IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.

Petitioners,

v.

PROXENSE, LLC

Patent Owner

IPR2025-00562

U.S. Patent No. 9,049,188 B1

PATENT OWNER RESPONSE

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EXHIBIT LIST

No.	Exhibit Description
2001	Memo In Support of Claim Construction Order in *Proxense, LLC v. Samsung Electronics, Co., Ltd. et al.*
2002	Claim Construction Order in *Proxense, LLC v. Samsung Electronics, Co., Ltd. et al.,* No. 6.21-CV-00210-ADA
2003	Markman Transcript from *Proxense, LLC v. Samsung Electronics, Co., Ltd. et al.*
2004	Claim Construction Order in *Proxense, LLC v., Google LLC,* No. 6:23-cv-00320-ADA
2005	Opening Claim Construction Brief in *Proxense, LLC v. Microsoft Corporation,* No. 6:23-cv-00319-ADA
2006	Responsive Claim Construction Brief in *Proxense, LLC v. Microsoft Corporation*
2007	Reply Claim Construction Brief in *Proxense, LLC v. Microsoft Corporation*
2008	Sur-reply Claim Construction Brief in *Proxense, LLC v. Microsoft Corporation*
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2010	Reply Claim Construction Brief in *Proxense, LLC v. Samsung Electronics, Co., Ltd. et al.*
2011	Joint Claim Construction Statement, *Proxense, LLC v., Microsoft Corp.,* No. 6:23-cv-00319-ADA
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2013	Declaration of David L. Hecht in Support of Motion
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2015	Defendant's Preliminary Claim Construction in *Proxense, LLC v. Apple, Inc*., No. 6:24-cv-00143-ADA
2016	Declaration of Markus Jakobsson

I. INTRODUCTION

Pursuant to 35 U.S.C. § 316 and C.F.R. § 42.120, the Patent Owner, Proxense LLC ("Proxense"), submits this Patent Owner Response in response to the Petition for *Inter Partes* Review of claims 1-20 of U.S. Patent No. 9,049,188 B1 (the "188 Patent") filed by Petitioner, Apple Inc ("Apple").

The Board in its Institution Decision clearly indicated no intention of reconsidering the construction provided in IPR2024-00405, IPR2024-00407, and IPR2024-00784[1]. Paper 8, 10-11. Proxense continues to believe the Board's prior construction violates the controlling law and policies of the Office stated MPEP § 2181(II)(B) and has thus appealed each of the aforementioned IPRs. *See* CAFC Nos. 2025-2130 and 2025-2131. As not to waive any arguments for appeal, Proxense will repeat the arguments presented in those cases in this Response.

Proxense respectfully submits claims 1-20 are patentable over the instituted grounds, as each of the grounds relies on combinations of references failing to show *all* elements of the claimed invention. Specifically, the asserted references, either alone or in combination, fail to show the algorithm disclosed in the specification allowing any of an "integrated PDK," an "integrated RDC," and an "enablement signal" to perform the function of "enabling one or more of an application, a function

[1] IPR2024-00784 was terminated due to settlement without issuance of a final written decision. *See* IPR2024-00784, Paper 17.

and a service" as recited independent claims 1 and 10. Claims 1 and 10 each invoke 35 U.S.C. § 112, ¶ 6, by reciting that the function of "enabling one or more of an application, a function and a service" is performed by general purpose computers, such that the disclosed structure for performing the function is the special purpose computer programmed to perform the algorithm disclosed in the specification. For computer implement inventions, "The corresponding structure is not simply a general purpose computer by itself but the special purpose computer ***as programmed to perform the disclosed algorithm***." MPEP § 2181(II)(B), *citing Aristocrat Techs. Australia v. Intern. Game Tech,* 1333 521 F.3d 1328, 1333 (Fed. Cir. 2008) (emphasis added). The Petition has not demonstrated claims 1-20 are unpatentable because none of the grounds demonstrate the algorithm in any of the asserted references.

II. RELATED MATTERS

Family members of the 188 Patent are currently being asserted in *Proxense v. Microsoft Corporation*, No. 6:23-cv-00319-ADA (W.D. Tex. May 2, 2023). The District Court issued a Claim Construction Order on May 24, 2024, a copy of which is attached as Exhibit 2012.

Family members of the 188 Patent are also currently being asserted against Petitioner in *Proxense, LLC, v. Apple, Inc.,* No. 6:24-cv-00143 (W.D. Tex. March 18, 2024). The parties have provided their Preliminary Claim Constructions, copies of which are attached as Exhibits 2014 and 2015.

Family members of the 188 Patent were also asserted in *Proxense, LLC v. Google LLC*, No. 6:23-cv-00320 (W.D. Tex. May 2, 2023). The District Court issued a Claim Construction Order, a copy of which was previously submitted as Exhibit 2004.

The 188 Patent was asserted in *Proxense, LLC v. Samsung Electronics, Co., Ltd. et al.,* No. 6:21-cv-00210-ADA (W.D. Tex. Mar. 5, 2021). The District Court issued a Claim Construction Order, a copy of which was previously submitted as Exhibit 2002.

The validity of the family members of 188 Patent has been challenged in the following proceedings before the Office:

IPR202-01439, terminated by settlement;

IPR2024-00405, CAFC No. 2025-2130;

IPR2024-00407. CAFC No. 2025-2131;

IPR2024-00573, joined with IPR2024-01398, CAFC No. TBD;

IPR2024-00782, joined with IPR2024-01399, CAFC No. TBD;

IPR2024-00783, joined with IPR2025-00075, CAFC No. TBD; and

IPR2025-00075, institution denied.

The validity of the 188 Patent was challenged in IPR2021-01438, terminated by settlement.

III. OVERVIEW OF THE 188 PATENT

The 188 Patent discloses and claims a technical improvement to solve the technical problem of being unable to expand proximity systems to new and third-party applications, by providing a novel control logic allowing memory to be used as local, secured storage for external applications. As noted in the Background section, most proximity systems "typically do not have the capabilities to run different applications or to even interact with different applications" and lack "easy expandability to other situations or third party applications." 188 Patent, 1:57-62. To solve this problem, the patent discloses a novel control logic controlling "service blocks" within device memory that permits isolated storage and selection of different information for different applications. In operation, the control logic allows external applications to "gain access to a specific service block 112 by proving the corresponding access key 118." 188 Patent, 6:24-26. In addition to disclosing the control logic, the 188 Patent provides various examples of how the logic may be utilized in various general-purpose computers, such as cell phones, servers, personal computers, and credit card terminals. For example, with reference to Fig. 6 (reproduced below), the 188 Patent details simultaneous use of the control logic by different applications as a user accesses the website of his credit card provider:

> [T]he first application 120Y1 might be the auto login/logoff, where a user logs in to a personal computer via a service block 112C that provides a username and password. Now that the user is logged in, the

> user wishes to attach to his credit card company. The user types in the web address of the credit card provider, where the credit card provider requests the user's credentials. First, the user may have to provide some live biometric information. Application 120Y2 compares this against a biometric stored in a second service block 112F on the PDK. After the sensor 108Y verifies the correct biometrics, the sensor indicates to the PDK that external services may now access their service blocks. The credit card provider 120Z1 then sends its service block access key 118A to the PDK where this third service block 112A is retrieved and sent back to the credit card issuer. The credit card issuer then verifies the data and authorizes the user's transaction.

188 Patent, 9:10-26.

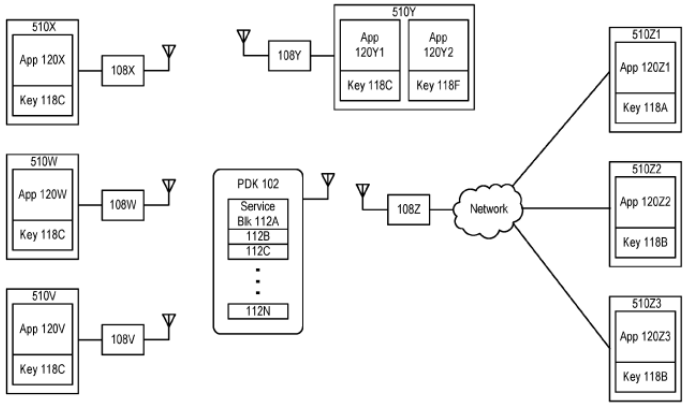


FIG. 6

As the above illustrates, when implemented, the control logic generates an enablement signal enabling one or more of an application, a function, and a service by having the application, function, or service to be enabled authenticate by

exchanging an access key for the ability to store, retrieve and/or modify data in a service block of the integrated PDK.

IV. CLAIM CONSTRUCTION

Determining whether the Petition raises sufficient grounds of invalidity requires construing claim terms present in independent claims 1 and 10. Independent claim 1 recites that the function of "enabling one or more of an application, a function and a service" is performed by an "integrated PDK" and/or an "integrated RDC." Independent claim 10 recites the function is performed by an "enablement signal" generated by a "hybrid device." These terms must be construed to determine the corresponding structures performing the recited function. Only then can it be determined whether the Petition demonstrates all elements of claims 1 and 10 can be found in the asserted references.

A. Claims 1 and 10 Invoke 35 U.S.C. § 112, Paragraph 6

Independent claims 1 and 10 each recite the function of "enabling one or more of an application, a function and a service." "In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the ***structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function***." *See* MPEP § 2181(II)(B), *citing Noah Systems Inc. v. Intuit Inc.,* 675 F.3d 1302, 1312 (Fed. Cir. 2012) and *Aristocrat,* 521

F.3d at 133 (emphasis added). Accordingly, it must be determined if each of claims 1 and 10 recite a sufficiently definite structure for performing that function, ***other than a general-purpose computer***. Here, the claims do not recite a sufficiently definite structure for performing the function, but rather a general-purpose computer. Therefore, the claims invoke 35 U.S.C. § 112, ¶ 6, and the claims must be construed to cover only the structure, material, or acts described in the specification as corresponding to the claimed structure. "The corresponding structure is not simply a general purpose computer by itself but the special purpose computer ***as programmed to perform the disclosed algorithm***." MPEP § 2181(II)(B), *citing Aristocrat,* 521 F.3d at 1333. "In several Federal Circuit cases, the patentees argued that the requirement for the disclosure of an algorithm can be avoided if one of ordinary skill in the art is capable of writing the software to convert a general purpose computer to a special purpose computer to perform the claimed function... Such argument was found to be unpersuasive because the understanding of one skilled in the art does not relieve the patentee of the duty to disclose sufficient structure to support means-plus-function claim terms." MPEP 2181(II)(B), citing *Blackboard, Inc. v. Desire2Learn, Inc.,* 574 F.3d 1371,1385 (Fed. Cir. 2009) ("A patentee cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function."); *Atmel Corp. v. Information Storage Devices Inc.,* 198 F.3d 1374, 1380 (Fed. Cir. 1999)

("[C]onsideration of the understanding of one skilled in the art in no way relieves the patentee of adequately disclosing sufficient structure in the specification."). Accordingly, with respect to claims 1 and 10, the structure is the algorithm the general-purpose computers are programmed to perform.

"[I]f there is no corresponding structure disclosed in the specification (i.e., the limitation is only supported by software and does not correspond to an algorithm and the computer or microprocessor programmed with the algorithm), the ***limitation should be deemed indefinite*** as discussed above, and the claim should be rejected under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph." MPEP § 2181(II)(B). As the Board noted, the District Court has determined that claims 1 and 10 are not indefinite because "enabl[ing] one or more of an application a function, and a service" does requires receiving information from a PDK in exchange for an access key or forwarding a message to the application, function, or service." Paper 9, 10-11. Even though "indefiniteness analysis involves general claim construction principles," *Sonix Tech. Co. v. Publications Int'l, Ltd.,* 844 f.3d 1370, 1378 (Fed. Cir. 2017), the Board remains "unpersuaded that the District Court construed that '[a]n application, function, or service is enabled by a PDK when it receives information from a PDK in exchange for an access key' or that 'hybrid device' includes 'an RDC that enable[es] one or more of an application, a function, and a service when it forwards such a message to the application, function, or service.'" Paper 9, 10.

Having disregarded the District Court's indefiniteness determination, and failing to limit claims to the algorithm disclosed in the specification per MPEP 2181(II)(B) and the controlling law, "the Board must decide one or both of two issues. One is whether it can resolve the prior-art challenge to the patentability … despite the potential indefiniteness [and] whether those terms are actually indefinite." *Intel Corp. v. Qualcomm Inc.*, 21 F. 4th 801, 814 (Fed. Cir. 2021). "If the Board determines both that there is indefiniteness and that such indefiniteness renders it impossible to adjudicate the prior-art challenge on its merits, then the Board should conclude that it is impossible to reach a decision on the merits of the challenge and so state in its decision." *Id.* The Board has yet to make such determination in this proceeding or any of the related proceedings noted above.

B. Applicable Law

> To determine whether § 112 ¶ 6 applies to a claim limitation, we must inquire whether the words of the claim are understood by persons of ordinary skill in the art to have a ***sufficiently definite meaning as the name for structure. If those words lack a sufficiently definite meaning, § 112 ¶ 6 applies***. If the limitation uses the word 'means,' there is a rebuttable presumption that § 112 ¶ 6 applies. If not, there is a rebuttable presumption that the provision does not apply. But that presumption can be overcome and § 112 para. 6 will apply if the challenger demonstrates that ***the claim term fails to recite sufficiently definite structure*** or else recites function without reciting sufficient structure for performing that function.

Rain Computing v. Samsung Electronics America, 989 F.3d 1002, 1005 (Fed. Cir. 2021) (citing *Williamson v. Citrix, LLC,* 792 F.3d 1339 (Fed. Cir. 2015) (internal quotations, brackets, and citations omitted and emphasis added).

The above is often misstated as requiring the term "means" be replaced by a recognized "nonce" word. But that is just *one way* to demonstrate that a claim limitation fails to recite a sufficiently definite structure:

> One way to demonstrate that a claim limitation fails to recite sufficiently definite structure is to show that, although not employing the word 'means,' the claim limitation uses a similar 'nonce' word that can operate as a substitute for `means' in the context of § 112, para. 6… In each case, ***a critical question*** is whether the claim term is used in common parlance or by persons of skill in the pertinent art ***to designate structure***, including either a particular structure or a class of structures.

MTD Products Inc. v. Iancu, 933 F. 3d 1336, 1341 (Fed. Cir. 2019) (emphasis added). Accordingly, the failure of the claims to recite a recognized "nonce" word is not determinative. Rather, the critical question is whether a claim term, when read in light of the specification, designates a structure. *Media Rights Technologies v. Capital One Financial*, 800 F. 3d 1366, 1372 (Fed. Cir. 2015) ("In undertaking this analysis, we ask if the claim language, read in light of the specification, recites sufficiently definite structure to avoid § 112, ¶ 6.").

Once it has been determined that § 112, ¶ 6, is invoked, the construction of the claim term attributed for performing the function must be determined, which occurs in two steps.

> The first step in construing a means-plus function claim is to identify the claimed function. After identifying the function, we then determine what structure, if any, disclosed in the specification corresponds to the claimed function. Under this second step, structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.

Rain Computing, 989 F.3d at 1007 (citing *Williamson v. Citrix, LLC,* 792 1139 (Fed. Cir. 2015) (internal quotations and citations omitted).

When the structure disclosed for performing the function is a general-purpose computer, as here, the second step requires identifying an algorithm disclosed in the specification for accomplishing the function.

> If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function… For means-plus-function claims in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, we have held that the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.

Rain Computing, 989 F.3d at 1007 (citing *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339 (Fed. Cir. 1999) (internal quotations and citations omitted).

An identical edict is recited in MPEP 2181(II)(B), which directs:

> "To claim a means for performing a specific computer-implemented function and then to disclose only a general purpose computer as the structure designed to perform that function ***amounts to pure functional claiming***. *Aristocrat,* 521 F.3d 1328 at 1333, 86 USPQ2d at 1239. In this instance, ***the structure*** corresponding to a 35 U.S.C. 112(f) claim limitation for a computer-implemented function ***must include the algorithm needed to transform the general purpose computer or microprocessor disclosed in the specification***. *Aristocrat,* 521 F.3d at 1333, 86 USPQ2d at 1239; *Finisar Corp. v. DirecTV Group, Inc.,* 523 F.3d 1323, 1340, 86 USPQ2d 1609, 1623 (Fed. Cir. 2008); *WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1349, 51 USPQ2d 1385, 1391 (Fed. Cir. 1999); *Rain Computing, Inc. v. Samsung Electronics America Co.,* 989 F.3d 1002, 1007-8, 2021 USPQ2d 284 (Fed. Cir. 2021)." (Emphasis added.")

There is, however, a narrow exception to the rule that an algorithm must be disclosed for a general-purpose computer to satisfy the disclosure requirement. In instances where the recited function is merely, "processing," "storing," and "receiving," a general-purpose computer is sufficient:

> [W]e held that absent a possible narrower construction of the terms 'processing,' 'receiving,' and 'storing,' the disclosure of a general-purpose computer was sufficient. We explained that in substance,

> claiming ‘means for processing,’ ‘receiving,’ and ‘storing’ may simply claim a general-purpose computer, although in means-plus-function terms.

Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F. 3d 1361, 1365 (Fed. Cir. 2012) (citing *In re Katz Interactive Call Processing Patent*, 639 F. 3d 1303 (Fed. Cir. 2011) (internal quotations and citations omitted).

This exception is also echoed in MPEP § 2181(II)(B), which states:

> “For a computer-implemented means-plus-function claim limitation invoking 35 U.S.C. 112(f) the Federal Circuit has stated that "a microprocessor can serve as structure for a computer-implemented function only where the claimed function is ‘coextensive’ with a microprocessor itself." *EON Corp. IP Holdings LLC v. AT&T Mobility LLC,* 785 F.3d 616, 622, 114 USPQ2d 1711, 1714 (Fed. Cir. 2015), citing *In re Katz Interactive Call Processing Patent Litigation,* 639 F.3d 1303, 1316, 97 USPQ2d 1737, 1747 (Fed. Cir. 2011). "‘***It is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed.***’" *EON Corp.,* 785 F.3d at 621, 114 USPQ2 at 1714, quoting *Ergo Licensing, LLC v. CareFusion* 303, Inc., 673 F.3d 1361, 1365, 102 USPQ2d 1122, 1125 (Fed. Cir. 2012). "‘[S]pecial programming’ includes any functionality that is not ‘coextensive’ with a microprocessor or general purpose computer." *EON Corp.,* 785 F.3d at 623, 114 USPQ2d at 1715 (citations omitted). "Examples of such coextensive functions are ‘receiving’ data, ‘storing’ data, and ‘processing’ data—the only three functions on which the Katz court

> vacated the district court's decision and remanded for the district court to determine whether disclosure of a microprocessor was sufficient." 785 F.3d at 622, 114 USPQ2d at 1714. Thus, "[a] microprocessor or general purpose computer lends sufficient structure only to basic functions of a microprocessor. All other computer-implemented functions require disclosure of an algorithm." *Id.,* 114 USPQ2d at 1714." (Emphasis added.)

Accordingly, the case law and MPEP both require that when the function recited in the claims requires more than storing, receiving, or processing, an algorithm must be disclosed in the specification.

Should an adequate structure not be found within the specification, then the claim is indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite."); MPEP 2181(II)(B) ("Accordingly, a rejection under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph is appropriate if the specification discloses no corresponding algorithm associated with a computer or microprocessor.").

C. Claims 1 and 10 Fail to Recite Sufficiently Definite Structure for Enabling One or More of An Application, a Function and a Service

Claims 1 and 10 each recite the function of "enabling one or more of an application, a function and a service" without reciting a sufficiently definite structure for performing that function. Claim 1 attributes to the function to an "integrated PDK" or an "integrated RDC." Claim 10 attributes the function to an "enablement

signal" generated by a "hybrid device." But none of these structures are recognized by those skilled in the art as sufficiently *definite* structures for performing the function. Jakobsson Decl. (Ex. 2016), ¶ 36 ("[T]he structures recited for performing the function of 'enabling one or more of an application, a function and a service' recited in claims 1 and 10 of the 042 Patent are not used in common parlance or by persons of skill in the pertinent art to designate structures or a class of structures recognized for performing the function."). The claims themselves and the specification further inform that the recited structures for performing the function are nothing more than the generic abilities of general-purpose computers or meaningless nonce words. Jakobsson Decl., ¶ 18 ("The terms, rather, connote the general and generic abilities of general-purpose computers or are a completely meaningless nonce defined only by the intended action to be performed.").

Consequently, the structure for performing the function of "enabling one or more of an application, a function, and a service" must be an algorithm disclosed in the specification. *Rain Computing*, 989 F.3d at 1007 ("For means-plus-function claims in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, we have held that "the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm."); MPEP § 2181(II)(B) ("The corresponding structure is not simply a general purpose computer by itself but the

special purpose computer as programmed to perform the disclosed algorithm."). Absent such an algorithm within the specification, the claims would be indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite."); MPEP § 2181(II)(B) ("Accordingly, a rejection under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph is appropriate if the specification discloses no corresponding algorithm associated with a computer or microprocessor.").

But here the specification "discloses a control logic that can be used by an 'RDC' and a 'PDK to 'enable one or more of an application, a function and a service." Jakobsson Decl., ¶ 18. Furthermore, "the same control logic generates 'an enablement signal enabling one or more of an application, a function and a service." Jakobsson Decl., ¶ 18. Accordingly, the control logic disclosed in the specification is the structure for "enabling one or more of an application, a function, and a service."

1. Integrated PDK

The term "integrated PDK" (Personal Digital Key) is not recognized by those of ordinary skill in the art to provide a sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service". Jakobsson Decl., ¶ 18. Accordingly, claim 1 invokes § 112, ¶ 6.

Since claim 1 invokes § 112, ¶ 6, by failing to recite a sufficiently definite structure for performing the recited function, the claim term "integrated PDK" must be construed. "The first step in construing a means-plus function claim is to 'identify the claimed function." *Rain Computing*, 989 F.3d at 1007. With respect to claim 1, the recited function is "enabling one or more of an application, a function and a service." "After identifying the function, we then determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Rain Computing*, 989 F.3d at 1007.

Claim 1 attributes the function of "enabling one or more of an application, a function and a service" to an "integrated PDK." "§ 112 para. 6 will apply if the challenger demonstrates that ***the claim term fails to recite sufficiently definite structure*** or else recites function without reciting sufficient structure for performing that function." *Rain Computing*, 989 F.3d at 1005 (emphasis added). The specification states, that "[i]n a minimal embodiment, the PDK 102a includes an antenna and a transceiver for communicating with a RDC (not shown) and a controller and memory for storing information particular to a user." 042 Patent, 13:46-49. Consistent with this definition, Apple proposed a construction of PDK as "an operably connected collection of elements including ***an antenna and a transceiver for communicating*** with a RDC and ***a controller and memory*** for storing information particular to a user." Exhibit 2015, at 4 (emphasis added). Patent

Owner has proposed the same construction as Petitioner Apple. Exhibit 2006, at 10; and Exhibit 2014, at 2. But a "processor and transceiver amount to nothing more than a general-purpose computer." *HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270, 1280 (Fed. Cir. 2012); MPEP § 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function."); *see also* Jakobsson Decl., ¶ 37 ("The only structures are a controller (i.e., processor) and memory, which forms nothing more than a generic computer, and an antenna and transceiver, which add nothing more than Bluetooth, Wi-Fi, or the like.").

By holding that the transceiver and processor are sufficiently definite structures, the PTAB has misstated that law in a manner already chastised by the CAFC:

> "***The district court misstated the law***, however, when it stated that disclosure of a processor and transceiver alone was sufficient to provide structure to these claims. The processor and transceiver amount to nothing more than a general-purpose computer. We have consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor."

HTC Corp., 667 F. 3d 1270, 1280 (Fed. Cir. 2012) (emphasis added and citation omitted).

"Memory for storing information particular to a user" is nothing more than a computer readable media or storage device. "[C]omputer-readable media or storage devices amount to nothing more than a general-purpose computer." *Rain Computing,* 989 F.3d at 1007 (Fed. Cir. 2021). "Thus, a PDK is defined in the specification as a generic computer with Bluetooth or Wi-Fi, such as a standard laptop, desktop, or smart phone." Jakobsson Decl., ¶ 37. A PDK, therefore, legally and factually amounts to nothing more than a general-purpose computer.

In holding that memory provides a sufficiently definite structure, the Board has repeated an error criticized by the CAFC:

> ***The district court erred***, however, in concluding that the disclosure of computer-readable media or storage devices provided sufficient structure for the 'control access' function. These computer-readable media or storage devices amount to nothing more than a general-purpose computer. And 'controlling access to one or more software application packages to which the user has a subscription' requires more 'than merely plugging in a general purpose computer.' Rather, some special programming, *i.e.,* an algorithm, would be required to control access to the software application packages.

Rain Computing, 989 F.3d 1002, 1007-1008 (Fed. Cir. 2021) (citations omitted and emphasis added).

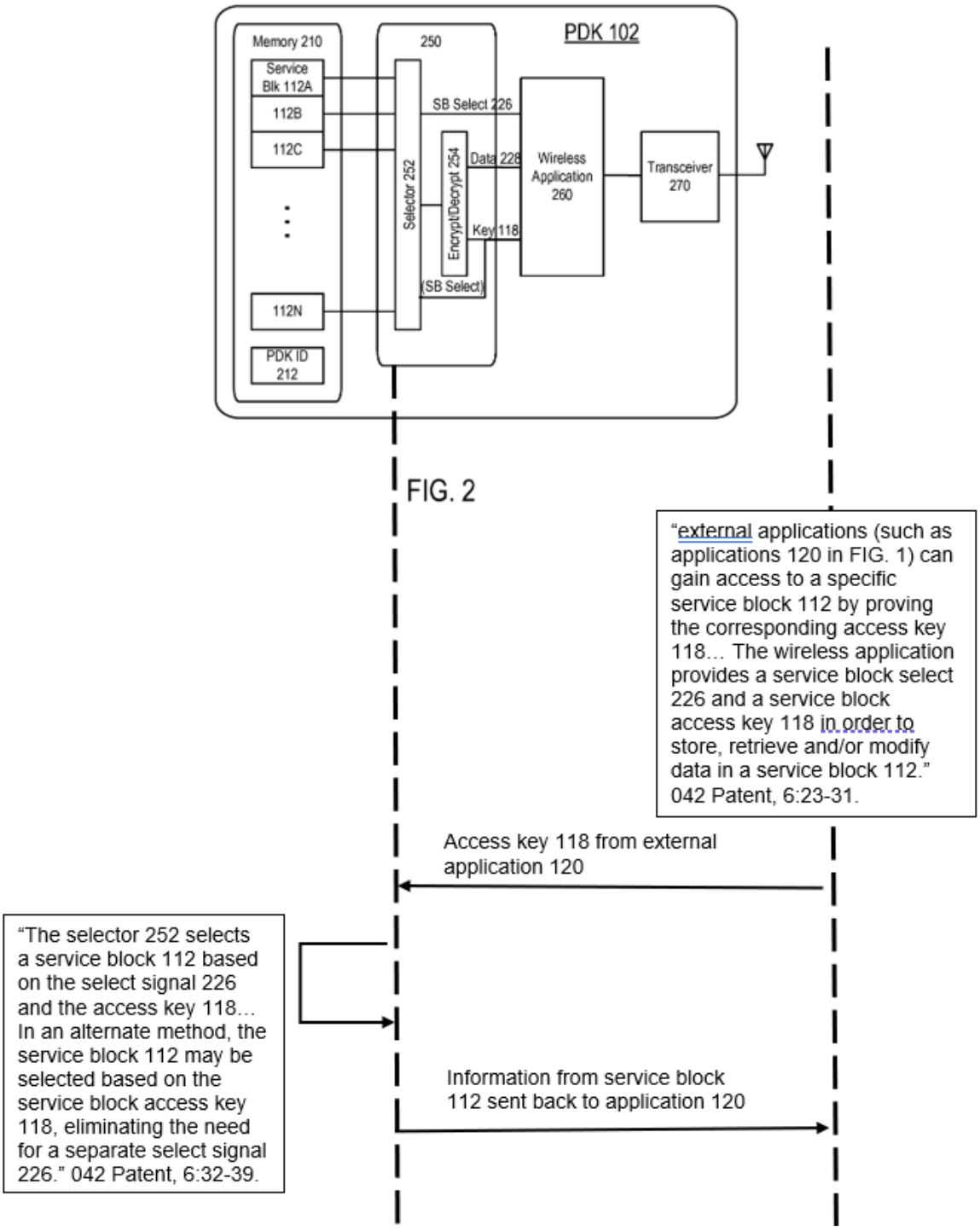
Furthermore, "controlling access to one or more software application packages to which the user has a subscription requires more than merely plugging in a general purpose computer." *Id.* (citing *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361 (Fed. Cir. 2012) (internal quotations and brackets omitted); MPEP § 2181(II)(B) ("The corresponding structure is not simply a general purpose computer by itself but the special purpose computer as programmed to perform the disclosed algorithm. *Aristocrat,* 521 F.3d at 1333, 86 USPQ2d at 1239. Thus, the specification must sufficiently disclose an algorithm to transform a general purpose microprocessor to the special purpose computer.").

"If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Rain Computing,* 989 F.3d at 1007 (Fed. Cir. 2021); MPEP § 2181(II)(B) ("Mere reference to a general purpose computer with appropriate programming without providing an explanation of the appropriate programming, or simply reciting "software" without providing detail about the means to accomplish a specific software function, would not be an adequate disclosure of the corresponding structure to satisfy the requirements of 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph."). The algorithm is presented in the specification of the 042 patent with reference to "control logic 250". Jakobsson Decl., ¶¶ 38-39.

> Regardless of how created, once created, ***external applications (such as applications 120 in FIG. 1) can gain access to a specific service block 112 by proving the corresponding access key 118***. In FIG. 2, this is shown ***conceptually by control logic 250***. The wireless application 260 on the PDK 102 communicates to the sensor (not shown in FIG. 2) via transceiver 270. The wireless application provides a service block select 226 and ***a service block access key 118 in order to store, retrieve and/or modify data in a service block 112***. The selector 252 selects a service block 112 based on the select signal 226 and the access key 118. The encryption engine 254 encrypts/decrypts data 228 flowing to/from the service block 112 based on the access key 118 (or some other key generated based on the access key, for example a session key). In an alternate method, ***the service block 112 may be selected based on the service block access key 118***, eliminating the need for a separate select signal 226.

188 Patent, 6:23-39 (emphasis added).

Dr. Jakobsson graphically presents the above algorithm as follows:



Jakobsson Decl., ¶ 39.

The passage begins by summarizing the operation of the algorithm of control logic 250 as one in which "external applications (such as applications 120 in FIG. 1)

can gain access to a specific service block 112 by proving the corresponding ***access key 118***." Accordingly, when executed, the algorithm of control logic 250 exchanges an "access key" provided by an application for the information held within a "service block," consistent with the recognized function of an access key. Jakobsson Decl., ¶ 40. Thus, the specification provides an algorithm.

For the algorithm to be the structure corresponding to the recited function of "enabling one or more of an application, a function and a service" it must be clearly linked to the function. *Rain Computing*, 989 F.3d at 1007 ("Under this second step, structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim."); MPEP § 2181(II)(B) ("Mere reference to a general purpose computer with appropriate programming without providing an explanation of the appropriate programming, or simply reciting 'software' without providing detail about the means to accomplish a specific software function, would not be an adequate disclosure of the corresponding structure to satisfy the requirements of 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph."). The specification does just that with reference to Figures 1 and 4-6. Jakobsson Decl., ¶¶ 41-42.

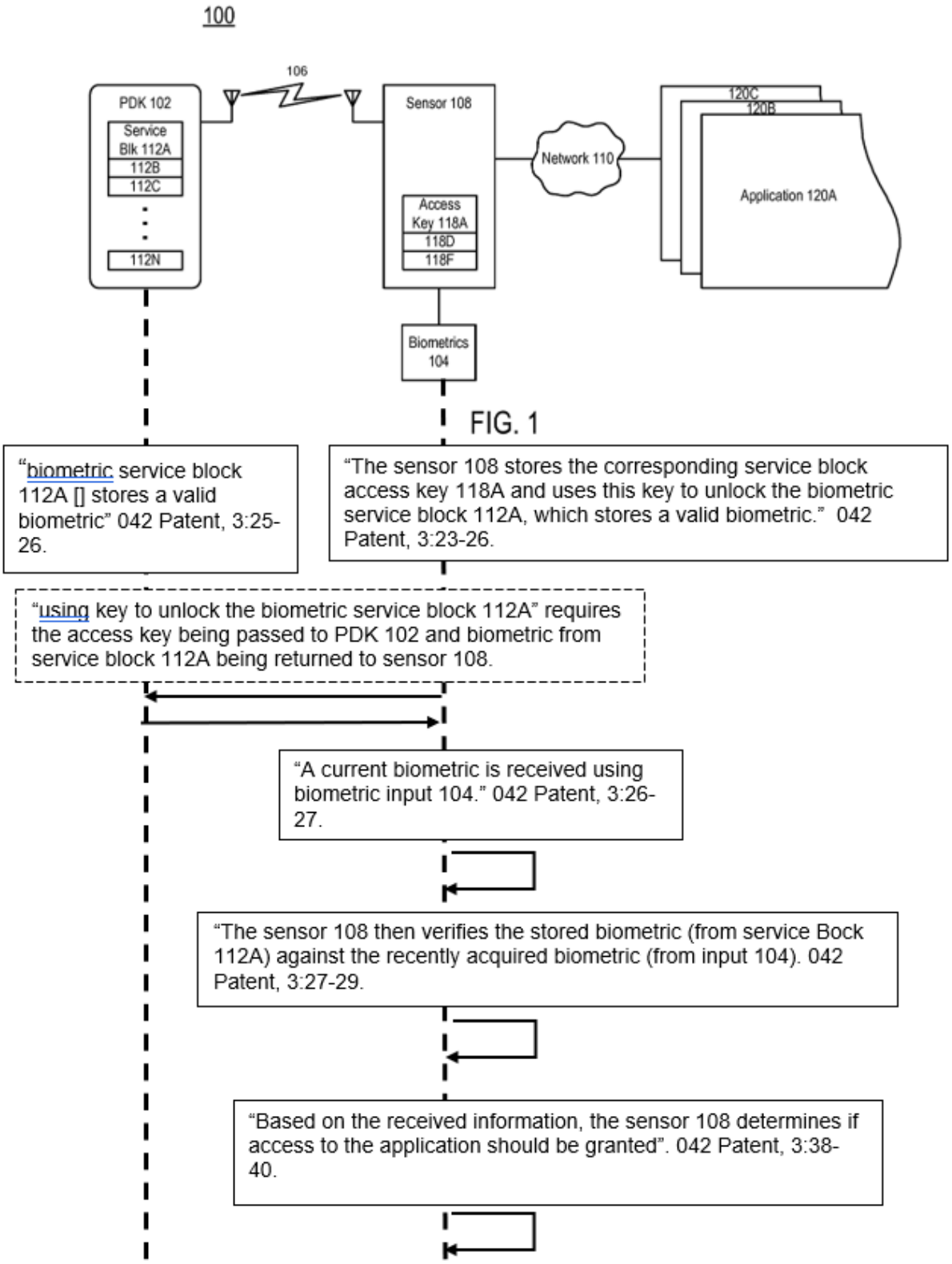
First, with reference to Figure 1, the specification details the use of the algorithm to enable the function of biometric authentication, such that biometric authentication by sensor 108 is enabled by the sensor exchanging an access key to

unlock and retrieve a biometric held within a service block. Jakobsson Decl., ¶¶ 41-43.

> In one example, a biometric is required in order to access specific service blocks 112 in the PDK102. Verification of the biometric is achieved by using service block 112A. The sensor 108 stores the corresponding service block access key 118A and uses this key to unlock the biometric service block 112A, which stores a valid biometric. A current biometric is received using biometric input 104. The sensor 108 then verifies the stored biometric (from service block 112A) against the recently acquired biometric (from input 104). Upon proper verification, various applications 120 are permitted to connect to the PDK102 via the sensor 108 and/or to gain access to other service blocks 112.
>
> The system 100 can be used to address applications 120 where it is important to authenticate an individual for use. Generally, the sensor 108 wirelessly receives information stored in the PDK 102 that uniquely identifies the PDK 102 and the individual carrying the PDK102. The sensor 108 can also receive a biometric input 104 from the individual. Based on the received information, the sensor 108 determines if access to the application 120 should be granted. In this example, the system 100 provides authentication without the need for PINs or passwords (although PINs and passwords may be used in other implementations).”

188 Patent, 3:22-44.

Dr. Jakobsson graphically presents the flow of the above process as follows:



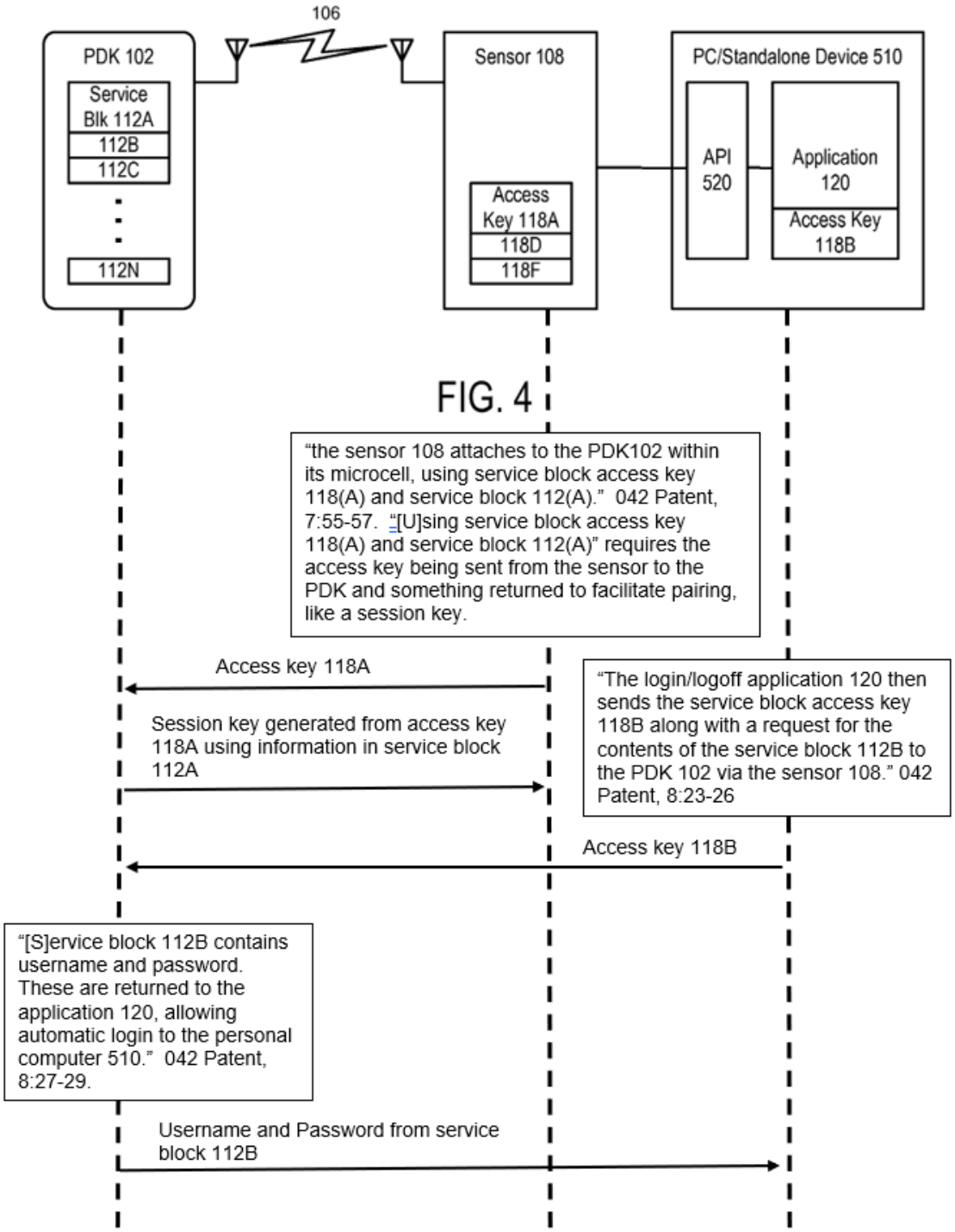
Jakobsson Decl., ¶ 42.

With reference to Figure 4, the shared specification details how the algorithm of exchanging an access key to retrieve information held within a service block enables an auto login/logoff application. Jakobsson Decl., ¶¶ 44-46.

> An example of a local application (FIG. 4) is an auto login/logoff of a personal computer. When a PDK 102 is within the proximity of the personal computer 510, the PDK 102 is detected and the sensor 108 attaches to the PDK 102 (using service block 112A). The login/logoff application 120 then sends the service block access key 118B along with a request for the contents of the service block 112B to the PDK 102 via the sensor 108. For example, a standard may specify that particular service block 112B contains username and password. These are returned to the application 120, allowing automatic login to the personal computer 510.

188 Patent, 8:19-29.

Dr. Jakobsson graphically presents the flow as follows:



Jakobsson Decl., ¶ 45.

As shown above, the flow begins with the creation of a wireless link facilitating wireless communication between the sensor 108 and the PDK 102.

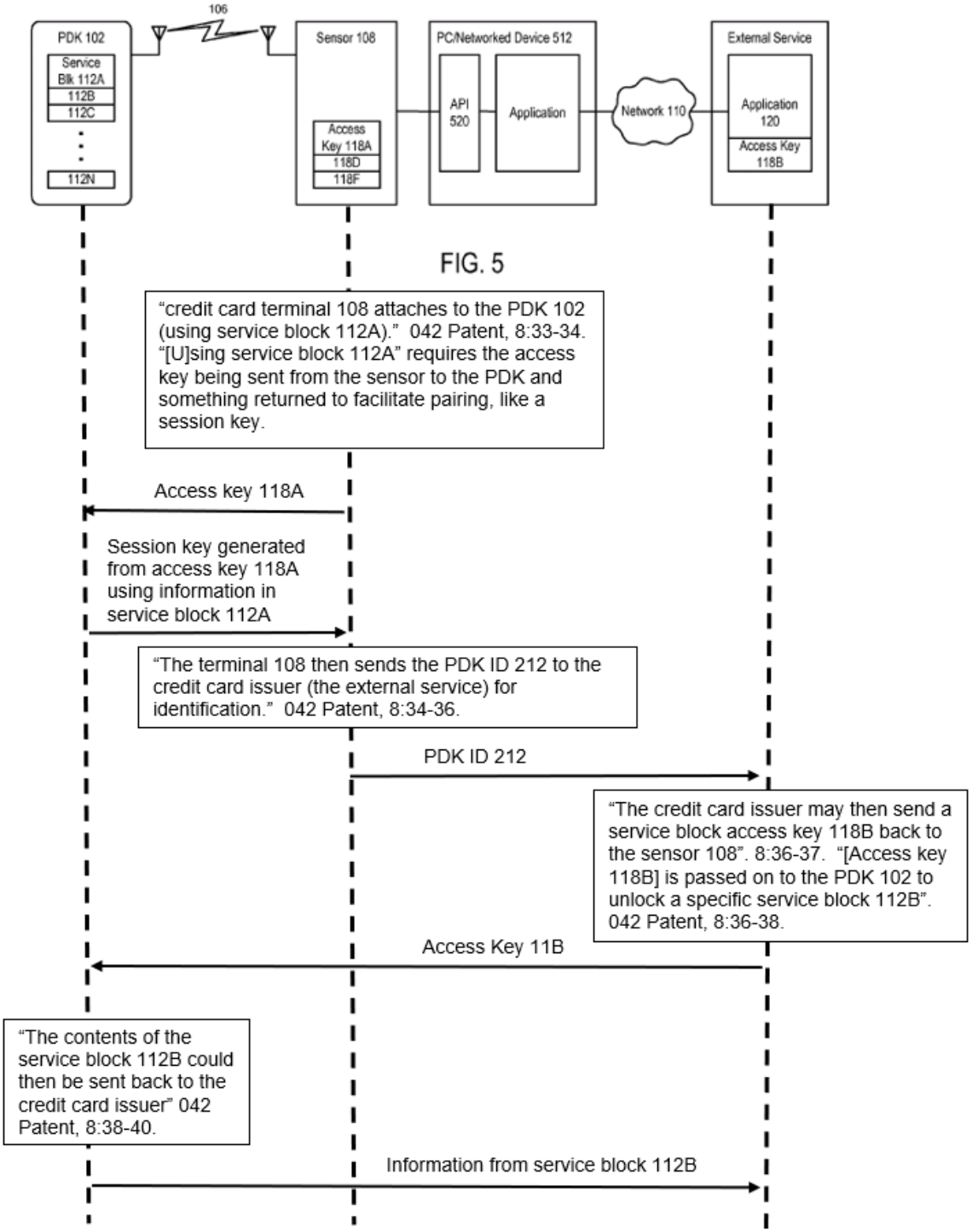
Jakobsson Decl., ¶ 46. However, despite the presence of the wireless link, application 120 is not enabled until it exchanges an access key 118B to unlock and retrieve a username and password held within service block 112B. Jakobsson Decl., ¶ 46. Accordingly, the wireless link is not sufficient to enable application 120.

With reference to Figure 5, the specification details how the algorithm of control logic 250 can be used to enable the service of using a credit card. Jakobsson Decl., ¶¶ 47-49.

> An example of a remote application (FIG.5) is a credit card transaction. The sensor 108 in this case could be a credit card terminal. When the PDK 102 is brought in close proximity, the credit card terminal 108 attaches to the PDK 102 (using service block 112A). The terminal 108 then sends the PDKID 212 to the credit card issuer (the external service) for identification. The credit card issuer may then send a service block access key 118B back to the sensor 108, where it is passed on to the PDK102 to unlock a specific service block 112B. The contents of the service block 112B could then be sent back to the credit card issuer where further decryption could occur and the credit cardholder could be verified. Once verified, the credit card terminal displays that the transaction is approved.

188 Patent, 8:30-42.

Dr. Jakobsson graphically presents the flow as follows:



Jakobsson Decl., ¶ 48.

As before, the flow begins with the creation of a wireless link facilitating wireless communication between the credit card terminal 108 and the PDK 102.

Jakobsson Decl., ¶ 49. However, despite the presence of the wireless link, the service of charging a card is not enabled until the credit card issuer sends an access key 118B to unlock and retrieve the contents of service block 112B. Jakobsson Decl., ¶ 49. Accordingly, the wireless link is not sufficient to enable the service.

"FIGS. 4 and 5 illustrate a basic case where a single application accesses a single service block on a single PDK via a single sensor." 188 Patent, 8:50-52. The algorithm of control logic 250, however, can also be used with multiple applications, functions and services, as illustrated by Figure 6. Jakobsson Decl., ¶¶ 50-51.

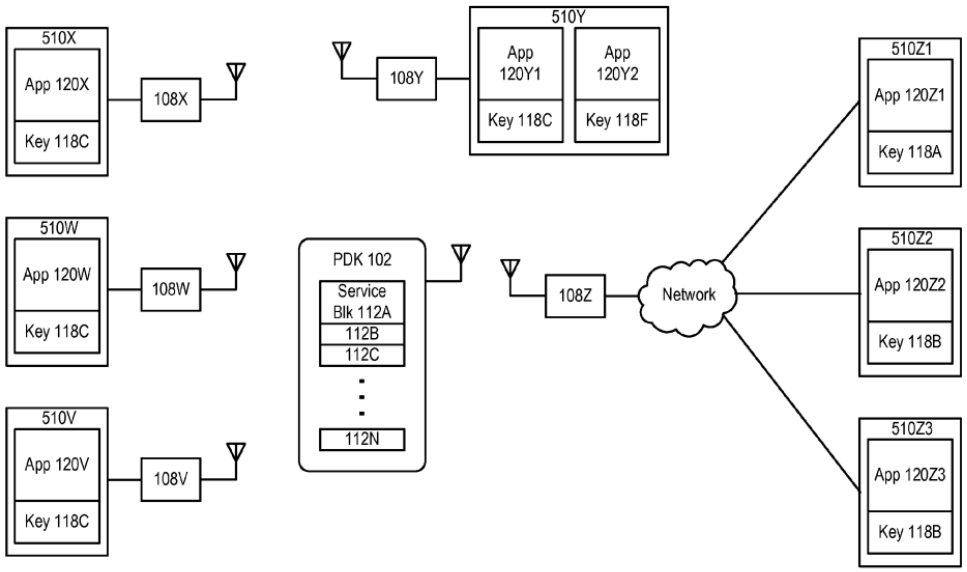


FIG. 6

Again, access to a service block is dependent on being able to exchange the right access key to unlock and retrieve the information held within the service block. Jakobsson Decl., ¶ 51. Thus, "applications 120W, 120X and 120Y1 can each access service block 112C since each application has access to service block access key

118C." 042 Patent, 8:59-61. The algorithm of control logic 250 allows multiple applications to use the same PDK simultaneously. Jakobsson Decl., ¶ 51. For instance, "the first application 120Y1 might be the auto login/logoff, where a user logs in to a personal computer via a service block 112C that provides a username and password." 188 Patent, 9:10-13. As application 120Y1 has a copy of access key 118C, it can exchange access key 118C to unlock and retrieve the username and password in service block 112C. Jakobsson Decl., ¶ 51. After a user has logged onto the computer, the user may authenticate via biometric verification application 120Y2. Jakobsson Decl., ¶ 51. "Application 120Y2 compares this against a biometric stored in a second service block 112F on the PDK." 188 Patent, 9:17-19. Application 120Y2 can make the comparison because it has access key 118F, which can be exchanged to unlock and retrieve a biometric stored in service block 112F. Jakobsson Decl., ¶ 51. After biometric authentication, "credit card provider 120Z1 then sends its service block access key 118A to the PDK where this third service block 112A is retrieved and sent back to the credit card issuer." 188 Patent, 9:21-24. Yet again, an application, function, or service is enabled by exchanging an access key to unlock and retrieve information held within the service block. Jakobsson Decl., ¶ 51.

The above examples from the specification unmistakenly link the algorithm of control logic 250 to the ability of an "integrated PDK" to perform the function of

"enabling one or more of an application, a function and a service." Therefore, claim 1 must be construed as including the algorithm of control logic 250. Absent such a construction, claim 1 would be indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite.").

2. Integrated RDC

Claim 1 also attributes the function of "enabling one or more of an application, a function and a service" to an "integrated RDC" (Receiver-Decoder Circuit). "§ 112 para. 6 will apply if the challenger demonstrates that ***the claim term fails to recite sufficiently definite structure*** or else recites function without reciting sufficient structure for performing that function." *Rain Computing*, 989 F.3d at 1005 (emphasis added). The term "integrated RDC" is not recognized by those of ordinary skill in the art to provide a sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service." Jakobsson Decl., ¶¶ 18 and 53. Accordingly, claim 1 invokes § 112, ¶ 6.

Since claim 1 invokes § 112, ¶ 6 by failing to recite a sufficiently definite structure for performing the recited function, the claim term "integrated RDC" must be construed. "The first step in construing a means-plus function claim is to 'identify the claimed function." *Rain Computing*, 989 F.3d at 1007. With respect to claim 1 the recited function is "enabling one or more of an application, a function and a

service." "After identifying the function, we then determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Rain Computing*, 989 F.3d at 1007. Claim 1 recites the function is also performed by an "integrated RDC for communicating wirelessly with at least one external PDK within a proximity zone." On its face, the recited structure is nothing more than the ability to receive data via Bluetooth, Wi-Fi, and other wireless protocols. Jakobsson Decl., ¶¶ 53-55.

Furthermore, the specification does not provide any significant structure for the receiver decoder circuit. Jakobsson Decl., ¶¶ 54-55. The specification merely describes an RDC as follows:

> The RDC 304 provides the wireless interface to the PDK 102. Generally, the RDC 304 wirelessly receives data from the PDK 102 in an encrypted format and decodes the encrypted data for processing by the processor 306.

188 Patent, 7:10-13.

Dr. Jakobsson characterizes the RDC as "just a wireless interface that can decode or decrypt received data," as in Bluetooth, Wi-Fi and other wireless communication protocols. Jakobsson Decl., ¶ 55. Petitioner Apple and Patent Owner are in full agreement with Dr. Jakobsson. Each has proposed a construction for RDC involving nothing more than a structure that receives data. Before the District Court, Apple proposed a construction of RDC as "a component or collection of

components, capable of ***wirelessly receiving data*** in an encrypted format and decoding the encrypted data for processing." Exhibit 2015, at 4. Patent Owner has proposed the same construction as Petitioner Apple. Exhibit 2006, at 12; and Exhibit 2014, at 3. Accordingly, there is agreement that an RDC is nothing more than a receiver. But a "processor and transceiver amount to nothing more than a general-purpose computer." *HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270, 1280 (Fed. Cir. 2012); MPEP § 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function."). By holding that the transceiver and processor are sufficiently definite structures, the PTAB has misstated that law in a manner already chastised by the CAFC:

> "***The district court misstated the law***, however, when it stated that disclosure of a processor and transceiver alone was sufficient to provide structure to these claims. The processor and transceiver amount to nothing more than a general-purpose computer. We have consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor."

HTC Corp., 667 F. 3d 1270, 1280 (Fed. Cir. 2012) (emphasis added and citation omitted).

As noted above, creating a wireless link facilitating the receipt of data does not enable an application, function, or service. Rather, enablement does not occur until an access key is exchanged to unlock and retrieve the contents of a service block, per control logic 250. Accordingly, an RDC alone is not a sufficiently definite structure.

"If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Rain Computing,* 989 F.3d at 1007 (Fed. Cir. 2021 MPEP § 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function."). As detailed above, an algorithm is provided in the specification as control logic 250, which when executed allows an RDC to perform the function of "enabling one or more of an application, a function and a service." Claim 1, accordingly, must be construed as including the algorithm of control logic 250. Absent such construction, claim 1 would be indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite.").

3. Enablement Signal

Claim 10 attributes the function of "enabling one or more of an application, a function and a service" to an "enablement signal." "§ 112 para. 6 will apply if the challenger demonstrates that ***the claim term fails to recite sufficiently definite structure*** or else recites function without reciting sufficient structure for performing that function." *Rain Computing*, 989 F.3d at 1005 (emphasis added). The term "enablement signal" is not recognized by those of ordinary skill in the art to provide a sufficiently definite structure for performing the function of "enabling one or more of an application, a function and a service", rather it is a meaningless nonce merely reciting the function to be performed. Jakobsson Decl., ¶ 56. Accordingly, claim 10 invokes § 112, ¶ 6.

Since claim 10 invokes § 112, ¶ 6, by failing to recite a sufficiently definite structure for performing the recited function, the claim term "enablement signal" must be construed. "The first step in construing a means-plus function claim is to 'identify the claimed function." *Rain Computing*, 989 F.3d at 1007. With respect to claim 10 the recited function is "enabling one or more of an application, a function and a service." "After identifying the function, we then determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Rain Computing*, 989 F.3d at 1007. Claim 10 recites the function is performed by an "enablement signal."

On its face, the recited structure is nothing more than the ability to receive data. As defined by the American Heritage Dictionary, the term signal means "[t]he sound, image, or message transmitted or received by means of telecommunications." American Heritage Dictionary Entry: signal (ahdictionary.com), https://ahdictionary.com/word/search.html?q=signal. Thus, an enablement signal is nothing more than the receipt of data by a computer. If the receipt of data were sufficient to enable the function of "enabling one or more of an application, a function and a service," then the "enablement signal" would be a sufficiently definite structure. *Ergo Licensing, LLC,* 673 F.3d at 1365 ("We explained that in substance, claiming 'means for processing,' 'receiving,' and 'storing' may simply claim a general-purpose computer, although in means-plus-function terms"). Claim 10, however, clearly says otherwise. The first element of claim 10 is "creating a first wireless link," which is followed by "receiving a first signal." But the link and the first signal don't "enable one or more of an application, a function and a service." Claim 10, rather, recites "***generating*** an enablement signal enabling one or more of an application, a function and a service." Accordingly, by the express language of claim 10, the mere receipt of data via a wireless link is insufficient to perform the function of "enabling one or more of an application, a function and a service."

The specification, thankfully, details an enablement signal and how it is generated, with reference to Figures 14 and 15 (reproduced below).

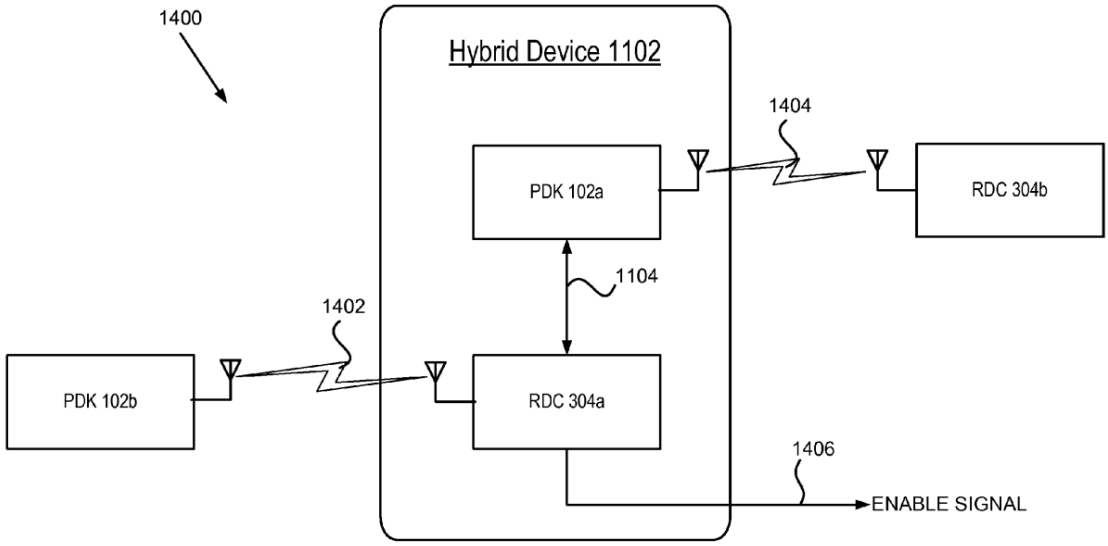

1400
Hybrid Device 1102
1404
PDK 102a
RDC 304b
1104
1402
PDK 102b
RDC 304a
1406
ENABLE SIGNAL

FIG. 14

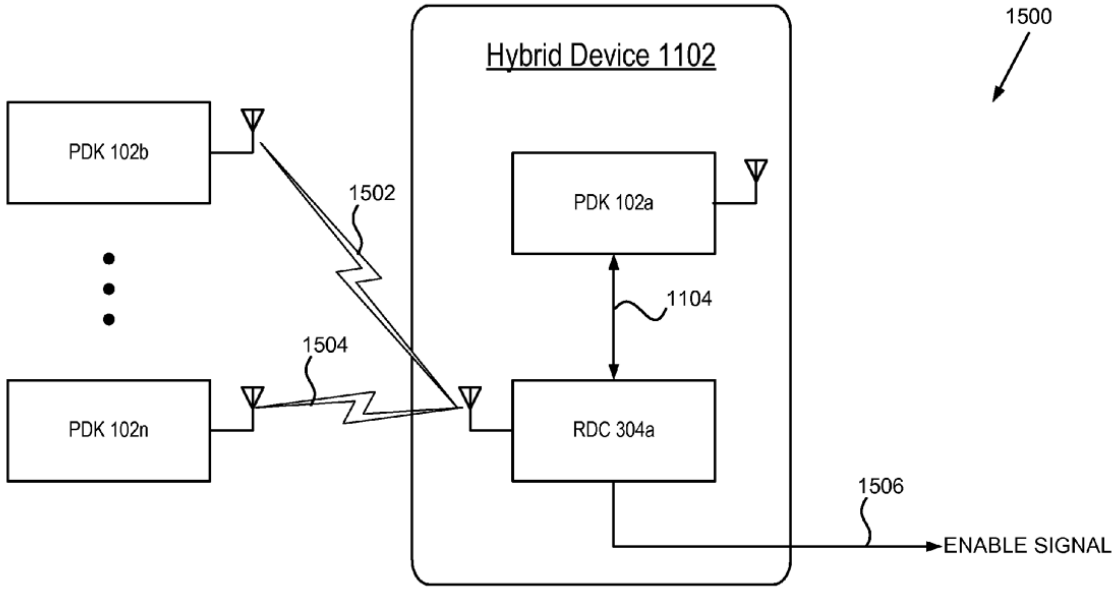

1500
Hybrid Device 1102
PDK 102b
1502
PDK 102a
1104
1504
PDK 102n
RDC 304a
1506
ENABLE SIGNAL

FIG. 15

The specification details that a link between an RDC and PDK is required to generate an enablement signal on a signal line between an RDC and a device. Referencing Figure 14, the specification states, "***only when the hybrid device 1102 has multiple links 1402, 1404*** will the hybrid device 1102 ***generate an authorization or enable signal*** on signal line 1406." 188 Patent, 16:67-17:3. Links 1402, 1404 are between PDKs 102b, 102a and RDCs 304a, 304b, respectively. "If either the RDC 304b or PDK102b is not present, the hybrid device 1102 does not allow operation of the personal computer." 188 Patent, 17:17-19. Another embodiment requiring the same is shown in Figure 15. "For the system 1500, only when multiple PDK links 1502,1504 to the hybrid device 1102 exist, will an authorization/enablement signal be generated on signal line 1506." 188 Patent,17:23-26. Generating an enablement signal, therefore, depends upon the operation and interaction of a PDK and RDC. Jakobsson Decl., ¶ 58.

As noted above, Petitioner Apple, Patent Owner, and Dr. Jakobsson all agree that an RDC is nothing more than a receiver. But a "processor and transceiver amount to nothing more than a general-purpose computer." *HTC Corp.*, 667 F.3d at 1280; MPEP § 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing

the claimed function."). Accordingly, the RDC necessary to generate an "enablement signal" is a general-purpose computer and thus cannot provide the required sufficiently definite structure. *Rain Computing,* 989 F.3d at 1007 ("If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function."). The same is true for a PDK.

As also noted above, Petitioner Apple, Patent Owner, and Dr. Jakobsson all agree a PDK includes "***an antenna, a transceiver for communicating*** with the RDC and ***a controller and memory*** for storing information particular to a user." Exhibit 2005, at 11; Exhibit 2015, at 4; Exhibit 2006, at 10; Exbibit 2014, at 2; and Jakobsson Decl., ¶ 37. Here again, a processor and transceiver amount to nothing more than a general-purpose computer. *See HTC Corp.*, 667 F.3d at 1280 (Fed. Cir. 2012); MPEP § 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function."). Likewise, memory storing information particular to a user requires an algorithm. "[C]omputer-readable media or storage devices amount to nothing more than a general-purpose computer." *Rain Computing,* 989 F.3d at 1007 (Fed. Cir.

2021). A PDK thus amounts to nothing more than a general-purpose computer. "If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Id.* Accordingly, as both the PDK and RDC, which generate the "enablement signal enabling one or more of an application, a function and a service," are general purpose computers, an algorithm is required.

As noted above, an algorithm executed by the controller of the PDK is detailed in the specification as "control logic 250." The specification summarizes the operation of the algorithm as "external applications (such as applications 120 in FIG. 1) can gain access to a specific service block 112 by proving the corresponding ***access key 118***." 188 Patent, 6:23-26. "If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Rain Computing,* 989 F.3d at 1007. Claim 10, accordingly, must be construed as including the algorithm of control logic 250. Absent such a construction, claim 10 would be indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite.").

D. Prior Construction by the District Court

In instituting the present proceedings, the Board determined that the District Court did not limitations in claims 1 and 10 simply because the District Court's Memorandum in Support of Claim Construction Order (Ex. 2001) "a determination of whether a term is indefinite is not the same thing as construing a claim term." Paper 9, 10. However, "indefiniteness analysis involves general claim construction principles" *Sonix Tech. Co.,* 844 F.3d at 1378. Such a cursory analysis, accordingly ignores the case law, as well as the entirety of the District Court proceedings.

The District Court was asked to construe the term "hybrid device", which Samsung alleged was indefinite. Consistent with the Patent Owner's proposed claim construction, the District Court construed a "hybrid device" to be a "device comprising an integrated personal digital key (PDK) and an integrated receiver-decoder circuit [(RDC)]." Ex. 2001, at 25. The District Court then construed each of the terms PDK and RDC. Samsung and Patent Owner both proposed constructions that defined a PDK as including "antenna [and] a transceiver for communicating with the RDC and a controller and memory for storing information particular to a user." Exhibit 2001, at 27. Accordingly, the District Court construed the term "PDK" as an "operably connected collection of elements including an antenna and a transceiver for communicating with a RDC and a controller and memory for storing information particular to a user." Ex. 2001, at 27. But as noted above, such a construction is construing a PDK to be nothing more than a general-

purpose computer. The District Court also construed the term RDC. Samsung and Patent Owner both proposed constructions that defined an RDC as a wireless interface. Exhibit 2001, at 36. The District Court construed the term "RDC" as a "component or collection of components, capable of wirelessly receiving data in an encrypted format and decoding the encrypted data for processing." Ex. 2001, at 36. Such a construction, as also noted above, is construing an RDC to be nothing more than a general-purpose computer. Accordingly, the District Court effectively construed the term "hybrid device" to be a combination of two general-purpose computers.

Thus, in *Proxense v. Samsung,* as with the present matter, the parties proposed constructions for "PDK" and "RDC" that defined the terms as nothing more than general-purpose computers. Having construed the claims to recite functions performed by general-purpose computers the District Court had to then address the issue of indefiniteness raised by Samsung. "If the function is performed by a general-purpose computer or microprocessor, then the second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Rain Computing,* 989 F.3d at 1007; MPEP 2181(II)(B) ("In cases involving a special purpose computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general purpose computer or microprocessor and that the specification

must disclose an algorithm for performing the claimed function."). Should an adequate structure not be found within the specification, then the claim is indefinite. *Rain Computing*, 989 F.3d at 1007 ("And finally, if the patentee fails to disclose adequate corresponding structure, the claim is indefinite."); MPEP 2181(II)(B) ("Accordingly, a rejection under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph is appropriate if the specification discloses no corresponding algorithm associated with a computer or microprocessor."). Thus, "if there is no corresponding structure disclosed in the specification (i.e., the limitation is only supported by software and does not correspond to an algorithm and the computer or microprocessor programmed with the algorithm), the ***limitation should be deemed indefinite*** as discussed above, and the claim should be rejected under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph." MPEP § 2181(II)(B). Accordingly, to find the claims definite under § 112, the District Court had to find an algorithm in the specification allowing a PDK and/or RDC to "enable one or more of an application, a function, and a service."

The District Court did so by paraphrasing the algorithm implemented by "control logic 250" and demonstrated in all examples presented in the specification of "enabling one or more of an application, a function, and a service." As such the District Court held:

> Claims 1 and 10 of the 188 Patent and claims 1 and 11 of the 700 Patent state, 'one or more of the ***integrated RDC*** and ***integrated PDK enabling one or more an application, a function and a service.***' An application, function, or service is 'enabled' by a PDK when it ***receives information from a PDK in exchange for an access key***. Similarly, ***an RDC 'enables*** one or more of an application, a function, and a service' ***when it forwards such a message to the application, function, or service***.

Ex. 2001, at 26.

Absent construing claims 1 and 10 of the 188 Patent to include the algorithm implemented by control logic 250, or some other algorithm disclosed in the specification, the District Court would have been required to find the claims indefinite. The District Court, therefore, construed the claims of the 188 and 700 Patents to include the algorithm implemented by control logic 250.

The current proceedings place the Board in an identical situation. When confronting such situations, the Federal Circuit has directed how the Board must proceed.

> "the Board must decide one or both of two issues. One is whether it can resolve the prior-art challenge to the patentability … despite the potential indefiniteness [and] whether those terms are actually indefinite… If the Board determines both that there is indefiniteness and that such indefiniteness renders it impossible to adjudicate the prior-art challenge on its merits, then the Board should conclude that it

> is impossible to reach a decision on the merits of the challenge and so state in its decision."

Intel, 21 F. 4th at 814.

As noted above, Petitioner and Patent Owner have advanced before the District Court constructions for the terms "PDK" and "RDC" that describe each to be what the case law recognizes as general-purpose computers. Furthermore, as evidenced by the Declaration of Markus Jakobsson (Exhibit 2016) and detailed above, the specification of the 188 Patent defines a "PDK" and "RDC" to be nothing more than general-purpose computers. Yet claim 1 recites one or both of these general-purpose computers performs the function of "enabling one or more of an application, a function, and a service." Consequently, construing the terms "PDK" and "RDC" as defined in the specification and consistent with the construction advanced by all parties before the District Court requires the Board either: 1) interpret claim 1 such that the algorithm disclosed in the specification is the structure for performing the recited function, or 2) find claim 1 to be indefinite. Should the Board insist on construing the claims in defiance of the controlling law and the MPEP, the Board will have to make a determination whether claim 1 is sufficiently definite to enable a determination on the merits of the Petition and so state in its decision.

The same is also true with respect to claim 10. Like the claims at issue before the District Court, claim 10 recites a "hybrid device", "enablement signal", and the function of "enabling one or more of an application, a function and a service." For the reasons presented above, an "enablement signal" is nothing more than a nonce word, but the specification teaches "generating an enablement signal" requires the combined operation of a PDK and RDC. Furthermore, claim 10 explicitly recites "hybrid device" defined in the claim as including "an integrated RDC and [an] integrated PDK". Additionally, claim 10 also explicitly recites "creating a first wireless link between [the] integrated receiver-decoder circuit (RDC) of a hybrid device and an external personal digital key (PDK)." Thus claim 10 recites a method performed by what all parties have argued before the District Court are nothing more than general-purpose computers. Unless the Board will allow Petitioner to advance positions inconsistent with those Petitioner advanced before the District Court, the Board must either: 1) interpret claim 10 such that the algorithm disclosed in the specification is the structure for performing the recited function, or 2) find claim 10 to be indefinite. Should the Board insist on construing the claims in defiance of the controlling law and the MPEP, the Board will have to determine whether claims 1 and 10 are sufficiently definite to enable a determination on the merits of the Petition and so state in its decision. The Board has yet to make such determination in this proceeding or any of the related proceedings.

In addressing these conundrums, the Board has the advantage of the District Court's prior construction which addressed and resolved the issue of indefiniteness. In view of the foregoing, Patent Owner respectfully requests the Board reconsider its characterizations of the District Court proceedings, observe the controlling case law, and follow the policies of the Office outlined in MPEP § 2181(II)B).

V. RESPONSE TO GROUNDS FOR INVALIDITY RAISED

A. [Ground 1A/1B] – Claims 1, 5, 6, 8-11, 13 and 14 Are Not Rendered Obvious by Giobbi-157 and Giobbi-139 [1A] nor by Giobbi-157, Giobbi-139, and Dua [1B]

The Petition fails to demonstrate that the combination of Giobbi 157 (U.S. Publication No. 2007/0245157), Giobbi 139 (U.S. Publication No. 2004/0255139), and Dua (U.S. Patent No. 9,042,819) discloses or renders obvious "enabling one or more of an application, a function, and a service." These references thus cannot render the challenged claims invalid and unpatentable.

Independent claims 1 and 10 each recite "enabling one or more of an application, a function, and a service." For the reasons stated above, claims 1 and 10 invoke 35 U.S.C. § 112, ¶ 6, such that the algorithm represented by control logic 250 performs the function of "enabling one or more of an application, a function and a service." The Petition fails to establish Giobbi 157, Giobbi 139, or Dua, alone or in combination, "enables an application, a function, and a service" using the algorithm.

Consequently, the Petition fails to establish claims 1 and 10, and the claims dependent thereon, are invalid and unpatentable.

As noted *supra,* the algorithm of control logic 250 requires exchanging an access key to retrieve and unlock information held within a service block of a PDK. The Petitioner alleges that this element can be found in the authentication process shown in Figure 4 of Giobbi 157. Petition, at 37-39, and 53-57. The process detailed in Figure 4 of Giobbi 157 includes sending various messages between a PDK and RDC. However, Giobbi 157 does not contemplate that the information is received in exchange for an access key.

At most, Giobbi 157 discloses starting an exchange with an unsecure connection. Giobbi 157 explains that the process shown in Figure 4 begins "[w]hen a PDK 102 comes within range of a Reader 108, communication is automatically established 402 between the RDC 304 and the PDK 102. . . . Generally, initial communication between the Reader 108 and the PDK 102 is not encrypted in order to provide faster and more power efficient communication." Giobbi 157, ¶ [0059]. After establishing unsecure communication, "[i]n step 404, a device authentication is performed. Here, the Reader 108 establishes if the PDK 102 is a valid device and the PDK 102 establishes if the Reader 108 is valid." Giobbi 157, ¶ [0060]. In performing device authentication,

> [t]he RDC 304 receives information and analyzes 502 information from the PDK 102; and the PDK 102 receives and analyzes 502 information received from RDC 304. Generally, this initial information is transmitted over a public communication channel in an unencrypted format. Based on this information, each device 102, 304 determines 504 if the other is valid . . . . If both the PDK 102 and the RDC 304 are determined by the other to be valid, the Reader 108 requests and receives 506 authentication type information from the PDK 102 indicating the different types of authentication the PDK 102 is capable of satisfying based on the types of profiles the PDK 102 stores . . . . If the PDK 102 does have one or more sufficient types of profiles, the devices are valid 510.

Giobbi 157, ¶ [0061]. But nowhere does Giobbi 157 teach or describe that this unsecure exchange of information is accomplished by providing an access key in exchange for information held locally in the PDK's service blocks, as required in the challenged claims.

The second exchange in Giobbi 157 similarly does not disclose providing an access key to retrieve and unlock information. After the initial exchange to validate the PDK and RDC:

> The method next determines 410 whether profile authentication is required based on the configuration of the Reader 108, the type of transaction desired

> or by request of a merchant or other administrator. If the Reader 108 configuration does not require a profile authentication in addition to the PDK authentication, then the Reader 108 proceeds to complete the transaction for the PDK 102 . . . . [C]ompleting 416 the transaction includes charging a credit card for a purchase. Alternatively, bank information, debit/check/ATM card information, coupon codes, or any other purchasing means information (typically stored in a profile memory field 232) can be transmitted by the PDK 102 in place of credit card information.

Giobbi 157, ¶ [0063]. Again, while the PDK may send a message containing various account information, Giobbi 157 fails to describe or otherwise teach unlocking such information from a service block in exchange for an access key, as required by the challenged claims.

Giobbi 157, therefore, fails to disclose "enabling one or more of an application, a function, and a service" as required by claims 1 and 10.

As an alternative to Giobbi 157, the Petition relies on Giobbi 139. Petition, at 40 and 56-57. Giobbi 139 merely teaches that when a "user's physical electronic key [is] within a short range (e.g., few meters) of [a] playing device, the playing device reads [an] activation code carried in a secure radio frequency signal transmitted by the transceiver in the physical key to the transceiver in the [playing] device." Giobbi 139, ¶ [0036]. However, Giobbi 139 also fails to disclose that the "activation code"

is provided in exchange for an access key provided by the playing device. Consequently, the playing of digital content as detailed by Giobbi 139 fails to demonstrate "enabling one or more of an application, a function, and a service" as required by claims 1 and 10.

As neither Giobbi 157 nor Giobbi 139 disclose "enabling one or more of an application, a function, and a service" as required by claims 1 and 10, and given that the Petition fails to assert Dua discloses this element, the Petition fails to establish the combination of Giobbi 157, Giobbi 139, and Dua invalidates claims 1, 5, 6, 8-11, 13 and 14.

B. [GROUND 2] – Claims 10-11, 13 and 14 Are not Rendered Obvious by Broadcom

The Petition fails to demonstrate that Broadcom (EP 1 536 306) discloses or renders obvious "enabling one or more of an application, a function, and a service."

Independent claim 10 recites "enabling one or more of an application, a function, and a service." For the reasons stated above, claim 10 invokes 35 U.S.C. § 112, ¶ 6, such that the algorithm represented by control logic 250 performs the function of "enabling one or more of an application, a function and a service." The Petition fails to establish Broadcom "enables an application, a function, and a service" using the algorithm. Consequently, the Petition fails to establish claim 10, and the claims dependent thereon, are invalid and unpatentable.

As noted *supra,* the algorithm of control logic 250 requires exchanging an access key to retrieve and unlock information held within a service block. Broadcom, however, discloses accessing services by way of an RFID token freely broadcasting credentials when activated by a reader, which are subsequently passed onto a service provider for access. Accordingly, Broadcom at most teaches sending messages containing credential information from a token activated by proximity, which is distinct from the invention claimed in the Patent, as explained below.

"When a token 316 is relatively close to the RFID reader 306, an RF signal . . . may be received by an antenna 334 and processed by an RF interface 336 in the token 316." Broadcom, ¶ [0146]. "[T]he received RF signal may be used to power and activate the token 316." *Id*., ¶ [0147]. "[A]uthentication information such as network authentication credentials, passwords and/or certificates may be stored in a data memory . . . on the token 316." *Id*., ¶ [0148]. "When the token 316 is activated the RF interface may generate an RFID signal that is broadcasted by the antenna 334. Circuitry in the token 316 may be configured to modulate the RFID signal so that it includes some or all of the information stored on the token 316." I*d.*, ¶ [0149]. Broadcom's method of providing access to a service, accordingly, begins with a token sending a message containing authentication information. However, as the message is the result of the token being powered by an RF signal, the first message

lacks information received from a token in exchange for an access key provided to the token.

Notably, no key is provided in exchange for the information. "[T]he RFID reader 306 that extracts the information from the RFID signal 330 may be located within an integrated circuit…. [T]he integrated circuit 312 may include a cryptographic processor 308 that encrypts the information." *Id*., ¶ [0150]. "[A]fter the information is signed by a cryptographic processor 308, the service access processor 310 sends the signed information to the service processor 324." *Id.*, ¶ [0150]. "The service processor 324 then sends the received information to the cryptographic processor 322 for decryption…. The service processor then verifies that the received information indicates that the user is authorized to access the requested service." *Id*., ¶ [0153]. "[T]he service processor 324 may then provide access to the requested service." *Id*., ¶ [0154]. After receiving the information, the reader encrypts it and forwards it along to a service provider. While decrypting the information may entail the use of a key, the service provider's key is used after the information has been received. Consequently, the information is not received in exchange for a key provided to the token, as required by the claims of the 042 Patent, but rather the key is used to read information that has already been received. Furthermore, the key is ***provided to*** the service provider to be enabled rather than ***by the service provider*** to be enabled. The message between the reader and the service

provider, therefore, lacks information from the token received in exchange for an access key provided to the token by the application, function or service to be enabled, as required by the challenged claims. As a result, the Broadcom messages between the token, the reader, and the service provider are not "enabling one or more of an application, a function, and a service" as required by claim 10.

As Broadcom fails to disclose "enabling one or more of an application, a function, and a service" as required by claim 10, the Petition fails to establish that Broadcom invalidates claims 10, 11, 13 and 14.

VI. CONCLUSION

The Petition fails to demonstrate that the combination of Giobbi 157, Giobbi 139, and Dua, and Broadcom discloses "enabling one or more of an application, a function, and a service," as properly construed. The Petition, thus, fails to demonstrate the challenged claims are invalid and unpatentable.

Dated: December 29, 2025

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CERTIFICATION OF WORD COUNT UNDER 37 C.F.R. § 42.24

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner Response (excluding the table of contents, certificate of service, word count, or listing of exhibits) total 11,477 words, which is less than the 14,000 words allowed under 37 C.F.R. § 42.24(b)(2).

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

Pursuant to 37 C.F.R. § 42.6(e), the undersigned hereby certifies that the Patent Owner Response was served on December 29, 2025, by e-mailing copies to the following e-mail addresses provided by Petitioner in the Petition.

Dated: December 29, 2025

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