(d3).*

6. Claim 11(a1)-(a2)

See Claim 1(d1). *Mathiassen* alone or *Mathiassen* modified by *Anderson* teaches receiving a series of entries of the biometric signal, either a series of fingerprint movements or a fingerprint access code. *Mathiassen* modified by *Anderson* teaches "determining" the number/duration of the entries, as *Anderson* teaches analyzing the series of finger movements by establishing and ascertaining definitely after consideration, investigation, or calculation when comparing the series to the stored code. *Mathiassen*, [0192]; *Anderson*, 7:28-47, *Dec.* 288.

7. Claim 11(a3)

See Claim 1(d2).

8. Claim 11(a4)

See Claim 1(d3).

9. Claim 11(b)

See Claim 1(b1).

10. Claim 11(c)

See Claim 1(b2).

11. Claim 11(d)

See Claim 1(b3).

12. Claim 11(e)

See Claim 1(c2).

13. Claim 11(f)

See Claim 1(e).

F. Claim 12

Mathiassen teaches Claim 12. The "populating the database" including "enrolling a biometric signature" and "receiving a biometric signal" were mapped for Claim 11(a) (referencing Claim 1(d3), cited for this Claim 12). *Mathiassen,* [0164]; *Dec.,* 296. *Mathiassen* teaches enrolling the biometric signal as an administrator signature if the database of biometric signatures is empty. *Mathiassen* teaches the "**first person to enroll his fingerprint** on the portable door control (20) **becomes the 'owner' of the car, in the sense that he becomes the system administrator**." *Mathiassen,* [0165]. Thus, a POSITA would have understood the

fingerprint (i.e., biometric signal) is enrolled as an administrator when the database is empty, seeing as no other users had previously been enrolled. *Dec.,* 297-298.

G. Claim 14

1. Claim 14(Pre)

To the extent the preamble is limiting, *Mathiassen* teaches the IC stores "program code, e.g., administrative software" on memory 7,7A,7E. *Mathiassen*, [0050]. Non-volatile memory 7,7A,7E is well known to be a "non-transitory computer readable storage medium." *Dec.,* 299, 301. It is well known that a processor, such as processor 2 of IC, executes program code to perform functions. *Dec.,* 300, 302-303. The modified processor of *Mathiassen's* portable control and *Mathiassen's* modified ignition control/car computer thus include or render obvious the storage medium storing a computer program comprising instructions. *Id.*

2. Claim 14(a)

See Claim 1(d1).

3. Claim 14(b)

See Claim 1(d1), 11(a2).

4. Claim 14(c)

See Claim 1(d2).

5. Claim 14(d)

See Claim 1(d3), 1(a) ("of biometric signatures").

6. Claim 14(e)

See Claim 1(b1), 1(d1).

7. Claim 14(f)

See Claim 1(b2).

8. Claim 14(g)

See Claim 1(b3).

9. Claim 14(h)

See Claim 1(c2).

10. Claim 14(i)

See Claim 1(e).

H. Claim 15

1. Claim 15(Pre)

See Claim 1(Pre).

2. Claim 15(a)

See Claim 1(a).

3. Claim 15(b)

See Claim 1(b).

4. Claim 15(b1)

See Claim 1(b1).

5. Claim 15(b2)

See Claim 1(b2).

6. Claim 15(b3)

See Claim 1(b3).

7. Claim 15(c)

See Claim 1(c).

8. Claim 15(c1)

See Claim 1(c1).

9. Claim 15(c2)

See Claim 1(c2).

10. Claim 15(d)

See Claim 1(d).

11. Claim 15(d1)

See Claim 1(d1).

12. Claim 15(d2)

See Claim 1(d2).

13. Claim 15(d3)

See Claim 1(d3).

14. Claim 15(e)

See Claim 1(e).

I. Claim 16

1. Claim 16(Pre)

See Claims 1(b) ("transmitter subsystem"), 1(Pre) ("for operating in a system…").

2. Claim 16(a)

See Claim 1(b1).

3. Claim 16(b)

See Claim 1(b2).

4. Claim 16(c)

See Claim 1(b3).

5. Claim 16(d)

See Claim 1(d).

6. Claim 16(d1)

See Claim 1(d1).

7. Claim 16(d2)

See Claim 1(d2).

8. Claim 16(d3)

See Claim 1(d3).

9. Claim 16(e)

See Claim 1(e).

J. Claim 17

1. Claim 17(Pre1)

See Claim 11(Pre1).

2. Claim 17(Pre2)

See Claim 11(Pre2).

3. Claim 17(Pre3)

See Claim 11(Pre3).

4. Claim 17(Pre4)

See Claim 11(Pre4).

5. Claim 17(a)

See Claim 11(a).

6. Claim 17(a1)

See Claim 11(a1).

7. Claim 17(a2)

See Claim 11(a2).

8. Claim 17(a3)

See Claim 11(a3).

9. Claim 17(a4)

See Claim 11(a4).

10. Claim 17(b)

See Claim 11(b).

11. Claim 17(c)

See Claim 11(c).

12. Claim 17(d)

See Claim 11(d).

13. Claim 17(e)

See mapping for Claim 1(c2).

14. Claim 17(f)

See Claim 11(f).

VII. DISCRETIONARY CONSIDERATIONS

A. The *Fintiv* Factors Favor Institution

Under the "*Fintiv* factors," the Board asserted it may consider parallel litigation, including an early trial date, in determining whether to institute under 35 U.S.C. § 314(a). *NHK Spring Co., Ltd., v. Intri-Plex Technologies, Inc.*, IPR2018-00752, Paper 8 at 19–20 (PTAB Sept. 12, 2018) (precedential); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 2–3, 6 (PTAB Mar. 20, 2020) (precedential). Those factors favor institution here.

1. Stay

Parallel litigation is ongoing. While no stay has been requested, Petitioner will seek a stay if institution is granted, thus favoring institution. At worst, this factor is neutral because the Board "will not attempt to predict" how the district court will proceed. *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB Jun. 16, 2020).

2. Proximity of the Court's Trial Date

"This factor looks at the proximity of the trial date to the date of [FWD] to assess the weight to be accorded a trial date set earlier than the expected [FWD] date." *Shenzhen Carku Tech. Co., Ltd. v. The Noco Co.*, IPR2020-00944, Paper 20 at 61 (PTAB Nov. 12, 2020). The District Court scheduled trial for January 23, 2023,

with the notation the "Court expects to set these dates at the conclusion of the *Markman* hearing," thus indicating the Court recognizes the scheduled date is pursuant to the Court's default schedule and may not be the "actual trial date." *See* Ex. 1065 (Scheduling Order in District Court Litigation), 5, FN 4.

Trial dates are notoriously unreliable and should be an insufficient basis upon which to deny institution. "A court's general ability to set a fast-paced schedule is not particularly relevant," especially where "the forum [i.e., WDTX] itself has not historically resolved cases so quickly." *In re Apple Inc.*, No 20-135, slip op. at 16 (Fed. Cir. Nov. 9, 2020); *DISH Network L.L.C. v. Broadband iTV, Inc.*, IPR2020-01280, Paper 17 at 13-16 (PTAB Feb. 4, 2021). The Federal Circuit found error in the Board's reliance on the case's scheduled trial date. *In re Apple Inc.*, No 20-135, slip op. at 15 (Ex. 1071). It would be error for the Board speculatively rely upon the current schedule, especially with a motion to transfer pending. The Board would be no better suited to speculate as to the prospective trial date than it would be to speculate as to the likely outcome of the motion to transfer pending and especially as the District Court's own Scheduling Order recognizes the current trial date is set pursuant to "default" deadlines. (Ex. 1065, 5, FN 4).

Trial date speculation is particularly concerning where the statistics show frequent trial delays in WDTX. "70% of [WDTX] trial dates initially relied upon by the PTAB to deny petitions have slid," as of July 2020. *District Court Trial Dates*

Tend to Slip After PTAB Discretionary Denials (Ex. 1068). Such delays impacted the *NHK* and *Fintiv* cases, where, after the Board denied institution, associated trial dates were delayed to after the FWD dates—the same WDTX court in *Fintiv* as is handling the Texas Litigation. IPR2018-01680, Paper 22 at 17, n. 6 (PTAB Apr. 3, 2019) ("In the district court case running parallel to *NHK Spring*, the court ultimately moved the trial date back six months, illustrating the uncertainty associated with litigation schedules."); *Order Setting Jury Selection and Trial* (Ex. 1069) (resetting *Fintiv* trial to June 21, 2022, nearly thirteen months after the FWD would have been due in the associated IPR). In contrast, the Board adhered to the one-year statutory deadline for FWDs prescribed by 35 U.S.C. § 316(a)(11).

CPC undoubtedly will argue that Apple waited too long to file its IPR and that the delay in filing the IPR should be a basis for discretionary denial. Any such argument, however, should be given little merit. Commensurate with filing this Petition for the '705 Patent, Apple is filing a Petition for the related '208 Patent. *See* IPR2022-00601. The grounds, prior art applied, and merits of the '208 and '705 Patent are similar in many respects. The '208 Patent includes numerous means-plus-function limitations warranting waiting to file the '208 Petition until CPC finalized its constructions and the Court's *Markman* Order. *See* IPR2022-00601, Paper 1, at 6-9 (Section III.C.1).

Filing the '705 Patent's Petition at the same time as filing the '208 Patent's Petition allows for efficient and consistent review by the Board, i.e., the Board is reviewing similar merits of different patents at the same time. Moreover, filing the petitions at the same time eliminates any argument by CPC that Apple is attempting to obtain a strategic advantage in receiving a Patent Owner Preliminary Response on the '705 Patent's IPR prior to filing the '208 Patent's IPR.

3. Investment in Parallel Proceeding

Beyond claim construction, the parties have invested little in the parallel proceeding. Petitioner has diligently worked since the litigation's filing on locating prior art and preparing the Petition and supporting evidence. Minimal fact discovery has been conducted. Expert discovery does not close until September 21, 2022. (Ex. 1065, 4). This factor weighs in favor of institution.

4. Overlap

Petitioner stipulates that if the Board institutes the Petition on the same grounds presented, then Apple will not seek resolution in the District Court of any ground of invalidity that utilizes *Mathiassen*, *McKeeth*, or *Anderson*. In so stipulating, Apple seeks to avoid multiple proceedings addressing the validity of the '705 Patent based on any of the same prior art references. This factor weights in favor of institution.

5. Same Party

The Parties are the same in the district court litigation. However, members of the Board have noted *Fintiv* addresses only the scenario in which the petitioner is unrelated to a defendant in a parallel proceeding, finding this should weigh against denying institution, but that *Fintiv* "says nothing about situations in which the petitioner is the same as, or is related to, the district court defendant." *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd*., IPR2020-00122, Paper 15 at 10 (PTAB May 15, 2020) (APJ Crumbley, dissenting) (noting that disfavoring a "defendant in the district court" is "contrary to the goal of providing district court litigants an alternative venue to resolve questions of patentability").

6. Other Circumstances

The strength of the proposed grounds weighs strongly in favor of institution.

The *Fintiv* factors require the Board to take "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Fintiv*, Paper 11 at 6. Were the Board to deny institution, years of district court litigation would be required just to obtain a finding of invalidity. Such a scenario runs directly counter to *Fintiv's* goals of preserving efficiency and the system's integrity. Denying institution harms system integrity by rejecting the PTAB as the lead agency in assessing patentability.

B. The *Fintiv* Framework Should Be Overturned

The *Fintiv* framework should be overturned because it is legally invalid and unwise policy. The framework (1) exceeds the Director's authority, (2) is arbitrary and capricious, (3) and was adopted without notice-and-comment rulemaking.

1. The Fintiv Framework Exceeds the Director's Authority

The Director cannot deny IPRs based on parallel litigation if the IPR was timely under § 315(b). And the Director cannot create reasons to deny institution that conflict with the statutory language or exceed the authority under the AIA, such as, denial of institution based on parallel litigation.

Under § 315(b), IPRs are permissible when parallel litigation is pending. Ultimately, strategies like *Fintiv* "cannot be invoked to preclude adjudication of a claim…brought within the [statutory] window." *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 572 U.S. 663, 667, 677-680, 685 (2014). And the AIA's provisions confirm the Director lacks authority to apply the *Fintiv* framework. *See, e.g.*, §§ 315(a), (d), 325(d). None of the provisions grant the Director discretion to reject IPRs because there is a parallel lawsuit.

2. The Fintiv Framework Is Arbitrary and Capricious

The *Fintiv* framework is arbitrary and capricious. First, it requires the Board to rely on speculation about parallel litigation. *See, e.g.*, *Horsehead Resource Dev. Co. v. Browner*, 16 F.3d 1246, 1269 (D.C. Cir. 1994) ("agency actions based upon speculation are arbitrary and capricious"). Second, the *Fintiv* factors are vague,

resulting in the Board treating "similar situations differently without reasoned explanation"—a hallmark of arbitrary and capricious agency action. *Port of Seattle v. FERC*, 499 F.3d 1016, 1034 (9th Cir. 2007). Third, the *Fintiv* framework is not connected to promoting efficiency. Instead, it pressures defendants to file premature IPRs and allows infringement plaintiffs to block IPRs through forum shopping.

3. The Fintiv Framework Was Impermissibly Adopted Without Notice-and-Comment Rulemaking

The *Fintiv* factors were adopted without notice-and-comment rulemaking. Through the Director's designation of *NHK* and *Fintiv* as precedential, those decisions' framework became "binding" on the Board "in subsequent matters involving similar facts or issues," Patent Trial and Appeal Board, Standard Operating Procedure 2 (Rev. 10) ("SOP-2"), at 11 (Sept. 20, 2018)—that is, they became a "rule" as defined in the Administrative Procedure Act ("APA"), *see* 5 U.S.C. § 551(4) (defining "rule"). But that designation process did not entail public notice or comment, contrary to the requirements of both the APA and the AIA. *Kisor v. Wilkie*, 139 S. Ct. 2400, 2420 (2019); §§ 2(b)(2), 316(a).

VIII. CONCLUSION

Petitioner requests *inter partes* review of the Challenged Claims of U.S. Patent No. 9,269,705.

Respectfully submitted,

BY: */s/ Jennifer C. Bailey*
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Adam P. Seitz, Reg. No. 52,206

COUNSEL FOR PETITIONER

IX. MANDATORY NOTICES UNDER UNDER 37 C.F.R. § 42.8(A)(1)

A. Real Party-In-Interest

Apple Inc. is the real party-in-interest. 37 C.F.R. § 42.8(b)(1).

B. Related Matters

(1) a patent infringement lawsuit filed on February 23, 2021, by Patent Owner, CPC Patent Technologies Pty Ltd., against Petitioner in the United States District Court for the Western District of Texas, Case No. 6:21-cv-00165;

(2) *CPC Patent Technologies Pty Ltd., v. HMD Global Oy* in the United States District Court for the Western District of Texas, Case No. 6:21-cv-00166;

(3) *Apple Inc. v. CPC Patent Technologies Pty Ltd*., *Inter Partes* Review Case No. IPR2022-00601, filed February 23, 2022, of U.S. Patent No. 9,269,208; and

(4) *Apple Inc. v. CPC Patent Technologies Pty Ltd*., *Inter Partes* Review Case No. IPR2022-00600, filed February 23, 2022, of U.S. Patent No. 8,620,039 (unrelated patent).

C. Lead and Back-Up Counsel

Petitioner provides the following designation and service information for lead and back-up counsel. 37 C.F.R. § 42.8(b)(3) and (b)(4).

Lead Counsel	Back-Up Counsel
Jennifer C. Bailey (Reg. No. 52,583) Jennifer.Bailey@eriseip.com PTAB@eriseip.com Postal and Hand-Delivery Address:	Adam P. Seitz (Reg. No. 52,206) Adam.Seitz@eriseip.com PTAB@eriseip.com Postal and Hand-Delivery Address:

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CLAIMS LISTING APPENDIX

U.S. Patent No. 9,665,705, Claims 1, 4, 6, 10-12, and 14-17

Claim Designation	Claim Language
Claim 1(Pre)	1. A system for providing secure access to a controlled item, the system comprising:
Claim 1(a)	a memory comprising a database of biometric signatures;
Claim 1(b)	a transmitter sub-system comprising:
Claim 1(b1)	a biometric sensor configured to receive a biometric signal;
Claim 1(b2)	a transmitter sub-system controller configured to match the biometric signal against members of the database of biometric signatures to thereby output an accessibility attribute; and
Claim 1(b3)	a transmitter configured to emit a secure access signal conveying information dependent upon said accessibility attribute; and
Claim 1(c)	a receiver sub-system comprising: a receiver sub-system controller configured to:
Claim 1(c1)	receive the transmitted secure access signal; and
Claim 1(c2)	provide conditional access to the controlled item dependent upon said information;
Claim 1(d)	wherein the transmitter sub-system controller is further configured to:
Claim 1(d1)	receive a series of entries of the biometric signal, said series being characterised according to at least one of the number of said entries and a duration of each said entry;
Claim 1(d2)	map said series into an instruction; and
Claim 1(d3)	populate the data base according to the instruction,
Claim 1(e)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 4	4. The system according to claim 1, wherein the biometric sensor is responsive to one of voice, retinal pattern, iris pattern, face pattern, and palm configuration, and/ or the database of biometric signatures is located in at least one of the transmitter sub-system and the receiver sub-system.
Claim 6(a)	6. The system as claimed in claim 1, wherein the biometric sensor is further configured to authenticate the identity of a user;

Claim Designation	Claim Language
Claim 6(b)	wherein the transmitter is further configured to transmit information capable of granting access to the controlled item using a secure wireless signal dependent upon a request from the user and the authentication of the user identity; and
Claim 6(c)	the system further comprising a control panel configured to receive the information and provide the secure access requested.
Claim 10(Pre)	10. A transmitter sub-system for operating in a system for providing secure access to a controlled item, wherein the transmitter sub-system comprises
Claim 10(a)	a biometric sensor configured to receiving a biometric signal;
Claim 10(b)	a controller configured to match the biometric signal against members of a database of biometric signatures to thereby output an accessibility attribute;
Claim 10(c)	a transmitter configured to emit a secure access signal conveying said information dependent upon said accessibility attribute;
Claim 10(d)	wherein the controller is further configured to:
Claim 10(d1)	receive a series of entries of the biometric signal, said series being characterised according to at least one of the number of said entries and a duration of each said entry;
Claim 10(d2)	map said series into an instruction; and
Claim 10(d3)	populate the database according to the instruction,
Claim 10(e)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 11(Pre1)	11. A method for providing secure access to a controlled item in a system comprising
Claim 11(Pre2)	a database of biometric signatures;
Claim 11(Pre3)	a transmitter sub-system comprising a biometric sensor configured to receive a biometric signal, and a transmitter configured to emit a secure access signal capable of granting access to the controlled item,
Claim 11(Pre4)	a receiver sub-system comprising a receiver sub-system controller configured to receive the transmitted secure access signal, and provide conditional access to the controlled item dependent upon information in said secure access signal,
Claim 11(a)	the method comprising: populating the database of biometric signatures by:

Claim Designation	Claim Language
Claim 11(a1)	receiving a series of entries of the biometric signal;
Claim 11(a2)	determining at least one of the number of said entries and a duration of each said entry;
Claim 11(a3)	mapping said series into an instruction; and
Claim 11(a4)	populating the database according to the instruction;
Claim 11(b)	receiving the biometric signal;
Claim 11(c)	matching the biometric signal against members of the database of biometric signatures to thereby output an accessibility attribute;
Claim 11(d)	emitting a secure access signal conveying information dependent upon said accessibility attribute; and
Claim 11(e)	providing conditional access to the controlled item dependent upon said information,
Claim 11(f)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 12	12. The method according to claim 10, wherein populating the database of biometric signatures further comprises enrolling a biometric signature into the database of biometric signatures, and wherein enrolling the biometric signature into the database comprises: receiving a biometric signal; and enrolling the biometric signal as an administrator signature in response to the database of biometric signatures being empty.
Claim 14(Pre)	a non-transitory computer readable storage medium storing a computer program comprising instructions, which when executed by processors causes the processors to:
Claim 14(a)	receive a series of entries of a biometric signal;
Claim 14(b)	determine at least one of the number of said entries and a duration of each said entry;
Claim 14(c)	map said series into an instruction;
Claim 14(d)	populate the database of biometric signatures according to the instruction;
Claim 14(e)	receive the biometric signal;
Claim 14(f)	match the biometric signal against members of the database of biometric signatures to thereby output an accessibility attribute;

Claim Designation	Claim Language
Claim 14(g)	emit a secure access signal conveying information dependent upon said accessibility attribute;
Claim 14(h)	provide conditional access to a controlled item dependent upon said information;
Claim 14(i)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 15(Pre)	15. A system for providing secure access to a controlled item, the system comprising:
Claim 15(a)	a memory comprising a database of biometric signatures;
Claim 15(b)	a transmitter sub-system comprising:
Claim 15(b1)	a biometric sensor capable of receiving a biometric signal;
Claim 15(b2)	a transmitter sub-system controller capable of matching the biometric signal against members of the database of biometric signatures to thereby output an accessibility attribute; and
Claim 15(b3)	a transmitter capable of emitting a secure access signal conveying information dependent upon said accessibility attribute; and
Claim 15(c)	a receiver sub-system comprising: a receiver sub-system controller capable of:
Claim 15(c1)	receiving the transmitted secure access signal; and
Claim 15(c2)	providing conditional access to the controlled item dependent upon said information;
Claim 15(d)	wherein the transmitter sub-system controller is further capable of:
Claim 15(d1)	receiving a series of entries of the biometric signal, said series being characterized according to at least one of the number of said entries and a duration of each said entry;
Claim 15(d2)	mapping said series into an instruction; and
Claim 15(d3)	populating the database according to the instruction,
Claim 15(e)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 16(Pre)	16. A transmitter sub-system for operating in a system for providing secure access to a controlled item, wherein the transmitter sub-system comprises:
Claim 16(a)	A biometric sensor capable of receiving a biometric signal;

Claim Designation	Claim Language
Claim 16(b)	a controller capable of matching the biometric signal against members of a database of biometric signatures to thereby output an accessibility attribute;
Claim 16(c)	a transmitter capable of emitting a secure access signal conveying said information dependent upon said accessibility attribute;
Claim 16(d)	wherein the controller is further capable of:
Claim 16(d1)	receiving a series of entries of the biometric signal, said series being characterised according to at least one of the number of said entries and a duration of each said entry;
Claim 16(d2)	mapping said series into an instruction;
Claim 16(d3)	populating the database according to the instruction;
Claim 16(e)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.
Claim 17(Pre1)	17. A method for providing secure access to a controlled item in a system comprising
Claim 17(Pre2)	a database of biometric signatures,
Claim 17(Pre3)	a transmitter sub-system comprising a biometric sensor capable of receiving a biometric signal, and a transmitter capable of emitting a secure access signal capable of granting access to the controlled item, and
Claim 17(Pre4)	a receiver sub-system comprising a receiver sub-system controller capable of receiving the transmitted secure access signal, and providing conditional access to the controlled item dependent upon information in said secure access signal,
Claim 17(a)	the method comprising: populating the database of biometric signatures by:
Claim 17(a1)	receiving a series of entries of the biometric signal;
Claim 17(a2)	determining at least one of the number of said entries and a duration of each said entry;
Claim 17(a3)	mapping said series into an instruction; and
Claim 17(a4)	populating the database according to the instruction;
Claim 17(b)	receiving the biometric signal;

Claim Designation	Claim Language
Claim 17(c)	matching the biometric signal against members of the database of biometric signatures to thereby output an accessibility attribute;
Claim 17(d)	emitting a secure access signal conveying information dependent upon said accessibility attribute; and
Claim 17(e)	providing conditional access to the controlled item dependent upon said information,
Claim 17(f)	wherein the controlled item is one of: a locking mechanism of a physical access structure or an electronic lock on an electronic computing device.

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 9,665,705 to Burke ("the *'705 Patent"*)
Exhibit 1002	File History for the '705 Patent ("the *'818 Application File History*")
Exhibit 1003	Declaration of Dr. Andrew Sears
Exhibit 1004	U.S. Patent Application Publication No. 2004/0123113 to Mathiassen et al. ("*Mathiassen*")
Exhibit 1005	U.S. Patent No. 6,766,456 to McKeeth ("*McKeeth*")
Exhibit 1006	U.S. Patent No. 6,509,847 to Anderson ("*Anderson*")
Exhibit 1007	U.S. Patent No. 6,927,668 to Odle et al. ("*Odle*")
Exhibit 1008	Exhibit intentionally left blank
Exhibit 1009	Merriam Webster, Webster's New Collegiate Dictionary, 1981
Exhibit 1010	U.S. Patent No. 6,612,928 to Bradford, et al. ("Bradford")
Exhibit 1011	Anil Jain, et al., Biometric Identification, Communication of the ACM, February 2000
Exhibit 1012	Henry C. Lee, et al., Advances in Fingerprint Technology, Second Edition, CRC Press, copyright 2001
Exhibit 1013	P. Jonathon Phillips, et al., An Introduction to Evaluating Biometric Systems, National Institute of Standards and Technology, IEEE, copyright 2000
Exhibit 1014	U.S. Patent Publication No. 2003/0117261 to Gunsch ("*Gunsch*")
Exhibit 1015	U.S. Patent Publication No. 2003/0036825 to Kim ("Kim")
Exhibit 1016	U.S. Patent No. 6,140,939 to Flick ("*Flick*")
Exhibit 1017	U.S. Patent No. 6,164,403 to Wuidart ("*Wuidart*")
Exhibit 1018	U.S. Patent No. 7,239,227 to Gupta, et al. ("*Gupta*")
Exhibit 1019	U.S. Patent No. 6,877,097 to Hamid, et al. ("*Hamid*")
Exhibit 1020	U.S. Patent Publication No. 2001/0049785 to Kawan, et al. ("*Kawan*")
Exhibit 1021	U.S. Patent Publication No. 2002/0091937 to Ortiz ("*Ortiz*")
Exhibit 1022	U.S. Patent Publication No. 2003/0046552 to *Hamid '552* ("*Hamid '552*")
Exhibit 1023	U.S. Patent Publication No. 2002/0063154 to Hoyos, et al. ("*Hoyos*")
Exhibit 1024	U.S. Patent No. 6,484,260 to Scott, et al. ("*Scott*")
Exhibit 1025	U.S. Patent No. 7,404,086 to Sands, et al. ("*Sands*")
Exhibit 1026	Ross Tester, A Rolling Code 4-Channel UHF Remote Control: What is "Code Hopping" or "Rolling Code", Silicon Chip.com.au, July 2002

Exhibit 1027	Brent A. Miller, et al., Bluetooth Revealed: The Insider's Guide to an Open Specification for Global Wireless Communications, 2001
Exhibit 1028	U.S. Patent No. 7,284,266 to Morris, et al. ("*Morris*")
Exhibit 1029	Bricolage: Data Compression – Morse Code, https://perl.plover.com/Huffman/huffman.html, 1998
Exhibit 1030	U.S. Patent No. 6,323,565 to Williams, Jr., et al. ("*Williams*")
Exhibit 1031	U.S. Patent No. 7,020,270 to Ghassabian ("*Ghassabian*")
Exhibit 1032	U.S. Patent Publication No. 2003/0048260 to Matusis ("*Matusis*")
Exhibit 1033	International Publication WO 02/27455 to Mathiassen ("*Mathiassen '455*")
Exhibit 1034	European Patent Application No. 88301738.6 to Araki et al. ("*Araki*")
Exhibit 1035	U.S. Patent No. 7,152,045 to Hoffman ("*Hoffman*")
Exhibit 1036	U.S. Patent No. 6,833,785 to Brown, et al. ("*Brown*")
Exhibit 1037	U.S. Patent Publication No. 2004/0015450 to Zingher, et al. ("*Zingher*")
Exhibit 1038	U.S. Patent No. 6,498,970 to Colmenarez, et al. ("*Colmenarez*")
Exhibit 1039	U.S. Patent No. 6,100,811 to Hsu, et al. ("*Hsu*")
Exhibit 1040	U.S. Patent No. 4,638,292 to Mochida, et al. ("*Mochida*")
Exhibit 1041	K-9 Car Alarm Owner's Guide and Installation Instructions, K-9 Mundial, Omega Research and Development, 2000
Exhibit 1042	U.S. Patent No. 7,110,580 to Bostrom ("*Bostrom*")
Exhibit 1043	U.S. Patent No. 7,336,174 to Maloney ("*Maloney*")
Exhibit 1044	Microsoft Press Computer Dictionary, second edition, Microsoft Press, 1994
Exhibit 1045	Microsoft Computer Dictionary, fifth edition, Microsoft Press, 2002
Exhibit 1046	OnStar Features, OnStar, https://web.archive.org/web/20000619021703/http://www.onstar.com/features/3button.htm June 19, 2000
Exhibit 1047	U.S. Patent No. 6,420,975 to DeLine, et al. ("*DeLine*")
Exhibit 1048	Exhibit Intentionally left blank
Exhibit 1049	PC Basics: Get a Great Start, Survive and Thrive, 2002
Exhibit 1050	U.S. Patent Publication 2003/0160692 to Nonaka ("*Nonaka*")
Exhibit 1051	U.S. Patent No. 5,307,048 to Sonders ("*Sonders*")
Exhibit 1052	Merriam Webster's Collegiate Dictionary, tenth edition, 1998
Exhibit 1053	Alan Gatherer, et al., The Application of Programmable DSPs in Mobile Communications: Biometric Systems applied to Mobile Communications, 2002

Exhibit 1054	McGraw-Hill, Dictionary of Electrical and Computer Engineering, 2003
Exhibit 1055	U.S. Patent No. 6,970,970 to Jung et al. ("*Jung*")
Exhibit 1056	Exhibit Intentionally left blank
Exhibit 1057	Exhibit Intentionally left blank
Exhibit 1058	Exhibit Intentionally left blank
Exhibit 1059	Exhibit Intentionally left blank
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Exhibit 1071	In re Apple Inc., No 20-135 Order (Dkt No. 55)
Exhibit 1072	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Proposed Claim Constructions ("*CPC's Initial Constructions*")
Exhibit 1073	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Proposed Updated Claim Constructions ("*CPC's Initial Updated Constructions*") * Note that document was served without a cover page
Exhibit 1074	Case No. 6:21-cv-00165 (W.D. Tex.), Joint Claim Construction Statement
Exhibit 1075	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Response to Defendant Apple Inc.'s Claim Construction Brief
Exhibit 1076	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Sur-Reply to Defendant Apple Inc.'s Claim Construction Brief

Exhibit 1077	Case No. 6:21-cv-00165 (W.D. Tex.), Claim Construction Order, Dated February 10, 2022
Exhibit 1078	Case No. 6:21-cv-00166 (W.D. Tex.), Email from Peter Tong, Law Clerk to J. Albright, to the Parties Re Meet & Confer, Dated February 10, 2022
Exhibit 1080	Case No. 6:21-cv-00166 (W.D. Tex.), Claim Construction Order, Dated January 25, 2022 ("HMD Claim Construction Order")

CERTIFICATION OF WORD COUNT

The undersigned certifies pursuant to 37 C.F.R. § 42.24 that the foregoing Petition for *Inter Partes* Review, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 11,064 words according to the word-processing program used to prepare this document (Microsoft Word).

Dated: February 23, 2022

Respectfully submitted,

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COUNSEL FOR PETITIONER

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

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that on February 23, 2022, a complete and entire copy of this Petition for *Inter Partes* Review including exhibits was provided via Priority Mail Express to the Patent Owner by serving the correspondence address of record for the '705 Patent as listed on PAIR:

Crowell/BGL
P.O. Box 10395
Chicago, IL 60610

Further, a courtesy copy of this Petition for *Inter Partes* Review was sent via electronic mail to Patent Owner's litigation counsel:

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EXHIBIT C

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

CPC PATENT TECHNOLOGIES PTY, LTD.,
Patent Owner

Inter Partes Review Case No. IPR2022-00600
U.S. Patent No. 8,620,039

PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 8,620,039

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I. INTRODUCTION

Petitioner Apple Inc. ("Petitioner") requests *Inter Partes* Review ("IPR") of Claims 1-2 and 19-20 (collectively, the "Challenged Claims") of U.S. Patent No. 8,620,039 ("the '039 Patent"). The purportedly distinguishing features of the Challenged Claims were (1) a reference pointer on a card to a memory location for storing biometric information; and (2) automatically storing biometric information. Both features were well-known before the priority date of the '039 Patent, rendering the Challenged Claims obvious over the prior art. IPR of the Challenged Claims should thus be instituted.

II. SUMMARY OF THE '039 PATENT

A. Description of the '039 Patent

The '039 Patent describes systems and methods for storing a user's biometric information at a memory location defined by card data read from a card. *'039 Patent*, Abstract, 2:51-67. Embodiments further provide an enrollment process for storing the user's biometric information. *'039 Patent*, 2:62-67, 7:43-49.

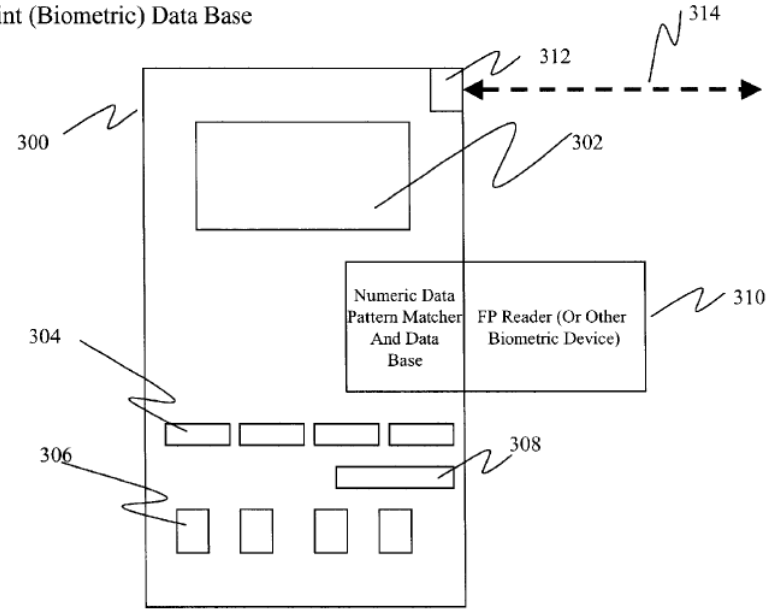
B. Summary of Unpatentability of the Challenged Claims

The Challenged Claims of the '039 Patent recite an enrollment process in which card data on a card defines a memory location for storing biometric information of a user. *See, e.g., '039 Patent*, Claim 1.

A single ground of unpatentability is presented for all Challenged Claims, relying on the combination of *Bradford*, *Foss*, and *Yamane*. *Bradford* alone teaches

most of the recited claim limitations, including a biometric card pointer enrollment system and method employing a user ID (obtained from a player ID card storing the user ID on a magnetic strip), storage of biometric information in local memory, and subsequent verification of a user's fingerprint via comparison to the enrolled biometric, which is located using the player ID card.

FIGURE 3
General Gaming Device Having A Fingerprint Reader (Or Other Biometric Reader) And Copy Of A Player Fingerprint (Biometric) Data Base

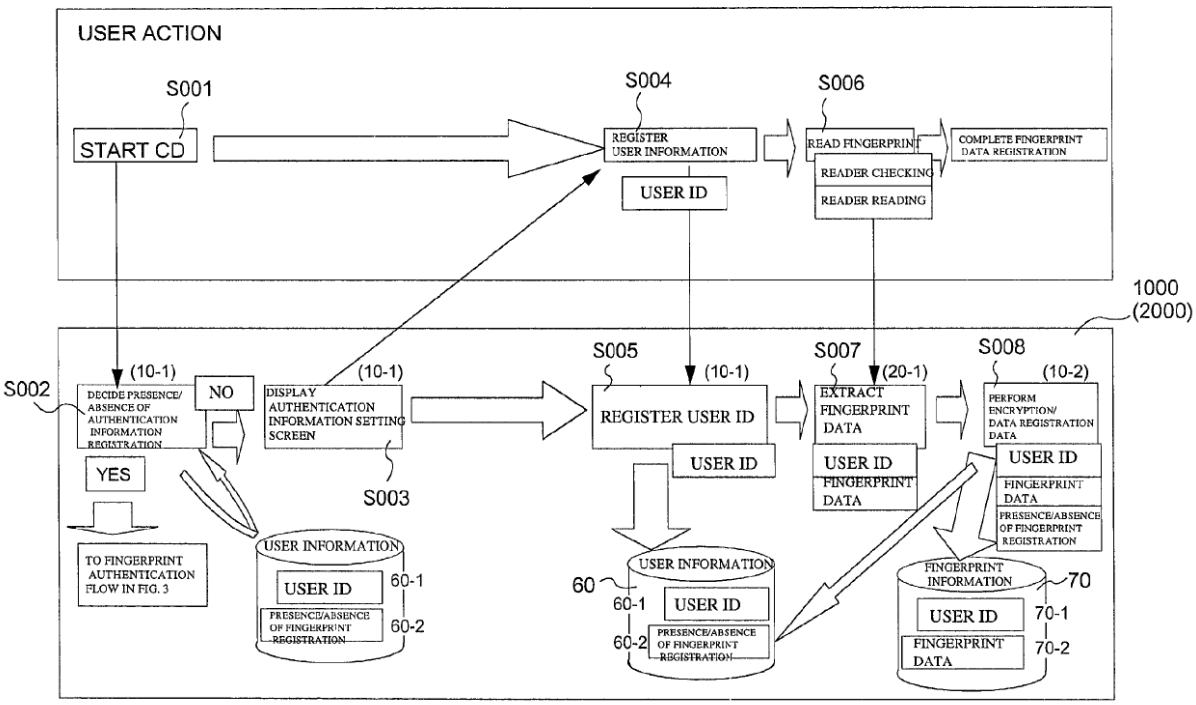


Bradford, FIG. 3.

Although *Bradford* alone describes utilizing read card data during subsequent *verification* of the user, *Foss* is included for clarification of a specific step reciting reading card data from the card during an *enrollment* process.

The Challenged Claims also recite a system and method for determining if the defined memory location is unoccupied, and, if it is not occupied, storing the presented biometric. *See, e.g., '039 Patent*, Claim 1(d)-(e). The '039 Patent describes using a flag to perform this determination. *'039 Patent,* 9:23-33. *Yamane* teaches a fingerprint presence/absence flag facilitating this functionality, illustrated below in Fig. 2.

FIG.2



Yamane, Fig. 2.

Therefore, the modifications to *Bradford's* system are minor, namely reading the card data from the card during an *enrollment* phase and setting a flag to determine if a memory location is unoccupied.

C. Priority Date of the Challenged Claims

U.S. Patent Application No. 12/063,650 (the '650 Application), from which the '039 Patent issued, was filed on August 12, 2010. The '650 Application is a § 371 National Phase Application of PCT/AU2006/001136, filed on August 10, 2006, which claims priority to AU2005904375, filed August 12, 2005.

For this IPR only, Apple applies August 12, 2005, as the priority date for the Challenged Claims.

D. Level of Skill of a POSITA

A POSITA at the time of the '039 Patent—which, for purposes of this Petition is August 12, 2005—would have had at least a bachelor's degree in computer engineering, computer science, electrical engineering, or a related field, with at least one year of experience in the field of human-machine interfaces and device access security. Additional education or experience might substitute for the above requirements. *Dec.*, 31-34.[1]

III. REQUIREMENTS FOR IPR UNDER 37 C.F.R. § 42.104

A. Grounds for Standing Under 37 C.F.R. § 42.104(a)

Apple certifies the '039 Patent is available for IPR and Apple is not barred or estopped from requesting IPR challenging the claims of the '039 Patent. Apple is not the owner of the '039 Patent, has not filed a civil action challenging the validity

[1] All citations to "*Dec.*" are to Ex. 1003, Declaration of Dr. Andrew Sears.

of any claim of the '039 Patent, and this Petition is filed less than one year after Apple was served with a complaint alleging infringement of the '039 Patent.

B. Identification of Challenge Under 37 C.F.R. § 42.104(b) and Relief Requested

In view of the prior art and evidence presented, the Challenged Claims of the '039 Patent are unpatentable and should be cancelled. 37 C.F.R. § 42.104(b)(1). Based on the prior art identified below, IPR of the Challenged Claims should be granted. 37 C.F.R. § 42.104(b)(2).

Proposed Grounds of Unpatentability
Ground 1: Claims 1-2 and 19-20 are **obvious** under § 103(a) over *Bradford* (Ex. 1004) in view of *Foss* (Ex. 1005) in further view of *Yamane* (Ex. 1006)

Section V identifies where each element of the Challenged Claims is found in the prior art. 37 C.F.R. § 42.104(b)(4). The exhibit numbers of the evidence relied upon to support the challenges are provided above and the relevance of the evidence to the challenges raised is provided in Section V. 37 C.F.R. § 42.104(b)(5). Exhibits 1001-1038 are also attached.

C. Claim Construction Under 37 C.F.R. § 42.104(b)(3)

In this proceeding, claims are interpreted under the same standard applied by Article III courts (i.e., the *Phillips* standard). 37 C.F.R. § 42.100(b); 83 Fed. Reg. 197 (Oct. 11, 2018); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). Petitioner applies the plain and ordinary meaning of all claim terms.

Petitioner does not waive any argument in any litigation that claim terms in the '039 Patent are indefinite or additional terms need construction.

In the related District Court litigation between the Parties, the Parties agreed to the following claim construction, which has been applied in the mappings below.

Claim Term	***Agreed Plain & Ordinary Construction***
Claims 1, 19: "**dependent upon**"	Plain and ordinary meaning, defined as "contingent on or determined by" (Ex. 1032, 2)

The District Court also construed "biometric card pointer system," recited in Claims 1 and 19, as a "[n]onlimiting preamble term with no patentable weight. (Ex. 1033, 1).

IV. SHOWING OF ANALOGOUS PRIOR ART

Bradford, Foss, and *Yamane* were neither cited nor considered during prosecution of the '039 Patent.

U.S. Patent No. 6,612,928 to Bradford et al. ("*Bradford*") published September 2, 2003, qualifying as prior art to the '039 Patent under at least 35 U.S.C. § 102(b). *Bradford* teaches a gaming authentication system and method including enrolling a user in a player ID database (FIG. 6, 14:21–16:47), authenticating the user for subsequent play (16:1-25), assisting the user in complying with requirements for filling out tax forms (16:48-50), and authenticating electronic funds transfers (24:52-54). Enrollment in the system can be at least partially performed directly on a gaming device that stores enrolled biometric information locally in a

player ID database. *Bradford*, 8:51-9:17, 15:48-67, FIG. 3. A newly enrolling user may be provided with a first authenticator such as a magnetic strip card containing a unique player ID that is used to find a matching entry in the player ID database. *Bradford*, 5:63-6:13, 15:16-29, FIG. 6. Because *Bradford*, like the '039 Patent, discloses an enrollment and verification system that uses card information to determine the location of biometric information in local memory, *Bradford* is in the same field of endeavor and is pertinent to a problem to be solved by the claimed invention in the '039 Patent. *Dec.*, 61. Therefore, *Bradford* is analogous art.

U.S. PGPub No. 2005/0127169 to Foss, Jr. ("*Foss*") filed Feb 3, 2005, and published June 16, 2005, qualifies as prior art to the '039 Patent under at least 35 U.S.C. § 102(e). *Foss* teaches an enrollment process for enabling an existing account holder to enroll additional new customer(s) in a group stored value card program. *Foss*, [0086], FIGS. 7-8. *Foss's* system prompts the customer to "swipe the existing stored value card" to "continue the enrollment process." *Foss*, [0088]. The system identifies the stored value card account associated with the existing customer, identifying the account based on the data read from its magnetic stripe via card reader. *Id.* Because *Foss*, like the '039 Patent, discloses a method for enrollment of user information that looks up an existing record using card information, *Foss* is in the same field of endeavor and is pertinent to a problem to be solved by the claimed invention in the '039 Patent. *Dec.*, 62. Therefore, *Foss* is analogous art.

U.S. PGPub No. 2001/0014883 to Yamane et al. ("*Yamane*") published August 16, 2001, qualifies as prior art to the '039 Patent under at least 35 U.S.C. § 102(b). *Yamane* teaches a process of registering the fingerprint information of a user by determining whether a fingerprint has been registered by reference to a fingerprint presence/absence flag 60-2. *Yamane*, [0049], [0052-0054], [0058-0059], FIG. 2. *Yamane* then teaches performing a process of determining a proper user based on the stored fingerprint information compared to live fingerprint information. *Yamane*, [0033]. Because *Yamane*, like the '039 Patent, discloses a method of enrolling a user's biometric using a flag to determine if a defined memory location for biometric information is occupied, *Yamane* is in the same field of endeavor and is pertinent to a problem to be solved by the claimed invention in the '039 Patent. *Dec.*, 63. Therefore, *Yamane* is analogous art.

V. GROUND 1: CLAIMS 1-2 AND 19-20 ARE OBVIOUS OVER *BRADFORD* IN VIEW OF *FOSS* IN FURTHER VIEW OF *YAMANE*

A. Claim 1

1. Claim 1(Pre): "A method of enrolling in a biometric card pointer system, the method comprising the steps of:"

a) *Bradford* Teaches a "biometric card pointer system"

To the extent the preamble is limiting[2], *Bradford* teaches a biometric card pointer system and method, as claimed. *Bradford* teaches a player ID database and "a method for the creation of an entry having biometric data in a player ID database," specifically for a "player currently without an entry in the player ID database." *Bradford*, 14:21-28, FIG. 6. *Bradford* is directed to a "system and method for using two authenticators to identify a player in a gaming environment," where exemplary first authenticators include a player ID card, credit card, or debit card storing a "unique data sequence" on a magnetic strip, and "the second authenticator is based on biometric data," such as fingerprint data. *Bradford*, Abstract, 3:6-27, 5:36–6:13, 6:49-64. The user uses the first authenticator to "identify themselves" at a gaming device and "to get the associated second authenticator." *Bradford*, 5:36-38, 3:56-58, 5:16-34, 1:20-26.

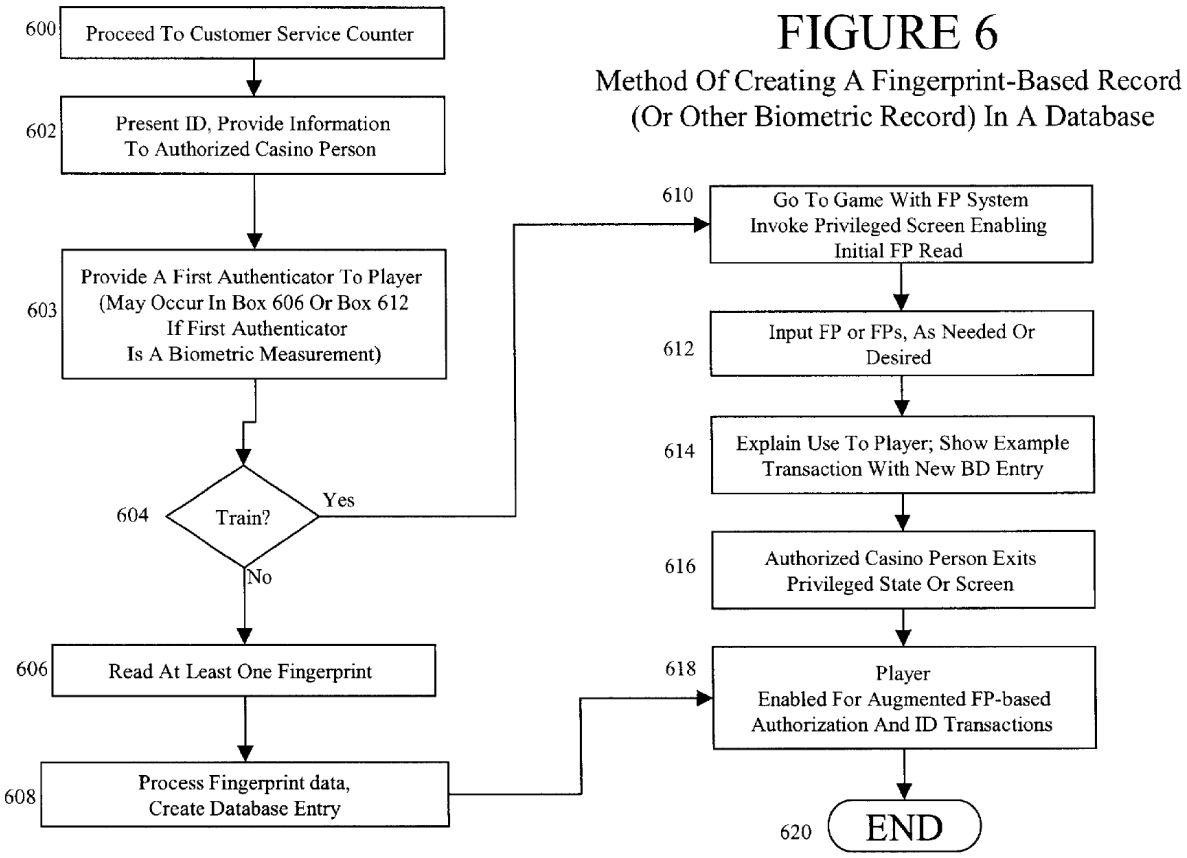
[2] The District Court found "biometric card pointer system" to be a "nonlimiting preamble term with no patentable weight." (Ex. 1033, 1).

Bradford describes various aspects of a gaming authentication system, including enrolling a user in a player ID database (FIG. 6, 14:21–16:47), authenticating the user for subsequent play (16:1-25), assisting the user in complying with requirements for filling out tax forms (16:48-50), and authenticating electronic funds transfers (24:52-54). *Bradford* teaches different embodiments of the game device, where the FIG. 3 embodiment is "similar" to the other embodiments of the game device shown in FIGs. 1-2. *Bradford*, 8:51-56. The present mapping primarily relies on the game device disclosed for FIG. 3, enrolling a user in the player ID database, and subsequent game play. However, because the FIG. 3 game device is "similar" to other game devices also disclosed in *Bradford*, a POSITA would have found it obvious to use like components of FIGs. 1-2 in the embodiment of FIG. 3. *Dec.*, 64-65.

b) *Bradford* Teaches a "method of enrolling"

Claim 1(Pre) recites a "method of enrolling." To the extent the preamble is limiting and specific to enrollment of a new user, *Bradford* teaches enrolling a new user (i.e., a player), referring to "creation of an entry having biometric data in a player ID database." *Bradford*, 14:21-25, FIG. 6, 16:5-7 (referring to "the newly enrolled player[]"), 3:50-54 (disclosing the first step of the invention "is to create an entry in the player identification database, which associates a first authenticator and

a second authenticator"). *Bradford* further teaches a method of enrolling in a biometric card pointer system, as shown in FIG. 6:



Bradford, FIG. 6. An "authorized person" (also referred to as a "casino attendant" in *Bradford*, 15:16) associated with the casino or gaming device and authorized to enroll the user "enters the player's data and information into the player ID database." *Bradford*, 14:25-43, FIG. 6, 15:37-38 (referring to the player "creating a new entry" as part of creating a record in the player ID database). The player is provided a first authenticator, such as a player ID card, or the player provides their own first authenticator. *Bradford*, 15:16-24. The casino attendant then accesses a privileged

screen of a game device in the casino to "enter a player's biometric measurements for entry into the player ID database." *Bradford*, 15:48-58 and 16:26-32 (also describing a "preferred embodiment allows the attendant to use any game device in the casino having the present invention…"). The player's biometric data, such as "fingerprint data," is "made part of the player's ID entry in the player ID database." *Bradford*, 15:59-63. The attendant then "makes use of the newly created entry to demonstrate to the player the use of the two-authenticator authentication process," including to "identify[] themselves to the system." *Bradford*, 16:1-5.

Once the enrollment process is complete, "the player is now ready to use the system and the system has an entry in the player ID database corresponding to the player, having a first authenticator and a second authenticator useable by the player." *Bradford*, 16:21-25, 16:40-47 (disclosing creating entry in the player ID database and "associating the data corresponding to a first and second authentic authenticator with this entry"); *see also id.* at 22:25-56 (discussing "initialization of an electronic funds account" and describing similar steps of enabling a player account and the player providing the first and second authenticators).

c) *Bradford* Teaches a Biometric "card pointer" System

Claim 1(Pre) also recites a "biometric **card pointer** system."[3] Specific to a "card pointer" system, *Bradford* describes creating a player ID that is accessed using

[3] All emphases added unless otherwise noted.

a player ID card. *Bradford* describes an implementation where the first authenticator is a tangible card, such as "an already existing player ID card," with a magnetic strip having a "unique data sequence" that is used "to find a matching data sequence in the player ID database." *Bradford*, 15:16-20, 3:6-23, 5:36-54, 6:3-13. The player ID entry in the player ID database associates the first and second authenticator. *Bradford*, 3:50-54, 16:40-45. *Bradford* teaches:

> A player identification database is also used, where an entry corresponding to a player comprises at least one record (typically, exactly one record), and the record has fields containing data, information, or pointers. The records have fields corresponding to a first authenticator and a second authenticator, providing authenticator data therein or pointers to authenticator data. The second authenticator will always have data that correspond to a biometric measurement.

Bradford, 3:28-36. "The data that is read off of the card is used to find matching first authenticator data in the player ID database." *Bradford*, 6:4-6.

Per Dr. Sears, *Bradford* thus teaches using a card, such as a player ID card, storing a unique data sequence, i.e., first authenticator data, for finding a matching data sequence in a player ID database. *Dec.*, 67-68. *Bradford* also teaches the player ID entry in player ID database storing second authenticator data, such as fingerprint data, and associating the first authenticator data with the second authenticator data. Because the created player ID entry in the player ID database associates the first and second authenticators, the first authenticator data may be "used to find matching first

authenticator data in the player ID database" to allow the first authenticator data to be subsequently "used to get the associated second authenticator." *Bradford*, 3:56-58, 6:4-6. *Bradford* thus teaches a "biometric card pointer system," as claimed. *Dec.,* 64-69.

2. Claim 1(a): "receiving card information"

Bradford teaches an authentication reader 104,304, which includes a player tracking ID slot. *Bradford*, 8:22-31, 8:51-56, FIG. 3. *Bradford* discusses the player "presenting" the first authenticator:

> 'Presents' is defined in this disclosure to mean any action needed by the user of an authenticator **to have the authenticator read *by a reader* designed to read that authenticator**. The exact actions will, of course, vary depending on what type of authenticator a player is using. In the case of **a magnetic strip card**, the presenting action would be to insert the card into a ***magnetic strip card reader*** (like an ATM and a bank card). […] Each type of authenticator and its associated input device would have a corresponding meaning of 'presents', where in each case the net result is that the **needed data on or in the authenticator to be read, is read by the reader corresponding to that type of authenticator**.

Bradford, 6:13-27. *Bradford* further teaches:

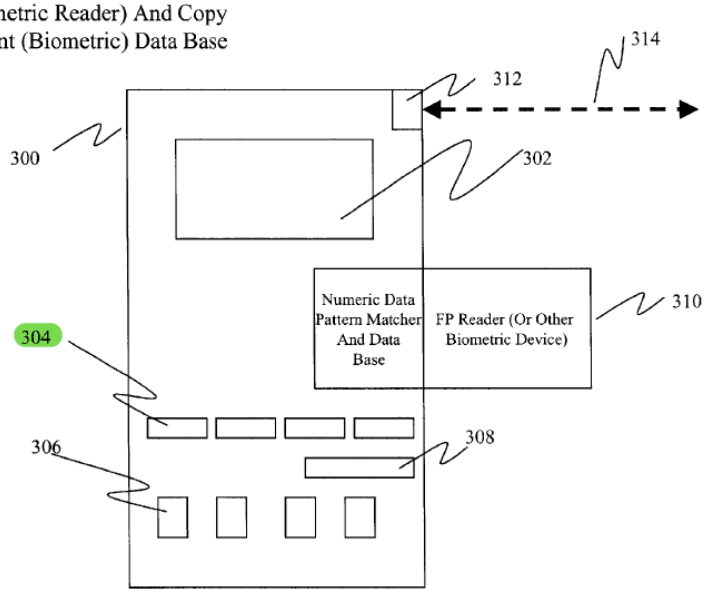
> Each first authenticator that is not data itself (i.e., a PIN) has the ability to have data read from it (i.e., the data on the magnetic strip of a typical player ID card). 'First authenticator data' refers to **the data that can be read from a physical first authenticator card**, if such is used.

Bradford, 3:9-15. *Bradford* thus teaches a "magnetic strip card reader" that receives data from the first authenticator, including data on a magnetic strip card. *Dec.*, 70.

Per Dr. Sears, a POSITA would have understood the data read from the card, including data stored on a magnetic strip of the card, is "card information," as claimed. *Dec.*, 70-72. For example, *Bradford* teaches the first authenticator data, which is received from the card, is a "unique data sequence," where the data "read off of the card is used to find matching first authenticator data in the player ID database." *Bradford*, 6:4-6; *Dec.*, 70-72.

The first authentication reader 304 housed in game device 300 is shown in FIG. 3:

FIGURE 3
General Gaming Device Having A Fingerprint Reader (Or Other Biometric Reader) And Copy Of A Player Fingerprint (Biometric) Data Base



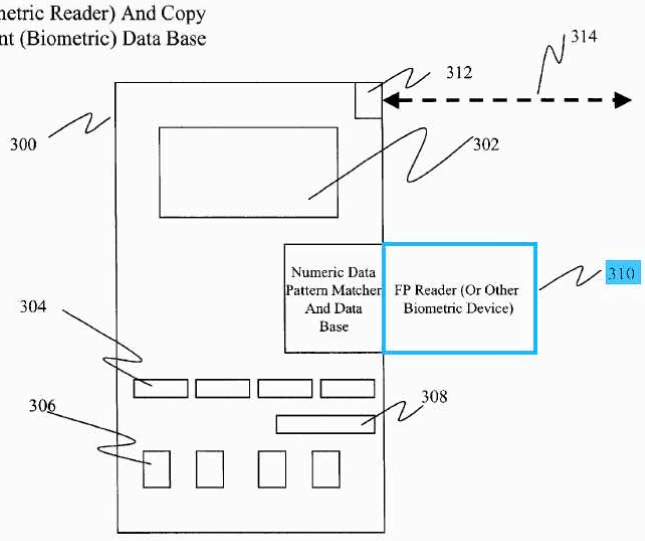
Bradford, FIG. 3, 8:51-56 (annotating first authentication reader 304).

3. Claim 1(b): "receiving the biometric signature"

The claimed "**the** biometric signature" lacks antecedent basis and is treated for purposes of this IPR as reciting "**a** biometric signature." *Dec.*, 73.

Bradford teaches a fingerprint reader 110,310 receiving a fingerprint "biometric signature." *Bradford*, 7:45-47 ("The card user is then required to input a biometric signature, such as fingerprint…"), 8:22-28, 8:56-65; *Dec.*, 74-78, 64-65 (noting *Bradford's* teaching the game device of FIG. 3 is similar to the game device of FIGs. 1-2). *Bradford* teaches reader 310 is housed within the game device of FIG. 3, where reader 310 "includes the hardware and software needed to do initial processing of the image, scan, or read of the **biometric data** that will be the **second authenticator**…." *Bradford*, 8:56-65, 10:30-40. The biometric reader 310 is annotated below in FIG. 3:

FIGURE 3
General Gaming Device Having A Fingerprint Reader (Or Other Biometric Reader) And Copy Of A Player Fingerprint (Biometric) Data Base



Bradford discloses the second authenticator is fingerprint data. *Bradford* describes the second authenticator is "a biometrically-based authentication means" including fingerprints. *Bradford*, 6:49-64. *Bradford* includes a lengthy discussion of fingerprint data and the information used from a player's fingerprint to authenticate the player. *Bradford*, 7:3-34. *Bradford* expressly states "'[f]ingerprint reader' means any method and device that may be used to yield 'fingerprint data'," where fingerprint data is information that identifies or characterizes the "fingerprint being used for identification." *Id.* Thus, *Bradford* teaches a method and system "receiving the biometric signature," teaching Claim 1(b). *Dec.*, 74-78.

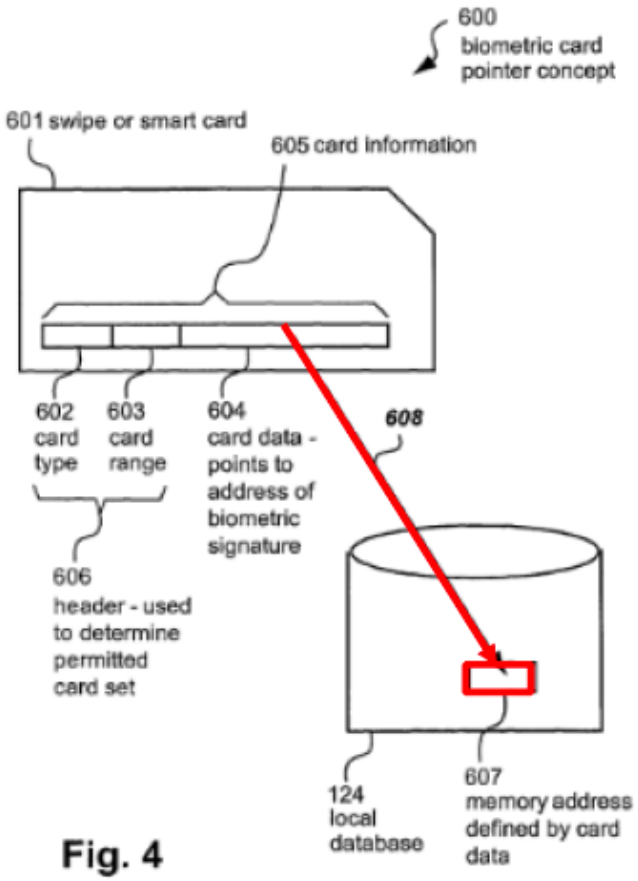
4. Claim 1(c): "defining, dependent upon the received card information, a memory location in a local memory external to the card"

Bradford in combination with *Foss* teaches Claim 1(c).

a) "defining, dependent upon the received card information, a memory location"

The Parties agree that "dependent upon" should be afforded its plain and ordinary meaning of "contingent on or determined by." *See* Section III.C. *Bradford* in combination with *Foss* teaches the claimed functionality. *Bradford* alone teaches this claimed function, except that *Bradford's* function is not specifically performed during an *enrollment* process (per Claim 1(Pre)). However, in related art, *Foss* teaches such.

Figure 4 of the '039 Patent illustrates a memory location 607 is defined by card information 605 on a card 601, specifically labeled as the "biometric card pointer concept:"



'039 Patent, Fig. 4 (annotated), 7:32-35.

***Bradford's* Teachings**

As discussed above, *Bradford* teaches a player ID card having a magnetic strip on which is encoded a "unique data sequence" identifying a player and referred to as "first authenticator data." *Bradford*, 5:36-54 (disclosing "magnetic-strip cards

(usually in the form of a traditional player ID card)"), 6:4-13 (disclosing a "unique data sequence" read from a card), 3:15-20; *Dec.*, 80. The first authenticator data is read from the card in response to a user presenting the card, e.g., "insert[ing] the card into a magnetic strip card reader." *Bradford*, 6:18-20, 3:10-13. Per Dr. Sears, the magnetic strip of the *Bradford* player ID card has encoded thereon the unique data sequence serving as the first authenticator data as a reference that **defines** a memory location external to the card. *Dec.*, 80-83.

Additionally, *Bradford* teaches an enrollment process "for the creation of an entry having biometric data in a player ID database," where the database is stored locally in a memory of game device in the FIG. 3 embodiment. *Bradford*, 14:21-28, 14:42-43, 15:16-23, 15:42–16:7, 16:21-26, 16:40-47, FIGs. 3, 6; *Dec.*, 83-85. The player ID entry includes information on the player, along with first authenticator data and second authenticator data (both unique to the player). *Bradford*, 16:40-47, 6:7-10 (disclosing the first authenticator data is "used as a unique data sequence to find a matching data sequence in the player ID database"), 40:46-48 (Claim 30 reciting the first authenticator "identifying a unique entry in said player identification database"). The first authenticator data may be a unique serial code, and the second authenticator data is biometric information, such as fingerprint data. *Bradford*, 6:3-30, 6:49-64. *Bradford* teaches the player entry in the player ID

database associates the first authenticator data with the second authenticator data. *Bradford*, 3:51-53, 16:40-45, 26:36-39.

During enrollment, the casino provides the player a player ID card that stores the first authenticator data on the magnetic strip. *Bradford*, 6:18-20. The casino also creates a player ID entry in the player ID database, where the player ID database stores the first authenticator data in a first authenticator data field. *Bradford*, 14:21-25, 3:27-36. A casino attendant may then subsequently accompany the new user from a customer service counter to a particular game device to complete enrollment and training of the player directly on the particular game device in a "two-level authorization process." *Bradford*, Abstract, 15:42-63; *Dec.*, 85 (noting *Bradford* refers to both a "two-level *authorization* process" and a "two-level *authentication* process"). During this enrollment and training process, the casino attendant assists the player in entering the player's biometric measurements (e.g., fingerprint data referred to as second authenticator data) into the player ID database, "enabling this data to be made part of the player's ID entry in the player ID database." *Bradford*, 15:59-63, 23:36-40.

Bradford teaches a player's entry in the player ID database is "enabled" when the entry includes the second authenticator. *Bradford*, 17:47-51, 17:18-22; *Dec.*, 85. Per Dr. Sears, because *Bradford* "creates" a player entry that is enabled prior to game play, *Bradford* teaches "enrollment" of the player (and the player's corresponding

player entry). *Dec.*, 85. In embodiments in which training and enrollment of the player is performed on a game device configured as illustrated in FIG. 3, the player ID database is stored locally at the game device. *Bradford*, 9:57-63 ("The configuration would allow for the local caching of (for example) the database entries or records corresponding to the last 10 players to use the game device."), 8:51-65, FIG. 3; *Dec.*, 83-85, 100-102.

During subsequent verification of the user (i.e., after enrollment and enablement of the player's entry), the first authenticator data stored on the card is used as a reference "to find" the matching first authenticator data in the player's entry. *Bradford*, 6:3-13 ("it [first authenticator data] is simply being used as a unique data sequence to find a matching data sequence in the player ID database"), 13:23-33; *Dec.*, 80-83, 87, 89. The first authenticator data on the card is matched to first authenticator data stored in the player entry in the player ID database. *Bradford*, FIG. 3, RN 310.

FIGURE 3
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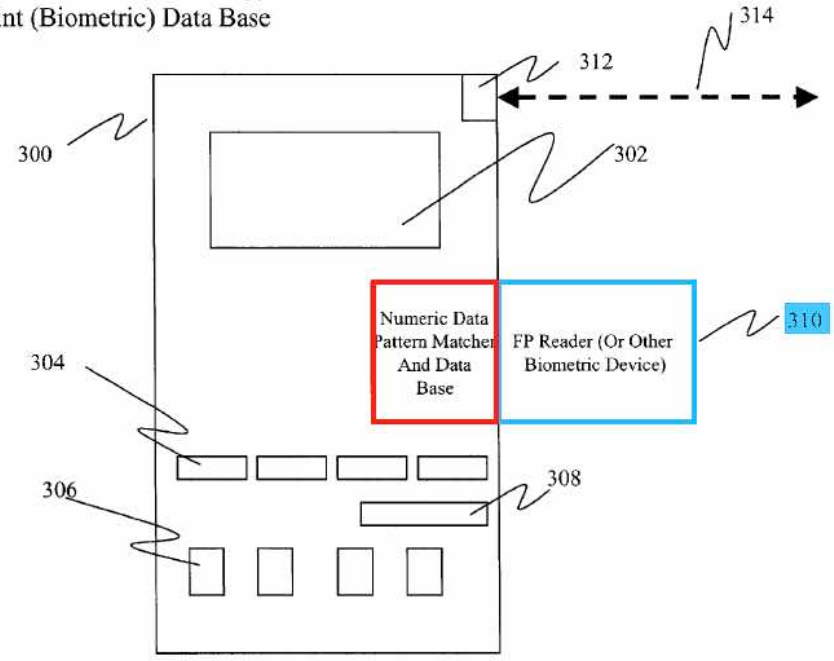

Bradford, FIG. 3.

The matched first authenticator data is then used "to get the associated second authenticator." *Bradford*, 3:56-58, 13:29-33. Specifically, *Bradford* discloses the player entry in the player ID database includes first and second authenticator data fields for storing respective first and second authenticator data. *Bradford*, 3:28-34, 16:21-25. *Bradford* also teaches the player entry associates the first authenticator data stored in the first authenticator data field with the second authenticator data stored in the second authenticator data field. *Bradford*, 3:51-53, 16:40-45, 26:36-39. The first authenticator "is checked to be sure it is valid and enabled for use with a

second authenticator." *Bradford*, 19:22-24. Thus, upon matching of the first authenticator data read from the card with first authenticator data stored in a player's entry in the player ID database, the associated second authenticator data is also matched. *Dec.*, 80-83, 87, 89. The player's second authenticator data (fingerprint) "is checked against the entry for the second authenticator found in the player ID database entry corresponding to the first authenticator" to authenticate the player via the two-level authentication process. *Bradford*, 19:65–20:1, 20:25-29, 18:27-34.

Per Dr. Sears, a POSITA would have understood from *Bradford's* collective teachings that during authorization of the user to the game device (and subsequent to enrollment), *Bradford* teaches the first authenticator data read from the card points to the second authenticator data stored in the player entry in the player ID database. *Dec.*, 80-83, 87, 89. The first authenticator data read from the card is used as a reference to locate a player entry having a matching first authenticator data. *Id.* (discussing *Bradford*, 13:27-32, referring to the system using first authenticator data to find an entry in a biometric database). Because the first authenticator data in the player entry is associated with the second authenticator data, the first authenticator data is used "to get" the corresponding second authenticator data. *Bradford*, 3:56-58, 13:29-33, 19:19-24, 19:63–20:1; *Dec.*, 80-83, 87, 89. Thus, the first authenticator data read from the card acts as a memory reference that points to a memory location, i.e., the second authenticator data field storing the second authenticator data, in a

database, i.e., the player ID database. *Dec.*, 80-83, 87, 89. In this way, the definition of the memory location is "determined by" the received card information. Further, because the system of *Bradford* requires the received card information to locate the memory location, the memory location is also "contingent on" the received card information. Thus, *Bradford's* memory location meets the plain-and-ordinary meaning of being defined "dependent upon" the received card information, as claimed.

To the extent CPC asserts the card information must point to a particular memory location at an address in the local database, a POSITA would have understood *Bradford* teaches such or otherwise renders such obvious. *Bradford* teaches a method for authenticating electronic funds transfers, where the system requests the player's first authenticator. *Bradford*, 24:52-67, FIG. 11. The first authenticator is typically a player ID "of some kind, including but not limited to a traditional player ID card, a voucher ID…." *Bradford*, 24:67–25:3. The system then determines if the presented first authenticator (e.g., player ID) "correspond[s] to at least one entry in the player ID database." *Bradford*, 25:5-10. *Bradford* explains the number of "hits" from the first authenticator will depend on the type of first authenticator used, such that a voucher ID (a type of player ID) will "yield one hit." *Bradford*, 25:11-18. The player then subsequently provides the second authenticator

(fingerprint data), which is "checked against the second authenticator data that is associated with the first authenticator…." *Bradford*, 25:36-46.

Per Dr. Sears, a POSITA would have understood that first authenticator data that yields one "hit" means the first authenticator data is identifying a single first authenticator with "one entry in the player ID database." *Bradford*, 25:7-9; *Dec.*, 87-88. A POSITA would have understood information pointing to one entry in the player ID database is information pointing to a particular memory location at an address in the player ID database or that such is obvious. *Dec.*, 87-88.

***Foss's* Teachings**

The preamble of claim 1 characterizes the claimed system as a method of "enrolling."[4] *Bradford* does not expressly indicate how the stored player's entry is retrieved during the *enrollment* process, i.e., during *creation* of an enabled player entry. *Dec.*, 90-92. For example, *Bradford* does not expressly state that during *enrollment*, the player ID card is read by a card reader to retrieve the stored first authenticator data. *Id.* However, as discussed above, *Bradford* does teach that during subsequent player authorization, the player ID card's magnetic strip is read to retrieve the first authenticator data, where the first authenticator data is then used to

[4] As noted above, the District Court found "biometric card pointer system" to be a "nonlimiting preamble term with no patentable weight." (Ex. 1033, 1).

get the associated second authenticator data. *Id.*; *Bradford*, 25:10-50, 3:56-58. *Bradford* in combination with *Foss* teaches that during *enrollment*, a user record stored in a database is retrieved by reading a card having unique user information thereon. *Dec.*, 90-94.

As mapped for Claim 1(Pre), during enrollment of a player in *Bradford*, a player entry is created in the player ID database at a customer service counter. *Bradford*, 14:21-25, FIG. 6. The player's information is entered into the entry. *Bradford*, 14:25-28, 14:42-43. The casino attendant then provides the player with the first authenticator, which may be a "tangible card," such as an "already existing player ID card," where the player ID card stores the first authenticator data. *Bradford*, 15:16-20, 5:36-54; *Dec.*, 91. The attendant and the player then move to a game device in the casino for training of the player in the two-level authentication system. *Bradford*, 15:30-44. *Bradford* teaches any game device in the casino may be used by the casino attendant to train the player. *Bradford*, 15:48-52, 16:8-16 (discussing that if training is occurring at a "regular floor game," once the attendant exits the privileged screen and training mode, the game device "is now ready to be used in a normal manner"); *Dec.*, 91.

Bradford teaches the enrollment process that began at the customer service counter is continued and completed at the particular game device but is not express about *how* the previously-created player entry in the player ID database is located

and accessed for completion on the particular game device. A POSITA would have found it obvious that a convenient and expected method for locating the player entry associated with the player ID on the card would have been to read the player ID from the card via the card reader on the particular game device. *Dec.*, 92. Such a continuation of an enrollment process via presentation of a card to a card reader is expressly disclosed by *Foss*, as discussed below. Motivation for the modification of *Bradford* using the method of *Foss* is also discussed below.

Turning back to *Bradford*, the attendant then "enter[s] a player's biometric measurements for entry in the player ID database" using a "privileged mode set by the attendant" and "enabling this data [the player's fingerprint data] to be made part of the player's ID entry in the player ID database." *Bradford*, 15:52-63. "[T]he player is now ready to use the system and the system has an entry in the player ID database corresponding to the player, having a first authenticator and a second authenticator useable by the player." *Bradford*, 16:21-25, 25:40-46 (disclosing checking the second authenticator data against stored authenticator data "associated with the first authenticator").

Foss teaches a system and method for transferring funds between stored value card accounts. *Foss*, Abstract. *Foss* teaches "an enrollment process…for enabling a primary account holder (i.e., an existing customer 610) to enroll additional new customer(s) in the family stored value card program." *Foss*, [0086], FIG. 7, FIG. 8,

RNs 802-810. Thus, in this embodiment, an account already exists, and the customer is "initiat[ing] an enrollment process." *Foss*, [0088]. To initiate enrollment, the customer is prompted "to swipe the **existing** stored value card" to "**continue** the **enrollment** process." *Id.* The system "identifies the stored value card account associated with the existing customer 610. The stored value card account may be identified based on the data read from magnetic stripe 710 via card reader 706…." *Id.* Thus, *Foss* teaches, during an enrollment process, identifying an account associated with a user by reading account information stored on a magnetic stripe of a card. *Dec.*, 93-94.

b) Motivation to Combine *Bradford* and *Foss*

A POSITA would have found it obvious and been motivated to modify *Bradford's* enrollment process to swipe the player ID card at the FIG. 3 game device to retrieve the player ID entry at the particular game device, as taught by *Foss*. *Dec.*, 95-98. *Bradford* already teaches creating a player ID entry that stores the first authenticator data for the player and providing the player with a player ID card also storing the first authenticator data. During the training and enrollment process, the casino attendant and player move from the customer service counter to a game device. At this point, it would have been obvious to retrieve the player ID entry by swiping the card at the card reader at the game device. *Dec.*, 95-98. Because the player subsequently enters their biometric information to enable entry of this data in

the player entry (15:60-63), the enrollment process is not complete when the attendant and player move to the game device. The player entry needs to be retrieved for associating the biometric information. *Dec.*, 95-98.

Per Dr. Sears, swiping the player ID card would have been a logical, fast, and simple method of retrieving the player ID entry. Dr. Sears notes *Bradford* does not indicate how the entry is retrieved during enrollment at the game device, and that other options are possible, such as typing in the player's name or the first authenticator data (i.e., unique data sequence). *Dec.*, 95-98. However, a very well-known and simple method of retrieving an account record is swiping a card with the account information, as indicated by *Foss*. *Dec.*, 92-98. This method is also consistent with the training purpose to show the player how to use the two-level authorization process, which *Bradford* repeatedly emphasizes. *Dec.*, 95-98. During subsequent authorization by the player to a game device, the player swipes the player ID card through the card reader as part of the first level of the authorization process. Therefore, it would have been obvious to show the player how to do this by also swiping the card through the card reader to retrieve the player entry during the player's training and enrollment process. *Dec.*, 95-98.

There would have been a reasonable expectation of success in the modification to *Bradford*, as *Bradford* already teaches the hardware and software for reading player account information from a magnetic strip of a card. *Dec.*, 96-98.

Bradford also already teaches the programmed functionality of retrieving a corresponding player entry by matching the unique data sequence stored on the card as first authenticator data to the stored first authenticator data in the player entry. *Id.* Yet further, *Bradford* already teaches the first authenticator data acting as a memory reference to point to second authenticator data stored as part of the player entry. Therefore, the modifications to *Bradford* encompass performing this look-up process for the player entry during *enrollment* for the two-level authorization process taught by *Bradford*. *Id.*

Bradford indicates the player entry is retrieved during the enrollment process because the player's second authenticator data is added to the player entry. *Bradford*, 15:60-63. *Bradford* does not indicate *how* the player entry is retrieved at the game device during enrollment. Modifying *Bradford* to retrieve the partially-completed player entry by swiping the player ID card having the first authenticator data would have been applying a known technique (swiping a card having a magnetic strip with account information, as taught by both *Bradford* and *Foss*) to a known device (the card reader taught by *Bradford*) ready for improvement (fast and accurate retrieval of the player entry) to yield predictable results (retrieve the player entry matching the first authenticator data read from the player ID card). *Dec.*, 96-98.

c) "a local memory external to the card"

Bradford teaches the defined memory location is "in a local memory external to the card," as claimed. Specifically, the player entry (including the corresponding second authenticator data) is stored locally in memory of the game device of the FIG. 3 embodiment.

FIGURE 3
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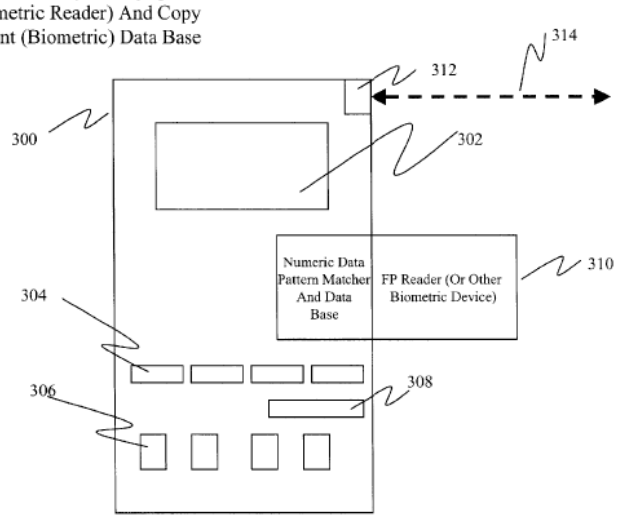


Bradford, 9:61-63, FIG. 3. The FIG. 3 embodiment includes the hardware and software for performing local database lookup and matching of the fingerprint data. *Bradford*, 8:56-60, 7:35-55 (generally describing a "game device"), 8:7-32 (disclosing components of all disclosed game devices, including processor and memory (8:7-9), fingerprint reader 110 (8:25), and one or more first authenticator readers 104 (8:22-24)), FIG. 3; *Dec.*, 99. Like the FIG. 1 embodiment, the FIG. 3 game device includes a memory. *Dec.*, 99 (*citing Bradford*, 8:7-14, 8:60-66).

Bradford discloses the FIG. 3 embodiment may provide a networked game device locally storing second authenticator data, i.e., fingerprint data, for a small number of players:

> In order to provide better (faster) service to players, a game device configured as shown in FIG. 3, including the **network connection**, could be implemented with a very limited-capacity embedded system having a small database. The configuration would allow for the **local caching of (for example) the database entries or records** corresponding to the last 10 players to use the game device.

Bradford, 9:57-63. Per Dr. Sears, in this configuration, the FIG. 3 game device is connected to a network but stores a limited number of players' database entries to provide "better (faster) service to players." *Id.*; *Dec.*, 99-101 (noting FIG. 3 explains the stored database at game device is a "copy of a player fingerprint (biometric) data base"). As explained by Dr. Sears, the disclosed database entry or record would have been understood to be a player entry, where the FIG. 3 game device stores in its memory the player entries for the last ten players to use the game device. *Id.*

In an enrollment and training process where the casino attendant uses a game device as shown in FIG. 3 to enroll and train the player, the player's entry with second authenticator data is stored locally in the game device for at least a period corresponding to the number of players' entries to be cached. *Dec.*, ¶ 102. *Bradford* teaches "[a] preferred embodiment allows the attendant to use any game device in

the casino having the present invention," thus indicating to a POSITA the training and enrollment may occur at the FIG. 3 game device. *Bradford*, 15:48-52; *Dec.*, 102. When the attendant assists the player in "enter[ing] a player's biometric measurements for entry into the player ID database," the player's second authenticator data will be stored locally in the FIG. 3 device. *Bradford*, 15:52-58; *Dec.*, 102. Because the FIG. 3 game device locally caches the database entries for the last ten players, then during enrollment of the player's second authenticator data in the player entry, the player's second authenticator data is stored at a memory location in a local memory external to the card, as claimed. *Dec.*, 102.

5. Claim 1(d): "determining if the defined memory location is unoccupied"

Bradford (as modified by *Foss*) as further modified by *Yamane* renders obvious Claim 1(d).

a) "determining if the defined memory location is unoccupied"

The '039 Patent envisions a method in which determining if the defined memory location is unoccupied is performed by checking the status of a flag that "can be set to indicate that the memory location in question is occupied" and "reset to indicate that the memory location in question is no longer occupied." *'039 Patent*, 9:25-37. Thus, the claimed method of "determining if the defined memory location is unoccupied" includes determining if a flag is set, where the flag indicates an

associated memory location is occupied/no longer occupied. *Bradford* (as otherwise modified by *Foss*) as modified by *Yamane* teaches determining if a flag is set indicating a memory location is occupied/no longer occupied, as claimed.

Yamane teaches a portable recording medium, such as a CD-RW, that requires identification of "a true" person (i.e., an authorized, "proper user") prior to accessing application software stored on the CD-RW. *Yamane*, [0011], [0013-0014], Abstract. The *Yamane* CD-RW stores "application software" protected by "authentication software for performing personal authentication using the personal identification information" of the user, where the personal identification information is fingerprint information. *Yamane*, [0013-0015].

Yamane teaches a "user authentication program 10" for performing a process of determining a proper user based on stored fingerprint information compared to live fingerprint information. *Yamane*, [0033]. User information 60 and fingerprint information 70 are stored in a protect area 1002-1 of a rewritable area 1002 of the CD-RW. *Yamane*, [0039], FIG. 1. During a "registration process" (i.e., enrollment), fingerprint information 70 comprising user ID 70-1 and fingerprint data 70-2 are obtained. *Yamane*, [0041]. *Yamane* teaches the portable recording medium (i.e., CD-RW) is used with a personal computer 2000, as shown in FIG. 6. The personal computer includes a microprocessor (MPU) 2001, a memory 2002, a CD-RW drive 2004 for "input/output data to/from the CD-RW," and a "personal identification

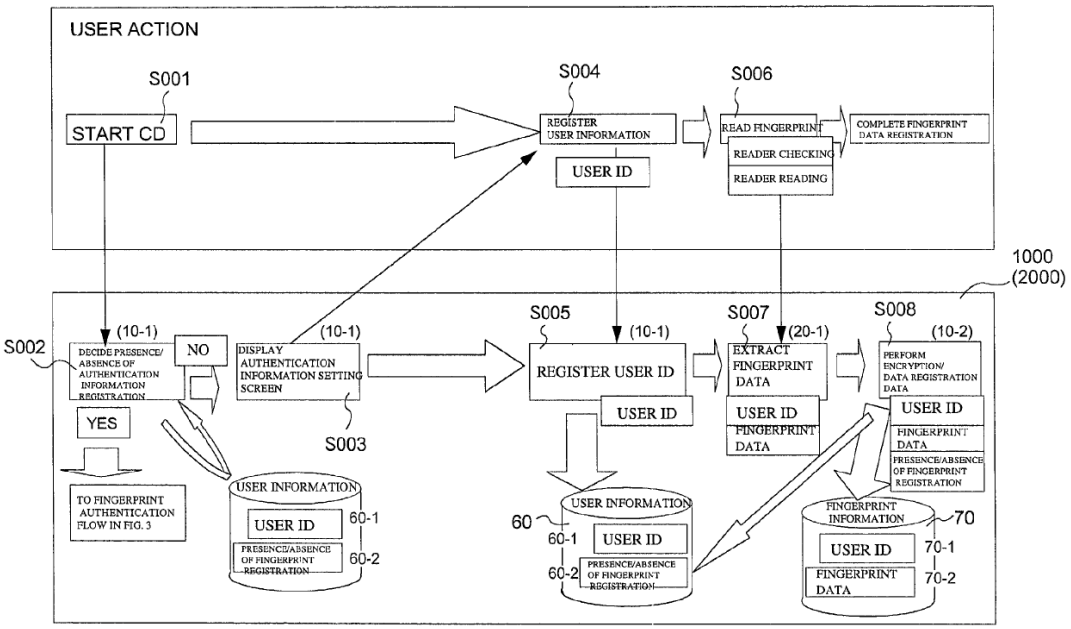
information input device for receiving personal identification information such as a fingerprint" 2007. *Yamane*, [0045-0047], FIG. 6.

Yamane discloses a "process of registering the fingerprint information of a proper user on the CD-RW 1000." *Yamane*, [0049], FIG. 2. *Yamane* expressly discloses determining whether a fingerprint has been registered by reference to a flag:

> The user ID management function 10-1 of the user authentication program 10 **decides whether a fingerprint has been registered or not with reference to the fingerprint registration presence/absence flag 60-2 of the user information 60 (step S002)**. If the fingerprint has not been registered, an authentication information setting screen for urging a user to register a fingerprint is shown to the user (step S003).

Yamane, [0052]. As shown in FIG. 2, Step S002 decides the "presence/absence of authentication information," and if there is no authentication information stored, the process moves to Step S003 of displaying to the user an authentication information setting screen for "urging a user to register a fingerprint." *Id.*

FIG.2



Yamane, FIG. 2. The user then inputs their user ID (Step S004), the user ID is registered at Step S005, and the user provides their fingerprint information via personal identification information input device 2007 at Step S006. *Yamane*, [0052-0054], FIG. 2. "The extracted fingerprint data is encrypted by the fingerprint information management function 10-2, and then stored together with the user ID in the fingerprint information 70 as the user ID 70-1 and the fingerprint data 70-2 (step S008), so that the fingerprint data registering process is completed." *Yamane*, [0054]. During subsequent use of the application software, the authentication program "refers to the fingerprint registration presence/absence flag 60-2 of the user information 60 to confirm that the fingerprint has registered (step S011)." *Yamane*, [0057], FIG. 2. The user provides their fingerprint (referred to as the "read

fingerprint"), which is collated (i.e., compared or matched) to the stored fingerprint information to authorize the user. *Yamane*, [0058-0059]; *Dec.*, 104-107.

Per Dr. Sears, *Yamane* teaches determining storage of a fingerprint at a memory location during an enrollment process is based on the presence or absence of a flag. Because *Yamane* teaches (1) a flag indicating the presence/absence of fingerprint information in memory at FIG. 2, RN 60-2; and (2) in response to the presence/absence flag, determining fingerprint data is stored at a memory location illustrated in FIG. 2, RN 70-2, *Yamane* teaches the claimed function of Claim 1(d) of "determining if a flag is set, where the flag indicates a memory location is occupied/no longer occupied," as claimed. *Yamane*, [0052], [0054]; *Dec.*, 104-107.

b) Motivation to Combine *Yamane* with *Bradford* and *Foss*

A POSITA would have found it obvious and been motivated to modify *Bradford* (as otherwise modified by *Foss*) to include *Yamane's* flag-determination procedure. *Dec.*, 104-112. In the proposed combination, when the *Bradford* enrollment and training process moves from the customer service counter to the FIG. 3 game device to complete entry of the second authenticator data, the partially complete player entry will be retrieved via the matching of the first authenticator data from the player ID card to the first authenticator data stored in the player entry, as discussed for Claim 1(c). The system will know to request storage of the second authenticator data based on the set flag, as taught by *Yamane*, associated with the

second authenticator data field in the player entry. Specifically, it would have been obvious to determine if the second authenticator data field has stored second authenticator data by setting the flag, as taught by *Yamane*. *Yamane* already teaches the purpose of its flag is to "decide[] whether a fingerprint has been registered or not," thus indicating the flag determines if fingerprint data has been stored or not. *Yamane*, [0052]; *Dec.*, 104-105, 109. *Bradford* teaches a player entry is enabled once the second authenticator data field is populated to include the second authenticator data. *Bradford*, 17:47-50. Therefore, it would have been obvious to modify the process of creation of the player entry to set a flag to determine if the memory location comprising the second authenticator data field is occupied with the second authenticator data or if such needs to be completed. *Dec.*, 108-111.

There would have been a reasonable expectation of success in the proposed modification. Setting a flag in computer code is a well-known method of indicating a binary state. *Dec.*, 112. *Bradford* already teaches the hardware and software for storing the second authenticator data in the second authenticator data field. *Bradford*, 3:28-36. It would have required only routine programming to determine if the memory location comprising the second authenticator data field is occupied by setting the flag. *Dec.*, 112. A POSITA would have recognized that checking the value of a flag to determine if a biometric signature had been previously stored as taught by *Yamane* would have required reduced time and computing resources

compared to actually reading the data stored in the referenced memory location, providing a fast and efficient method of completing the enrollment process taught by *Bradford*. *Dec.*, 112. Further, modification of *Bradford's* enrollment system to include *Yamane's* flag technique would have enabled the modified system to provide additional functionalities, such as system-wide audits for records missing biometric signatures (incomplete enrollments). *Dec.*, 109, 112. In one embodiment, *Bradford* itself teaches that the system may determine if an entry in the player ID database is "complete, valid, or enabled" based on factors including if the entry "never had second authenticator data associated with it." *Bradford,* 17:14-26, 17:47-51. A POSITA would have understood that this intended functionality would have been achieved simply, quickly, and with minimal computing resources required by employing a check of a flag (as taught by *Yamane)* associated with the user's database entry. *Dec.*, 109, 112.

6. Claim 1(e): "storing, if the memory location is unoccupied, the biometric signature at the defined memory location."

Bradford (as modified by *Foss*) as further modified by *Yamane* renders obvious Claim 1(e).

As discussed for Claim 1(d), *Yamane* teaches storing fingerprint information in a memory if the memory location is unoccupied. *Dec.*, 113-114. Specifically, depending on the presence/absence flag, *Yamane* "decides whether a fingerprint has

been registered." *Yamane*, [0052]. "If the fingerprint has not been registered," the user is urged to register their fingerprint. *Id.* The user then provides their fingerprint via personal identification information input device 2007, characteristic information of the fingerprint is extracted and encrypted, and the extracted encrypted fingerprint data is "stored together with the user ID in the fingerprint information 70 as the user ID 70-1 and the fingerprint data 70-2 (step S0008), so that the fingerprint data registering process is completed." *Yamane*, [0054].

Yamane thus teaches storing the fingerprint information at a memory location of protect area 1002-1 of the rewritable area 1002, as illustrated in FIGs. 1-2. *Dec.*, 113. In the proposed modification to *Bradford*, the fingerprint data corresponding to the second authenticator data is stored at a memory location comprising the second authenticator data field, as also discussed above for Claim 1(d). *Id.* When the memory location is unoccupied, as determined by the flag in the modified *Bradford* system, the fingerprint data is then input into and stored in the memory location comprising the second authenticator data field, as taught by *Bradford*. *Dec.*, 114.

A POSITA would have found it obvious and been motivated to modify *Bradford*, for the reasons provided for Claim 1(d), and would have had a reasonable expectation of success for the modification. *Dec.*, 108-112; *Mapping for Claim 1(d)*.

B. Claim 2

The *Bradford-Foss-Yamane* combination teaches Claim 2.

1. Claim 2(Pre): "A method of obtaining verified access to a process, the method comprising the steps of:"

To the extent the preamble is limiting, *Bradford* teaches a system for obtaining verified access, namely *Bradford's* use of "two authenticators [to] allow a two-level authorization process…." *Bradford*, Abstract, FIGS. 7-9 (referring to a "Two-level Authentication Process"), 5:31-35 ("two-step authorization method"), 11:51-56. The two-level authorization process is implemented in a system as described for Claim 1(Pre), which includes a card reader 104,304. *Bradford*, 8:22-25, 8:54-55, FIGs. 1-3. The system is used for securing and obtaining verified access to a game device or authenticating a user. *Dec.,* 115-116. As mapped for Claim 1(Pre), *Bradford* teaches a biometric card pointer system.

2. Claim 2(a): "storing a biometric signature according to the enrolment method of claim 1;"

Bradford teaches storing a biometric signature (*Bradford*, 15:60-63, FIG. 6), and the *Bradford-Foss-Yamane* combination teaches the enrollment method of Claim 1. *See* Claim 1 Mapping.

3. Claim 2(b): "verifying the subsequently presented presentation of the card information and the biometric signature if the subsequently presented biometric signature matches the biometric signature at the memory location, in said local memory, defined by the subsequently presented card information."

a) "verifying the subsequently presented presentation of card information…"

Bradford teaches, after the enrollment process has been completed, the enrolled player may be required to present the first authenticator card to a gaming device for verification. *Bradford*, 3:50-62 ("The first [step] is to create an entry in the player identification database…The player then goes and uses a game device…The player presents their first authenticator to the game device…"), 13:23-33 ("If the player has not, during this session, presented a first authenticator, the player is prompted for both a first and second authenticator…"), 17:5-26, 24:52-25:26. *Bradford* specifies that "in the case of a magnetic strip card, the presenting action would be to insert the card into a magnetic strip card reader," leading to the card data on the first authenticator being read by the card reader. *Bradford*, 6:13-27.

Bradford teaches embodiments may read the card, processing card information from the user's first authenticator to verify the card information is "valid" and "enabled." *Bradford*, 17:5-26, 24:52–25:26, FIGs. 7, 11. A POSITA would have understood the processor of the FIG. 3 game device 300 would have performed processing of the card information (such as the expressly-disclosed

comparing) to perform verification of validity and enablement. *Dec.,* 118. *Bradford* envisions possible causes for verification failure may include expiration, revocation, or incompleteness of the user's entry, or simply that no entry in the player ID database corresponds to the presented card information. *Bradford*, 17:14-27; *Dec.*, 118. If the first authenticator is determined to be valid (verified), steps corresponding to verification of the second authenticator data (e.g., fingerprint) are performed. *Bradford*, 3:50-62, 13:23-33, 17:47-51, 18:27-39, 24:52–25:25; *Dec.*, 118.

b) "verifying…the biometric signature…"

Per Claims 1(c)-(e), the *Bradford-Foss-Yamane* system teaches storing a biometric signature at a location in local memory defined by card information. As discussed in the above section, in *Bradford* after the enrollment process is completed, the enrolled player presents first authenticator card (e.g., the player ID card) to a gaming device for verification. The first authenticator data "is used to get the associated second authenticator," i.e., the biometric signal previously stored at the local memory location. *Bradford*, 3:50-62.

Bradford teaches that, subsequent to verification of the presented card information required to perform a transaction (such as transfer funds, authorize a form, or play a game), "the second authenticator is checked, and **if the fingerprint data just read matches the fingerprint data in the second authenticator**, the action is **authorized** and carried out. *Bradford*, 3:50–4:2, 18:27-39, 18:64–19:13,

24:35-65; *Dec.* 119-121. As discussed for Claim 1(c)-(e), *Bradford's* stored second authenticator is stored at a memory location defined by the card during the enrollment process.

C. Claim 19

1. Claim 19(Pre): "A non-transitory computer readable medium having recorded thereon a computer program for directing a processor to execute a method of enrolling in a biometric card pointer system, the program comprising"

Bradford teaches a system and method of enrolling in a biometric card pointer system, as discussed for Claim 1(Pre). *Bradford* teaches a non-transitory computer readable medium, as claimed and as further discussed below. *Dec.*, 122-129.

As discussed for Claim 2(b), a POSITA would have understood *Bradford* teaches the game device 300 of FIG. 3 includes at least one processor, memory, and software for performing the disclosed functions for game device 300. *Dec.*, 122-124. *Bradford* teaches game device 300 is similar to game devices 100,200 shown in FIGs. 1-2 (8:51-53), and game device 100 includes at least one central processor, memory, and the firmware and software for implementing the functionality (8:7-14). Therefore, a POSITA would have understood game device 300 similarly includes a processor, memory, and software for performing the functionality of the game device. *Dec.*, 122-124.

Bradford also teaches game device 300 includes card reader 304 for reading a player ID card (the first authenticator). *Bradford*, 8:51-65. A POSITA would have

understood or found obvious the card reader 304 of game device reading the card information is performed pursuant to instructions from processor of the game device, as it is well known processors execute software code for performing functions, and *Bradford* teaches the processor, memory, and software needed to implement the full functionality. *Dec.*, 125.

As also discussed for Claim 2(b), *Bradford* teaches game device 300 includes biometric reader 310, which "includes the **hardware and software** needed to do initial processing of the image, scan, or read of the biometric data that will be the second authenticator, and will further do the actual database lookup and attempted match for the authorization." *Bradford*, 8:56-65 (also describing reader 310 includes a processor, memory, and software "dedicated to reader 310"), 10:30-47; *Dec*. 122-125.

A POSITA would have understood or found obvious *Bradford* teaches a non-transitory computer readable medium (memory of game device and memory of biometric reader 310) having recorded thereon a computer program (software of game device and reader 310) for directing a processor (processor of game device or processor of reader 310) to execute a method (i.e., the method mapped for Claims 19(a)-I, below). The processor of the game device and the processor of the reader 310 individually or collectively perform the functionality recited in Claim 19 or such would have been obvious. Both the game device 300 and the reader 310 include the

software (or "code") to be executed by the processor for performing the Claim 19 functionality. Per Dr. Sears, it is extremely well known that processors execute code of a computer program (i.e., software) stored on a memory. *Dec.*, 126-129. Additionally, a POSITA would have understood a memory storing software (i.e., program code) is not merely a medium for transitory signals. *Id*. Therefore, *Bradford's* teaching of memory is "non-transitory." *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007).

A POSITA would have understood each of the "code for" recitations performed for Claims 19(a)-(e) and 20(a)-(c) is performed by the software (computer program code) disclosed in *Bradford*, as each of the recited steps involve reading, processing, and/or storing data.

2. Claim 19(a): "code for receiving card information"

See Claim 1(a) Mapping.

3. Claim 19(b): "code for receiving the biometric signature"

See Claim 1(b) Mapping.

4. Claim 19(c): "code for defining, dependent upon the received card information, a memory location in a local memory external to the card"

See Claim 1(c) Mapping.

5. Claim 19(d): "code for determining if the defined memory location is unoccupied"

See Claim 1(d) Mapping.

6. Claim 19(e): "code for storing, if the memory location is unoccupied, the biometric signature at the defined memory location."

See Claim 1(e) Mapping.

D. Claim 20

The *Bradford-Foss-Yamane* combination teaches Claim 20.

1. Claim 20(Pre): "A non-transitory computer readable medium having recorded thereon a computer program for directing a processor to execute a method of obtaining verified access to a process, the program comprising:"

Bradford teaches a method of obtaining verified access to a process. *Mapping, Claim 2(Pre)*. Further, for each of the limitations of Claim 20, *Bradford* teaches a computer readable medium having code for each recited step. *See* Claim 19(Pre) Mapping.

2. Claim 20(a): "code for storing a biometric signature according to the enrolment method of claim 19;"

Bradford teaches storing a biometric signature (*Bradford*, 15:60-63, FIG. 6), and the *Bradford-Foss-Yamane* combination teaches code for the enrollment method of claim 19. *See also* Claim 19 Mapping.

3. Claim 20(b): "code for subsequently presenting card information and a biometric signature"

See Claim 2(b) Mapping.

4. Claim 20(c): "code for verifying the subsequently presented card information if the subsequently presented biometric signature matches the biometric signature at the memory location, in said local memory, defined by the subsequently presented card information"

See Claim 2(c) Mapping.

VI. DISCRETIONARY CONSIDERATIONS

A. The *Fintiv* Factors Favor Institution

Under the "*Fintiv* factors," the Board asserted it may consider parallel litigation, including an early trial date, in determining whether to institute under 35 U.S.C. § 314(a). *NHK Spring Co., Ltd., v. Intri-Plex Technologies, Inc.*, IPR2018-00752, Paper 8 at 19–20 (PTAB Sept. 12, 2018) (precedential); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 2–3, 6 (PTAB Mar. 20, 2020) (precedential). Those factors favor institution here.

1. Stay

Parallel litigation is ongoing. While no stay has been requested, Petitioner will seek a stay if institution is granted, thus favoring institution. At worst, this factor is neutral because the Board "will not attempt to predict" how the district court will proceed. *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB Jun. 16, 2020).

2. Proximity of the Court's Trial Date

"This factor looks at the proximity of the trial date to the date of [FWD] to assess the weight to be accorded a trial date set earlier than the expected [FWD]

date." *Shenzhen Carku Tech. Co., Ltd. v. The Noco Co.*, IPR2020-00944, Paper 20 at 61 (PTAB Nov. 12, 2020). The District Court scheduled trial for January 23, 2023, with the notation the "Court expects to set these dates at the conclusion of the *Markman* hearing," thus indicating the Court recognizes the scheduled date is pursuant to the Court's default schedule and may not be the "actual trial date." *See* Ex. 1025 (Scheduling Order in District Court Litigation), 5, FN 4.

Trial dates are notoriously unreliable and should be an insufficient basis upon which to deny institution. "A court's general ability to set a fast-paced schedule is not particularly relevant," especially where "the forum [i.e., WDTX] itself has not historically resolved cases so quickly." *In re Apple Inc.*, No 20-135, slip op. at 16 (Fed. Cir. Nov. 9, 2020); *DISH Network L.L.C. v. Broadband iTV, Inc.*, IPR2020-01280, Paper 17 at 13-16 (PTAB Feb. 4, 2021). The Federal Circuit found error in the Board's reliance on the case's scheduled trial date. *In re Apple Inc.*, No 20-135, slip op. at 15 (Ex. 1031). It would be error for the Board speculatively rely upon the current schedule, especially with a motion to transfer pending. The Board would be no better suited to speculate as to the prospective trial date than it would be to speculate as to the likely outcome of the motion to transfer pending and especially as the District Court's own Scheduling Order recognizes the current trial date is set pursuant to "default" deadlines. (Ex. 1025, 5, FN 4).

Trial date speculation is particularly concerning where the statistics show frequent trial delays in WDTX. "70% of [WDTX] trial dates initially relied upon by the PTAB to deny petitions have slid," as of July 2020. *District Court Trial Dates Tend to Slip After PTAB Discretionary Denials* (Ex. 1028). Such delays impacted the *NHK* and *Fintiv* cases, where, after the Board denied institution, associated trial dates were delayed to after the FWD dates—the same WDTX court in *Fintiv* as is handling the Texas Litigation. IPR2018-01680, Paper 22 at 17, n. 6 (PTAB Apr. 3, 2019) ("In the district court case running parallel to *NHK Spring*, the court ultimately moved the trial date back six months, illustrating the uncertainty associated with litigation schedules."); *Order Setting Jury Selection and Trial* (Ex. 1029) (resetting *Fintiv* trial to June 21, 2022, nearly thirteen months after the FWD would have been due in the associated IPR). In contrast, the Board adhered to the one-year statutory deadline for FWDs prescribed by 35 U.S.C. § 316(a)(11).

CPC undoubtedly will argue that Apple waited too long to file its IPR and that the delay in filing the IPR should be a basis for discretionary denial. Any such argument, however, should be given little merit.

CPC originally asserted Claim 13 of the '039 Patent in its Complaint. (Ex. 1034, p. 7 at ¶ 39). Claim 13 (and dependent Claim 14) include numerous means-plus-function terms. In the litigation, the Parties disputed the constructions, warranting waiting for the Court's *Markman* Order (recently issued on February 10,

2022; *see* Ex. 1033). In response to the Court's requirement that CPC narrow its asserted claims (Ex. 1035), it was not until February 14, 2022, that CPC—for the first time—removed Claims 13-14 from its list of asserted claims. *See* Ex. 1036 (Email from CPC to the Court narrowing the asserted claims).

Up until February 14, 2022, Apple acted under the reasonable understanding that CPC intended to assert Claims 13-14 having means-plus-function limitations. Reliance on CPC's means-plus-function constructions in view of CPC's asserted claims necessitated waiting until CPC came forward with its proposed constructions for the means-plus-function terms. However, CPC did not disclose its proposed structure for the means plus function terms until it filed its responsive claim construction brief on December 8, 2021 (Ex. 1037), and its sur-reply claim construction brief on January 5, 2022 (Ex. 1038). CPC then finalized the identification of its proposed structure in the parties' Joint Claim Construction Statement on January 12, 2022. (Ex. 1032). Without this information, Apple could not have filed a claim construction brief relying upon CPC's claim constructions because they had not been identified. Once briefing was complete and CPC's proposed algorithms identified, Apple diligently worked to finalize and file this Petition. Thus, CPC's failure to identify its proposed constructions prior to claim construction briefing prevented Apple from filing this IPR any earlier. Denying this petition because of a scheduled (but unlikely to hold) trial date would reward CPC

for its gamesmanship in refusing to identify the structure for the means-plus-function terms prior to the claim construction briefing.

Moreover, should the Board deny because of *Fintiv*, it would be creating a perverse incentive for other patent owners to engage in gamesmanship by hiding their proposed claim constructions until they were sure the trial date would precede the FWD. The Board should not countenance such gamesmanship and should assign no weight to the trial date's proximity in this matter.

3. Investment in Parallel Proceeding

Beyond claim construction, the parties have invested little in the parallel proceeding. Petitioner has diligently worked since the litigation's filing on locating prior art and preparing the Petition and supporting evidence. Minimal fact discovery has been conducted. Expert discovery does not close until September 21, 2022. (Ex. 1025, 4). This factor weighs in favor of institution.

4. Overlap

Petitioner stipulates that if the Board institutes the Petition on the same grounds presented, then Apple will not seek resolution in the District Court of any ground of invalidity that utilizes *Bradford*, *Foss*, or *Yamane*. In so stipulating, Apple seeks to avoid multiple proceedings addressing the validity of the '039 Patent based on any of the same prior art references. This factor weights in favor of institution.

5. Same Party

The Parties are the same in the district court litigation. However, members of the Board have noted *Fintiv* addresses only the scenario in which the petitioner is unrelated to a defendant in a parallel proceeding, finding this should weigh against denying institution, but that *Fintiv* "says nothing about situations in which the petitioner is the same as, or is related to, the district court defendant." *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd*., IPR2020-00122, Paper 15 at 10 (PTAB May 15, 2020) (APJ Crumbley, dissenting) (noting that disfavoring a "defendant in the district court" is "contrary to the goal of providing district court litigants an alternative venue to resolve questions of patentability").

6. Other Circumstances

The strength of the proposed grounds weighs strongly in favor of institution.

The *Fintiv* factors require the Board to take "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Fintiv*, Paper 11 at 6. Were the Board to deny institution, years of district court litigation would be required just to obtain a finding of invalidity. Such a scenario runs directly counter to *Fintiv's* goals of preserving efficiency and the system's integrity. Denying institution harms system integrity by rejecting the PTAB as the lead agency in assessing patentability.

B. The *Fintiv* Framework Should Be Overturned

The *Fintiv* framework should be overturned because it is legally invalid and unwise policy. The framework (1) exceeds the Director's authority, (2) is arbitrary and capricious, (3) and was adopted without notice-and-comment rulemaking.

1. The Fintiv Framework Exceeds the Director's Authority

The Director cannot deny IPRs based on parallel litigation if the IPR was timely under § 315(b). And the Director cannot create reasons to deny institution that conflict with the statutory language or exceed the authority under the AIA, such as, denial of institution based on parallel litigation.

Under § 315(b), IPRs are permissible when parallel litigation is pending. Ultimately, strategies like *Fintiv* "cannot be invoked to preclude adjudication of a claim…brought within the [statutory] window." *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 572 U.S. 663, 667, 677-680, 685 (2014). And the AIA's provisions confirm the Director lacks authority to apply the *Fintiv* framework. *See, e.g.*, §§ 315(a), (d), 325(d). None of the provisions grant the Director discretion to reject IPRs because there is a parallel lawsuit.

2. The Fintiv Framework Is Arbitrary and Capricious

The *Fintiv* framework is arbitrary and capricious. First, it requires the Board to rely on speculation about parallel litigation. *See, e.g.*, *Horsehead Resource Dev. Co. v. Browner*, 16 F.3d 1246, 1269 (D.C. Cir. 1994) ("agency actions based upon speculation are arbitrary and capricious"). Second, the *Fintiv* factors are vague,

resulting in the Board treating "similar situations differently without reasoned explanation"—a hallmark of arbitrary and capricious agency action. *Port of Seattle v. FERC*, 499 F.3d 1016, 1034 (9th Cir. 2007). Third, the *Fintiv* framework is not connected to promoting efficiency. Instead, it pressures defendants to file premature IPRs and allows infringement plaintiffs to block IPRs through forum shopping.

3. The Fintiv Framework Was Impermissibly Adopted Without Notice-and-Comment Rulemaking

The *Fintiv* factors were adopted without notice-and-comment rulemaking. Through the Director's designation of *NHK* and *Fintiv* as precedential, those decisions' framework became "binding" on the Board "in subsequent matters involving similar facts or issues," Patent Trial and Appeal Board, Standard Operating Procedure 2 (Rev. 10) ("SOP-2"), at 11 (Sept. 20, 2018)—that is, they became a "rule" as defined in the Administrative Procedure Act ("APA"), *see* 5 U.S.C. § 551(4) (defining "rule"). But that designation process did not entail public notice or comment, contrary to the requirements of both the APA and the AIA. *Kisor v. Wilkie*, 139 S. Ct. 2400, 2420 (2019); §§ 2(b)(2), 316(a).

VII. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests *inter partes* review of Claims 1-2 and 19-20 of U.S. Patent No. 8,620,039.

Respectfully submitted,

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COUNSEL FOR PETITIONER

VIII. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8(A)(1)

A. Real Party-In-Interest

Apple Inc. is the real party-in-interest. 37 C.F.R. § 42.8(b)(1).

B. Related Matters

(1) a patent infringement lawsuit filed on February 23, 2021, by Patent Owner, CPC Patent Technologies Pty Ltd., against Petitioner in the United States District Court for the Western District of Texas, Case No. 6:21-cv-00165 (Ex. 1034);

(2) *CPC Patent Technologies Pty Ltd. v. HMD Global Oy* in the United States District Court for the Western District of Texas, Case No. 6:21-cv-00166;

(3) *Apple Inc. v. CPC Patent Technologies Pty Ltd*., *Inter Partes* Review Case No. IPR2022-00601, filed February 23, 2022, of U.S. Patent No. 9,269,208 (unrelated patent); and

(4) Apple Inc. v. CPC Patent Technologies Pty Ltd., *Inter Partes* Review Case No. IPR2022-00602, filed February 23, 2022, of U.S. Patent No. 9,665,705 (unrelated patent).

C. Lead and Back-Up Counsel

Petitioners provide the following designation and service information for lead and back-up counsel. 37 C.F.R. § 42.8(b)(3) and (b)(4).

Lead Counsel	Back-Up Counsel
Jennifer C. Bailey (Reg. No. 52,583) Jennifer.Bailey@eriseip.com PTAB@eriseip.com Postal and Hand-Delivery Address: ERISE IP, P.A. 7015 College Blvd., Suite 700 Overland Park, Kansas 66211 Telephone: (913) 777-5600 Fax: (913) 777-5601	Adam P. Seitz (Reg. No. 52,206) Adam.Seitz@eriseip.com PTAB@eriseip.com Postal and Hand-Delivery Address: ERISE IP, P.A. 7015 College Blvd., Suite 700 Overland Park, Kansas 66211 Telephone: (913) 777-5600 Fax: (913) 777-5601

CLAIMS LISTING APPENDIX

U.S. Patent No. 8,620,039, Claims 1-2 and 19-20

Claim Designation	Claim Language
Claim 1(Pre)	A method of enrolling in a biometric card pointer system, the method comprising the steps of:
Claim 1(a)	receiving card information;
Claim 1(b)	receiving the biometric signature;
Claim 1(c)	defining, dependent upon the received card information, a memory location in a local memory external to the card;
Claim 1(d)	determining if the defined memory location is unoccupied; and
Claim 1(e)	storing, if the memory location is unoccupied, the biometric signature at the defined memory location.
Claim 2(Pre)	2. A method of obtaining verified access to a process, the method comprising the steps of:
Claim 2(a)	storing a biometric signature according to the enrolment method of claim 1;
Claim 2(b)	subsequently presenting card information and a biometric signature; and
Claim 2(c)	verifying the subsequently presented presentation of the card information and the biometric signature if the subsequently presented biometric signature matches the biometric signature at the memory location, in said local memory, defined by the subsequently presented card information.
Claim 19(Pre)	19. A non-transitory computer readable medium having recorded thereon a computer program for directing a processor to execute a method of enrolling in a biometric card pointer system, the program comprising:
Claim 19(a)	code for receiving card information;
Claim 19(b)	code for receiving the biometric signature;
Claim 19(c)	code for defining, dependent upon the received card information, a memory location in a local memory external to the card;
Claim 19(d)	code for determining if the defined memory location is unoccupied; and
Claim 19(e)	code for storing, if the memory location is unoccupied, the biometric signature at the defined memory location.

Claim Designation	Claim Language
Claim 20(Pre)	20. A non-transitory computer readable medium having recorded thereon a computer program for directing a processor to execute a method of obtaining verified access to a process, the program comprising:
Claim 20(a)	code for storing a biometric signature according to the enrolment method of claim 19;
Claim 20(b)	code for subsequently presenting card information and a biometric signature; and
Claim 20(c)	code for verifying the subsequently presented presentation of the card information and the biometric signature if the subsequently presented biometric signature matches the biometric signature at the memory location, in said local memory, defined by the subsequently presented card information.

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 8,620,039 to Burke ("the *'039 Patent"*)
Exhibit 1002	File History for the '039 Patent ("the *'650 Application File History*")
Exhibit 1003	Declaration of Dr. Andrew Sears
Exhibit 1004	U.S. Patent No. 6,612,928 to Bradford et al. ("*Bradford*")
Exhibit 1005	U.S. Patent App. 2005/0127169 to Foss ("*Foss*")
Exhibit 1006	U.S. Patent App. 2001/0014883 to Yamane et. al ("*Yamane*")
Exhibit 1007	Anil Jain, Lin Hong, and Sharath Pankanti. *Biometric Identification.* Communications of the ACM. February 2000. Vol. 43, No. 2 ("*Biometric Identification*")
Exhibit 1008	Henry C. Lee and R.E. Gaensslen. *Advances in Fingerprint Technology*. Second Edition. CRC Press. 2001 ("*Advances in Fingerprint Technology*")
Exhibit 1009	P. Jonathon Phillips et al. *An Introduction to Evaluating Biometric Systems*. National Institute of Standards and Technology. IEEE. February 2000. Vol 33, pp. 56-63. ("*Evaluating Biometric Systems*")
Exhibit 1010	U.S. Patent No. 6,898,299 to Brooks ("*Brooks*")
Exhibit 1011	U.S. Patent Application Publication No. 2002/0091937 to Ortiz ("*Ortiz*")
Exhibit 1012	U.S. Patent No. 6,140,939 to Flick ("*Flick*")
Exhibit 1013	U.S. Patent Application Publication No. 2003/0046552 to Hamid ("*Hamid '552*")
Exhibit 1014	U.S. Patent Application Publication No. 2002/0063154 to Hoyos et al. ("*Hoyos*")
Exhibit 1015	U.S. Patent No. 6,877,097 to Hamid et al. ("*Hamid*")
Exhibit 1016	U.S. Patent No. 6,164,403 to Wuidart ("*Wuidart*")
Exhibit 1017	U.S. Patent No. 6,484,260 to Scott et al. ("*Scott*")
Exhibit 1018	Martha E. Haykin and Robert B. J. Warnar. NIST Special Publication 500-157 "Smart Card Technology: New Methods for Computer Access Control." September 1988. ("*Haykin*")
Exhibit 1019	U.S. Patent Application Publication No. 2006/0177106 to Wrage ("*Wrage*")
Exhibit 1020	U.S. Patent No. 6,954,737 to Kalantar et al. ("*Kalantar*")
Exhibit 1021	U.S. Patent Application Publication No. 2006/0200480 to Harris et al. ("*Harris*")

Exhibit 1022	U.S. Patent Application Publication No. 2003/0055530 to Dodson ("*Dodson*")
Exhibit 1023	U.S. Patent No. 5,835,906 to Hagersten et al. ("*Hagersten*")
Exhibit 1024	U.S. Patent No. 4,975,873 to Nakabayashi et al. ("*Nakabayashi*")
Exhibit 1025	Case No. 6:21-cv-00166-ADA, Scheduling Order (Dkt No. 37)
Exhibit 1026	Case No. 6:21-cv-00165-ADA Motion to Transfer Venue (Dkt No. 22)
Exhibit 1027	Federal Court Management Statistics–Comparison Within Circuit, June 30, 2021 (Average time to trial statistics)
Exhibit 1028	Scott McKeown, District Court Trial Dates Tend to Slip After PTAB Discretionary Denials, July 24, 2020
Exhibit 1029	Case No. 1:21-cv-00896-ADA, Order Setting Jury Selection and Trial (Dkt No. 423)
Exhibit 1030	Judge Albright's Second Amended Standing Order Regarding Motions for Inter-District Transfer, August 18, 2021
Exhibit 1031	In re Apple Inc., No 20-135 Order (Dkt No. 55)
Exhibit 1032	Case No. 6:21-cv-00165-ADA, *CPC Patent Technologies PTY LTD., v. Apple Inc.*, Joint Claim Construction Statement, Dated January 12, 2022 (Dkt No. 57)
Exhibit 1033	Case No. 6:21-cv-00165-ADA, *CPC Patent Technologies PTY LTD., v. Apple Inc.*, Claim Construction Order, Dated February 10, 2022 (Dkt No. 76)
Exhibit 1034	Case No. 6:21-cv-00165-ADA, *CPC Patent Technologies PTY LTD., v. Apple Inc.*, Original Complaint for Patent Infringement, Dated February 23, 2021 (Dkt No. 1)
Exhibit 1035	Case No. 6:21-cv-00166 (W.D. Tex.), Email from Peter Tong, Law Clerk to J. Albright, to the Parties Re Meet & Confer, Dated February 10, 2022
Exhibit 1036	Case No. 6:21-cv-00165 (W.D. Tex.), Email from George Summerfield, CPC Counsel, to the Court Re Narrowed Claims and Agreed-Upon Constructions, Dated February 14, 2022
Exhibit 1037	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Response to Defendant Apple Inc.'s Claim Construction Brief
Exhibit 1038	Case No. 6:21-cv-00165 (W.D. Tex.), Plaintiff CPC Patent Technologies Pty Ltd.'s Sur-Reply to Defendant Apple Inc.'s Claim Construction Brief

CERTIFICATION OF WORD COUNT

The undersigned certifies pursuant to 37 C.F.R. § 42.24 that the foregoing Petition for *Inter Partes* Review, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 11,351 words according to the word-processing program used to prepare this document (Microsoft Word).

Dated: February 23, 2022

Respectfully submitted,

BY: */s/ Jennifer C. Bailey*
Jennifer C. Bailey, Reg. No. 52,583
Adam P. Seitz, Reg. No. 52,206

COUNSEL FOR PETITIONER

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

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that on February 23, 2022, a complete and entire copy of this Petition for *Inter Partes* Review including exhibits was provided via Priority Mail Express to the Patent Owner by serving the correspondence address of record for the '039 Patent as listed on PAIR:

Crowell/BGL
P.O. Box 10395
Chicago, IL 60610

Further, a courtesy copy of this Petition for *Inter Partes* Review was sent via electronic mail to Patent Owner's litigation counsel:

Ben Roxborough (ben.roxborough@klgates.com)
Dhohyung Kim (dk.kim@klgates.com)
George C. Summerfield (george.summerfield@klgates.com)
James A. Shimota (jim.shimota@klgates.com)
Stewart Mesher (stewart.mesher@klgates.com)
Elizabeth Abbott Gilman (beth.gilman@klgates.com)
Jonah Heemstra (jonah.heemstra@klgates.com)

Respectfully submitted,

BY: */s/ Jennifer C. Bailey*
Jennifer C. Bailey, Reg. No. 52,583
Adam P. Seitz, Reg. No. 52,206

COUNSEL FOR PETITIONER

EXHIBIT D

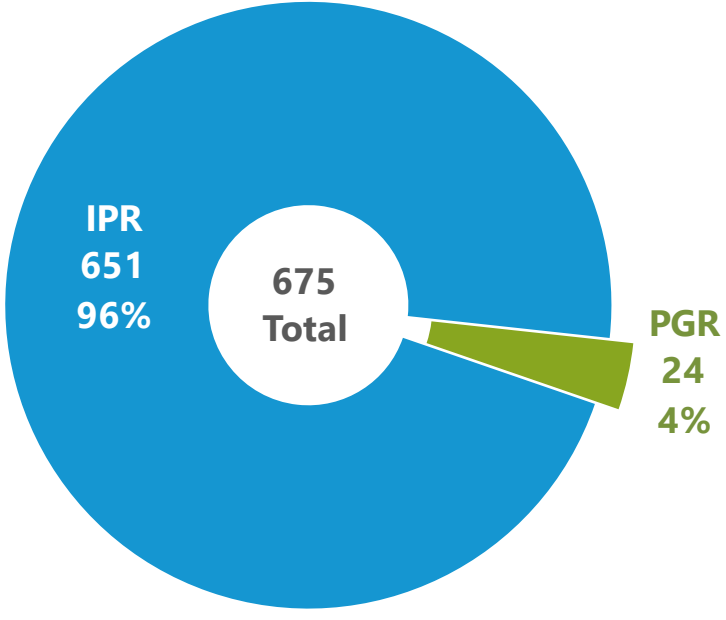

UNITED STATES
PATENT AND TRADEMARK OFFICE
uspto

PTAB Trial Statistics
FY22 Q2 Outcome Roundup
IPR, PGR

Patent Trial and Appeal Board
Fiscal Year 2022 2nd Quarter

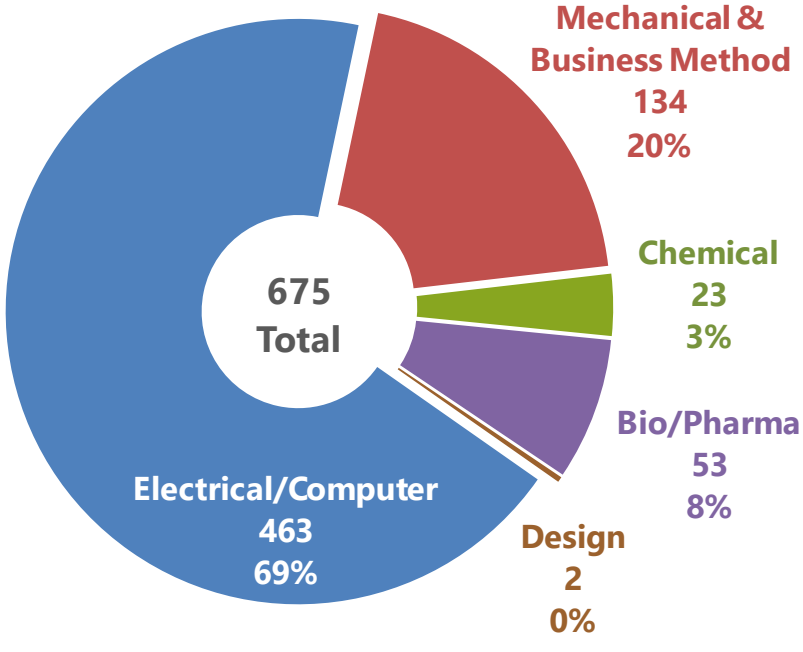
UNITED STATES
PATENT AND TRADEMARK OFFICE
uspto

Petitions filed by trial type
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)



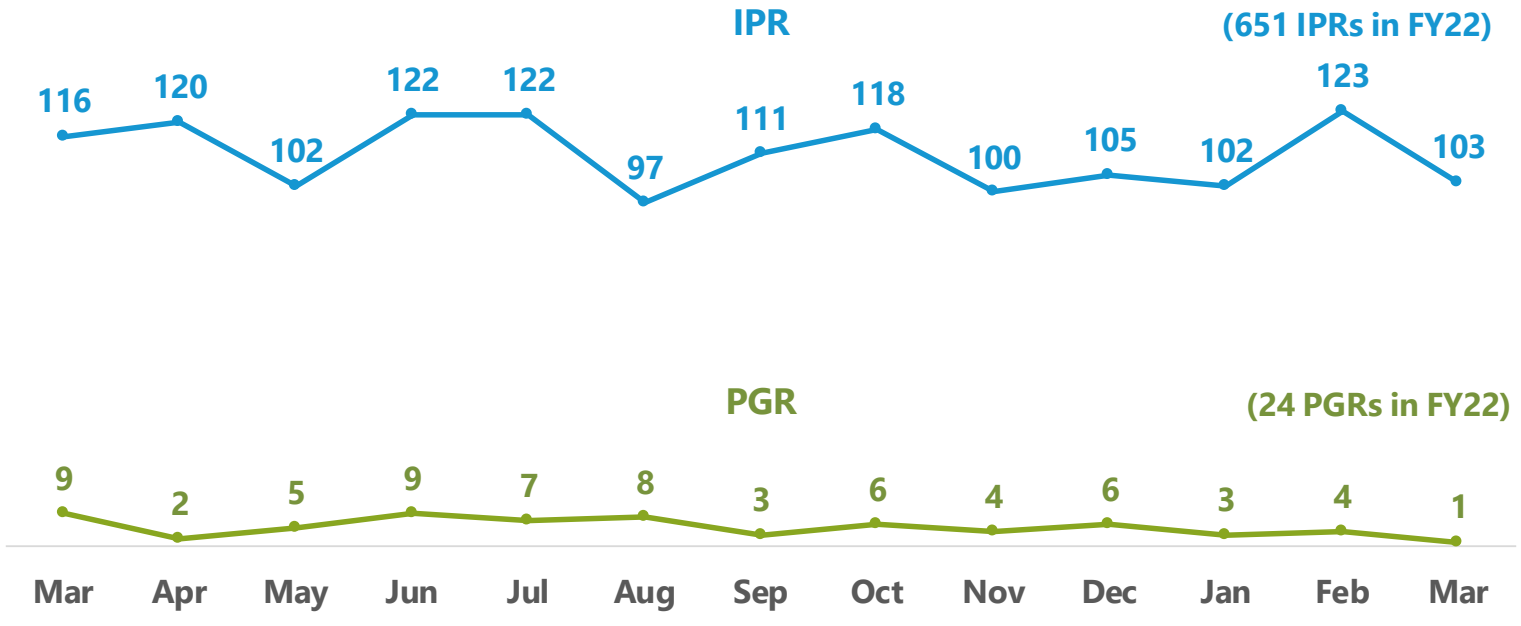
Trial types include Inter Partes Review (IPR) and Post Grant Review (PGR).

Petitions filed by technology
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)

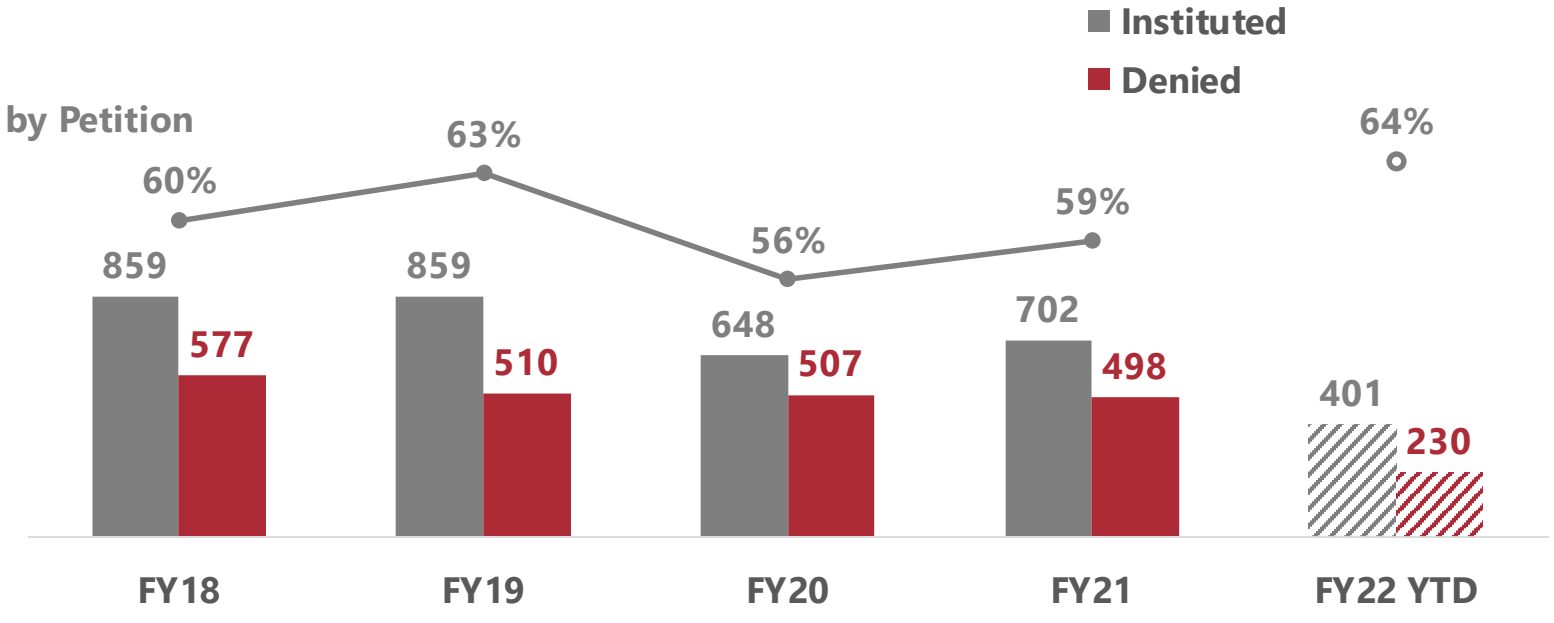


Petitions filed by month

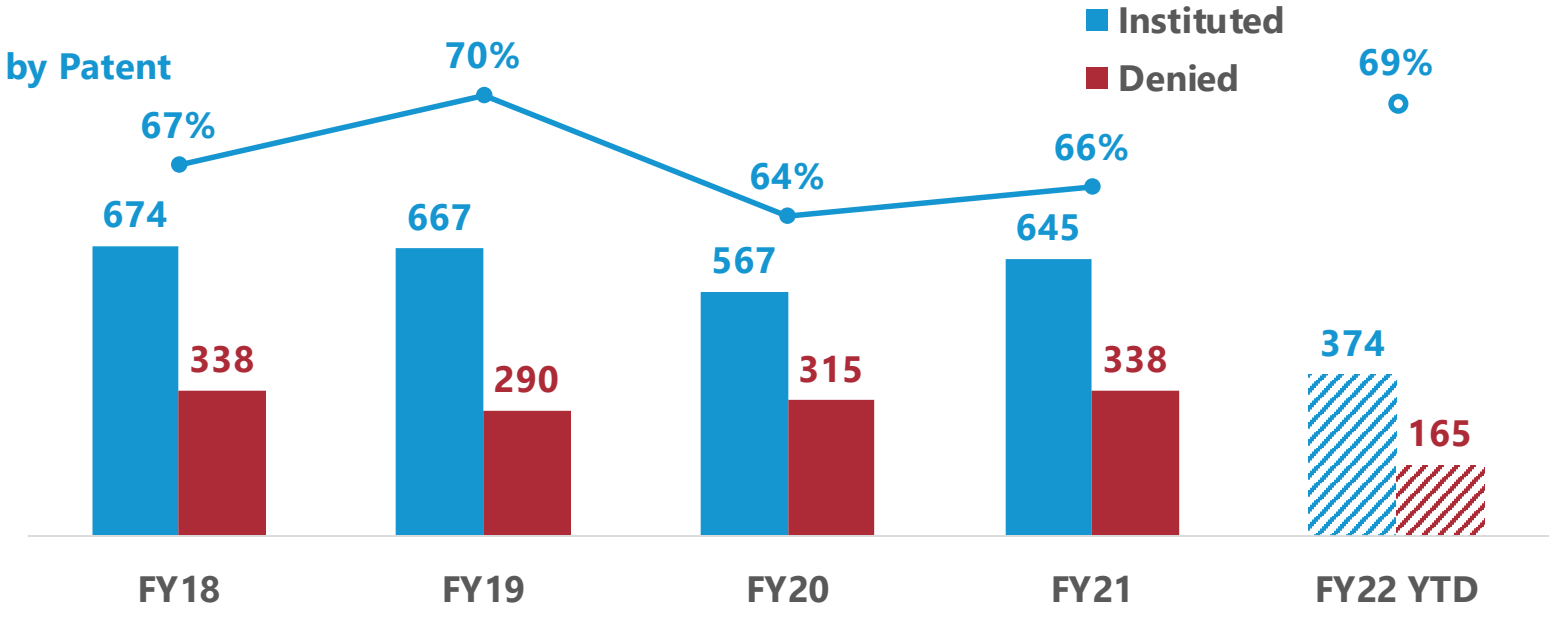
(Mar. 2022 and Previous 12 Months: Mar. 1, 2021 to Mar. 31, 2022)



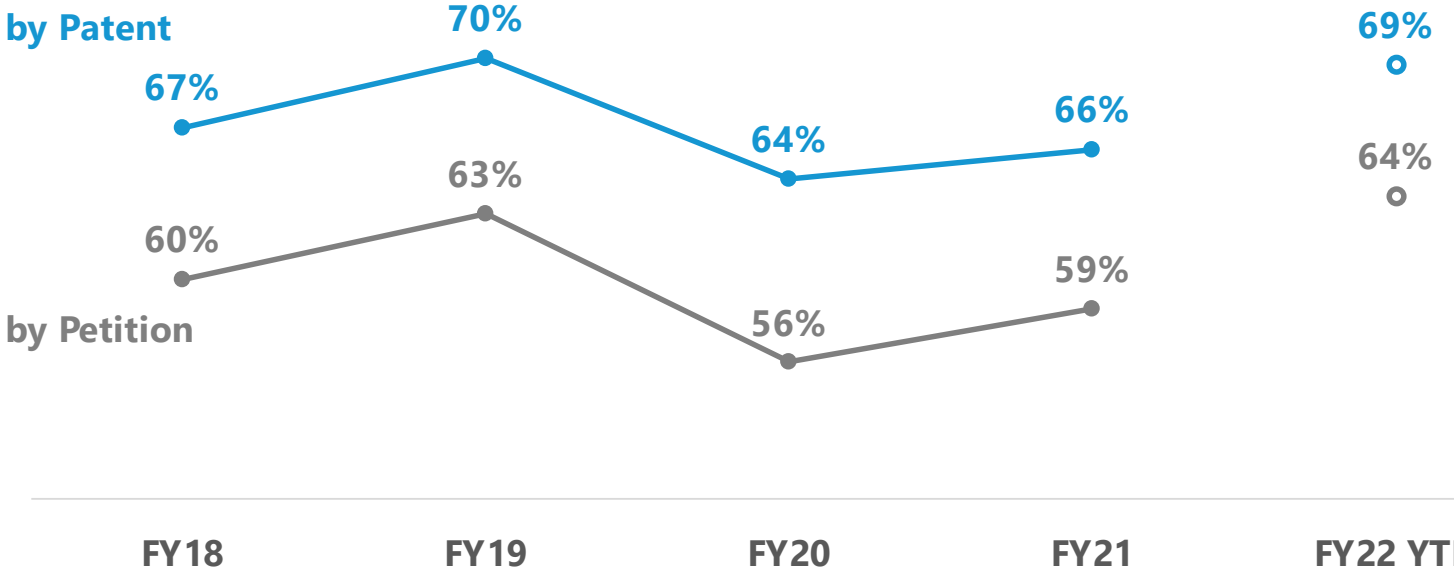
Institution rates by petition
(FY18 to FY22 through Q2: Oct. 1, 2017 to Mar. 31, 2022)



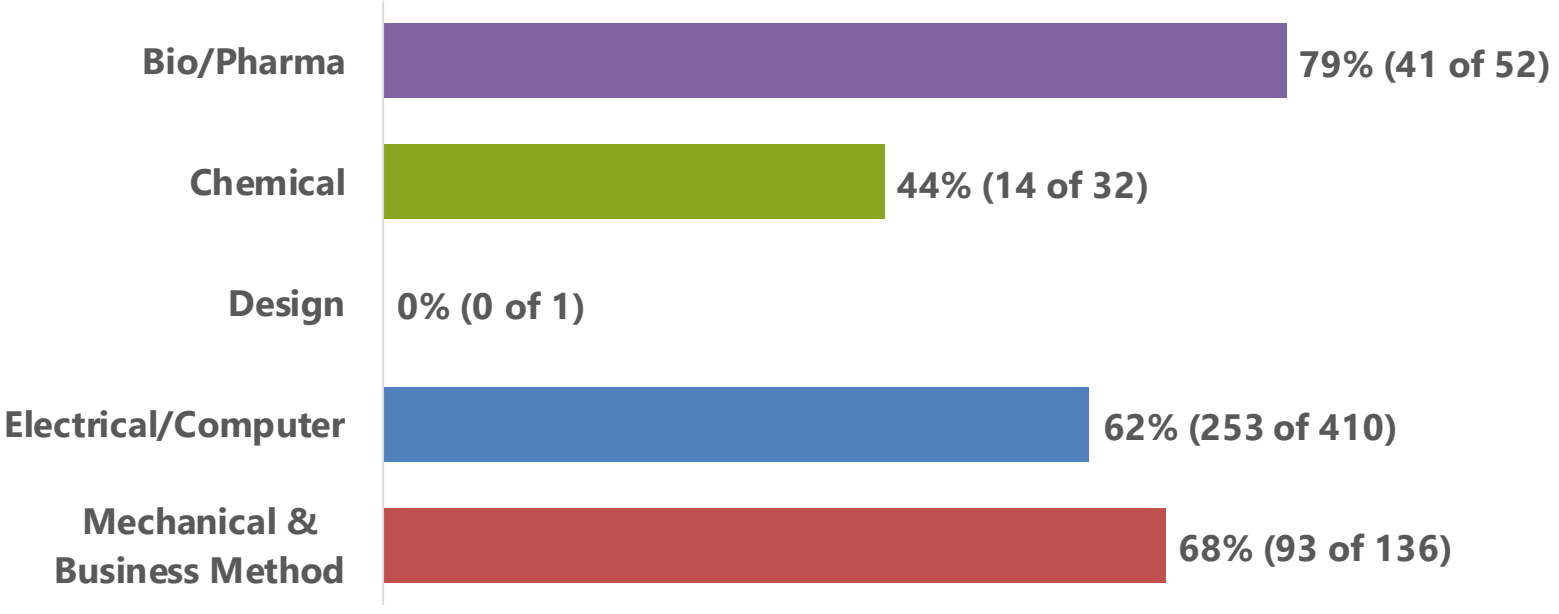
Institution rates by patent
(FY18 to FY22 through Q2: Oct. 1, 2017 to Mar. 31, 2022)



Institution rates by patent and by petition
(FY18 to FY22 through Q2: Oct. 1, 2017 to Mar. 31, 2022)

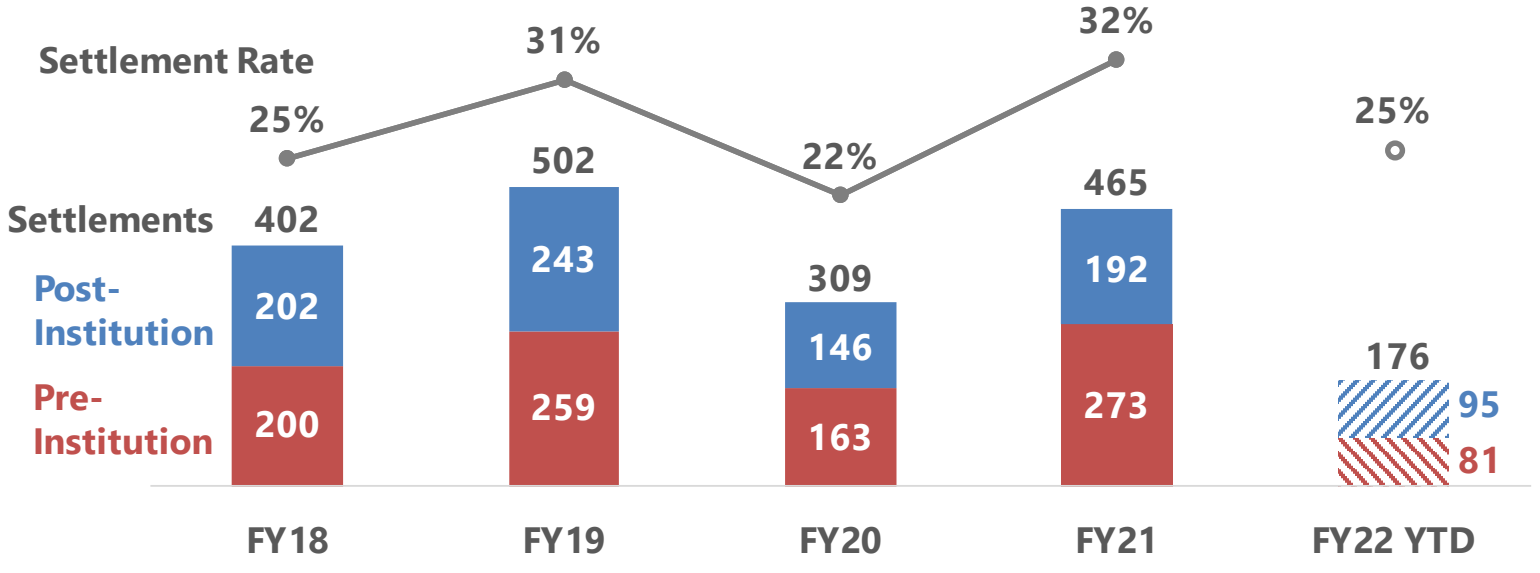


Institution rates by technology
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)



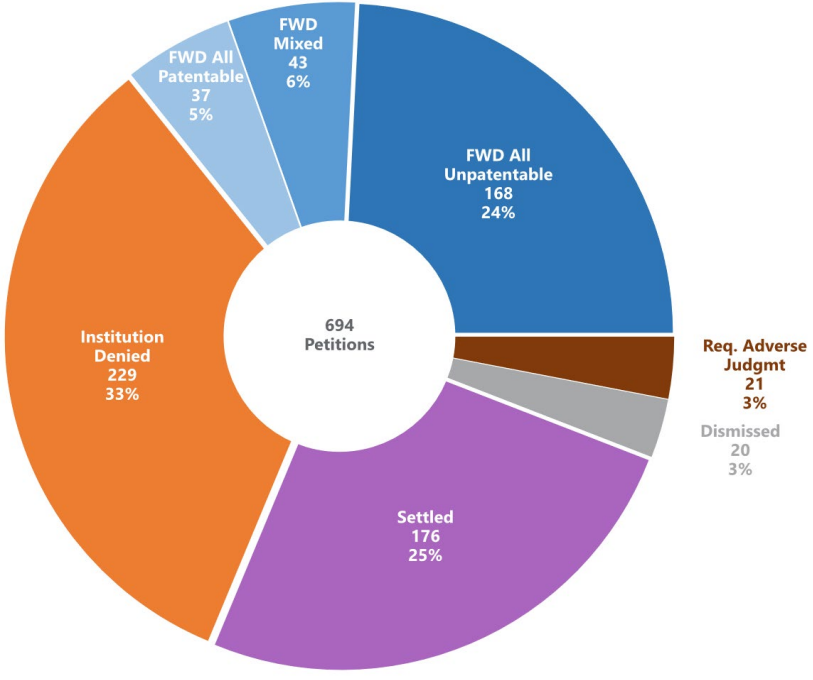
Institution rate for each technology is calculated by dividing petitions instituted by decisions on institution (i.e., petitions instituted plus petitions denied). The outcomes of decisions on institution responsive to requests for rehearing are excluded.

Settlements
(FY18 to FY22 through Q2: Oct. 1, 2017 to Mar. 31, 2022)



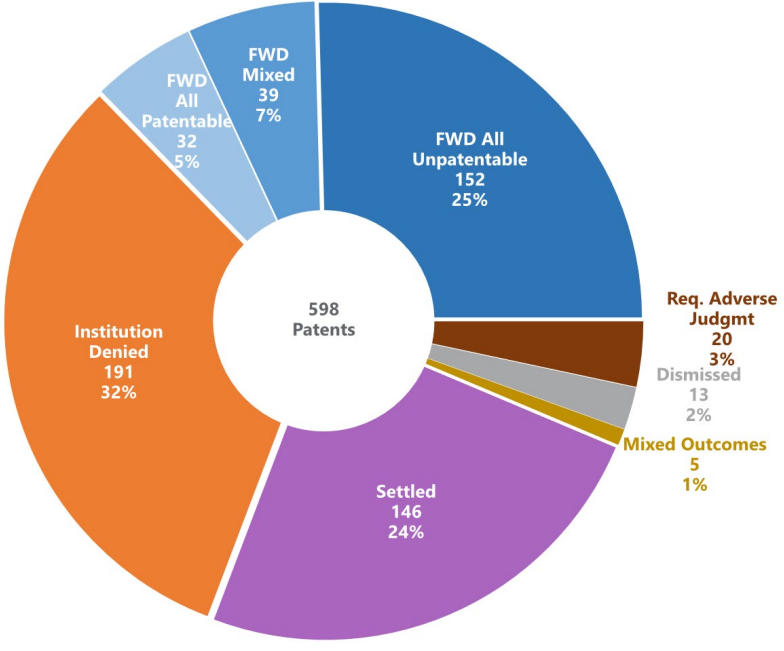
Settlement rate is calculated by dividing total settlements by concluded proceedings in each fiscal year (i.e., denied institution, settled, dismissed, requested adverse judgment, and final written decision), excluding joined cases.

Outcomes by petition
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)



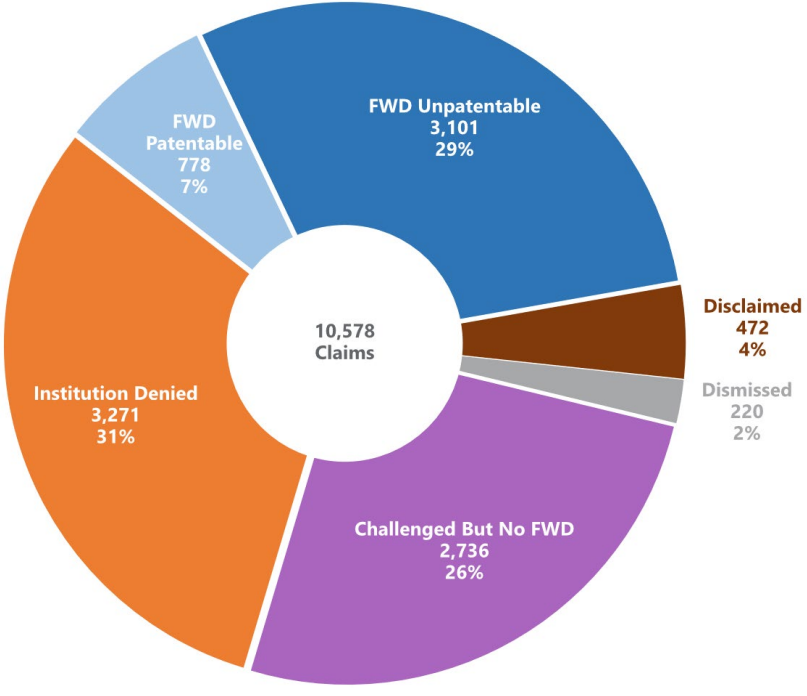
FWD patentability or unpatentability reported with respect to the claims at issue in the FWD. Joined cases are excluded.

Outcomes by patent
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)

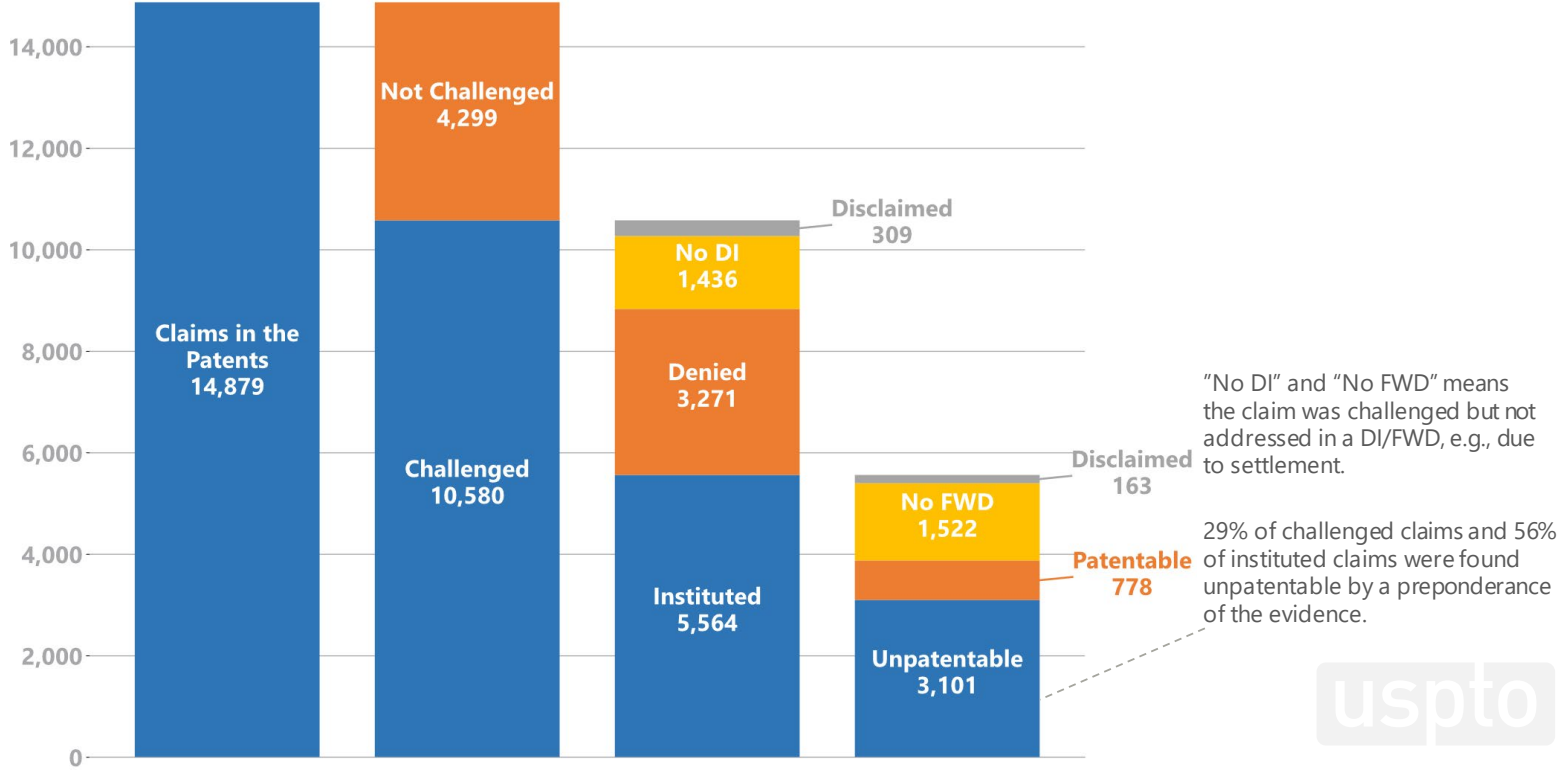


FWD patentability or unpatentability reported with respect to the claims at issue in the FWD. "Mixed Outcome" is shown for patents receiving more than one type of outcome from the list of: denied, settled, dismissed, and/or req. adverse judgement only. A patent is listed in a FWD category if it ever received a FWD, regardless of other outcomes.

Outcomes by claim challenged
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)



Claim outcomes
(FY22 through Q2: Oct. 1, 2021 to Mar. 31, 2022)



"No DI" and "No FWD" means the claim was challenged but not addressed in a DI/FWD, e.g., due to settlement.

29% of challenged claims and 56% of instituted claims were found unpatentable by a preponderance of the evidence.

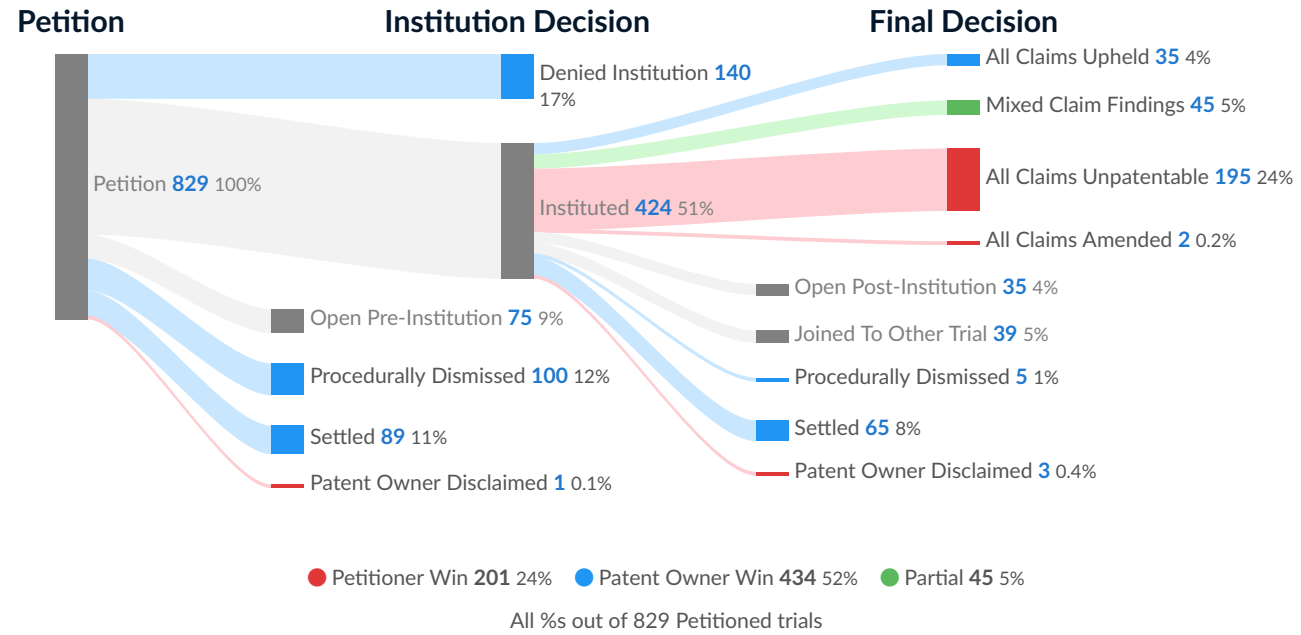

UNITED STATES PATENT AND TRADEMARK OFFICE
DEPARTMENT OF COMMERCE

EXHIBIT E

Apple Inc.

Showing **829** PTAB trials with Apple Inc. as a party; filed between 2012-09-16 and 2022-06-13.; sorted by most recent document activity.

Trial Flow



Case List

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2022-00949	2022-05-05	None	8185402	12973475	Apple Inc.	Parus Holdings Inc.
IPR2022-00950	2022-05-05	None	6721705	09776996	Apple Inc.	Parus Holdings Inc.
IPR2022-00948	2022-05-05	None	9769314	15193517	Apple Inc.	Parus Holdings Inc.
IPR2022-00208	2021-12-16	None	6317804	09201450	Apple Inc.	Future Link Systems, LLC
PGR2022-00006	2021-11-20	2022-06-10	11017020	17079208	Apple Inc.	MemoryWeb, LLC
IPR2022-00111	2021-11-20	None	11017020	17079208	Apple Inc.	MemoryWeb, LLC
IPR2022-00040	2021-10-15	None	6059576	08976228	Apple Inc.	LoganTree LP
IPR2022-00037	2021-10-15	None	6059576	08976228	Apple Inc.	LoganTree LP
IPR2021-01488	2021-09-28	2022-04-11	6807505	10621002	Apple Inc.	Future Link Systems, LLC
IPR2021-01487	2021-09-28	2022-04-11	6622108	09402154	Apple Inc.	Future Link Systems, LLC
IPR2016-01520	2016-07-30	2017-02-16	8559635	08449413	Apple Inc.	Personalized Media Communications, LLC
IPR2016-00754	2016-03-14	2016-09-21	8559635	08449413	Apple Inc.	Personalized Media Communications, LLC
IPR2022-00420	2022-01-18	None	10477994	16375836	Cisco Systems, Inc. Apple Inc. Aruba Networks, LLC Hewlett Packard Enterprise Company	BillJCo, LLC
IPR2022-00367	2022-01-07	None	10715235	15495539	Apple Inc. HP Inc.	XR Communications, LLC
IPR2020-01722	2020-10-02	2021-05-12	10470695	16226249	Apple Inc.	Masimo Corporation
IPR2020-01523	2020-09-09	2021-04-14	8457703	11939519	Apple Inc.	Masimo Corporation

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2020-01524	2020-08-31	2021-04-16	10433776	16174144	Apple Inc.	Masimo Corporation
IPR2020-01526	2020-08-31	2021-04-16	6771994	10374303	Apple Inc.	Masimo Corporation
IPR2022-01005	2022-05-23	None	9084291	14273323	Apple Inc. Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	
IPR2022-01003	2022-05-23	None	9191083	14709428	Apple Inc. Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	
IPR2022-01002	2022-05-23	None	9191083	14709428	Apple Inc. Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	
IPR2022-01004	2022-05-19	None	9614943	13621294	Apple Inc. Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	
IPR2022-00982	2022-05-09	None	8472937	13615384	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Smart Mobile Technologies LLC
IPR2022-00981	2022-05-09	None	8472936	13615274	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Smart Mobile Technologies LLC
IPR2022-00980	2022-05-09	None	8761739	13893225	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Smart Mobile Technologies LLC
IPR2022-00979	2022-05-09	None	9049119	13925766	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Smart Mobile Technologies LLC
IPR2022-00873	2022-04-27	None	10342444	15923699	Apple Inc.	AliveCor, Inc.
IPR2022-00872	2022-04-27	None	8509882	12796188	Apple Inc.	AliveCor, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2021-01129	2021-06-16	2021-12-21	7894837	11973020	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2021-01126	2021-06-16	2021-12-21	7292870	10846236	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2021-01124	2021-06-16	2021-12-21	7292870	10846236	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2021-01125	2021-06-23	2021-12-21	7292870	10846236	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2022-01037	2022-05-19	None	8947164	13894221	LG Electronics Mobilecomm U.S.A., Inc. Apple Inc. LG Electronics, Inc. Samsung Electronics America, Inc. Samsung Electronics Co., Ltd.	Arigna Technology Limited
IPR2022-01021	2022-05-16	None	7246058	10159770	Apple Inc. Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	Jawbone Innovations, LLC
IPR2022-00033	2021-11-03	2022-05-20	10423658	15375927	Apple Inc.	MemoryWeb, LLC
IPR2022-00031	2021-10-30	2022-05-20	10621228	16578238	Apple Inc.	MemoryWeb, LLC
IPR2021-00592	2021-03-02	2021-08-23	10469934	16375879	Apple Inc.	Koss Corporation
IPR2022-01085	2022-06-03	None	8326611	12606140	Apple Inc.	
IPR2022-01084	2022-06-03	None	8321213	12606146	Apple Inc.	
IPR2022-00310	2021-12-22	None	9088868	14087313	Apple Inc.	BillJCo, LLC
IPR2022-00351	2021-12-23	None	10622842	16182258	Apple Inc.	Scramoge Technology Ltd.
IPR2022-00350	2021-12-23	None	9806565	13663012	Apple Inc.	Scramoge Technology Ltd.
IPR2021-00208	2020-11-20	2021-06-03	10258266	16212537	Apple Inc.	Masimo Corporation

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2021-00193	2020-11-20	2021-06-03	10299708	16261366	Apple Inc.	Masimo Corporation
IPR2021-00921	2021-06-02	2021-12-13	8878949	13961452	Apple Inc. LG Electronics, Inc.	Gesture Technology Partners, LLC
IPR2021-00305	2020-12-15	2021-06-03	10506325	16528703	Apple Inc.	Koss Corporation
IPR2021-00255	2020-11-25	2021-06-03	10298451	16057360	Apple Inc.	Koss Corporation
IPR2018-01350	2018-07-03	2019-02-11	8856539	11768729	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2018-00812	2018-04-12	2018-11-07	8856539	11768729	Apple Inc.	Universal Secure Registry LLC
IPR2021-01552	2021-09-21	2022-02-07	9918196	15717138	Apple Inc. T-Mobile USA, Inc.	Traxcell Technologies, LLC
IPR2021-00600	2021-03-07	2021-09-01	10298451	16057360	Apple Inc.	Koss Corporation
IPR2022-00209	2021-11-18	None	7917680	11719532	Apple Inc.	Future Link Systems, LLC
IPR2021-00209	2020-11-20	2021-06-03	10376191	16409515	Apple Inc.	Masimo Corporation
IPR2021-00195	2020-11-20	2021-06-03	10376190	16409304	Apple Inc.	Masimo Corporation
IPR2018-01334	2018-07-03	2019-03-18	8838949	13052516	Apple Inc. Intel Corporation	Qualcomm Incorporated
IPR2018-01330	2018-07-03	2019-01-15	9608675	13764328	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2018-01328	2018-07-03	2019-01-15	9608675	13764328	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2022-00976	2022-05-16	None	9892386	15201152	Apple Inc.	Fintiv, Inc.
IPR2018-01329	2018-07-03	2019-01-15	9608675	13764328	Intel Corporation Apple Inc.	Qualcomm Incorporated

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2018-01327	2018-07-03	2019-01-15	9608675	13764328	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2018-01326	2018-07-03	2019-01-15	9608675	13764328	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2022-00468	2022-01-25	None	10512027	15568431	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00458	2022-01-25	None	9888486	15386355	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2022-00346	2022-01-25	None	10587386	16245407	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00342	2022-01-25	None	9584204	14408321	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00339	2022-01-25	None	10492179	16294356	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00340	2022-01-21	None	10470203	16398655	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00129	2021-11-30	2022-05-23	8566839	12800394	Apple Inc.	BillJCo, LLC
IPR2022-00131	2021-11-23	2022-05-23	8639267	12287064	Apple Inc.	BillJCo, LLC
IPR2021-00923	2021-05-26	2021-12-06	8194924	13051698	Apple Inc. LG Electronics, Inc. Google LLC	Gesture Technology Partners, LLC
IPR2021-00920	2021-05-21	2021-12-06	7933431	12834281	Apple Inc. LG Electronics, Inc. Google LLC	Gesture Technology Partners, LLC
IPR2021-00381	2021-01-04	2021-07-02	10491982	16528701	Apple Inc.	Koss Corporation
IPR2022-00060	2021-10-21	2022-04-18	10820117	16592631	Apple Inc.	Taction Technology, Inc.
IPR2022-00059	2021-10-21	2022-04-18	10659885	16592487	Apple Inc.	Taction Technology, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2022-00058	2021-10-21	2022-04-18	10820117	16592631	Apple Inc.	Taction Technology, Inc.
IPR2022-00057	2021-10-21	2022-04-18	10659885	16592487	Apple Inc.	Taction Technology, Inc.
IPR2022-00865	2022-04-26	None	8467543	10400282	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Jawbone Innovations, LLC
IPR2021-01131	2021-06-16	2021-12-21	7894837	11973020	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2021-01130	2021-06-16	2021-12-21	7894837	11973020	Apple Inc. Microsoft Corporation	Zipit Wireless, Inc.
IPR2021-00922	2021-05-18	2021-11-29	8553079	13714748	Apple Inc.	Gesture Technology Partners, LLC
IPR2022-00341	2022-02-08	None	10506528	16363218	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00117	2021-11-03	2022-05-12	9843215	14636347	Apple Inc.	Scramoge Technology Ltd.
IPR2022-00118	2021-10-29	2022-05-12	10804740	16264360	Apple Inc.	Scramoge Technology Ltd.
IPR2021-00971	2021-06-09	2021-12-08	10595731	16588201	Apple Inc.	AliveCor, Inc.
IPR2021-00972	2021-06-09	2021-12-08	10638941	16158112	Apple Inc.	AliveCor, Inc.
IPR2021-00970	2021-06-09	2021-12-08	9572499	14730122	Apple Inc.	AliveCor, Inc.
IPR2021-00470	2021-02-11	2021-08-13	10259020	15851952	Apple Inc.	GUI Global Products, Ltd. DBA Gwee
IPR2021-00473	2021-02-05	2021-08-13	10589320	16698223	Apple Inc. GUI Global Products, Ltd. DBA Gwee	
IPR2021-00472	2021-02-05	2021-08-13	10562077	16460770	Apple Inc. GUI Global Products, Ltd. DBA Gwee	
IPR2021-00471	2021-02-05	2021-08-13	10259021	15852000	Apple Inc. GUI Global Products, Ltd. DBA Gwee	

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2020-00489	2020-02-05	2020-07-31	10015408	15424853	Apple Inc.	Corephotonics, Ltd.
IPR2022-00053	2021-10-15	None	10206025	15962305	Apple Inc.	Koss Corporation
IPR2022-00808	2022-04-06	None	8442501	13615365	Apple Inc. Samsung Electronics America, Inc. Samsung Electronics Co., Ltd.	Smart Mobile Technologies LLC
IPR2022-00766	2022-04-05	None	8824434	12912607	Samsung Electronics Co., Ltd. Apple Inc.	Smart Mobile Technologies LLC
PGR2022-00003	2021-10-20	None	10600046	14728349	Apple Inc.	RFCyber Corp.
IPR2022-00465	2022-01-19	None	8731124	13468855	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00464	2022-01-19	None	10193600	15105648	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00850	2022-04-15	None	11039312	17153522	Apple Inc.	Ericsson, Inc
IPR2022-00651	2022-03-10	None	6603343	10171983	Apple Inc. LG Electronics, Inc. Samsung Electronics Co., Ltd.	Arigna Technology Limited
IPR2022-00716	2022-04-06	None	9705400	14889892	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00736	2022-04-04	None	6879849	10081013	Apple Inc. Telefonaktiebolaget LM Ericsson	
IPR2022-00715	2022-04-01	None	8792454	13554711	Apple Inc.	Ericson Enterprises Inc
IPR2022-00648	2022-03-01	None	9860044	15350360	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00573	2022-02-10	None	7825537	12271023	Apple Inc.	Scramoge Technology Ltd.
IPR2022-00120	2021-10-29	2022-05-04	9997962	14901426	Apple Inc.	Scramoge Technology Ltd.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2020-01646	2020-10-01	2021-05-06	7672985	11554241	Apple Inc.	Sentius International, LLC
IPR2020-01737	2020-09-30	2021-05-12	10709366	16829510	Apple Inc.	Masimo Corporation
IPR2022-00348	2022-02-15	None	10484915	16211399	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2021-00453	2021-01-22	2021-08-06	10517484	16506885	Apple Inc.	Omni MedSci, Inc.
IPR2020-01713	2020-09-30	2021-05-05	10624564	16725292	Apple Inc.	Masimo Corporation
IPR2022-00807	2022-04-06	None	9756168	10911211	Apple Inc. Samsung Electronics America, Inc. Samsung Electronics Co., Ltd.	Smart Mobile Technologies LLC
IPR2020-01733	2020-09-30	2021-05-05	10702195	16834467	Apple Inc.	Masimo Corporation
IPR2020-01716	2020-09-30	2021-05-05	10702194	16829536	Apple Inc.	Masimo Corporation
IPR2022-00073	2021-10-22	None	10820147	16788498	Apple Inc.	Traxcell Technologies, LLC
IPR2022-00455	2022-01-19	None	10165601	15619766	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00461	2022-02-15	None	9277436	14311606	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2022-00459	2022-01-19	None	8798658	13001687	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00032	2021-11-08	None	9552376	14193426	Apple Inc.	MemoryWeb, LLC
IPR2017-01668	2017-06-22	2018-01-19	8724622	13546673	LG Electronics, Inc. Huawei Device Co., Ltd. Apple Inc. WhatsApp Inc. Facebook, Inc.	Uniloc Luxembourg S.A. Uniloc USA, Inc.
IPR2022-00600	2022-02-23	None	8620039	12063650	Apple Inc.	CPC Patent Technologies PTY, LTD.

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IPR2022-00602	2022-02-23	None	9665705	15000818	Apple Inc.	CPC Patent Technologies PTY, LTD.
IPR2022-00601	2022-02-23	None	9269208	13572166	Apple Inc.	CPC Patent Technologies PTY, LTD.
IPR2021-00144	2020-11-06	2021-06-15	8095879	10315250	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Neonode Smartphone LLC
IPR2022-00173	2021-11-11	None	9507948	13918214	Apple Inc.	Identity Security LLC
IPR2022-00172	2021-11-11	None	8489895	13208035	Apple Inc.	Identity Security LLC
IPR2022-00170	2021-11-11	None	7493497	09658387	Apple Inc.	Identity Security LLC
IPR2022-00171	2021-11-11	None	8020008	12350139	Apple Inc.	Identity Security LLC
IPR2021-00145	2020-11-06	2021-06-16	8812993	13310755	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Neonode Smartphone LLC
IPR2022-00626	2022-02-22	None	9319211	14239454	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00607	2022-02-15	None	10517133	16380844	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00462	2022-02-15	None	9832726	15235734	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00188	2021-11-15	None	10469934	16375879	Apple Inc.	Koss Corporation
IPR2022-00561	2022-02-08	None	10306669	16203391	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00560	2022-02-08	None	10285150	14532781	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00619	2022-02-25	None	10516513	16196182	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericson Enterprises Inc

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IPR2022-00456	2022-02-08	None	10264569	15483171	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00467	2022-02-01	None	10476722	16204265	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00466	2022-02-01	None	10491348	16226346	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2020-01715	2020-09-30	2021-04-13	10631765	16725478	Apple Inc.	Masimo Corporation
IPR2020-01714	2020-09-30	2021-04-13	10631765	16725478	Apple Inc.	Masimo Corporation
IPR2020-01538	2020-09-02	2021-03-02	10588554	16544713	Apple Inc.	Masimo Corporation
IPR2020-01539	2020-09-02	2021-03-02	10588554	16544713	Apple Inc.	Masimo Corporation
IPR2020-01521	2020-09-02	2021-04-14	10292628	16261326	Apple Inc.	Masimo Corporation
IPR2020-01537	2020-08-31	2021-03-02	10588553	16534949	Apple Inc.	Masimo Corporation
IPR2020-01536	2020-08-31	2021-03-02	10588553	16534949	Apple Inc.	Masimo Corporation
IPR2020-01520	2020-08-31	2021-03-02	10258265	16212440	Apple Inc.	Masimo Corporation
IPR2017-00319	2016-11-23	2017-06-06	8923941	14184396	Apple Inc.	Valencell, Inc.
IPR2022-00618	2022-02-25	None	9313178	14266368	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2020-01193	2020-07-22	2021-03-04	8421619	13356643	Apple Inc.	LBT IP I LLC
IPR2020-01192	2020-07-22	2021-03-04	8421618	11969905	Apple Inc.	LBT IP I LLC
IPR2020-01191	2020-07-22	2021-03-04	8102256	11969905	Apple Inc.	LBT IP I LLC
IPR2020-01189	2020-07-22	2021-03-04	8497774	12419451	Apple Inc.	LBT IP I LLC
IPR2020-01190	2020-07-22	2021-03-04	8542113	13356614	Apple Inc.	LBT IP I LLC

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IPR2021-01553	2021-09-22	2022-03-15	9549388	15099960	Apple Inc.	Traxcell Technologies, LLC
IPR2018-01429	2018-07-27	2019-02-15	8229043	12053371	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2022-00457	2022-02-01	None	9509440	14390904	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2022-00349	2022-02-15	None	10374768	16195959	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00532	2022-02-03	None	9490652	14148952	Apple Inc.	Scramoge Technology Ltd.
IPR2022-00529	2022-02-02	None	10193392	15110665	Apple Inc.	Scramoge Technology Ltd.
IPR2022-00343	2022-02-08	None	9300432	13660158	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2022-00338	2022-02-01	None	8995357	12664347	Apple Inc.	Ericsson, Inc Telefonaktiebolaget LM Ericsson
IPR2022-00337	2022-02-01	None	10454655	16203450	Apple Inc.	Ericsson, Inc Telefonaktiebolaget LM Ericsson
IPR2021-01292	2021-07-30	None	10589320	16698223	Apple Inc.	GUI Global Products, Ltd. DBA Gwee
IPR2021-01290	2021-07-30	None	10259021	15852000	Apple Inc.	GUI Global Products, Ltd. DBA Gwee
IPR2021-01291	2021-07-30	None	10562077	16460770	Apple Inc.	GUI Global Products, Ltd. DBA Gwee
IPR2021-01289	2021-07-30	None	10259020	15851952	Apple Inc.	GUI Global Products, Ltd. DBA Gwee
IPR2021-01590	2021-10-04	None	8416862	11237341	Apple Inc.	Bell Northern Research, LLC
IPR2021-01591	2021-10-04	None	7957450	12506053	Apple Inc.	Bell Northern Research, LLC
IPR2021-01589	2021-10-04	None	7319889	11516316	Apple Inc.	Bell Northern Research, LLC
IPR2021-01588	2021-10-04	None	8204554	11945505	Apple Inc.	Bell Northern Research, LLC

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IPR2022-00119	2021-10-29	None	10424941	15884020	Apple Inc.	Scramoge Technology Ltd.
IPR2020-00861	2020-05-06	2020-12-09	10230898	15324720	Apple Inc.	Corephotonics, Ltd.
IPR2020-00862	2020-05-06	2020-12-09	10356332	16241505	Apple Inc.	Corephotonics, Ltd.
IPR2020-00896	2020-05-05	2020-12-08	10317647	15976422	Apple Inc.	Corephotonics, Ltd.
IPR2020-00897	2020-05-04	2020-12-08	10324277	15817235	Apple Inc.	Corephotonics, Ltd.
IPR2018-01146	2018-05-23	2018-12-07	9568712	15170472	Apple Inc.	Corephotonics, Ltd.
IPR2020-00906	2020-05-06	2020-11-12	10225479	16048242	Apple Inc.	Corephotonics, Ltd.
IPR2020-00905	2020-05-06	2020-11-12	10225479	16048242	Apple Inc.	Corephotonics, Ltd.
IPR2020-00860	2020-05-01	2020-11-05	10326942	15865869	Apple Inc.	Corephotonics, Ltd.
IPR2020-00487	2020-02-28	2020-09-14	9661233	14880251	Apple Inc.	Corephotonics, Ltd.
IPR2020-00878	2020-05-01	2020-11-03	10330897	15976391	Apple Inc.	Corephotonics, Ltd.
IPR2020-00877	2020-04-30	2020-11-03	10288840	15540676	Apple Inc.	Corephotonics, Ltd.
IPR2021-00693	2021-03-23	None	10469934	16375879	Apple Inc.	Koss Corporation
IPR2021-00686	2021-03-22	None	10491982	16528701	Apple Inc.	Koss Corporation
IPR2021-00679	2021-03-22	None	10506325	16528703	Apple Inc.	Koss Corporation
IPR2020-00687	2020-03-18	2020-09-23	9451084	13462819	Apple Inc.	Parus Holdings Inc.
IPR2020-00686	2020-03-18	2020-09-23	7076431	10821690	Apple Inc.	Parus Holdings Inc.
IPR2021-00626	2021-03-17	2021-09-30	10206025	15962305	Apple Inc.	Koss Corporation
IPR2020-00466	2020-02-28	None	8411557	13333805	Apple Inc.	Optis Wireless Technology, LLC

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IPR2020-00465	2020-02-28	None	8102833	12209136	Apple Inc.	Optis Wireless Technology, LLC
IPR2018-01133	2018-05-22	2018-12-04	9538152	14386823	Apple Inc.	Corephotonics, Ltd.
IPR2019-00614	2019-01-23	2019-08-19	9779419	14848191	Apple Inc.	Firstface Co., Ltd.
IPR2019-00613	2019-01-23	2019-08-05	9633373	14848156	Apple Inc.	Firstface Co., Ltd.
IPR2019-00612	2019-01-23	2019-08-05	8831557	13590483	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Firstface Co., Ltd.
IPR2015-01047	2015-04-14	2015-10-07	7490151	10259494	Apple Inc. Mangrove Partners Master Fund Ltd Black Swamp IP, LLC	VirnetX Inc.
IPR2015-01046	2015-04-14	2015-10-07	6502135	09504783	Apple Inc. Mangrove Partners Master Fund Ltd	VirnetX Inc.
IPR2020-01540	2020-09-10	2021-03-16	7020514	10305691	Apple Inc.	Microlife Corporation
IPR2019-00030	2018-10-03	2019-04-16	9857568	15418925	Apple Inc.	Corephotonics, Ltd.
IPR2018-01140	2018-05-22	2018-12-04	9402032	14932319	Apple Inc.	Corephotonics, Ltd.
IPR2021-00546	2021-02-22	2021-09-07	10206025	15962305	Apple Inc.	Koss Corporation
IPR2020-00320	2019-12-18	2020-06-23	7446338	11235579	Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd. Samsung Display Co., Ltd.	Solas OLED Ltd.
IPR2020-00019	2019-10-28	None	8843125	13310091	Apple Inc.	Fintiv, Inc.
IPR2021-00285	2020-12-04	2021-06-11	10468047	16185786	Apple Inc. Beats Electronics, LLC	One-E-Way, Inc.
IPR2021-00287	2020-12-04	2021-06-11	10129627	15003242	Apple Inc. Beats Electronics, LLC	One-E-Way, Inc.

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IPR2021-00284	2020-12-04	2021-06-11	10468047	16185786	Apple Inc. Beats Electronics, LLC	One-E-Way, Inc.
IPR2021-00286	2020-12-04	2021-06-11	10129627	15003242	Apple Inc. Beats Electronics, LLC	One-E-Way, Inc.
IPR2021-00283	2020-12-04	2021-06-11	8131391	12940747	Apple Inc. Beats Electronics, LLC	One-E-Way, Inc.
IPR2019-01667	2019-10-16	2020-04-21	7020252	09961996	Apple Inc.	Uniloc 2017 LLC
IPR2020-00175	2019-12-11	2020-06-17	10188299	15594053	Apple Inc.	Omni MedSci, Inc.
IPR2016-01201	2016-06-15	2016-11-21	8542815	12513147	Apple Inc.	Voip-Pal.com, Inc.
IPR2016-01198	2016-06-15	2016-11-21	9179005	13966096	Apple Inc.	Voip-Pal.com, Inc.
IPR2020-01723	2020-10-02	None	10470695	16226249	Apple Inc.	Masimo Corporation
IPR2020-01635	2020-10-02	2021-04-19	9749284	14890986	Apple Inc.	Blix Inc.
IPR2021-00221	2020-11-23	None	10455066	15563937	Apple Inc.	Pinn, Inc.
IPR2021-00220	2020-11-23	None	10455066	15563937	Apple Inc.	Pinn, Inc.
IPR2020-01668	2020-09-25	None	9807491	15625935	Apple Inc.	Pinn, Inc.
IPR2019-01471	2019-08-09	2020-02-11	6836654	09739507	Apple Inc. Microsoft Corporation Motorola Mobility LLC	Uniloc 2017 LLC
IPR2021-00047	2020-12-14	None	7203517	10625723	Apple Inc.	Maxell, Ltd.
IPR2020-00201	2019-12-19	2020-06-19	7116438	10747267	Apple Inc.	Maxell, Ltd.
IPR2021-00400	2021-01-12	None	10129590	15208886	Apple Inc.	Maxell, Ltd.
IPR2021-00367	2020-12-23	None	10176848	14478020	Apple Inc.	Maxell, Ltd.

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IPR2021-00362	2020-12-23	None	8982086	14154993	Apple Inc.	Maxell, Ltd.
IPR2020-00204	2019-12-20	2020-06-19	6928306	09755878	Apple Inc.	Maxell, Ltd.
IPR2020-00202	2019-12-19	2020-07-15	10212586	13874535	Apple Inc.	Maxell, Ltd.
IPR2020-00199	2019-12-19	2020-06-19	6329794	09657151	Apple Inc.	Maxell, Ltd.
IPR2020-00200	2019-12-19	2020-07-15	10084991	15837402	Apple Inc.	Maxell, Ltd.
PGR2020-00073	2020-07-01	None	10609198	15694736	Apple Inc.	Pinn, Inc.
PGR2020-00066	2020-06-11	None	10455066	15563937	Apple Inc.	Pinn, Inc.
IPR2020-00999	2020-06-11	None	9807491	15625935	Apple Inc.	Pinn, Inc.
IPR2020-01546	2020-09-11	None	7573068	11232368	Apple Inc.	Solas OLED Ltd.
IPR2020-01287	2020-08-17	None	9411472	13314858	Apple Inc.	Neodron, Ltd.
IPR2020-01331	2020-07-29	None	7821502	11428670	Apple Inc.	Neodron, Ltd.
IPR2019-01337	2019-07-16	2020-01-21	7136999	09597198	Apple Inc.	Uniloc 2017 LLC
IPR2019-01352	2019-07-22	2020-01-23	7558730	11824794	Apple Inc.	Advanced Voice Recognition Systems Incorporated
IPR2020-01275	2020-07-22	2020-12-21	7446338	11235579	Apple Inc.	Solas OLED Ltd.
IPR2019-01258	2019-06-21	2020-01-08	6611289	09232769	Apple Inc.	Yu et al.
IPR2020-01059	2020-06-08	2020-12-18	6072450	08976217	Apple Inc.	Solas OLED Ltd.
IPR2020-00701	2020-03-11	2020-08-12	6836654	09739507	Samsung Electronics America, Inc. Motorola Mobility LLC Apple Inc. Samsung Electronics Co., Ltd.	Uniloc 2017 LLC
IPR2019-00875	2019-04-03	None	6397186	09469707	Apple Inc.	SpeakWare, Inc.

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IPR2019-00874	2019-04-03	None	6397186	09469707	Apple Inc.	SpeakWare, Inc.
IPR2020-01119	2020-06-17	2020-11-23	7821425	11279402	Samsung Electronics America, Inc. Apple Inc. Microsoft Corporation Samsung Electronics Co., Ltd.	Neodron, Ltd.
IPR2020-00778	2020-04-16	2020-09-14	7821425	11279402	Apple Inc. Microsoft Corporation	Neodron, Ltd.
IPR2020-01229	2020-07-29	2021-01-21	9823784	12421705	Apple Inc.	Neodron, Ltd.
IPR2020-01000	2020-06-16	2020-12-15	8749251	13116764	Apple Inc. Microsoft Corporation	Neodron, Ltd.
IPR2020-00998	2020-06-16	2020-12-15	8749251	13116764	Apple Inc. Microsoft Corporation	Neodron, Ltd.
IPR2020-00779	2020-04-10	2020-09-14	7903092	11750430	Apple Inc. Microsoft Corporation	Neodron, Ltd.
IPR2020-00209	2019-12-11	None	10213113	16016649	Apple Inc.	Omni MedSci, Inc.
IPR2020-01224	2020-08-07	None	10163103	14814740	Apple Inc.	Universal Secure Registry LLC
IPR2020-01225	2020-08-07	None	10163103	14814740	Apple Inc.	Universal Secure Registry LLC
IPR2020-01223	2020-07-20	None	9928495	15691378	Apple Inc.	Universal Secure Registry LLC
IPR2020-01221	2020-07-20	None	9947000	15691359	Apple Inc.	Universal Secure Registry LLC
IPR2020-01222	2020-07-20	None	9928495	15691378	Apple Inc.	Universal Secure Registry LLC
IPR2018-00395	2017-12-22	2018-06-29	6622018	09558413	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-00394	2017-12-22	2018-06-29	6622018	09558413	Apple Inc.	Uniloc Luxembourg S.A.
IPR2020-01220	2020-07-20	None	9947000	15691359	Apple Inc.	Universal Secure Registry LLC

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IPR2020-01254	2020-07-24	2021-01-15	9885782	13374915	Apple Inc.	NavBlazer, LLC
IPR2019-00824	2019-03-29	2019-11-06	9712502	15376558	Apple Inc.	MPH Technologies Oy
IPR2019-00823	2019-03-29	2019-11-06	9712494	15372208	Apple Inc.	MPH Technologies Oy
IPR2019-00826	2019-03-29	2019-11-07	9838362	15609312	Apple Inc.	MPH Technologies Oy
IPR2020-01253	2020-07-24	None	9075136	09259957	Apple Inc.	NavBlazer, LLC
IPR2020-00488	2020-02-05	2020-08-03	10015408	15424853	Apple Inc.	Corephotonics, Ltd.
IPR2019-00918	2019-04-12	2019-10-16	8369298	13463540	Apple Inc.	Uniloc 2017 LLC
IPR2019-00820	2019-03-27	2019-10-07	7937581	12560481	Apple Inc.	MPH Technologies Oy
IPR2019-00821	2019-03-27	2019-10-07	8037302	10490933	Apple Inc.	MPH Technologies Oy
IPR2019-00819	2019-03-27	2019-09-27	7620810	10490932	Apple Inc.	MPH Technologies Oy
IPR2020-00707	2020-04-10	2020-10-22	9712476	15140284	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00584	2020-02-14	2020-09-01	9603056	15205036	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00506	2020-02-04	2020-09-01	9769176	15362130	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00491	2020-02-03	2020-07-08	9712986	13427748	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00490	2020-01-31	2020-07-08	9473914	14583726	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00280	2020-01-03	2020-08-14	10027619	14609189	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC

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IPR2020-00255	2019-12-30	2020-07-28	9516127	14223689	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2020-00235	2019-12-27	2020-07-28	10091734	15595104	Apple Inc.	CF SVN LL SEVEN Networks, LLC
IPR2020-00285	2019-12-24	2020-07-28	10039029	15829310	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00279	2019-12-24	2020-08-14	9712476	15140284	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2020-00266	2019-12-23	2020-08-14	10135771	15639014	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2020-00236	2019-12-23	2020-07-28	9369539	14467881	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00180	2019-12-18	2020-08-14	9648557	14506622	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2020-00157	2019-12-05	2020-06-15	10110534	15338238	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2020-00156	2019-12-05	2020-06-15	10110534	15338238	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC

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IPR2020-00188	2019-12-02	2020-06-11	9608968	14623514	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2019-00186	2018-11-12	None	9552633	14201261	Apple Inc.	Qualcomm Incorporated
IPR2019-00185	2018-11-12	None	9552633	14201261	Apple Inc.	Qualcomm Incorporated
IPR2020-00224	2019-12-18	2020-04-06	7075917	09973312	Apple Inc.	Uniloc 2017 LLC
IPR2019-00973	2019-04-19	2019-11-19	7075917	09973312	Apple Inc. Microsoft Corporation Ericsson, Inc	Uniloc 2017 LLC
IPR2017-00626	2017-01-09	2017-07-24	6363345	09252874	Apple Inc.	Andrea Electronics Corporation
IPR2019-00916	2019-04-10	2019-10-18	9651533	14875709	Apple Inc.	Omni MedSci, Inc.
IPR2020-00854	2020-04-23	None	6467088	09343607	Apple Inc.	Uniloc 2017 LLC
IPR2020-00857	2020-05-15	None	6703963	10247065	Apple Inc.	Princeps Secundus LLC
IPR2020-00425	2020-02-21	None	9438550	14873143	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2020-00507	2020-02-04	2020-09-01	10243962	15899947	Apple Inc.	CF SVN LLC SEVEN Networks, LLC
IPR2019-00181	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC
IPR2019-00141	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC
IPR2019-00140	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC
IPR2019-00139	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC
IPR2019-00125	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC

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IPR2019-00124	2018-11-08	None	7039033	09850399	Apple Inc.	IXI IP, LLC
IPR2019-00700	2019-02-22	2019-08-26	8406116	13193579	Apple Inc.	Uniloc 2017 LLC
IPR2019-00701	2019-02-22	2019-08-28	8018877	13079767	Apple Inc.	Uniloc 2017 LLC
IPR2019-00359	2018-11-29	2019-08-05	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00358	2018-11-29	2019-08-05	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00702	2019-02-22	2019-08-14	7969925	12832576	Apple Inc.	Uniloc 2017 LLC
IPR2020-00642	2020-02-28	None	9001774	14078204	Apple Inc.	Unwired Planet International Limited
IPR2020-00597	2020-03-17	None	8339493	12845266	Apple Inc.	Maxell, Ltd.
IPR2020-00281	2020-01-03	None	10027619	14609189	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2019-00611	2019-01-23	2019-08-05	8831557	13590483	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Firstface Co., Ltd.
IPR2019-00251	2018-11-12	2019-07-22	6993049	09876514	Apple Inc. LG Electronics, Inc. LG Electronics Mobilecomm U.S.A., Inc.	Uniloc 2017 LLC
IPR2019-00048	2018-11-08	2019-07-10	9154356	13590423	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2019-00047	2018-11-08	2019-07-09	9154356	13590423	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2019-01012	2019-04-24	2019-10-28	9779419	14848191	Apple Inc.	Firstface Co., Ltd.
IPR2019-01011	2019-04-24	2019-10-25	9633373	14848156	Apple Inc.	Firstface Co., Ltd.

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IPR2019-00049	2018-11-08	2019-07-10	9154356	13590423	Intel Corporation Apple Inc.	Qualcomm Incorporated
IPR2020-00696	2020-03-27	None	6091956	08873965	Apple Inc.	LBS Innovations LLC
IPR2020-00254	2019-12-30	None	9516127	14223689	CF SVN LLC Apple Inc. SEVEN Networks, LLC VLSI Technology LLC CF VLSI Holdings LLC	
IPR2020-00408	2020-01-13	None	6430498	09613634	Apple Inc.	Maxell, Ltd.
IPR2020-00407	2020-01-13	None	6748317	10428755	Apple Inc.	Maxell, Ltd.
IPR2020-00409	2020-01-13	None	6580999	10173423	Apple Inc.	Maxell, Ltd.
IPR2020-00203	2019-12-20	None	6408193	09436502	Apple Inc.	Maxell, Ltd.
IPR2020-00189	2019-12-02	2020-06-11	9608968	14623514	Apple Inc.	CF SVN LLC VLSI Technology LLC SEVEN Networks, LLC CF VLSI Holdings LLC
IPR2019-00377	2018-11-30	2019-05-31	6176947	09417169	Apple Inc.	Singapore Asahi Chemical & Solder Industries PTE Ltd
IPR2019-00510	2019-01-10	2019-07-25	6868079	09455124	LG Electronics, Inc. LG Electronics Mobilecomm U.S.A., Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Uniloc 2017 LLC
IPR2019-00252	2018-11-12	2019-06-04	7167487	10151087	LG Electronics Mobilecomm U.S.A., Inc. Samsung Electronics America, Inc. LG Electronics, Inc. Apple Inc. Samsung Electronics Co., Ltd. BlackBerry Corporation	Uniloc 2017 LLC

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IPR2019-00222	2018-11-12	2019-06-04	7167487	10151087	LG Electronics Mobilecomm U.S.A., Inc. Samsung Electronics America, Inc. LG Electronics, Inc. Apple Inc. Samsung Electronics Co., Ltd. BlackBerry Corporation	Uniloc 2017 LLC
IPR2019-00277	2018-11-09	2019-05-10	8351895	12554517	Apple Inc.	Zomm, LLC
IPR2019-00275	2018-11-09	2019-05-10	8351895	12554517	Apple Inc.	Zomm, LLC
IPR2019-00825	2019-03-29	2019-11-06	9762397	13685544	Apple Inc.	MPH Technologies Oy
IPR2019-00822	2019-03-29	2019-10-07	8346949	10500930	Apple Inc.	MPH Technologies Oy
IPR2019-00219	2018-11-12	2019-05-09	7020106	09920041	LG Electronics Mobilecomm U.S.A., Inc. Samsung Electronics America, Inc. LG Electronics, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Uniloc 2017 LLC
CBM2015-00160	2015-07-17	2015-09-11	7774280	10956121	Apple Inc. Google Inc.	ContentGuard Holdings, Inc.
CBM2015-00040	2014-12-09	2015-06-24	7774280	10956121	Apple Inc. Google Inc.	ContentGuard Holdings, Inc.
IPR2019-00054	2018-11-09	2019-07-08	6304612	09316985	Apple Inc.	Uniloc 2017 LLC
IPR2020-00029	2019-10-17	2020-04-22	10098546	15860065	Apple Inc.	Omni MedSci, Inc.
IPR2018-01476	2018-08-21	2019-04-12	7764711	11767124	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC
IPR2018-01473	2018-08-21	2019-03-29	6611676	10083553	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC

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IPR2019-01065	2019-05-06	2019-11-08	9245314	14485612	Apple Inc.	Red.com, LLC
IPR2019-01064	2019-05-06	2019-11-07	9230299	14485611	Apple Inc.	Red.com, LLC
IPR2018-01460	2018-07-27	2019-03-15	9024418	13829864	Apple Inc.	Qualcomm Incorporated
IPR2018-01555	2018-08-22	2019-03-07	7848439	11719611	Apple Inc. HTC Corporation	INVT SPE LLC
IPR2019-01030	2019-04-30	None	8351895	12554517	Apple Inc.	Zomm, LLC
IPR2018-01281	2018-06-29	2019-02-25	8768865	13269516	Apple Inc.	Qualcomm Incorporated
IPR2018-01282	2018-06-29	2019-02-25	8768865	13269516	Apple Inc.	Qualcomm Incorporated
IPR2020-00036	2019-11-05	None	8457228	13198568	Apple Inc.	Rembrandt Wireless Technologies, LP
IPR2020-00037	2019-11-05	None	8457228	13198568	Apple Inc.	Rembrandt Wireless Technologies, LP
IPR2020-00033	2019-11-05	None	8023580	12543910	Apple Inc.	Rembrandt Wireless Technologies, LP
IPR2020-00034	2019-11-05	None	8023580	12543910	Apple Inc.	Rembrandt Wireless Technologies, LP
IPR2018-00289	2017-12-08	2018-06-11	8872646	12247950	Apple Inc. Samsung Electronics America, Inc.	Uniloc Luxembourg S.A.
IPR2018-01276	2018-06-28	2019-02-15	8971861	13863714	Apple Inc.	Qualcomm Incorporated
IPR2019-00233	2018-11-07	2019-04-30	7373795	11005687	Apple Inc. August Home, Inc. Assa Abloy AB Assa Abloy Inc.	Mark W. Kilbourne
IPR2018-00282	2017-12-06	2018-06-08	7092671	09727727	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01475	2018-08-21	2019-03-29	7760815	11431606	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC

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IPR2018-01252	2018-07-02	2019-02-28	8683362	12416279	Apple Inc.	Qualcomm Incorporated
IPR2018-00456	2018-01-11	2018-08-03	6446127	09451388	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01452	2018-07-27	2019-03-18	7834591	11356594	Apple Inc.	Qualcomm Incorporated
IPR2018-01283	2018-07-27	2019-03-18	7834591	11356594	Apple Inc.	Qualcomm Incorporated
IPR2018-01335	2018-07-03	2019-03-18	8838949	13052516	Apple Inc. Intel Corporation	Qualcomm Incorporated
IPR2018-01453	2018-07-27	None	7834591	11356594	Apple Inc.	Qualcomm Incorporated
IPR2018-01478	2018-08-21	2019-02-19	6760590	10089605	Apple Inc. ZTE Corporation	INVT SPE LLC
IPR2018-01315	2018-06-29	2019-01-18	8063674	12365559	Apple Inc.	Qualcomm Incorporated
IPR2018-01316	2018-06-29	2019-01-18	8063674	12365559	Apple Inc.	Qualcomm Incorporated
IPR2018-01279	2018-06-22	2019-02-01	7844037	11200511	Apple Inc.	Qualcomm Incorporated
IPR2018-01249	2018-06-18	2019-01-15	7693002	11548132	Apple Inc.	Qualcomm Incorporated
IPR2018-01589	2018-08-23	2019-02-27	7653508	11644455	LG Electronics, Inc. Samsung Electronics America, Inc. Apple Inc. HTC Corporation	Uniloc 2017 LLC
IPR2018-01472	2018-08-21	2019-02-27	6466563	09147831	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC
IPR2019-01574	2019-09-11	None	7339949	10222989	Apple Inc. ZTE Corporation HTC Corporation	INVT SPE LLC
IPR2019-00913	2019-04-10	2019-10-16	9651533	14875709	Apple Inc.	Omni MedSci, Inc.

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IPR2018-01275	2018-06-21	2019-02-14	9203940	13117729	Apple Inc.	Qualcomm Incorporated
IPR2019-00917	2019-04-10	2019-10-17	9757040	15357136	Apple Inc.	Omni MedSci, Inc.
IPR2019-00915	2019-04-10	None	9885698	15212549	Apple Inc.	Omni MedSci, Inc.
IPR2019-00914	2019-04-10	2019-11-06	9861286	15686198	Apple Inc.	Omni MedSci, Inc.
IPR2019-00912	2019-04-10	None	9885698	15212549	Apple Inc.	Omni MedSci, Inc.
IPR2019-00911	2019-04-10	2019-11-06	9861286	15686198	Apple Inc.	Omni MedSci, Inc.
IPR2019-00910	2019-04-10	2019-10-17	9757040	15357136	Apple Inc.	Omni MedSci, Inc.
IPR2019-00727	2019-03-11	2019-09-05	8856539	11768729	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2019-00753	2019-02-28	2019-09-16	7587207	09876515	Apple Inc.	Uniloc 2017 LLC
CBM2018-00024	2018-05-03	2018-11-20	8577813	13237184	Apple Inc.	Universal Secure Registry LLC
CBM2018-00025	2018-05-03	2018-12-03	8577813	13237184	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2018-00884	2018-04-10	2018-10-02	8539552	10671375	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01277	2018-06-20	2019-01-22	8497928	11831051	Apple Inc.	Qualcomm Incorporated
IPR2018-01278	2018-06-20	2019-01-22	8497928	11831051	Apple Inc.	Qualcomm Incorporated
IPR2018-01250	2018-06-26	2019-01-18	8447132	12961400	Apple Inc.	Qualcomm Incorporated
IPR2018-01251	2018-06-26	2019-01-18	8447132	12961400	Apple Inc.	Qualcomm Incorporated
IPR2018-01245	2018-06-18	2019-01-16	8665239	13686692	Apple Inc.	Qualcomm Incorporated
IPR2018-01346	2018-07-06	2019-01-23	9535490	14568694	Intel Corporation Apple Inc.	Qualcomm Incorporated

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IPR2018-00424	2018-01-05	2018-08-02	7881902	12694135	LG Electronics, Inc. Samsung Electronics America, Inc. Apple Inc. HTC Corporation	Uniloc Luxembourg S.A.
IPR2019-01009	2019-05-13	2019-11-12	9948549	15788666	Apple Inc.	Voip-Pal.com, Inc.
IPR2019-01008	2019-05-13	2019-11-12	9826002	15405188	Apple Inc.	Voip-Pal.com, Inc.
IPR2019-01006	2019-05-13	2019-11-12	9813330	15396344	Apple Inc.	Voip-Pal.com, Inc.
IPR2019-01003	2019-05-13	2019-11-12	9537762	14877570	Apple Inc.	Voip-Pal.com, Inc.
IPR2018-01028	2018-05-04	2018-11-09	7881902	12694135	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01093	2018-05-29	2018-11-07	7944353	12130471	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01348	2018-07-13	2019-02-04	9185291	14365711	Apple Inc.	Corephotonics, Ltd.
IPR2018-01092	2018-05-29	2019-01-04	6961561	10047005	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-00813	2018-04-03	2018-10-09	9100826	14027860	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2018-00809	2018-04-04	2018-10-09	9530137	15019660	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2018-00810	2018-04-03	2018-10-09	9100826	14027860	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2018-00523	2018-01-23	2018-08-31	6661203	10011140	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-00728	2017-01-20	2017-08-21	7421032	11542950	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2017-00701	2017-01-20	2017-08-08	7421032	11542950	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2017-00700	2017-01-20	2017-08-04	7421032	11542950	Apple Inc.	California Institute of Technology

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					Broadcom Corporation	
IPR2017-00297	2016-12-12	2017-07-05	7916781	12165606	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2017-00219	2016-11-15	2017-06-30	7116710	09861102	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2017-00210	2016-11-15	2017-06-30	7116710	09861102	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2018-00389	2017-12-22	2018-06-27	8712723	13018321	Apple Inc.	Uniloc USA, Inc.
IPR2018-00387	2017-12-22	2018-07-23	7653508	11644455	LG Electronics, Inc. HTC Corporation Apple Inc.	Uniloc USA, Inc.
IPR2018-00361	2017-12-20	2018-07-16	6216158	09237609	Apple Inc.	Uniloc Luxembourg S.A. Uniloc 2017 LLC
IPR2013-00596	2013-09-18	2014-03-26	7802310	11980687	Apple Inc.	PersonalWeb Technologies LLC Level 3 Communications, LLC
IPR2019-00258	2018-11-12	2019-07-02	7093298	09942634	Apple Inc.	Uniloc Luxembourg S.A. Uniloc 2017 LLC
IPR2018-00294	2017-12-18	2018-05-21	6736759	09436515	Apple Inc.	Uniloc Luxembourg S.A.
IPR2019-00360	2018-11-29	2019-08-02	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00357	2018-11-29	None	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00356	2018-11-29	2019-07-22	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00355	2018-11-29	None	5796183	08601268	Apple Inc.	UUSI, LLC, DBA Nartron
IPR2019-00259	2018-11-12	2019-06-27	7075917	09973312	Apple Inc.	Uniloc 2017 LLC
IPR2019-00056	2018-10-17	2019-04-29	6467088	09343607	Apple Inc.	Uniloc 2017 LLC

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IPR2019-00220	2018-11-12	2019-05-09	7020106	09920041	LG Electronics Mobilecomm U.S.A., Inc. Samsung Electronics America, Inc. LG Electronics, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Uniloc 2017 LLC
IPR2018-01270	2018-06-21	2019-02-14	9203940	13117729	Apple Inc.	Qualcomm Incorporated
CBM2019-00026	2018-12-20	2019-06-11	8577813	13237184	Apple Inc. Visa Inc.	Universal Secure Registry LLC
CBM2019-00025	2018-12-20	2019-06-11	8577813	13237184	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2019-00112	2018-11-12	None	8683362	12416279	Apple Inc.	Qualcomm Incorporated
IPR2018-01353	2018-07-27	None	9024418	13829864	Apple Inc.	Qualcomm Incorporated
IPR2018-01285	2018-07-27	None	9024418	13829864	Apple Inc.	Qualcomm Incorporated
IPR2019-00958	2019-04-08	2019-05-30	7848439	11719611	Apple Inc.	INVT SPE LLC
IPR2019-00959	2019-04-08	2019-05-30	7848439	11719611	Apple Inc.	INVT SPE LLC
IPR2019-00325	2018-11-12	None	8656196	13863554	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00321	2018-11-12	None	8271812	12756006	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00322	2018-11-12	None	8443216	13590217	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00297	2018-11-11	None	8433940	13433246	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00296	2018-11-11	None	7383453	11213215	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.

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IPR2019-00276	2018-11-09	None	7355905	11173565	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00274	2018-11-09	None	7760559	12325476	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00270	2018-11-09	None	8098534	12791080	Qualcomm Technologies, Inc. Qualcomm Incorporated	Apple Inc.
IPR2019-00265	2018-11-09	None	6520699	09785813	Apple Inc.	Toshiyasu Abe
IPR2018-01477	2018-08-21	2019-03-07	7848439	11719611	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC
IPR2018-01474	2018-08-21	2019-03-05	7206587	10321623	Apple Inc. HTC Corporation ZTE Corporation	INVT SPE LLC
IPR2018-01253	2018-07-02	2019-02-28	8683362	12416279	Apple Inc.	Qualcomm Incorporated
IPR2018-01280	2018-06-22	None	7844037	11200511	Apple Inc.	Qualcomm Incorporated
CBM2018-00026	2018-05-03	2018-12-10	8577813	13237184	Apple Inc.	Universal Secure Registry LLC
IPR2018-00811	2018-04-12	2018-11-08	8856539	11768729	Apple Inc.	Universal Secure Registry LLC
CBM2018-00023	2018-04-12	None	8856539	11768729	Apple Inc.	Universal Secure Registry LLC
IPR2018-00808	2018-04-04	2018-10-09	9530137	15019660	Apple Inc.	Universal Secure Registry LLC
CBM2018-00022	2018-04-04	None	9530137	15019660	Apple Inc.	Universal Secure Registry LLC
IPR2017-00702	2017-02-16	None	8284833	13073947	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2017-00703	2017-02-16	None	8284833	13073947	Apple Inc. Broadcom Corporation	California Institute of Technology

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IPR2017-00211	2016-11-15	None	7116710	09861102	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2019-00174	2018-11-02	2019-05-16	9530137	15019660	Apple Inc. Visa Inc.	Universal Secure Registry LLC
IPR2017-01399	2017-05-09	2017-11-20	8542815	12513147	Apple Inc.	Voip-Pal.com, Inc.
IPR2017-01805	2017-07-20	None	8724622	13546673	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-01398	2017-05-09	2017-11-20	9179005	13966096	Apple Inc.	Voip-Pal.com, Inc.
IPR2017-00224	2016-11-14	2017-05-25	8724622	13546673	Apple Inc.	Uniloc Luxembourg S.A. Uniloc USA, Inc.
IPR2014-01567	2014-09-30	2015-04-15	5781752	08773992	Apple Inc.	Wisconsin Alumni Research Foundation
IPR2017-01804	2017-07-20	None	8724622	13546673	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-00223	2016-11-14	2017-05-25	8724622	13546673	Apple Inc.	Uniloc Luxembourg S.A. Uniloc USA, Inc.
IPR2017-00220	2016-11-14	2017-05-25	7535890	10740030	Apple Inc.	Uniloc Luxembourg S.A. Uniloc USA, Inc.
IPR2019-00524	2019-01-03	None	9445251	14633804	Apple Inc.	AGIS Software Development LLC
IPR2019-00523	2019-01-03	None	9445251	14633804	Apple Inc.	AGIS Software Development LLC
IPR2019-00432	2018-12-13	None	9408055	14695233	Apple Inc.	AGIS Software Development LLC
IPR2019-00411	2018-12-07	None	8213970	12324122	Apple Inc.	AGIS Software Development LLC
IPR2014-00319	2014-01-03	None	7177798	09861860	Apple Inc.	Rensselaer Polytechnic Institute
IPR2015-01444	2015-06-19	2015-12-30	7039033	09850399	Apple Inc. Samsung Electronics Co., Ltd.	IXI IP, LLC
IPR2014-00320	2014-01-03	None	7177798	09861860	Apple Inc.	Rensselaer Polytechnic Institute

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IPR2016-00923	2016-04-20	2016-08-23	5812789	08702911	HTC Corporation Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-00748	2016-03-21	2016-09-26	8519834	12860893	Apple Inc.	Masa LLC
IPR2016-00331	2015-12-28	2016-06-30	8504696	13337757	Apple Inc.	VirnetX Inc.
IPR2015-00578	2015-01-20	2015-07-21	8055820	12289825	Apple Inc.	Cellular Communications Equipment LLC
IPR2018-01471	2018-07-31	2019-02-27	9749829	14633764	Apple Inc.	AGIS Software Development LLC
IPR2018-00819	2018-03-22	2018-11-07	9467838	14529978	Apple Inc.	AGIS Software Development LLC
IPR2016-00847	2016-04-07	2016-08-23	5812789	08702911	LG Electronics MobileComm, U.S.A. LG Electronics, Inc. Apple Inc. HTC Corporation	Parthenon Unified Memory Architecture LLC
IPR2018-01356	2018-07-06	None	9568712	15170472	Apple Inc.	Corephotonics, Ltd.
IPR2018-01026	2018-05-07	2018-10-18	7653508	11644455	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-00420	2018-01-04	2018-08-06	6161134	09181431	Apple Inc.	Uniloc Luxembourg S.A.
IPR2018-01027	2018-05-04	2018-10-18	8712723	13018321	Apple Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2017-02202	2017-09-29	2018-05-01	8239852	12818906	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-01993	2017-08-22	2018-03-08	9414199	14188063	Apple Inc.	Uniloc Luxembourg S.A. Uniloc 2017 LLC
IPR2018-01417	2018-07-18	None	8847734	11024280	Apple Inc.	Ironworks Patents, LLC
IPR2018-01378	2018-07-10	None	6850150	09717862	Apple Inc.	Ironworks Patents, LLC
IPR2018-01344	2018-07-06	2019-01-23	9535490	14568694	Intel Corporation Apple Inc.	Qualcomm Incorporated

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IPR2018-00821	2018-03-22	2018-10-23	8213970	12324122	Apple Inc.	AGIS Software Development LLC
IPR2018-00818	2018-03-22	2018-10-03	9408055	14695233	Apple Inc.	AGIS Software Development LLC
IPR2018-00817	2018-03-22	2018-10-03	9445251	14633804	Apple Inc.	AGIS Software Development LLC
IPR2017-00225	2016-11-14	2017-05-25	8995433	14224125	WhatsApp Inc. Apple Inc. Snap Inc. Facebook, Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2017-00222	2016-11-14	2017-05-25	8243723	12398063	WhatsApp Inc. Apple Inc. Facebook, Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2017-00221	2016-11-14	2017-05-25	7535890	10740030	WhatsApp Inc. Apple Inc. Snap Inc. Facebook, Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2018-00695	2018-03-06	None	9289135	14540404	Apple Inc.	Valencell, Inc.
IPR2017-01947	2017-08-15	2018-02-26	9044180	13552117	Apple Inc.	Valencell, Inc.
IPR2017-01883	2017-07-28	2018-02-13	8942776	14298219	Apple Inc.	Valencell, Inc.
IPR2017-01703	2017-06-30	2018-01-24	8652040	11811844	Apple Inc.	Valencell, Inc.
IPR2017-01702	2017-06-30	2018-01-24	8652040	11811844	Apple Inc.	Valencell, Inc.
IPR2017-01701	2017-06-30	2018-01-26	8157730	11848878	Apple Inc.	Valencell, Inc.
IPR2017-00315	2016-11-23	2017-06-02	8929965	14274288	Apple Inc. Fitbit, Inc.	Valencell, Inc.
IPR2017-00627	2017-01-09	2017-07-24	6363345	09252874	Apple Inc.	Andrea Electronics Corporation
IPR2016-01738	2016-09-09	2017-03-20	8880862	13118122	Apple Inc.	Realtime Data, LLC DBA IXO Realtime Data LLC

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IPR2016-01737	2016-09-09	2017-03-14	8880862	13118122	Apple Inc.	Realtime Data, LLC DBA IXO
IPR2018-00580	2018-02-15	2018-08-21	8724622	13546673	Apple Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2018-00579	2018-02-15	2018-08-21	8724622	13546673	Apple Inc.	Uniloc USA, Inc. Uniloc Luxembourg S.A.
IPR2017-00337	2016-11-29	2017-06-02	9038163	13950877	Apple Inc.	VirnetX Inc.
IPR2017-00321	2016-11-23	2017-06-06	8923941	14184396	Apple Inc.	Valencell, Inc.
IPR2017-00318	2016-11-23	2017-06-05	8886269	14184364	Apple Inc. Fitbit, Inc.	Valencell, Inc.
IPR2017-00317	2016-11-23	2017-06-05	8989830	14484585	Apple Inc. Fitbit, Inc.	Valencell, Inc.
IPR2017-00423	2016-12-12	2017-07-05	7916781	12165606	Apple Inc. Broadcom Corporation	California Institute of Technology
IPR2016-01842	2016-10-11	2017-04-27	9189437	11467092	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01863	2016-10-11	2017-04-17	8504746	12891443	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01864	2016-10-11	2017-04-17	6470399	09331002	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01860	2016-10-11	2017-04-17	8966144	11467073	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01839	2016-10-11	2017-03-27	6470399	09331002	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01229	2016-06-20	2016-12-27	7881236	12538514	Microsoft Mobile Inc. (FKA Nokia Inc.) Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Apple Inc. Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC
IPR2016-01228	2016-06-20	2016-12-27	7881236	12538514	Microsoft Mobile Inc. (FKA Nokia Inc.)	Evolved Wireless, LLC

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					Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Apple Inc. Microsoft Corporation Microsoft Luxembourg International Mobile SARL	
IPR2016-00755	2016-03-14	2016-09-20	8191091	08485507	Apple Inc.	Personalized Media Communications, LLC
IPR2018-00286	2017-12-08	None	6137390	09304471	Apple Inc.	MEC Resources, LLC
IPR2016-01585	2016-08-18	2017-02-22	8904516	13911813	Apple Inc.	VirnetX Inc.
IPR2017-02041	2017-08-31	2018-03-08	8239852	12818906	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-01914	2017-08-04	2018-03-01	8838976	12703470	Apple Inc.	Uniloc Luxembourg S.A.
IPR2017-01704	2017-06-30	2018-01-24	8888701	13358102	Apple Inc.	Valencell, Inc.
IPR2016-01739	2016-09-09	2017-03-14	8880862	13118122	Apple Inc.	Realtime Data, LLC DBA IXO
CBM2015-00130	2015-05-08	2015-11-16	8118221	12943872	Apple Inc.	Smartflash LLC
CBM2015-00121	2015-05-06	2015-11-10	8794516	13438754	Apple Inc.	Smartflash LLC
IPR2016-01907	2016-09-29	2017-04-03	7808488	11693117	Apple Inc.	Immersion Corporation
IPR2016-01884	2016-09-23	2017-04-03	7336260	10285450	Apple Inc.	Immersion Corporation
IPR2016-01381	2016-07-08	2017-01-11	8773356	13362113	Apple Inc.	Immersion Corporation
IPR2016-01372	2016-07-07	2017-01-11	8659571	13773191	Apple Inc.	Immersion Corporation
IPR2017-00927	2017-02-21	2017-07-20	8218481	12303947	Microsoft Mobile Inc. (FKA Nokia Inc.) Apple Inc. Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC

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IPR2017-00068	2016-10-14	2017-02-23	8218481	12303947	Microsoft Mobile Inc. (FKA Nokia Inc.) Apple Inc. Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC
IPR2016-01349	2016-07-05	2017-01-12	8218481	12303947	Microsoft Mobile Inc. (FKA Nokia Inc.) Microsoft Mobile Inc. Samsung Electronics America, Inc. ZTE Corporation Microsoft Mobile Oy Apple Inc. HTC Corporation Microsoft Corporation Samsung Electronics Co., Ltd.	Evolved Wireless, LLC
IPR2016-00981	2016-05-02	2016-11-03	8218481	12303947	Microsoft Mobile Inc. (FKA Nokia Inc.) Apple Inc. Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC
IPR2016-00758	2016-03-23	2016-09-16	8218481	12303947	Microsoft Mobile Inc. (FKA Nokia Inc.) Apple Inc. Samsung Electronics America, Inc. ZTE Corporation Microsoft Mobile Oy HTC Corporation Microsoft Corporation Samsung Electronics Co., Ltd.	Evolved Wireless, LLC
IPR2017-01077	2017-03-13	2017-10-16	7260521	09830114	Apple Inc.	Saint Lawrence Communications LLC
IPR2016-01603	2016-08-12	2017-02-23	8581710	13603578	Apple Inc.	Immersion Corporation
IPR2016-01493	2016-07-26	2017-02-13	8457676	12665427	Apple Inc.	Cellular Communications Equipment LLC

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					HTC Corporation ZTE Corporation	
IPR2016-01203	2016-06-16	2016-12-16	5850482	08633896	LG Electronics, Inc. Apple Inc.	FastVDO LLC
IPR2016-01216	2016-06-17	2016-12-15	8966144	11467073	Panasonic Corporation (of North America) JVC KENWOOD Corporation Fujifilm North America Corporation Nikon Corporation Samsung Electronics America, Inc. Fujifilm Corporation Fujifilm Holdings Corporation Canon Financial Services, Inc. Olympus Corporation Apple Inc. Canon Inc. Samsung Electronics Co., Ltd.	Papst Licensing GmbH & Co. (KG)
IPR2016-01212	2016-06-17	2016-12-15	8966144	11467073	Panasonic Corporation (of North America) JVC KENWOOD Corporation Fujifilm North America Corporation Nikon Corporation Samsung Electronics America, Inc. Fujifilm Corporation Fujifilm Holdings Corporation Canon Financial Services, Inc. Olympus Corporation Apple Inc. Canon Inc. Samsung Electronics Co., Ltd.	Papst Licensing GmbH & Co. (KG)
IPR2016-01366	2016-07-08	2017-01-12	8090936	11551204	Apple Inc.	Realtime Data LLC
IPR2016-01365	2016-07-08	2017-01-18	7181608	09776267	Apple Inc.	Realtime Data LLC
IPR2016-01480	2016-07-22	2017-01-31	8867472	13637222	Apple Inc. HTC Corporation	Cellular Communications Equipment LLC

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					ZTE Corporation	
IPR2017-01244	2017-04-04	2017-10-25	6807524	09830276	Apple Inc.	Saint Lawrence Communications LLC
IPR2016-01177	2016-06-17	2016-12-21	7768965	12440869	Microsoft Mobile Inc. (FKA Nokia Inc.) Samsung Electronics America, Inc. ZTE Corporation Apple Inc. Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy HTC Corporation Microsoft Corporation Microsoft Luxembourg International Mobile SARL Samsung Electronics Co., Ltd.	Evolved Wireless, LLC
IPR2016-01209	2016-06-20	2016-12-21	7746916	11563909	Microsoft Mobile Inc. (FKA Nokia Inc.) Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Apple Inc. Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC
IPR2016-01208	2016-06-20	2016-12-21	7746916	11563909	Microsoft Mobile Inc. (FKA Nokia Inc.) Samsung Electronics America, Inc. ZTE Corporation Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Apple Inc. HTC Corporation Microsoft Corporation Microsoft Luxembourg International Mobile SARL Samsung Electronics Co., Ltd.	Evolved Wireless, LLC
IPR2017-01371	2017-05-04	None	7808488	11693117	Apple Inc.	Immersion Corporation
IPR2017-01369	2017-05-04	None	7336260	10285450	Apple Inc.	Immersion Corporation
IPR2017-01368	2017-05-04	None	8581710	13603578	Apple Inc.	Immersion Corporation

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IPR2017-01310	2017-04-21	2017-11-02	8749507	13441108	Apple Inc.	Immersion Corporation
IPR2017-00732	2017-01-20	2017-07-24	6377637	09614875	Apple Inc.	Andrea Electronics Corporation
IPR2017-00628	2017-01-09	2017-07-24	6049607	09157035	Apple Inc.	Andrea Electronics Corporation
IPR2016-00794	2016-03-25	2016-09-23	8090309	11967692	Apple Inc.	Chestnut Hill Sound Inc.
IPR2016-01500	2016-07-27	2017-02-13	8457022	12564536	Apple Inc.	Cellular Communications Equipment LLC
IPR2017-01075	2017-03-13	None	7151802	09830332	Apple Inc.	Saint Lawrence Communications LLC
IPR2016-01561	2016-08-12	2017-02-07	6233181	09251352	Apple Inc.	Limestone Memory Systems LLC
IPR2016-00622	2016-02-12	2016-08-22	7149511	09652734	Apple Inc. Samsung Electronics America, Inc. Samsung Electronics Co., Ltd.	Rosetta-Wireless Corp.
IPR2017-00897	2017-02-12	None	8773356	13362113	Apple Inc.	Immersion Corporation
IPR2017-00896	2017-02-12	None	8659571	13773191	Apple Inc.	Immersion Corporation
IPR2017-00887	2017-02-10	None	8619051	13195383	Apple Inc.	Immersion Corporation
IPR2016-01135	2016-06-02	2016-12-06	5812789	08702911	HTC Corporation Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-01121	2016-06-01	2016-12-05	5960464	08701890	HTC Corporation Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-01114	2016-05-31	2016-12-07	7777753	12424389	Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-00332	2015-12-28	2016-07-01	8504696	13337757	Apple Inc.	VirnetX Inc.
IPR2017-00316	2016-11-23	2017-06-05	8989830	14484585	Apple Inc.	Valencell, Inc.
IPR2016-00616	2016-02-12	2016-08-22	7149511	09652734	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc. Apple Inc.	Rosetta-Wireless Corp.

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IPR2016-00924	2016-04-20	2016-08-23	5960464	08701890	HTC Corporation Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-01840	2016-10-11	2017-04-17	9189437	11467092	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01841	2016-10-11	2017-04-17	9189437	11467092	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01777	2016-09-12	2017-03-23	8749507	13441108	Apple Inc.	Immersion Corporation
IPR2017-00679	2017-01-15	2017-05-24	8966144	11467073	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2017-00670	2017-01-15	2017-05-24	8966144	11467073	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2017-00158	2016-10-31	2017-03-10	8504746	12891443	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2017-00154	2016-10-31	2017-03-10	8966144	11467073	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01844	2016-10-11	2017-03-10	9189437	11467092	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01843	2016-10-11	2017-03-10	6470399	09331002	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2017-00156	2016-10-31	None	9189437	11467092	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01862	2016-10-11	None	8504746	12891443	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-01849	2016-10-11	2017-03-10	8966144	11467073	Apple Inc.	Papst Licensing GmbH & Co. (KG)
IPR2016-00753	2016-03-14	2016-09-20	7752649	08449097	Apple Inc.	Personalized Media Communications, LLC
IPR2016-00751	2016-03-14	2016-09-20	8752088	08483980	Apple Inc.	Personalized Media Communications, LLC
IPR2015-01879	2015-09-08	2016-03-04	8492933	13707119	Apple Inc.	Comarco Wireless Technologies, Inc.
IPR2015-01898	2015-09-12	2016-03-17	8434020	10343333	Apple Inc.	Core Wireless Licensing S.a.r.l.
IPR2015-01899	2015-09-12	2016-03-17	8713476	14063544	Apple Inc.	Core Wireless Licensing S.a.r.l.
IPR2016-01567	2016-08-12	2017-01-18	5894441	09050354	Apple Inc.	Limestone Memory Systems LLC

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IPR2016-01134	2016-06-02	2016-12-08	7542045	11956165	Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2016-01118	2016-06-01	2016-12-05	7321368	10174918	Apple Inc.	Parthenon Unified Memory Architecture LLC
IPR2015-01896	2015-09-11	2016-03-18	7072667	10029940	Apple Inc.	Core Wireless Licensing S.a.r.l.
IPR2015-01465	2015-07-01	2016-01-13	8725063	12906033	Apple Inc.	Chestnut Hill Sound Inc.
IPR2016-01371	2016-07-07	2017-01-11	8619051	13195383	Apple Inc.	Immersion Corporation
IPR2015-01902	2015-09-12	2016-02-17	7693552	12314382	Apple Inc.	Core Wireless Licensing S.a.r.l.
CBM2015-00133	2015-05-11	2015-11-16	8336772	13212047	Apple Inc. Google Inc.	Smartflash LLC
CBM2015-00131	2015-05-08	2015-11-16	8061598	13012541	Apple Inc.	Smartflash LLC
CBM2015-00127	2015-05-07	2015-11-10	7334720	11336758	Apple Inc.	Smartflash LLC
CBM2015-00124	2015-05-07	2015-11-10	7942317	12014558	Apple Inc.	Smartflash LLC
CBM2015-00123	2015-05-06	2015-11-10	8033458	12943847	Apple Inc.	Smartflash LLC
IPR2016-01185	2016-06-20	2016-12-19	7809373	11553939	Microsoft Mobile Inc. (FKA Nokia Inc.) Microsoft Luxembourg USA Mobile SARL Microsoft Mobile Oy Apple Inc. Microsoft Corporation Microsoft Luxembourg International Mobile SARL	Evolved Wireless, LLC
IPR2015-01175	2015-05-11	2015-11-17	8288952	13189865	Apple Inc. Motorola Mobility LLC	Global Touch Solutions, LLC
IPR2015-01173	2015-05-11	2015-11-17	7329970	11480868	Toshiba America Information Systems, Inc. Apple Inc. Motorola Mobility LLC	Global Touch Solutions, LLC
IPR2015-01616	2015-07-23	2016-01-28	7265494	10961373	Apple Inc. Toshiba America Information Systems, Inc.	Global Touch Solutions, LLC

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IPR2015-01443	2015-06-19	2015-12-30	7295532	09932180	Apple Inc. Samsung Electronics Co., Ltd.	IXI IP, LLC
IPR2015-01445	2015-06-18	2015-12-30	7016648	10298753	Apple Inc. Samsung Electronics Co., Ltd.	IXI IP, LLC
IPR2015-01446	2015-06-18	2015-12-30	7016648	10298753	Apple Inc. Samsung Electronics Co., Ltd.	IXI IP, LLC
CBM2016-00053	2016-04-05	None	9009060	11190633	Apple Inc.	Ameranth, Inc.
IPR2015-01603	2015-07-23	2015-12-02	7498749	11928964	Toshiba America Information Systems, Inc. Toshiba Corporation Apple Inc.	Global Touch Solutions, LLC
IPR2015-00871	2015-03-17	2015-10-01	8560705	13342795	Apple Inc.	VirnetX Inc.
IPR2015-00870	2015-03-17	2015-10-01	8560705	13342795	Apple Inc.	VirnetX Inc.
IPR2015-00868	2015-03-17	2015-10-01	8516131	13336958	Apple Inc.	VirnetX Inc.
IPR2015-00866	2015-03-17	2015-10-01	8458341	13336790	Apple Inc.	VirnetX Inc.
IPR2015-01031	2015-04-09	2015-10-13	7900229	10271801	Apple Inc.	OpenTV, Inc.
IPR2015-01174	2015-05-11	2015-11-17	7781980	12239369	Apple Inc. Motorola Mobility LLC	Global Touch Solutions, LLC
IPR2015-01172	2015-05-11	2015-11-17	7498749	11928964	Toshiba America Information Systems, Inc. Apple Inc. Motorola Mobility LLC	Global Touch Solutions, LLC
IPR2015-01171	2015-05-11	2015-11-17	7994726	12855006	Apple Inc. Motorola Mobility LLC	Global Touch Solutions, LLC
IPR2015-00811	2015-03-02	2015-09-11	8868705	13615557	Apple Inc.	VirnetX Inc.
IPR2016-01004	2016-05-04	None	7055169	10419621	Apple Inc.	OpenTV, Inc.

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CBM2016-00066	2016-05-02	None	7055169	10419621	Apple Inc.	OpenTV, Inc.
IPR2016-00992	2016-04-29	None	6233736	09054740	Apple Inc.	OpenTV, Inc.
IPR2016-00971	2016-04-28	None	6148081	09196964	Apple Inc.	OpenTV, Inc.
IPR2015-00812	2015-03-02	2015-09-11	8850009	13911792	Apple Inc.	VirnetX Inc.
IPR2015-00810	2015-03-02	2015-09-11	8868705	13615557	Apple Inc.	VirnetX Inc.
IPR2015-01010	2015-04-28	2015-10-29	8843643	13950919	Apple Inc.	VirnetX Inc.
IPR2015-01009	2015-04-28	2015-10-29	8843643	13950919	Apple Inc.	VirnetX Inc.
IPR2015-00980	2015-03-31	2015-09-28	5566287	08267084	Apple Inc.	OpenTV, Inc.
IPR2015-00969	2015-03-30	2015-09-23	5884033	08645636	Apple Inc.	OpenTV, Inc.
CBM2015-00099	2015-03-06	2015-09-14	6871325	10015729	Eventbrite, Inc. Starbucks Corporation Apple Inc. Starwood Hotels & Resorts Worldwide, Inc.	Ameranth, Inc.
CBM2015-00091	2015-03-02	2015-09-14	6384850	09400413	Starbucks Corporation Apple Inc. Starwood Hotels & Resorts Worldwide, Inc. Eventbrite, Inc.	Ameranth, Inc.
CBM2015-00082	2015-02-19	2015-09-01	6871325	10015729	Ticketmaster L.L.C. Hotwire, Inc. Kayak Software Corporation Pizza Hut of America, LLC Eventbrite, Inc. Agilysys, Inc. Travelocity.com LP Apple Inc. Pizza Hut, Inc. OpenTable, Inc.	Ameranth, Inc.

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					Domino's Pizza, Inc. Hilton International Co. Mobo Systems, Inc. Papa John's USA, Inc. Fandango, LLC Starwood Hotels & Resorts Worldwide, Inc. Hilton Resorts Corporation Hotels.com LP Usablenet, Inc. Hotel Tonight, Inc. Expedia, Inc. Domino's Pizza LLC Orbitz, LLC StubHub, LLC Wanderspot LLC Live Nation Entertainment, Inc.	
CBM2015-00080	2015-02-19	2015-09-01	6384850	09400413	Ticketmaster L.L.C. Hotwire, Inc. Hilton Worldwide, Inc. Pizza Hut of America, LLC Eventbrite, Inc. Agilysys, Inc. Travelocity.com LP Apple Inc. Pizza Hut, Inc. OpenTable, Inc. Domino's Pizza, Inc. Hilton International Co. Mobo Systems, Inc. StubHub, Inc. Fandango, LLC Starwood Hotels & Resorts Worldwide, Inc. Hilton Resorts Corporation Usablenet, Inc. Hotels.com LP Hotel Tonight, Inc.	Ameranth, Inc.

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					Papa John's USA, Inc. Expedia, Inc. Domino's Pizza LLC Orbitz, LLC Wanderspot LLC Live Nation Entertainment, Inc. Kayak Software Corporation	
IPR2015-00849	2015-03-06	2015-09-22	5902347	08835037	Google Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	American Navigation Systems, Inc.
IPR2015-00851	2015-03-06	2015-09-22	5902347	08835037	Google Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	American Navigation Systems, Inc.
IPR2015-00971	2015-03-30	2015-09-28	6985586	09796261	Apple Inc.	Nagravision SA
IPR2016-00961	2016-04-28	None	7725740	10848014	Apple Inc.	Nagravision SA
CBM2015-00033	2014-11-25	2015-05-28	8336772	13212047	Google Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
CBM2015-00032	2014-11-25	2015-05-28	8336772	13212047	Google Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
CBM2015-00031	2014-11-25	2015-05-28	8336772	13212047	Google Inc. Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
IPR2015-00414	2014-12-11	2015-07-01	7643168	11617509	Samsung Electronics Co., Ltd. Samsung Electronics America, Inc.	e-Watch, Inc.

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					Apple Inc.	
CBM2015-00029	2014-11-24	2015-05-28	7334720	11336758	Apple Inc. Google Inc.	Smartflash LLC
IPR2015-00163	2014-10-28	2015-05-08	7296121	10966161	Samsung Telecommunications America LLC Samsung Electronics America, Inc. Amazon.com, Inc. Apple Inc. HTC Corporation Samsung Electronics Co., Ltd.	Memory Integrity LLC
IPR2015-00159	2014-10-28	2015-05-11	7296121	10966161	Samsung Telecommunications America LLC Samsung Electronics America, Inc. Amazon.com, Inc. Apple Inc. HTC Corporation Samsung Electronics Co., Ltd.	Memory Integrity LLC
IPR2016-00887	2016-04-13	None	6233518	09509349	Apple Inc.	Ji-Soo Lee
IPR2016-00883	2016-04-13	None	6532413	09787120	Apple Inc.	Ji-Soo Lee
IPR2015-00369	2014-12-04	2015-06-25	6128290	08949999	Apple Inc.	DSS Technology Management, Inc.
IPR2015-00373	2014-12-04	2015-06-25	6128290	08949999	Apple Inc.	DSS Technology Management, Inc.
CBM2015-00028	2014-11-24	2015-05-28	7334720	11336758	Apple Inc. Google Inc.	Smartflash LLC
IPR2016-00500	2016-01-22	2016-07-26	7864163	11850013	Intellectual Integrity, LLC	Apple Inc.
IPR2015-00599	2015-01-23	2015-07-30	7120835	10241626	Apple Inc.	Farstone Technology, Inc.
CBM2014-00190	2014-09-26	2015-04-02	7334720	11336758	Samsung Electronics America, Inc. Samsung Telecommunications America LLC Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC

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CBM2016-00019	2015-11-19	2016-05-26	6006227	08673255	Best Buy Stores, L.P. BestBuy.com, LLC Apple Inc.	Mirror Worlds Technologies, LLC
CBM2016-00007	2015-10-14	2016-04-14	6384850	09400413	Apple Inc. Eventbrite, Inc. Starwood Hotels & Resorts Worldwide, Inc.	Ameranth, Inc.
CBM2016-00006	2015-10-14	2016-04-14	6871325	10015729	Apple Inc. Eventbrite, Inc. Starwood Hotels & Resorts Worldwide, Inc.	Ameranth, Inc.
CBM2015-00017	2014-10-30	2015-04-10	8061598	13012541	Apple Inc.	Smartflash LLC
CBM2014-00194	2014-09-26	2015-03-30	8118221	12943872	Samsung Telecommunications America LLC Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
CBM2014-00193	2014-09-26	2015-04-02	8061598	13012541	Samsung Telecommunications America LLC Samsung Electronics America, Inc. Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
CBM2015-00016	2014-10-30	2015-04-10	8033458	12943847	Apple Inc.	Smartflash LLC
CBM2014-00192	2014-09-26	2015-04-02	8033458	12943847	Samsung Electronics America, Inc. Samsung Telecommunications America LLC Apple Inc. Samsung Electronics Co., Ltd.	Smartflash LLC
IPR2015-00412	2014-12-11	2015-05-11	7365871	10336470	Apple Inc.	e-Watch, Inc.
IPR2016-00302	2015-12-09	None	8090862	12797139	Apple Inc.	Nonend Inventions, N.V.
CBM2016-00023	2016-01-08	None	6411941	09164777	Apple Inc.	Ancora Technologies, Inc.
IPR2015-01702	2015-08-12	None	7764231	09194367	Apple Inc.	TracBeam, L.L.C.

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IPR2015-01700	2015-08-12	2016-02-12	8032153	12014092	Apple Inc.	TracBeam, L.L.C.
IPR2015-01696	2015-08-12	2016-02-19	7525484	09770838	Apple Inc.	TracBeam, L.L.C.
IPR2015-01694	2015-08-12	2016-02-12	7298327	10262413	Apple Inc.	TracBeam, L.L.C.
IPR2015-01703	2015-08-12	2016-02-19	7764231	09194367	Apple Inc.	TracBeam, L.L.C.
IPR2015-01701	2015-08-12	2016-02-08	8032153	12014092	Apple Inc.	TracBeam, L.L.C.
IPR2015-01695	2015-08-12	2016-02-08	7298327	10262413	Apple Inc.	TracBeam, L.L.C.
IPR2015-01697	2015-08-12	2016-02-17	7525484	09770838	Apple Inc.	TracBeam, L.L.C.
IPR2014-01565	2014-09-29	2015-04-22	RE44412	13232432	Apple Inc.	Aylus Networks, Inc.
IPR2015-00761	2015-02-18	2015-07-29	6449359	09230488	Apple Inc.	Yozmot 33 Ltd.
IPR2015-01950	2015-09-22	None	7818490	11250238	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01949	2015-09-22	None	7818490	11250238	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01945	2015-09-22	None	7818490	11250238	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01943	2015-09-22	None	6968421	10841388	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01942	2015-09-22	None	7657702	12371460	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01934	2015-09-22	None	6831865	13168756	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01933	2015-09-21	None	6831865	10281696	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01931	2015-09-18	None	7970987	12900397	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01930	2015-09-18	None	6763424	09766436	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01925	2015-09-17	2016-03-17	7224607	11271553	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2015-01924	2015-09-17	2016-03-17	7012835	10678345	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01911	2015-09-14	2016-03-17	7181611	10685624	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01910	2015-09-14	2016-03-17	6510488	09775499	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01909	2015-09-14	2016-03-17	7120729	10686399	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
IPR2015-01908	2015-09-14	2016-03-17	8050095	12945000	Apple Inc.	Longitude Flash Memory Systems S.a.r.l.
CBM2015-00018	2014-11-03	2015-04-10	7942317	12014558	Apple Inc.	Smartflash LLC
CBM2015-00015	2014-10-30	2015-04-10	8118221	12943872	Apple Inc.	Smartflash LLC
IPR2016-00154	2015-11-06	None	6029052	08886244	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2016-00152	2015-11-06	None	6026293	08706574	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2016-00110	2015-10-30	None	6122263	08872271	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2016-00109	2015-10-30	None	6157620	08857543	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2016-00108	2015-10-29	None	6400376	09217400	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2016-00107	2015-10-29	None	RE43931	11078916	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2016-00106	2015-10-29	None	RE43931	11078916	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2016-00050	2015-10-19	None	6633550	08803392	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2016-00004	2015-10-02	None	6029052	08886244	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2015-01919	2015-09-28	None	6291966	09491954	Apple Inc.	Telefonaktiebolaget LM Ericsson

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2015-01905	2015-09-14	None	8812059	13682566	Apple Inc.	Telefonaktiebolaget LM Ericsson
IPR2015-01904	2015-09-14	None	8812059	13682566	Apple Inc.	Telefonaktiebolaget LM Ericsson Ericsson, Inc
IPR2015-01464	2015-07-01	2016-01-13	8725063	12906033	Apple Inc.	Chestnut Hill Sound Inc.
IPR2015-01463	2015-06-30	2016-01-13	8090309	11967692	Apple Inc.	Chestnut Hill Sound Inc.
IPR2015-01442	2015-06-19	2015-12-30	7295532	09932180	Apple Inc. Samsung Electronics Co., Ltd.	IXI IP, LLC
IPR2015-00927	2015-03-28	None	7050061	09591226	Apple Inc.	ZiiLabs Inc., Ltd.
IPR2016-00062	2015-10-26	2016-01-25	6502135	09504783	Apple Inc.	VirnetX Inc.
IPR2016-00063	2015-10-26	2016-01-25	7490151	10259494	Apple Inc.	VirnetX Inc.
IPR2015-00931	2015-03-26	2015-10-01	5835096	08640513	Apple Inc.	ZiiLabs Inc., Ltd.
CBM2014-00112	2014-04-03	2014-09-30	7942317	12014558	Apple Inc.	Smartflash LLC
CBM2014-00102	2014-03-28	2014-09-30	8118221	12943872	Apple Inc.	Smartflash LLC
CBM2014-00108	2014-04-01	2014-09-30	8061598	13012541	Apple Inc.	Smartflash LLC
CBM2014-00106	2014-03-31	2014-09-30	8033458	12943847	Apple Inc.	Smartflash LLC
IPR2015-00930	2015-03-27	2015-09-15	8144156	10952225	Apple Inc.	ZiiLabs Inc., Ltd.
CBM2015-00081	2015-02-19	2015-08-20	8146077	11112990	Apple Inc. Eventbrite, Inc. Starwood Hotels & Resorts Worldwide, Inc.	Ameranth, Inc.
IPR2015-00442	2014-12-22	2015-07-13	6963859	10345390	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00448	2014-12-22	2015-07-10	8370956	13584782	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00965	2015-03-28	2015-09-17	6111584	08657945	Apple Inc.	Ziilabs Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2014-00482	2014-03-07	2014-09-03	7188180	10702486	Apple Inc.	VirnetX Inc.
IPR2014-00481	2014-03-07	2014-09-03	7188180	10702486	Apple Inc.	VirnetX Inc.
IPR2015-00451	2014-12-22	2015-07-13	8393007	13585408	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00354	2014-12-10	2015-07-01	7774280	10956121	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00413	2014-12-11	2015-05-18	7365871	10336470	Apple Inc.	e-Watch, Inc.
IPR2015-00172	2014-10-28	2015-05-11	7296121	10966161	Amazon.com, Inc. Samsung Telecommunications America LLC Samsung Electronics America, Inc. Apple Inc. HTC Corporation Samsung Electronics Co., Ltd.	Memory Integrity LLC
IPR2015-00445	2014-12-22	2015-07-09	7523072	11304794	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00963	2015-03-28	2015-10-01	6977649	09280250	Apple Inc.	Ziilabs Inc.
IPR2015-00869	2015-03-17	2015-10-01	8516131	13336958	Apple Inc.	VirnetX Inc.
IPR2015-00867	2015-03-17	2015-10-01	8458341	13336790	Apple Inc.	VirnetX Inc.
IPR2014-00404	2014-02-04	2014-07-31	7987274	11839987	Apple Inc. Microsoft Corporation	VirnetX Inc.
IPR2014-00403	2014-02-04	2014-07-31	7987274	11839987	Apple Inc. Microsoft Corporation	VirnetX Inc.
CBM2014-00113	2014-04-03	2014-09-30	7942317	12014558	Apple Inc.	Smartflash LLC
CBM2014-00103	2014-03-28	2014-09-30	8118221	12943872	Apple Inc.	Smartflash LLC
CBM2014-00109	2014-04-01	2014-09-30	8061598	13012541	Apple Inc.	Smartflash LLC
CBM2014-00107	2014-03-31	2014-09-30	8033458	12943847	Apple Inc.	Smartflash LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2014-00086	2013-10-22	2014-04-25	7010536	09284113	Apple Inc. Twitter, Inc. Yelp, Inc.	Evolutionary Intelligence, LLC
IPR2015-00964	2015-03-28	2015-09-17	6111584	08657945	Apple Inc.	Ziilabs Inc.
IPR2015-00813	2015-03-02	2015-09-16	8850009	13911792	Apple Inc.	VirnetX Inc.
IPR2014-00207	2013-12-02	2014-06-11	7496854	09923134	Apple Inc. Google LLC Motorola Mobility LLC	Arendi S.A.R.L.
IPR2015-00358	2014-12-10	None	8001053	10956070	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00454	2014-12-22	2015-07-13	7269576	10773306	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00440	2014-12-22	2015-07-13	6963859	10345390	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00411	2014-12-11	2015-05-07	7365871	10336470	Apple Inc.	e-Watch, Inc.
IPR2014-00235	2013-12-06	2014-06-11	7433483	10937796	Apple Inc.	THX, Ltd.
IPR2014-00208	2013-12-02	2014-06-11	7917843	12182048	Apple Inc. Google LLC Motorola Mobility LLC	Arendi S.A.R.L.
IPR2014-00206	2013-12-02	2014-06-11	7496854	09923134	Apple Inc. Google LLC Motorola Mobility LLC	Arendi S.A.R.L.
IPR2015-00576	2015-01-16	2015-06-12	7941174	11667595	Apple Inc.	Cellular Communications Equipment LLC
CBM2015-00120	2015-04-30	2015-08-06	8061598	13012541	Apple Inc.	Smartflash LLC
CBM2015-00119	2015-04-30	2015-08-06	8033458	12943847	Apple Inc.	Smartflash LLC
CBM2015-00118	2015-04-30	2015-08-06	7334720	11336758	Apple Inc.	Smartflash LLC
CBM2015-00117	2015-04-30	2015-08-06	8118221	12943872	Apple Inc.	Smartflash LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2015-00352	2014-12-10	2015-06-24	7774280	10956121	Apple Inc.	ContentGuard Holdings, Inc.
IPR2014-00484	2014-03-07	2014-09-15	7987274	11839987	Apple Inc.	VirnetX Inc.
IPR2014-00483	2014-03-07	2014-09-15	7987274	11839987	Apple Inc.	VirnetX Inc.
IPR2015-00458	2014-12-22	2015-07-15	7225160	10015951	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00449	2014-12-22	2015-07-15	8393007	13585408	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00453	2014-12-22	2015-07-13	7269576	10773306	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00452	2014-12-22	2015-07-13	7269576	10773306	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00441	2014-12-22	2015-07-13	6963859	10345390	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00447	2014-12-22	2015-07-10	8370956	13584782	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00446	2014-12-22	2015-07-10	8370956	13584782	Apple Inc.	ContentGuard Holdings, Inc.
IPR2014-00238	2013-12-06	2014-05-14	8504697	13339257	Apple Inc.	VirnetX Inc.
IPR2014-00237	2013-12-06	2014-05-14	8504697	13339257	Apple Inc.	VirentX Inc. VirnetX Inc.
IPR2015-00443	2014-12-22	2015-07-09	7523072	11304794	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00444	2014-12-22	2015-07-09	7523072	11304794	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00192	2014-11-12	2015-06-02	5463750	08146818	Apple Inc.	Vantage Point Technology, Inc.
IPR2015-00191	2014-11-12	2015-06-02	5463750	08146818	Apple Inc.	Vantage Point Technology, Inc.
IPR2015-00161	2014-10-28	2015-05-08	7296121	10966161	Amazon.com, Inc. Samsung Electronics America, Inc. Samsung Telecommunications America LLC Apple Inc. HTC Corporation	Memory Integrity LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Samsung Electronics Co., Ltd.	
IPR2015-00455	2014-12-22	None	7269576	10773306	Apple Inc.	ContentGuard Holdings, Inc.
IPR2014-01033	2014-06-27	2015-01-22	5894506	08708696	Apple Inc.	Mobile Telecommunications Technologies, LLC
IPR2014-01032	2014-06-27	2015-01-22	5590403	07973918	Apple Inc.	Mobile Telecommunications Technologies, LLC
IPR2015-00457	2014-12-22	2015-06-30	7225160	10015951	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00929	2015-03-28	None	7710425	09591225	Apple Inc.	Ziilabs Inc.
IPR2015-00928	2015-03-28	None	7710425	09591225	Apple Inc.	Ziilabs Inc.
IPR2015-00926	2015-03-28	None	6683615	09591231	Apple Inc.	Ziilabs Inc.
IPR2015-00925	2015-03-28	None	6683615	09591231	Apple Inc.	ZiiLabs Inc., Ltd.
IPR2015-00932	2015-03-27	None	7187383	10086980	Apple Inc.	ZiiLabs Inc., Ltd.
IPR2015-00450	2014-12-22	2015-06-29	8393007	13585408	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00357	2014-12-10	2015-06-29	8001053	10956070	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00356	2014-12-10	2015-06-26	8001053	10956070	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00355	2014-12-10	None	8001053	10956070	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00966	2015-03-28	None	5831637	08431821	Apple Inc.	ZiiLabs Inc., Ltd.
IPR2015-00353	2014-12-10	2015-06-25	7774280	10956121	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00351	2014-12-10	2015-06-24	7774280	10956121	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00577	2015-01-16	None	6819923	09831689	Apple Inc.	Cellular Communications Equipment LLC
IPR2015-00400	2014-12-12	None	8583556	13210153	Apple Inc.	ContentGuard Holdings, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2015-00399	2014-12-12	None	8583556	13210153	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00688	2015-02-04	None	7765482	10961720	Apple Inc. Twitter, Inc.	Summit 6 LLC
IPR2015-00687	2015-02-04	None	7765482	10961720	Apple Inc. Twitter, Inc.	Summit 6 LLC
IPR2015-00684	2015-02-04	None	8612515	13098090	Apple Inc. Twitter, Inc.	Summit 6 LLC
IPR2015-00683	2015-02-04	None	8612515	13098090	Apple Inc. Twitter, Inc.	Summit 6 LLC
IPR2015-00456	2014-12-22	None	7269576	10773306	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00686	2015-02-04	None	7765482	10961720	Apple Inc. Twitter, Inc.	Summit 6 LLC
IPR2015-00685	2015-02-04	None	7765482	10961720	Apple Inc. Twitter, Inc.	Summit 6 LLC
CBM2015-00046	2014-12-12	2015-06-03	8583556	13210153	Apple Inc.	ContentGuard Holdings, Inc.
IPR2014-01036	2014-06-27	2015-01-22	5915210	08899476	Apple Inc. T-Mobile USA, Inc.	Mobile Telecommunications Technologies, LLC
IPR2014-01035	2014-06-27	2015-01-22	5659891	08480718	Apple Inc. T-Mobile USA, Inc.	Mobile Telecommunications Technologies, LLC
IPR2015-00935	2015-03-25	None	7454201	11105911	Apple Inc.	Enterprise Systems Technologies S.a.r.l.
CBM2014-00016	2013-10-15	2014-03-26	6871325	10015729	Hotels.com LP Hotwire, Inc. Seamless North America, LLC Hilton Resorts Corporation Micros Systems, Inc. Kayak Software Corporation Best Western International, Inc.	Ameranth, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Hotel Tonight, Inc. Marriott International, Inc. Starwood Hotels & Resorts Worldwide, Inc. Eventbrite, Inc. Domino's Pizza, Inc. Agilysys, Inc. Travelocity.com LP Starbucks Corporation Apple Inc. Pizza Hut, Inc. OpenTable, Inc. Hilton International Co. Mobo Systems, Inc. StubHub, Inc. Fandango, LLC Ordr.in, Inc. Usablenet, Inc. Hyatt Corporation Domino's Pizza LLC Papa John's USA, Inc. Grubhub Inc. Expedia, Inc. Orbitz, LLC Hilton Worldwide, Inc. Wanderspot LLC Live Nation Entertainment, Inc. Ticketmaster L.L.C.	
CBM2014-00015	2013-10-15	2014-03-26	6384850	09400413	Hotels.com LP Hotwire, Inc. Seamless North America, LLC Hilton Resorts Corporation Micros Systems, Inc. Kayak Software Corporation Best Western International, Inc. Hotel Tonight, Inc. Marriott International, Inc.	Ameranth, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Starwood Hotels & Resorts Worldwide, Inc. Eventbrite, Inc. Domino's Pizza, Inc. Starbucks Corporation Travelocity.com LP Agilysys, Inc. Apple Inc. Pizza Hut, Inc. OpenTable, Inc. Hilton International Co. Mobo Systems, Inc. StubHub, Inc. Fandango, LLC Ordr.in, Inc. Usablenet, Inc. Hyatt Corporation Domino's Pizza LLC Papa John's USA, Inc. Grubhub Inc. Expedia, Inc. Orbitz, LLC Hilton Worldwide, Inc. Wanderspot LLC Live Nation Entertainment, Inc. Ticketmaster L.L.C.	
CBM2014-00013	2013-10-15	2014-03-26	6982733	10016517	Domino's Pizza LLC Apple Inc. OpenTable, Inc. Fandango, LLC Domino's Pizza, Inc.	Ameranth, Inc.
IPR2014-01034	2014-06-27	2015-01-22	5894506	08708696	Apple Inc.	Mobile Telecommunications Technologies, LLC
IPR2014-01566	2014-09-29	None	RE44412	13232432	Apple Inc.	Aylus Networks, Inc.
CBM2015-00041	2014-12-12	None	8583556	13210153	Apple Inc.	ContentGuard Holdings, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
CBM2015-00042	2014-12-12	None	8583556	13210153	Apple Inc.	ContentGuard Holdings, Inc.
IPR2015-00189	2014-10-30	None	7418504	10714849	Apple Inc.	VirnetX Inc.
IPR2015-00188	2014-10-30	None	7418504	10714849	Apple Inc.	VirnetX Inc.
IPR2015-00187	2014-10-30	None	7490151	10259494	Apple Inc.	VirnetX Inc.
IPR2015-00186	2014-10-30	None	7921211	11840560	Apple Inc.	VirnetX Inc.
IPR2015-00185	2014-10-30	None	7921211	11840560	Apple Inc.	VirnetX Inc.
IPR2014-00472	2014-03-03	None	7096358	10658246	Apple Inc. Oracle Corporation	MAZ Encryption Technologies LLC
IPR2014-00234	2013-12-06	2014-06-11	8457340	13208923	Apple Inc.	THX, Ltd.
IPR2014-00085	2013-10-22	2014-04-25	7010536	09284113	Apple Inc.	Evolutionary Intelligence, LLC
IPR2014-00083	2013-10-22	2014-04-25	7010536	09284113	Apple Inc.	Evolutionary Intelligence, LLC
IPR2014-00082	2013-10-22	2014-04-25	7010536	09284113	Apple Inc.	Evolutionary Intelligence, LLC
IPR2014-00080	2013-10-23	2014-04-25	7702682	11280700	Apple Inc.	Evolutionary Intelligence, LLC
IPR2014-00079	2013-10-22	2014-04-25	7702682	11280700	Apple Inc.	Evolutionary Intelligence, LLC
IPR2014-00486	2014-03-10	None	8051181	11679416	Apple Inc.	VirnetX Inc.
IPR2014-00485	2014-03-10	None	8051181	11679416	Apple Inc.	VirnetX Inc.
IPR2014-00061	2013-10-11	None	6799084	09773170	Apple Inc.	Benjamin Filmalter Grobler
IPR2014-00060	2013-10-11	None	6799084	09773170	Apple Inc.	Benjamin Filmalter Grobler
IPR2013-00394	2013-07-01	None	7418504	10714849	Apple Inc.	VirnetX Inc.
IPR2013-00393	2013-07-01	None	7418504	10714849	Apple Inc.	VirnetX Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2013-00398	2013-07-01	None	7921211	11840560	Apple Inc.	VirnetX Inc.
IPR2013-00397	2013-07-01	None	7921211	11840560	Apple Inc.	VirnetX Inc.
IPR2013-00354	2013-06-17	None	7490151	10259494	Apple Inc.	VirnetX Inc.
IPR2013-00349	2013-06-12	None	6502135	09504783	Apple Inc.	VirnetX Inc.
IPR2013-00348	2013-06-12	None	6502135	09504783	Apple Inc.	VirnetX Inc.
CBM2013-00021	2013-05-06	2013-10-08	5966440	08471964	Apple Inc.	SightSound Technologies, Inc.
CBM2013-00019	2013-05-06	2013-10-08	5191573	07586391	Apple Inc.	SightSound Technologies LLC
CBM2014-00014	2013-10-15	2014-03-26	8146077	11112990	Ticketmaster L.L.C. Hotwire, Inc. Seamless North America, LLC Micros Systems, Inc. Best Western International, Inc. Hilton Worldwide, Inc. Marriott International, Inc. Eventbrite, Inc. Starbucks Corporation Travelocity.com LP Agilysys, Inc. Apple Inc. Pizza Hut, Inc. OpenTable, Inc. Domino's Pizza, Inc. Hilton International Co. Mobo Systems, Inc. Papa John's USA, Inc. StubHub, Inc. Fandango, LLC Ordr.in, Inc. Starwood Hotels & Resorts Worldwide, Inc. Hilton Resorts Corporation	Ameranth, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Hotels.com LP Usablenet, Inc. Hotel Tonight, Inc. Hyatt Corporation Grubhub Inc. Expedia, Inc. Domino's Pizza LLC Orbitz, LLC Wanderspot LLC Live Nation Entertainment, Inc. Kayak Software Corporation	
CBM2014-00111	2014-04-03	2014-09-30	8336772	13212047	Apple Inc.	Smartflash LLC
CBM2014-00105	2014-03-31	2014-09-30	7334720	11336758	Apple Inc.	Smartflash LLC
CBM2014-00104	2014-03-31	2014-09-30	7334720	11336758	Apple Inc.	Smartflash LLC
CBM2014-00110	2014-04-03	2014-09-30	8336772	13212047	Apple Inc.	Smartflash LLC
CBM2013-00023	2013-05-06	2013-10-08	5966440	08471964	Apple Inc.	SightSound Technologies LLC
CBM2013-00020	2013-05-06	2013-10-08	5191573	07586391	Apple Inc.	SightSound Technologies LLC
IPR2014-00268	2013-12-18	2014-05-19	7921139	11566043	Apple Inc.	WhitServe LLC
IPR2014-00203	2013-12-02	2014-06-05	8306993	11745186	Apple Inc. Google Inc. Motorola Mobility LLC	Arendi S.A.R.L.
IPR2013-00191	2013-03-15	2013-08-19	6563529	09416505	Apple Inc. Google Inc.	Jongerius Panoramic Technologies, LLC
IPR2013-00081	2012-12-15	2013-06-03	5982889	08845805	Apple Inc.	Achates Reference Publishing, Inc.
IPR2013-00080	2012-12-14	2013-06-03	6173403	09288012	Apple Inc.	Achates Reference Publishing, Inc.
IPR2014-00077	2013-10-21	2014-04-15	7177798	09861860	Apple Inc.	Rensselaer Polytechnic Institute

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2014-00030	2013-10-07	None	7103380	09391966	Apple Inc.	NetAirus Systems LLC

EXHIBIT F

About

(https://www.charpac.com.au/)

Founded in 1988, Charter Pacific is a diversified investment company with a focus on the global commercialisation of Australian Biometric technology

We have traditionally reduced our investment risk by diversifying our investments across a range of companies and industry sectors, thereby ensuring that our investment portfolio is not overly exposed to any one company or any one particular sector of the market.

However, in recent years we have focussed our investment portfolio in the high growth sectors of technology, in particular biometric technology.

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

(SAN JOSE DIVISION)

CPC PATENT TECHNOLOGIES PTY LTD.,

Plaintiff,

v.

APPLE INC.,

Defendant.

Case No. 5:22-cv-02553-EJD-NC

[PROPOSED] ORDER GRANTING DEFENDANT APPLE INC.'S MOTION TO STAY PENDING *INTER PARTES* REVIEW

Before this Court is Defendant Apple Inc.'s ("Apple") Motion to Stay Pending *Inter Partes* Review. The Court finds that good cause exists for the stay of this matter inasmuch as a stay will prevent the unnecessary expenditure of time and resources by this Court and the Parties.

IT IS HEREBY ORDERED THAT the proceedings in this matter are STAYED pending the Patent Trial and Appeal Board's issuance of final written decisions in the IPR petitions filed by Apple (IPR2022-00602 and IPR2022-00600) and the final resolution of any appeals.

IT IS SO ORDERED.

Dated: _____

/s/
Hon. Judge Edward J. Davila
United States District Court Judge