APPENDIX

TABLE OF CONTENTS

APPENDIX A

NOTE: This disposition is nonprecedential.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

UNILOC USA, INC., UNILOC LUXEMBOURG S.A.,
Appellants

v.

SEGA OF AMERICA, INC., UBISOFT, INC., KOFAX, INC., CAMBIUM LEARNING GROUP, INC.,
Appellees

2016-2000

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2014-01453, IPR2015-01026.

Decided: October 23, 2017

Before PROST, *Chief Judge*, REYNA and HUGHES, *Circuit Judges*.

PROST, *Chief Judge*.

Appellants Uniloc USA, Inc., and Uniloc Luxembourg S.A. (collectively, "Uniloc") appeal from a final written decision from two consolidated inter partes reviews ("IPR") holding that claims 1–20 of U.S. Patent No. 5,490,216 are unpatentable for being anticipated and obvious. In particular, Uniloc argues that the Patent Trial and Appeal

Board ("Board") erred in its priority analysis and that the submitted reference does not disclose certain claim elements. Because we conclude that the Board did not commit any legal or factual errors in its analysis, we affirm.

I

A

The '216 patent, entitled "System for Software Registration," is directed to "[a] registration system [that] allows digital data or software to run" without restriction, "only if an appropriate licensing procedure has been followed." '216 patent Abstract. An algorithm on the user's computer combines certain user information to generate a "local" ID that is unique to the user. *Id.* at col. 5 ll. 61–67. The same process is duplicated at a registration server for the program's licensor using the same user information and algorithm to create a "remote' ID. *Id.* at col. 6 ll. 1–8. These two IDs are compared and if they match, the program enters a "use mode" where that program can be accessed without restrictions. *Id.* at figs. 2a–2c. If they do not match, the program enters into a "demo mode," in which certain features are disabled. *Id.* at col. 6 ll. 42–52.

Claim 1 is illustrative:

> 1. A registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including
>
> [a] local licensee *unique ID generating means* and remote licensee *unique ID generating means*,
>
> [b] said system further including *mode switching means* operable on said platform which permits use of said digital data in said use mode on said platform only

> if a licensee unique ID first generated by said local licensee unique ID generating means has matched a licensee unique ID subsequently generated by said remote licensee unique ID generating means; and
>
> [c] wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the [sic] algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

Id. at col. 13 l. 54–col. 14 l. 1 (emphasis added).

The '216 patent was filed on September 21, 1993, and claims priority to two separate Australian provisional patent applications: PL4842 filed September 21, 1992, and PL5524 filed October 26, 1992. The '216 patent added certain new matter that was not included in the Australian provisionals. It issued on February 6, 1996.

B

In a separate case, Uniloc sued Microsoft Corporation in 2003 for allegedly infringing the '216 patent. *Uniloc USA, Inc. v. Microsoft Corp.*, 447 F. Supp. 2d 177, 180 (D.R.I. 2006) ("*Uniloc I*"), *vacated in part*, 290 F. App'x 337 (Fed. Cir. 2008) ("*Uniloc II*"). During that litigation, the district court construed the "generating means" term pursuant to 35 U.S.C. § 112, ¶ 6. *Id.* at 190–91. The district court found that the term's function was "to generate a local or remote licensee unique ID/registration key," and that its structure was "a summation algorithm or a summer and equivalents thereof." *Id.* at 190. In deriving the structure, the district court concluded that the "only algorithm" in the '216 patent for generating a licensee unique ID is found in the sixth embodiment, which states:

> The algorithm, in this embodiment, combines by addition the serial number 50 with the software product name 64 and customer information 65 and previous user identification 22 to provide registration number 66.

Uniloc I, 447 F. Supp. 2d at 192 (quoting '216 patent, col. 11 ll. 53–56). We remanded that case on other grounds. *Uniloc II*, 290 F. App'x at 344. On appeal from that remand, we endorsed the district court's construction and noted that "the summation structure was derived" from the sixth embodiment. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1304 (Fed. Cir. 2011) ("*Uniloc III*"). It is undisputed that this portion of the specification was new matter added in the '216 patent and was not contained in either of the Australian provisionals.

C

In this case, Appellees Sega of America, Inc., Ubisoft, Inc., Kofax, Inc., and Cambium Learning Group, Inc., (collectively, "Appellees") filed an IPR with the Board challenging all claims of the '216 patent. The Board instituted IPR proceedings on all claims and found them unpatentable.

In its final written decision, the Board adopted the district court's construction of the "generating means" term from *Uniloc I* and found that the term encompassed the structure of "a summation algorithm or a summer and equivalents thereof." J.A. 8, 10. The Board then analyzed whether the Australian provisionals provide written description support for the "generating means" term by reviewing if they "necessarily disclose" or "reasonably convey" a "summation algorithm or a summer and equiva-

lents thereof." J.A. 13. The Board concluded that the provisionals do not disclose this structure and that the asserted claims were not entitled to claim priority to those provisionals. J.A. 20. The Board then performed a novelty analysis and determined that claims 1–11 and 17–20 were anticipated by U.S. Patent No. 5,509,070 ("Schull") entitled "Method for encouraging purchase of executable and non-executable software" and filed on December 15, 1992.[1]

On appeal, Uniloc challenges the Board's priority and anticipation determinations. In particular, Uniloc argues that the Board erred by applying the wrong legal standard in its priority analysis. According to Uniloc, the provisionals only need to satisfy 35 U.S.C. § 112, ¶ 1 to meet the written description requirement, but the Board improperly required that the provisionals satisfy § 112, ¶ 6 as well. Uniloc also argues that Schull does not teach "generating means" because it fails to disclose a summation algorithm. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

A

Under pre-AIA 35 U.S.C. § 120, a patent may claim priority to a provisional application so long as the provisional application satisfies "the first paragraph of section 112 of this title." The first paragraph of § 112 requires, in relevant part, that "[t]he specification . . . contain a written description of the invention." A disclosure satisfies

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[1] The Board invalidated claims 12–16 on other grounds, none of which are challenged here.

the written description requirement if it "reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (2010) (en banc). And "[o]ne shows that one is 'in possession' of *the invention* by describing *the invention, with all its claimed limitations*, not that which makes it obvious." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).

The claims here are drafted in means-plus-function format and their scope is governed by § 112, ¶ 6. Under ¶ 6, claimed subject matter may be "expressed as a means or step for performing a specified function without the recital of structure" but "such claim shall be construed to cover the corresponding structure . . . described in the specification." We have previously explained that such means-plus-function claim limitations "comprise not only the language of the claims, but also the structure corresponding to that means that is disclosed in the written description portion of the specification (and equivalents thereof)." *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1381–82 (Fed. Cir. 1999).

Whether a priority document contains sufficient disclosure under § 112, ¶ 1 is a question of law that we review de novo. *Utter v. Hiraga*, 845 F.2d 993, 998 (Fed. Cir. 1988). However, "compliance with the written description aspect of that requirement is a question of fact" that we review for substantial evidence. *Id.* In conducting this inquiry, "[t]he fact finder must determine if one skilled in the art, reading the original specification, would immediately discern the limitation at issue in the parent." *Waldemar Link v. Osteonics Corp.*, 32 F.3d 556, 558 (Fed. Cir. 1994).

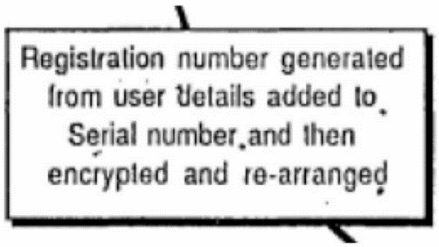
Uniloc here argues that the Board erred in its priority analysis because it did not look for a disclosure that would "reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date" in the Australian provisionals. *Ariad*, 598 F.3d at 1351. Instead, Uniloc contends that the Board "looked myopically at whether *specific structure* was disclosed in the provisionals," which "may answer the question posed by *paragraph six* of Section 112, but not paragraph one." Appellants' Br. 12. We disagree.

The Board proceeded through the proper analysis for determining priority. When determining priority, the Board must first construe the relevant claim terms. *X2Y Attenuators, LLC v. Int'l Trade Comm'n*, 757 F.3d 1358, 1365 (Fed. Cir. 2014) ("Where the claims have not been properly construed, the full scope of the claim is unknown, thereby rendering baseless any determination of written support in an earlier patent."). After construing the claims, the Board determines if the original disclosure "describ[ed] *the invention*, *with all its claimed limitations*," *Lockwood*, 107 F.3d at 1572, to show "possession of the claimed subject matter as of the filing date," *Ariad*, 598 F.3d at 1351.

Here, the Board first construed the "generating means" term encompassing the function "to generate a local or remote licensee unique ID" and the structure "a summation algorithm or a summer and equivalents thereof." J.A. 10. As noted earlier, the Board adopted this construction from *Uniloc I* and neither party challenges this construction. In construing the "generating means" term, the Board also determined that the sixth embodiment of the '216 patent discloses the structure for this term. And it is undisputed that this embodiment was new

matter added to the '216 patent and was not included in the Australian provisionals.

Even though the Australian provisionals do not include the sixth embodiment, the Board reviewed the provisionals to determine if they describe the structure in a different part of the disclosure. J.A. 13–20. Appellants argued, both to the Board and on appeal here, that the provisionals disclose a summation algorithm by teaching that the "registration number algorithm *combines information* entered by a prospective registered user unique to that user with a serial number generated from information provided by the environment in which the software to be protected is to run." J.A. 199 (emphasis added). Uniloc also argues that figure 2B in the provisionals, shown below, discloses a summation algorithm by stating that the "[r]egistration number" is "generated from user details *added to* Serial number." J.A. 208



The Board reviewed these arguments and was unpersuaded. We too are not convinced.

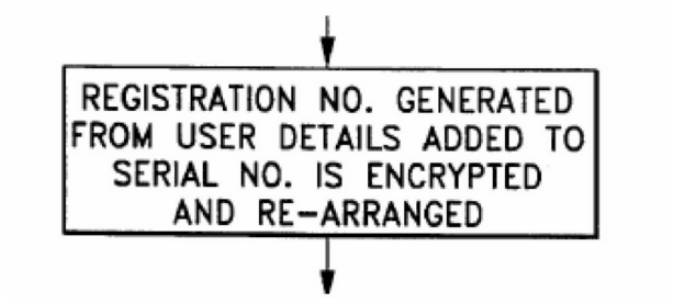
In its final written decision, the Board determined that the provisionals' disclosure of an algorithm that "combines information" and of a registration number that is "generated from user details added to" the serial number is insufficient for one skilled in the art to "immedi-

ately discern," *Waldemar Link*, 32 F.3d at 558, a summation algorithm. J.A. 16–17. This finding is supported by substantial evidence. As the Board explained, the Appellees' expert testified "that there are a number of different ways to combine letters and numbers without mathematical addition." J.A. 18–19. The expert further testified that to non-mathematically combine or add information, "you could put a code for the different digits and scramble them up. You could take portions of each and try to create another registration number. You could use different operations in different ways." J.A. 19. The Board also relied on the expert's testimony that the word "add" does not necessarily mean "sum" because it can also describe "Adding a redundancy" or "add[ing] a header." *Id.*

Further, figure 2B and the text that Uniloc points to in the provisionals is also present in the '216 patent. Specifically, the '216 patent recites that:

> Preferably, the registration number algorithm *combines information* entered by a prospective registered user unique to that user with a serial number generated from information provided by the environment in which the software to be protected is to run (e.g., system clock, last modify date, user name).

'216 patent col. 4 ll. 6–11 (emphasis added). And, figure 2b, copied below, states that the "registration no. [is] generated from user details added to serial no."



Despite these disclosures, the district court found, and we confirmed, that only the sixth embodiment of the '216 patent provides the structural support for the "generating means" term. *See Uniloc I*, 447 F. Supp. 2d at 192 (noting that the "only algorithm specified in the '216 Patent for generating a licensee unique ID is found in the sixth embodiment"); *Uniloc III*, 632 F.3d at 1304 (confirming that "the summation structure was derived" from the sixth embodiment).

Accordingly, the Board here proceeded through the proper analysis for determining priority by first construing the means-plus-function claims under § 112, ¶ 6, and then determining if the original disclosure "describ[ed] *the invention*, *with all its claimed limitations*," *Lockwood*, 107 F.3d at 1572, under § 112, ¶ 1. Because substantial evidence supports the Board's finding that the provisionals do not disclose a summation algorithm, we agree with the Board that the '216 patent may not claim priority to the Australian provisionals.[2]

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[2] The parties also dispute whether the Australian provisionals provide written description support for the "mode switching means"

B

Uniloc next argues that even if Schull does predate the '216 patent, Schull does not anticipate the '216 patent because it fails to disclose a "generating means." As noted above, claim 1 of the '216 patent recites a "local licensee *unique ID generating means* and remote licensee *unique ID generating means*." The Board construed "generating means" as encompassing the function "to generate a local or remote licensee unique ID" and the structure "a summation algorithm or a summer and equivalents thereof." J.A. 10. Uniloc argues that Schull fails to disclose this structure. We disagree.

Schull discloses a system that allows a user to access advanced features of software only with a valid password. Schull at Abstract. It describes a password-generating algorithm that locally generates a "Passwordable ID" by concatenating a Program ID, Feature ID, and Target ID. *Id.* at col. 5 ll. 20–33, col 7 ll. 10–27, col. 9 ll. 5–9. Schull also discloses that the "Passwordable ID" can include two digits that constitute a "checksum for the preceding digits." *Id.* at col. 7 ll. 28–36.

The same password-generating algorithm is performed at a Licensing Processor, and is transmitted to the user's processor and stored. *Id.* at col. 11 ll. 8–13, 35–40, 51–54; col. 6 ll. 6–11. A password validation check compares the generated "Passwordable ID" to the stored password and if there is a match, the advanced features of the software are unlocked. *Id.* at col. 5 ll. 40–47.

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term. Because we conclude that the provisionals do not provide written description support for the "generating means" term, we need not address this alternate argument.

In its final written decision, the Board found that Schull's disclosure of concatenating the three IDs as well as its disclosure of the two-digit checksum each independently discloses a summation algorithm. J.A. 26–31. Substantial evidence supports the Board's finding that at least the checksum discloses a summation algorithm. We accordingly do not reach whether the concatenation also discloses a summation algorithm.

In relevant part, Schull teaches that:

> In addition, to ensure error-checking when the Passwordable ID is transmitted to the central computer (80), it is desirable that a Passwordable ID satisfy some kind of coherence constraint such that the misreport of a single digit can be detected. One coherence constraint would be to append two more digits to the ID which would constitute a checksum for the preceding digits. Thus an error would be detected when the checksum and the preceding digits were inconsistent.

Id. at col. 7 ll. 28–36. The Board credited Appellees' expert's testimony that "[a]s of 1992, using a checksum to detect an error in a number, as described by Schull, was done using what is known as a 'check digit,' and all of the methods for calculating check digits utilize some form of addition." J.A. 30 (internal alterations omitted). The Board also relied on Uniloc's expert's testimony that most checksums use addition and that he had never created a checksum that did not use summation. *Id.*

Uniloc argues that the disclosed checksum does not perform the function of "generat[ing] a local or remote licensee unique ID" because the checksum is appended to the ID and therefore is not a part of the ID. Uniloc does

not cite any expert testimony or other basis for this argument. *See* Appellant's Br. 46. Because Uniloc's argument was not supported by any evidence, the Board properly relied on Appellees' expert's testimony and its reading of Schull to find that the checksum appended to the Passwordable ID became a part of that ID. Uniloc also argues that the Board did not give enough weight to its expert's testimony that it is possible to perform a checksum using tables instead of addition. Uniloc is essentially asking us to reweigh the evidence, which we cannot do. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

III

In sum, we conclude that the Board applied the proper legal standard in determining the priority date of the '216 patent. We further conclude that the Board's finding that the '216 patent is not entitled to claim priority to the Australian provisionals is supported by substantial evidence. Finally, we conclude that Schull discloses the "generating means" term and therefore anticipates the '216 patent.

Accordingly, the judgment of the Board is affirmed.

AFFIRMED

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

December 8, 2017

ERRATA

Appeal No. 2016-2000

UNILOC USA, INC., UNILOC LUXEMBOURG S.A.,
Appellants

v.

SEGA OF AMERICA, INC., UBISOFT, INC., KOFAX, INC., CAMBIUM LEARNING GROUP, INC.,
Appellees

Decided: October 23, 2017
Non-precedential opinion

Please make the following changes:

Page 5, lines 26-29, delete the sentence:
Under pre-AIA 35 U.S.C. § 120, a patent may claim priority to a provisional application so long as the provisional application satisfies "the first paragraph of section 112 of this title."

Insert in lieu thereof the following:
Under pre-AIA 35 U.S.C. §§ 119 and 120, a patent may claim priority to an earlier application so long as the earlier application satisfies the first paragraph of § 112. *See*

In re Gosteli, 872 F.2d 1008, 1010 (Fed. Cir. 1989) ("Under section 119, the claims set forth in a United States application are entitled to the benefit of a foreign priority date if the corresponding foreign application supports the claims in the manner required by section 112, ¶ 1.").

APPENDIX C

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571-272-7822

Paper 27
Entered: March 10, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SEGA OF AMERICA, INC., UBISOFT, INC., KOFAX, INC., CAMBIUM LEARNING GROUP, INC., and PERFECT WORLD ENTERTAINMENT, INC.,
Petitioner,

v.

UNILOC USA, INC. and UNILOC LUXEMBOURG S.A.,
Patent Owner.

Case IPR2014-01453[1]
Patent 5,490,216 C2

Before WILLIAM V. SAINDON, DONNA M. PRAISS, and PATRICK R. SCANLON, *Administrative Patent Judges.*

PRAISS, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

[1] Case IPR2015-01026 has been joined with this proceeding.

I. BACKGROUND

A. Introduction

SEGA of America, Inc., Ubisoft, Inc., Kofax, Inc., and Cambium Learning Group, Inc. (collectively, "Petitioner") filed a Petition (Paper 6, "Pet.") to institute an *inter partes* review of claims 1–20 of U.S. Patent No. 5,490,216 ("the '216 patent"). Uniloc USA, Inc. and Uniloc Luxembourg S.A. (collectively, "Patent Owner") timely filed a Preliminary Response (Paper 10, "Prelim. Resp."). Taking into account the arguments presented in Patent Owner's Preliminary Response, we determined that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail in challenging claims 1–20 of the '216 patent under 35 U.S.C. §§ 102(b) and 103(a). Pursuant to 35 U.S.C. § 314, we instituted this proceeding on March 10, 2015, as to these claims of the '216 patent. Paper 11 ("Dec. on Inst.").

During the course of trial, we joined case no. IPR2015-01206, and Perfect World Entertainment Inc. as a Petitioner, to this proceeding. Paper 16. Patent Owner timely filed a Patent Owner Response (Paper 14, "PO Resp."), and Petitioner timely filed a Reply to the Patent Owner Response (Paper 19, "Pet. Reply"). An oral hearing was held on December 2, 2015, and a transcript of the hearing is included in the record. Paper 26 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–20 of the '216 patent. For the reasons discussed below, we determine that Petitioner has demonstrated by a preponderance of the evidence that these claims are unpatentable under §§ 102(e) and 103(a).

B. Related Matters

The parties indicate that the '216 patent was asserted in complaints filed in the U.S. District Court for the Eastern District of Texas against SEGA of America, Inc. (No. 6:13-cv-627), Ubisoft, Inc. (No. 6:13-cv-628), Cambium Learning, Inc. (No. 6:14-cv-419), Kofax, Inc. (No. 6:14-cv-427), and Perfect World Entertainment, Inc. (No. 6:14-cv-429). Pet. 54; Paper 9. Additional litigations in which the '216 patent has been asserted are listed in Ex. 1031. The '216 patent is also the subject of IPR2015-01207, which was instituted on December 2, 2015, and petitions filed in IPR2016-00414 and IPR2016-00427.

The '216 patent was the subject of *Uniloc USA, Inc. v. Microsoft Corp.*, No. 03-0440 (D.R.I.) in which a decision on claim construction was issued (Ex. 1008) and affirmed by the Federal Circuit (Ex. 1009; Ex. 1010). PO Resp. 4; Pet. 3. The '216 patent was also the subject of two reexamination proceedings (Control Nos. 90/010831 and 90/012179). PO Resp. 4; Pet. 12–15. Additionally, the '216 patent was the subject of petitions for covered business method review (CBM2014-00183) and for *inter partes* review (IPR2015-00178), which were denied. PO Resp. 5 n.2; Pet. 55.

C. The '216 Patent (Ex. 1001)

The '216 patent, titled "System for Software Registration," is directed to a system that allows software to run without restrictions ("use mode") if a specified licensing procedure has taken place. Ex. 1001, Abstr. A code portion in the digital data to be protected may include an algorithm that generates a registration number unique to a licensee of the digital data. *Id.* The algorithm in the code portion is duplicated at a remote location under the

control of the licensor. *Id.* A mode switching means compares the local and remote registration numbers and, if they match, the program enters into a use mode. *Id.* at 4:49–54, 13:37–40. If they do not match, the program enters into a "demo mode" in which features of the program are disabled. *Id.*

The block diagram of Figure 8 of the '216 patent is reproduced below to illustrate the registration system:

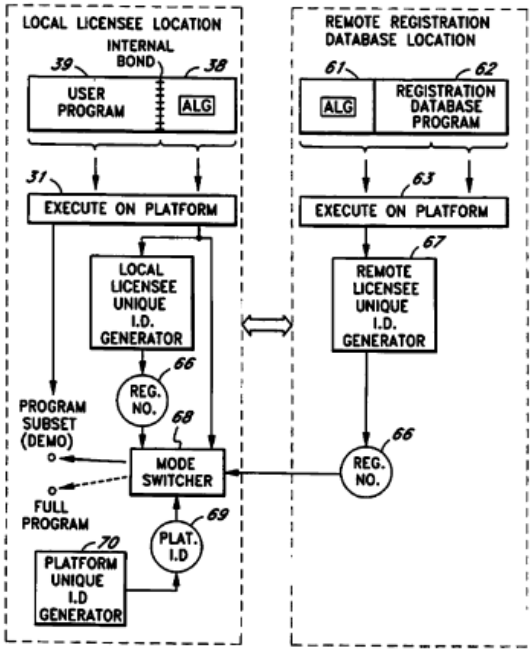


FIG. 8

The registration system depicted in Figure 8 operates in the manner generally described by the embodiments disclosed in the '216 patent. *Id.* at 11:43–45.

D. Illustrative Claims

Independent claims 1 and 12 are illustrative of the claims at issue (paragraphing, indentations, and bracketed matter added):

> 1. A registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including
>
> [a] local licensee unique ID generating means and remote licensee unique ID generating means,
>
> [b] said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID first generated by said local licensee unique ID generating means has matched a licensee unique ID subsequently generated by said remote licensee unique ID generating means; and
>
> [c] wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the [sic] algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.
>
> 12. A registration system attachable to software to be protected,
>
> [a] said registration system generating a security key from information input to said software which uniquely identifies an intended registered user of said software on a computer on which said software is to be installed; and
>
> [b] wherein said registration system is replicated at a registration authority and used for the purposes

of checking by the registration authority that the information unique to the user is correctly entered at the time that the security key is generated by the registration system.

E. Prior Art Relied Upon

Petitioner relies on the following prior art:

Reference	Publication	Date	Exhibit
Haines	US 5,077,660	Dec. 31, 1991	1005
Logan	US 5,199,066	Mar. 30, 1993	1003
Grundy	US 5,291,598	Mar. 1, 1994	1004
Schull	US 5,509,070	Apr. 16, 1996	1002
Manduley	US 5,956,505	Sept. 21, 1999	1006

Petitioner also relies on the Declaration of Vijay K. Madisetti dated September 5, 2014 ("Madisetti Decl." Ex. 1007).

F. Instituted Grounds of Unpatentability

We instituted this proceeding based on the asserted grounds of unpatentability ("grounds") set forth in the table below. Dec. on Inst. 23.

Claims Challenged	Basis	Reference(s)
1–11, 17–20	§ 102(e)	Schull
10, 11	§ 103(a)	Schull
12–14	§ 102(e)	Logan
15, 16	§ 103(a)	Logan and Grundy

Claims Challenged	Basis	Reference(s)
12–14	§ 103(a)	Haines and Manduley

II. ANALYSIS

A. Claim Interpretation

As a first step in our analysis, we determine the meaning of the claims. Because the challenged patent expired on September 21, 2013 and, as such, the claims are not subject to amendment, the rule of "broadest reasonable construction" per 37 C.F.R. § 42.100(b) does not apply. In this circumstance, the Board's review of the claims is similar to that of a district court. *In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Specifically, the claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313– 17 (Fed. Cir. 2005) (en banc).

Petitioner proposes that we adopt the claim construction of the District Court for the District of Rhode Island issued in *Uniloc USA, Inc. v. Microsoft Corp.*, No. 03-CV0440 ("Microsoft litigation") for purposes of the Petition "except where noted". Pet. 3; *see* Ex. 1008 (claim construction decision and order dated Aug. 22, 2006); Ex. 1011, 27–28 (summary judgment decision clarifying claim construction dated Oct. 19, 2007). Petitioner asserts that the term "checking by the registration authority that the information unique to the user is correctly entered," as recited in claim 12, lacks written description support. Pet. 6. Petitioner also asserts that there is no structure disclosed in the '216 patent to support the term "platform

unique ID generating means," as recited in claims 7–9. *Id.* at 9. Nevertheless, Petitioner provides the District Court construction for these terms for the purpose of its unpatentability analysis.

Patent Owner does not propose alternative constructions to the District Court claim constructions, but contends that the Petition "reconstructs" the claim term "security key" and disputes Petitioner's argument that certain claim terms lack definiteness or support in the specification for the required structure. PO Resp. 9–12. Regarding the term "security key," Patent Owner acknowledges that the District Court stated "vendor information *may indeed be an input* to creating the licensee unique ID", but asserts that the District Court "did not hold that the product number *alone* provides 'a unique identifier associated with a licensee.'" *Id.* at 9–10 (quoting Ex. 1008, 12). Patent Owner further contends that the claim construction of "security key" was not modified by the Federal Circuit, which stated that "a user intending to use the software in 'use mode' enters certain user information when prompted, which *may include* a software serial number and/or name and address information." *Id.* at 10 (quoting Ex. 1010, 3). Patent Owner notes that the Federal Circuit decision held that the District Court's construction of security key is correct "as a unique identifier associated with a licensee that can be, but is not limited to, personally identifiable information about the licensee or user" and that "the licensee unique ID *could encompass* vendor-supplied information." *Id.* at 11 (quoting Ex. 1009, 13).

In the Decision to Institute, we agreed with the analysis by the District Court for the District of Rhode Island

and adopted the claim construction issued in the Microsoft litigation. Dec. on Inst. 7; *see* Ex. 1008; Ex. 1011, 27–28. Given the parties' acceptance of our constructions of each claim phrase in the Decision to Institute, we discern no reason to alter those constructions for the purpose of this Final Written Decision. For convenience, those constructions are reproduced in the table below.

Claim Term	Claim Construction
Licensee Unique ID (claims 1, 19, 20) Security Key (claims 12, 13) Enabling Key (claim 17)	A unique identifier associated with a licensee
Information uniquely descriptive of an intending licensee (claim 2) Information . . . which uniquely identifies an intended registered user (claim 12)	Information that is uniquely associated with a person who intends to become a licensee so as to access full functionality of the digital data
Algorithm (claims 1, 13, 14, 19, 20)	A set of instructions that can be followed to carry out a particular task
Includes the algorithm utilized by said licensee unique ID generating means to produce said licensee unique ID (claims 1, 19, 20)	Includes the identical algorithm used by the local licensee unique ID generating means to produce the licensee unique ID
Generated by a third party means of operation of a duplicate copy of said	Generated by a third party's use of a duplicate copy of the registration

Claim Term	Claim Construction
registration key generating means (claim 17)	key generating means
Use mode (claims 1, 7, 19, 20) Fully enabled mode (claim 17) Full version run (claim 15)	A mode/version that allows full use of the digital data or software in accordance with the license
Partly enabled or demonstration mode (claim 17) Demonstration mode (claim 15)	A mode that allows partial use of the digital data or software
Has matched (claims 1, 17, 19, 20)	A comparison between the locally generated licensee unique ID/registration key and the remotely generated licensee unique ID/enabling key shows that the two are the same
Mode switching means will permit said data to run in said use mode in subsequent execution . . . only if said platform unique ID has not changed (claim 7)	The mode switching means will permit the data to run in the use mode only if the platform unique ID is identical to what it was previous time the digital data were run
Registration system (claims 1, 12, 19, 20)	A system that allows digital data or software to run in a use mode on a platform if and only if an appropriate licensing procedure has been followed

Claim Term	Claim Construction
Provided to said mode-switching means by said intending user (claim 17)	Provided to the mode-switching means by the person who intends to become a licensee
Communicated to said intending user (claim 17)	Communicated to the person who intends to become a licensee
Checking by the registration authority that the information unique to the user is correctly entered (claim 12)	Verification by the registration authority that information unique to the user and entered by the user is accurate[2]
Wherein said registration system is replicated at the registration authority (claim 12)	Wherein the portion of the registration system that generates a security key from information input to software to be protected is reproduced exactly at the registration authority. This clarifies that only the portion of the registration system responsible for generating the security key must be replicated exactly at the registration authority, not the entire registration

[2] The District Court used the term "verification" rather than "checking" in its claim construction for this term. Ex. 1008, 53. We note the use of "checking" instead in the Decision on Institution is a typographical error. *See* Dec. on Inst. 8.

Claim Term	Claim Construction
	system.
Serial number (claim 14)	A number that is one of a series
Local licensee unique ID generating means (claims 1, 19, 20) Remote licensee unique ID generating means (claims 1, 19, 20) Registration key generating means (claim 17)	**Function**: to generate a local or remote licensee unique ID **Structure**: a summation algorithm or a summer and equivalents thereof
Mode switching means (claims 1, 19, 20) Mode-switching means (claim 17)	**Function**: to permit the digital data or software to run in a use mode if the locally generated licensee unique ID matches the remotely generated licensee unique ID **Structure**: program code which performs a comparison of two numbers or a comparator and equivalents thereof
Platform unique ID generating means (claims 7–9)	**Function**: to generate a platform unique ID **Structure**: a summation algorithm or a summer and equivalents thereof

Regarding the Licensee Unique ID (claims 1, 19, 20), Security Key (claims 12, 13), and Enabling Key (claim 17) terms that are each construed to mean "a unique identifier associated with a licensee," the level of uniqueness

need not distinguish an individual licensee from all other licensees or persons. As found by the District Court in construing these claim terms, "one-of-a-kind" uniqueness of the identifier "is inconsistent with the language of the '216 Patent itself." Ex. 1008, 11 (citing Ex. 1001, Abstr., 6:23–26 ("[I]n particular preferred forms, a serial number . . . is included in the registration number generation algorithm which introduces an additional level of uniqueness")). Because "unique" does not mean singularly unique, "'the licensee unique ID does not require personal information about the user,' so long as it is 'unique,' and not 'based solely on platform-related user information.'" *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1300 (Fed. Cir. 2011) (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 290 Fed. App'x 337, 342–43 (Fed. Cir. 2008)) (Ex. 1010, 11). Because the licensee unique ID need not be personal information about the user, it can be vendor-supplied information; it just cannot be "based solely on platform-related user information" as that disavowal comes from the '216 patent specification itself. *Id.* (citing *Uniloc USA, Inc.*, 290 Fed. App'x at 344); Ex. 1001, 2:5–7 (distinguishing prior art on the basis that "there is no suggestion or contemplation of linking platform identification with unique user identification").

Regarding Petitioner's assertion that certain claim terms lack definiteness or written description support, because those issues are neither appropriate for an *inter partes* review proceeding nor briefed by the parties, we do not address them in this decision. *See* 35 U.S.C. § 311(b). For purposes of this decision and for the reasons expressed by the District Court, we adopt and apply the constructions provided in the table above. *See* Ex. 1008, 53–54, 58–61.

B. Priority Date for the Challenged Claims of the '216 Patent

The '216 patent issued from U.S. Patent Application No. 08/124,718 ("the '718 application), filed September 21, 1993. Ex. 1001, [21]. The '718 application claims the benefit of the following foreign priority applications: (1) Australian provisional patent application PL4842 ("the '4842 application"), filed on September 21, 1992 (Ex. 1025); and (2) Australian provisional patent application PL5524 ("the '5524 application"), filed on October 26, 1992 (Ex. 1026).

In the Decision on Institution, we explained that, based on the record prior to instituting trial, we were persuaded by Petitioner's argument that the '4842 and the '5524 applications (collectively, "the Australian provisional applications") do not provide sufficient written description support for the "generating means" ("local licensee unique ID generating means," "remote licensee unique ID generating means," and "registration key generating means," collectively) and the "mode switching means" recited in independent claims 1, 17, 19, and 20. Dec. on Inst. 10–12 (citing Pet. 16– 18). In particular, Petitioner argued that the structures identified in the District Court claim construction for performing the corresponding functions of the generating means and the mode-switching means are not present in the Australian provisional applications. Pet. 15–18 (citing Ex. 1007 ¶¶ 23–27). For purposes of the Decision on Institution, we determined that Petitioner presented sufficient evidence indicating that the challenged claims of the '216 patent only are entitled to claim the benefit of the filing date of the '718 application—namely, September 21, 1993. Dec. on Inst. 11–12.

Although the burden of persuasion with respect to the unpatentability of the challenged claims remains with Petitioner, the burden of production of demonstrating that the challenged claims for the '216 patent are entitled to the earlier priority dates of the Australian provisional applications lies with Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379–80 (Fed. Cir. 2015). Therefore, we turn to Patent Owner's showing whether the Australian Provisionals "necessarily disclose" or "reasonably convey" the structure for (1) a summation algorithm or a summer and equivalents thereof; and (2) program code, which performs a comparison of two numbers or a comparator and equivalents thereof. *See Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) (a patentee demonstrates possession of the invention by describing it "in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention"); *Waldemar Link v. Osteonics Corp.*, 32 F.3d 556, 558 (Fed. Cir. 1994) (quoting *In re Rasmussen*, 650 F.2d 1212, 1215 (CCPA 1981)) ("The fact finder must determine if one skilled in the art, reading the original specification, would immediately discern the limitation at issue in the parent.").

1. Generating Means

The structural disclosure in the '216 patent for the term "licensee unique ID generating means" and other "generating means" listed in the above table is "a summation algorithm or a summer and equivalents thereof". *See* Ex. 1008, 25–27; Ex. 1010, 10, 20; Ex. 1001, 11:54–57, 12:62–65. The specific disclosure in the '216 patent specification was described by the District Court as follows:

> the only algorithm specified in the '216 Patent for generating a licensee unique ID is found in the sixth

embodiment, which states:

> The algorithm, in this embodiment, combines by addition the serial number 50 with the software product name 64 and customer information 65 and previous user identification 22 to provide registration number 66.

'216 Patent, col. 11, ll. 53–56. Similarly, the only hardware component disclosed for performing the stated function is a 'summer.' *Id.* at col. 12, ll. 62–65.

Ex. 1008, 27.

Patent Owner contends that "[s]imilar structural language exists in the Australian Provisionals." PO Resp. 16. Specifically, Patent Owner relies on the following disclosures in the '4842 application text and Figure 2B as disclosing the claimed algorithm (*id.* at 16–17 (citing Ex. 1025, 4, Fig. 2B)):

> Preferably said registration number algorithm combines information entered by a prospective registered user unique to that user with a serial number generated from information provided by the environment in which the software is to run ([e.g.,] system clock, last modify date, user name).

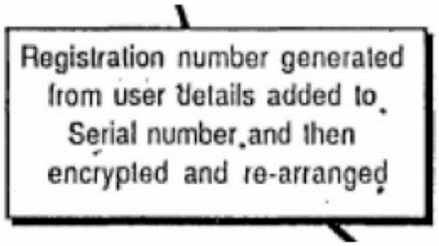
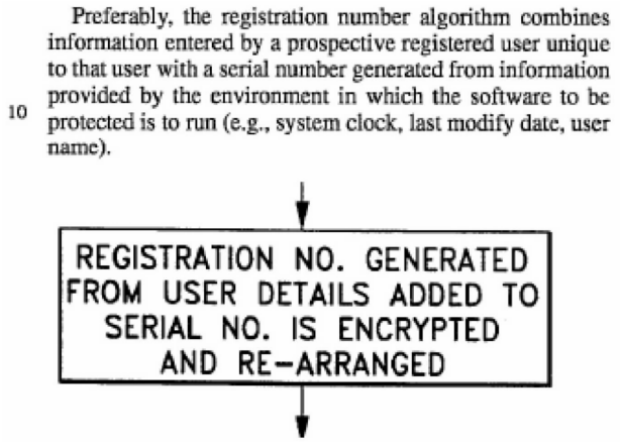


Fig. 2B, above, is a single box excerpted from a portion of a flowchart. *See* Ex. 1025, 5. Patent Owner asserts that the '5524 application contains similar disclosures and that "as a whole, each teaches a security key generated by a registration number algorithm that combines, by addition, information unique to an intended registered user, with a serial number." PO Resp. 17.

Patent Owner relies on the Declaration of Dr. Val DiEuliis (Ex. 2008) for the proposition that these disclosures of the Australian provisional applications convey to a person of ordinary skill in the art that "both the registration number and the serial number are numerical data (that is, numbers) and, as such, that FIG. 2B's disclosure of 'adding' means the addition of two numbers." PO Resp. 19 (citing Ex. 2008 ¶ 51). According to Dr. DiEuliis, Figure 2B "teaches that the algorithm that generates the registration number also adds the registration number (which was generated from user unique information) to the serial number . . . ." Ex. 2008 ¶ 53; PO Resp. 20. Dr. DiEuliis concludes that "the written description and figures taught an algorithm that uses addition to combine two numbers to arrive at a Licensee Unique ID, and that this algorithm would be 'fairly capable of categorization as a "summation algorithm,"' as explained by the Federal Circuit." Ex. 2008 ¶ 54; PO Resp. 20.

We are not persuaded by Patent Owner's evidence that the Australian provisional applications conveyed to a person of ordinary skill in the art a summation algorithm or a summer and equivalents thereof. The preponderance of the evidence is that the cited disclosures from the Australian provisional applications are insufficient for this purpose.

The two disclosures in the Australian provisional applications on which Patent Owner relies also appear in the '216 patent and are reproduced below from column 4 and Figure 2b:



The excerpt from column 4 states that "the registration number algorithm combines information entered by a prospective registered user unique to that user with a serial number" and the excerpted box from Figure 2b states that the "registration no. generated from user details added to serial no. is encrypted and re-arranged". Ex. 1001, 4:6–11, Fig. 2b. Despite these same two disclosures from the Australian provisional applications being present in the '216 patent, only the sixth embodiment in the '216 patent was found to provide structure for the generating means. Ex. 1008, 27 ("[H]aving scrutinized the '216 Patent in detail, the Court concludes that the only algorithm specified in the '216 Patent for generating a licensee unique ID is found in the sixth embodiment . . . ."); Ex. 1038, 24 ("There is no dispute that the generating means structure is fleshed out only in the sixth embodiment . . . ."). There is no dispute that the sixth em-

bodiment is only present in the '216 patent; it is not disclosed in the Australian provisional applications. Therefore, these additional disclosures from the specification are insufficient for one skilled in the art to "immediately discern the limitation at issue," namely, a summation algorithm. *See Waldemar Link*, 32 F.3d at 558.

In addition, we do not find credible Dr. DiEuliis's testimony that the text in Figure 2B, which states "registration no. generated from user details added to serial no. is encrypted and re-arranged," describes the addition of two numbers (registration no. and serial no.). There is no previous step in the flowchart depicted in Figure 2B that describes the step of generating the registration number to indicate that the registration number is an input, rather than an output. Ex. 1025, Fig. 2B; *see* Ex. 1026, Fig. 2. Further, as explained next, the "user details" encompass text, which further explains why the flowchart is not discussing the addition of numbers. If the text box in Figure 2B is properly understood to describe the generation of the registration number from the inputs of user details and serial number, the Australian provisional applications lack a disclosure of how to combine user data and information that is in different formats. Ex. 2009, 127:2–4, 62:19–23, 79:19–80:2, 125:7–14, 82:2–7, 87:13–18, 88:7–15, 132:24–133:14. "[I]nformation entered by a prospective registered user" and "user details" are not necessarily numbers because user details includes such information as name and address according to the '216 patent and the Australian provisional applications. *See* Ex. 1001, 3:50–53 ("Preferably, the information utilized by the local licensee unique ID generating means to produce the licensee unique ID comprises prospective licensee credit card number, date of birth and full name and address.");

Ex. 1025, 7 ("The registration dialogue box C prompts the user for details unique to that user (including, for example, name, company, address, state, contact number) . . . ."); Ex. 1026, 8 ("The registration dialogue box C prompts the user for details unique to that user (including, for example, name, company, address, state, contact number) . . . .").

Even if the flowchart box in the Australian provisional applications were to reasonably convey to one skilled in the art a simple addition operation of adding two numbers together, as Dr. DiEuliis contends by the addition of a registration number to a serial number (Ex. 2008 ¶ 53), that disclosure also would be insufficient to reasonably convey a summation algorithm. The summation algorithm structure is not simple addition. Ex. 1010, 20 (the Federal Circuit held that "[t]he structural disclosure in the '216 patent is not limited to simple addition in the colloquial sense of adding numbers together and nothing more"). As the Federal Circuit explained, the "combination by addition" taught by the sixth embodiment of the '216 patent "necessarily incorporates an initial step of converting the information into a common format to be added, which requires more than simple addition." *Id.*

Regarding the textual disclosure in the Australian provisional applications that the "registration number algorithm combines information" (Ex. 1025, 3), Patent Owner contends that the multitude of ways one could have combined information in 1992 would have narrowed to "summation" upon reading the totality of the Australian provisionals, particularly the "adding" disclosed in Figure 2B. PO Resp. 20–21 (citing Ex. 2008 ¶¶ 58, 61). A disclosure of a genus is not necessarily a disclosure of all

of its species, however. *In re Baird*, 16 F.3d 380, 382 (Fed. Cir. 1994). We are not persuaded by Patent Owner's evidence that the disclosure teaches combination by addition based on the trial record. Dr. Madisetti testified that there are a number of different ways to combine letters and numbers without mathematical addition. Ex. 1007 ¶ 24; Ex. 2009, 121:13–124:1, 128:5–16, 128:25–129:12, 132:11–20, 154:22–155:5. As examples of how information can be combined in a non-mathmatical manner, Dr. Madisetti testified that "[y]ou could put a code for the different digits and scramble them up. You could take portions of each and try to create another registration number. You could use different operations in different ways." *Id.* at 121:20–24. Dr. Madisetti also testified that the word "add" does not necessarily mean "sum" because it can also describe "adding a redundancy" and "add[ing] a header". Thus data can be amalgamated into an alphanumeric number to form a registration number. *See* Tr. 83. We credit Dr. Madisetti's testimony on the meaning of "add" and "combine" in the context of the Australian provisional applications. In addition, Patent Owner does not dispute that there is more than one way to combine information. *Id.* at 44 ("[T]here are only two forms of combining information in the totality of the evidence in this case: Summation, the mathematical operation, and concatenation").

At oral hearing, Patent Owner argued that the sixth embodiment in the '216 patent that describes the summation algorithm structure for the claimed generating means incorporates by reference prior embodiments including "everything that is disclosed in figure 2." *Id.* at 41. It is Patent Owner's position that for the summation algorithm structure disclosed in the sixth embodiment in

the '216 patent, "there is [] traceability back to the Australian provisionals." *Id.* at 42. As Petitioner pointed out in rebuttal, however, the '216 patent characterizes the disclosures that also appear in the Australian provisionals as a "generalized description". Ex. 1001, 11:40–43; Tr. 84. Thus, in the context of the '216 patent itself, the disclosures that appear in the Australian provisional applications do not convey the specific algorithm disclosed in the sixth embodiment, namely, combination by addition, nor an equivalent, but, rather, a generalized description. *See* Ex. 1001, 11:53–56.

In sum, we credit Dr. Madisetti's opinion on whether one of ordinary skill in the art would have immediately recognized from the Australian provisional applications the structure of a summation algorithm or summer and its equivalents. Accordingly, we find that the preponderance of the evidence supports the earliest priority date of September 21, 1993 for the '216 patent based on the earliest disclosure of structure and hardware for the claim term "licensee unique ID generating means" and similar terms "remote licensee uniuqe ID generating means," and "registration key generating means".

2. Mode Switching Means

The structural disclosure in the '216 patent for the term "mode switching means" is "program code which performs a comparison of two numbers or a comparator and equivalents thereof". *See* Ex. 1008, 41–44; Ex. 1001, 13:37–40 ("Comparator 90 together with gates 91, 92, and relay 93 comprise one particular form of mode switcher or switching platform 83 of various kinds of code such as the code of types D and U"), 6:12–14 ("[m]ode switching means can comprise execution of the code portion which

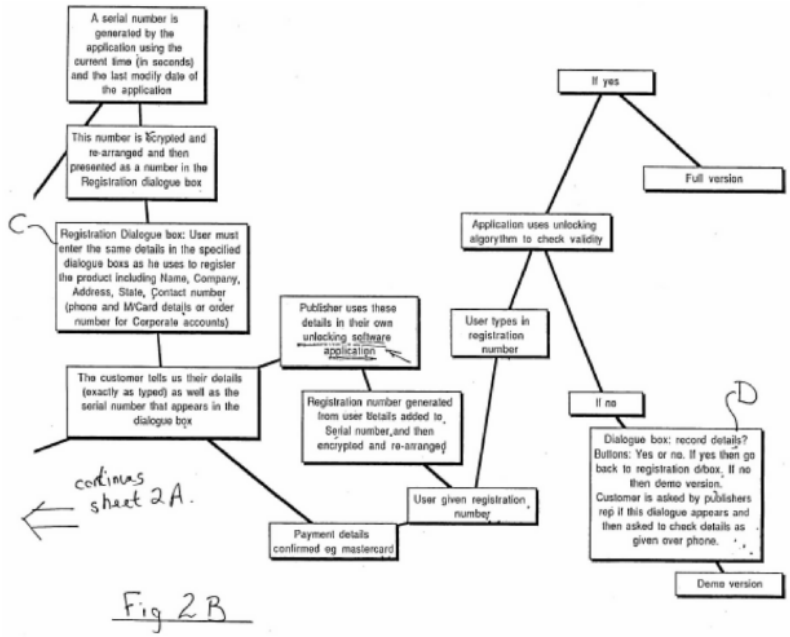
additionally performs a comparison of the locally and remotely generated registration numbers").

Patent Owner asserts that the function of the mode switching means is described in the '4842 application as follows:

> As the final stage in registration the registration authority 16 provides the registration number generated by the registration authority PC 15 to the user 11. The user 11 enters the registration number into the user PC 12 where the security routine checks to see whether the entered registration number matches the calculated registration number. If the two match then a valid registration has taken place and access is provided by the security routine to a full operating version of the software protected by the security routine.

Ex. 1025, 6–7; PO Resp. 26 (citing Ex. 2008 ¶ 63). Patent Owner further asserts one skilled in the art would have understood from the above disclosure in the Australian provisional applications that (1) they "teach a software invention", (2) "a 'routine attachable to software' is software," (3) "'software' is implemented with 'program code'", and (4) "the terms 'program code' and 'software' are often used interchangeably." PO Resp. 27 (citing Ex. 2008 ¶¶ 65, 66). Patent Owner also relies on Figure 2B of the Australian provisional applications as supporting disclosure of a "mode switching means". *Id.* at 28 (citing Ex. 2008 ¶ 68). At the oral hearing, Patent Owner argued that the third block from the top on the right side of Figure 2B is a decision block that is a software equivalent to a comparator and a model for software, which is program

code. Tr. 47–48; Ex. 1025, 13. Figure 2B is shown below:



According to Patent Owner, Figure 2B shows a decision block in the third block from the top ("Application uses unlocking algorithm to check validity") because there is an input and two outputs that are a "yes" and a "no". PO Resp. 28 (citing Ex. 2008 ¶ 68); Ex. 1025, 13; Tr. 47.

Patent Owner provides evidence that the function of the mode switching means was disclosed in the Australian provisional applications, but not the structure, namely, program code or its equivalent, or the hardware, a comparator. The fact that the security routine, which provides the function, is "attachable to software" and that software is "often used interchangeably" with program code, is not evidence that one of ordinary skill in the art would have clearly concluded from the Australian provisionals that program code, or an equivalent, is the

structure that performs the mode switching means function. *See Lockwood*, 107 F.3d at 1572. Moreover, Patent Owner does not provide evidence of a comparator or an equivalent being disclosed in the Australian provisionals to demonstrate that the inventor was in possession of the invention at the time of the filing of the Australian provisional applications. *See id.* Figure 2B does not reasonably convey a comparator, nor does the record reflect evidence that the block in Figure 2B to which Patent Owner directs us is a comparator or an equivalent.

Accordingly, we find that the preponderance of the evidence supports the earliest priority date of September 21, 1993 for the '216 patent based on the earliest disclosure of structure and hardware for the claim term "mode switching means".

3. Conclusion

The preponderance of the evidence on this record shows that the earliest priority date to which the '216 patent claims are entitled is September 21, 1993. We, therefore, discern no reason to alter our determination in this regard for the purposes of this Final Written Decision.

C. Patentability

To prevail on its challenges to the patentability of claims, Petitioner must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

1. Principles of Law

a. Anticipation

In order for a prior art reference to serve as an anticipatory reference, it must disclose every limitation of the claimed invention, either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). We must analyze prior art references as a skilled artisan would. *See Scripps Clinic & Research Found. V. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991), overruled on other grounds by *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282 (Fed. Cir. 2009) (to anticipate, "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention").

b. Obviousness

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in

the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). An invention "composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR*, 550 U.S. at 418. Moreover, a determination of unpatentability on the ground of obviousness must include "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). The obviousness analysis "should be made explicit" and it "can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 550 U.S. at 418.

2. Schull (Ex. 1002)

Petitioner asserts that claims 1–11 and 17–20 of the '216 patent are anticipated by Schull under 35 U.S.C. § 102(e). Pet. 19–37. Petitioner also asserts that claims 10 and 11 would have been obvious over Schull under 35 U.S.C. § 103(a). *Id.* at 53. Having determined that the earliest priority date of the '216 patent is September 21, 1993, we confirm that Schull is prior art to the '216 patent under 35 U.S.C. § 102(e) because it issued from an application filed in the United States on December 15, 1992. *See* Ex. 1002, [22].

a. Overview of Schull

Schull teaches a method of distributing, registering, and purchasing digital information whereby access to advanced features of the digital information is given in the presence of a valid password that is generated on the

user's system. Ex. 1002, Abstr. The password is generated using ID target information that can be unique to the user, such as the user's voice or telephone number, or specific to the user's processor. *Id.* at 5:20–47; 6:65– 7:27; 8:26–30; 17:13–20. An algorithm is used to transform the information into a unique ID. *Id.* at 7:16–27. The same password-generating algorithm is used on a licensing processor that is remote from the user's computer to transmit the password back to the user's processor where it is installed and found for subsequent executions or boots. *Id.* at 6:1–11, 8:55–9:4, 11:8–13, 35–40, 51–54. A check is conducted between the user's processor and the licensing processor to determine whether the installed password correctly matches the password generated in the user's processor. *Id.* The protected software may then be run on a user's processor, which "is typically a traditional computer". *Id.* at 6:46–53.

b. Anticipation of Claims 1–11 and 17–20

The key issue disputed by the parties is whether Schull teaches the "generating means" required by the claims. Petitioner contends that the preferred algorithm taught by Schull is a summation algorithm or an equivalent and provides the Madisetti Declaration in support of its position. Pet. 21 (citing Ex. 1007 ¶¶ 40–47). According to Dr. Madisetti, the preferred algorithm disclosed in Schull is a summation algorithm because it prominently uses addition to perform the function of generating an ID. Ex. 1007 ¶¶ 40–47.

Petitioner also argues that the presence of an operating system, as required by dependent claims 10 and 11, is implicitly if not expressly present in Schull's disclosure because traditional personal computers were almost universally being used by 1993, thus any program running

on a computer would have been adapted to run under that operating system or in an operating system environment. Pet. 22–23. Petitioner alternatively argues that claims 10 and 11 would have been obvious in view of Schull. *Id.* at 53. For both positions, Petitioner provides the Madisetti Declaration as evidence. Ex. 1007 ¶ 38.

Patent Owner contends that Petitioner's challenge based on Schull is defective "because Schull fails to teach a summation algorithm, summer, or equivalent structure for anticipating the licensee unique ID generating means." PO Resp. 33 (citing Ex. 2008 ¶¶ 75–105). According to Patent Owner, Schull uses "concatenation" to generate its "Passwordable ID" and "concatenation" is not a summation algorithm. *Id.* at 33–34 (citing Ex. 2008 ¶ 77). Dr. DiEuliis describes concatenation as

> the linking together of entities (e.g., characters or numbers), not a mathematical computation, summation or otherwise. In a computer system, data is stored in memory as a linear array of bytes, and concatenation is normally accomplished by copying the data to a contiguous section of memory so that the result is stored as a continuous array.

Ex. 2008 ¶ 78. Dr. DiEuliis provides as an example of concatenation "the concatenation of three numbers—X=1234; Y=56; Z=789—to arrive at the number 123456789" provided in Dr. Madisetti's declaration. *Id.* ¶ 82 (citing Ex. 1007 ¶ 44). According to Dr. DiEuliis, to concatenate these three numbers stored in memory requires rearranging the numbers by moving or copying into a contiguous section of memory. "To accomplish this rearrangement, at most, the program need only to move each byte to its new location in memory." *Id.* ¶ 83. Dr. DiEuliis states "[m]oving data from one memory location

to another . . . is a basic processor operation and is fast and efficient. Any type of arithmetic operation such as addition by byte-wide or multi-byte numbers is much more complicated and significantly slower." *Id.* (footnote omitted).

Because Petitioner relies upon the Declaration of Dr. Madisetti to explain the method of concatenation in Schull, Patent Owner argues that Petitioner supplements the teachings of Schull with other teachings of Dr. Madisetti. PO Resp. 40; Tr. 52.

Patent Owner does not present separate argument as to anticipation of claims 1–11 and 17–20 by Schull and obviousness of 10 and 11 over Schull. PO Resp. 32–40, 60.

The passages at issue in Schull describing the algorithms by which the Passwordable ID is generated read:

> The ID must be generated in such a way that two ID-Targest will generate different IDs. Also, in order that a plurality of Licensed-features in a plurality of software programs be independently licensable on the same ID-Target, any two Licensed features must be able to generate different IDs even in conjunction with a single ID-Target. Those familiar with the art will recognize that this can be achieved a variety of ways, in one preferred embodiment, each item of protected software is assigned an adequately unique P-digit Program ID, and each licensed Feature is assigned an F-digit Feature-ID, and each ID-Target can be associated with a T-digit Target-ID such as a serial number. Once assigned (using methods described below) these ID numbers are combined in a fash-

> ion which preserves their uniqueness (e.g., by concatenating them to produce a number with N+M+T digits capable encoding 10^(N+M+T) values) and then using this combination, an encryption of it, or some other adequately-unique transform of it, as the ID.

Ex. 1002, 7:10–27.[3] Schull goes on to describe "error-checking" by having the Passwordable ID "satisfy some kind of coherence constraint" that "would be to append two more digits to the ID which would constitute a checksum for the preceding digits." *Id.* at 7:28–36.

We are persuaded by Petitioner's argument that Schull discloses a summation algorithm for generating its Passwordable ID. As explained by Petitioner, Schull's algorithm combines three ID numbers: Program ID, Feature ID, and Target ID, which Petitioner refers to as X, Y, and Z in its explanation. Pet. 21. The X number has "N" digits, the Y number has "M" digits, and the Z number has "T" digits. *Id.* The algorithm combines the numbers X, Y, and Z "(e.g., by concatenating them to produce a number with N+M+T digits)". Ex. 1002, 7:24–25; Pet. 21; Ex. 1007 ¶ 41. In 1992, concatenating three integers to produce the desired result "boils down to two basic approaches: (1) multiplying the first integer and second integer by a power of ten (dependent on the number of digits of the subsequent numbers) and adding the three integers together, or (2) converting the integers to 'strings,' concatenating the strings, and converting the

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[3] Patent Owner does not dispute Dr. Madisetti's observation that Schull contains a typographical error (referring first to P, E, and T-digits and then to N, M, and T-digits) and his determination that N and M are equivalent to P and F. Ex. 1007 ¶ 41.

result back to an integer." Ex. 1007 ¶ 42. Using the former approach to produce a number with the combined number of digits as the numbers being combined, which Petitioner argues is the one disclosed in Schull, Dr. Madisetti describes the mathematical operations that can be performed programmatically. The mathematical operation provided by Dr. Madisetti is $X*10^{(M+T)} + Y*10^{T} + Z$, which uses multiplication and addition. *Id.* ¶¶ 44; Pet. 21. According to Dr. Madisetti, this approach is a summation algorithm and is "computationally quicker" for the reason that "it is a matter of performing basic calculations and processing smaller numbers, as opposed to converting, combining and reconverting large strings . . . ." Ex. 1007 ¶ 43.

To explain why Dr. DiEuliis is incorrect about Schull using the other method of concatenating three integers to generate the PasswordableID, Petitioner submits with its Reply a Supplemental Declaration of Dr. Vijay K. Madisetti (Ex. 1039). Pet. Reply 9–10. In his Supplemental Declaration, Dr. Madisetti provides a detailed explanation based on Schull's teachings about the programming used to generate a PasswordableID. Ex. 1039 ¶¶ 7–14. Regarding how the invention of Schull is implemented, Schull states that "[o]ne object of [its] invention is to allow programmers to conveniently invoke the first-described methods by adding a relatively small number of lines of code to their own programs." Ex. 1002, 12:46–50. Schull further discloses that this object can be achieved by implementing "Pascal language" and discloses programming that describes the Passwordable ID as a "longint." *Id.* at 12:53–14:13; Ex. 1039 ¶¶ 7–14. According to Dr. Madisetti, "longint" means the Passwordable ID is "a single integer, single number, or a whole

number." Ex. 1039 ¶ 11. Concatenating a PasswordableID in the manner described by Dr. DiEuliis would not produce a single integer, single number, or a whole number because the components of the number of would maintain their separate identities stored in separate places in memory. *Id.* ¶¶ 15–16. In view of the evidence before us, we are persuaded that Schull's longint concatenating implementation describes a summation algorithm.

Even if the concatenating procedure disclosed by Schull for generating a Passwordable ID does not necessarily utilize a "summation algorithm" or equivalent, we find that Schull's disclosure of appending two additional digits to the concatenated number using a checksum does. Schull describes this further step in creating the Passwordable ID as being for the purpose of error checking. Ex. 1002, 7:28–36. The preponderance of evidence on this record is that a checksum is a summation algorithm. Dr. Madisetti testifies that "[a]s of 1992, using a checksum to detect an error in a number, as described by Schull, was done using what is known as a 'check digit[,]' [and all] of the methods for calculating check digits utilize some form of addition." Ex. 1007 ¶ 48. Dr. DiEuliis confirmed that most checksums use addition and that he had never created a checksum that did not use summation. Ex. 1041, 63:10–17, 88:8–10. In addition, the publications relied upon by Dr. DiEuliis for disclosing checksum methods also confirms that summation is used in those methods. Ex. 1039, 24–36; 2009, 144:16–20. The issue of whether a checksum is a summation algorithm was also answered in the affirmative in prior litigation involving the '216 patent. Ex. 1032, 177:7–21; Ex. 1042, 20–21; Ex. 1010, 17, 24; Ex. 1037, 30, 41–42; Ex. 1033, 52, 53–55; Ex.

1016, 27; Ex. 1041, 61:21–62:20, 70:8–72:22, 80:10–81:21. Therefore, Schull discloses a licensee unique ID generating means because Schull discloses the step of appending digits for error-checking purposes to the Passwordable ID using a checksum.

At oral hearing, Patent Owner asserted that (1) Petitioner is relying on an inherency argument to establish that Schull used a summation algorithm, (2) that inherency argument must fail because the experts agree that there are two methods in which concatenation may be performed, and (3) [t]here is no express disclosure in Schull for using summation, only concatenation." Tr. 52–55. When asked how the other form of concatenation would produce a long integer, Patent Owner conceded that there is no evidence in the record to that level of detail. *Id.* at 54:8–16 ("We don't have expert testimony on that level of detail").

After considering Petitioner's and Patent Owner's positions, as well as their supporting evidence, we credit Dr. Madisetti's testimony regarding the disclosures in Schull describing the use of a summation algorithm to generate the PasswordableID. For the reasons provided by Petitioner, we determine that the preponderance of the evidence demonstrates that claims 1–11 and 17–20 would have been anticipated by Schull. *See* Pet. 19–37; Pet. Reply 9–14.

c. Obviousness of Claims 10 and 11

Claim 10 depends from claim 1 and recites "said platform comprises a computer operating system environment." Ex. 1001, 14:35–36. Claim 11 depends from claim 10 and further requires "said digital data comprises a software program adapted to run under said operating

system environment." *Id.* at 14:37–39. Petitioner argues that if Schull's disclosure of a traditional computer on which protected software may be run is not sufficient to anticipate dependent claims 10 and 11, then "modifying the 'traditional computer' of Schull to include an operating system under which protected software can be run would have been obvious to one of skill in the art." Pet. 53 (citing Ex. 1007 ¶ 38). Patent Owner contends that claims 10 and 11 are not unpatentable because Schull is not prior art. PO Resp. 60.

A disclosure that anticipates under 35 U.S.C. § 102 generally renders the claim unpatentable under 35 U.S.C. § 103, because anticipation is the "epitome of obviousness." *See In re Fracalossi*, 681 F.2d 792, 794 (CCPA 1982); *In re Pearson*, 494 F.2d 1399, 1402 (CCPA 1974). For the reasons we find that claims 10 and 11 have been shown by a preponderance of the evidence to be anticipated by Schull, we also determine that Petitioner has shown by a preponderance of the evidence that claims 10 and 11 are unpatentable under 35 U.S.C. § 103(a) as obvious over Schull.

We further find that if Schull's disclosure of a "traditional computer" is not a disclosure of a personal computer with an operating system, the preponderance of the evidence on this record shows that it would have been obvious to modify Schull's traditional computer to include an operating system under which protected software can be run as required by claims 10 and 11. According to Dr. Madisetti, "operating systems for personal computers had become ubiquitous and necessary to the operation of software on the computer" prior to 1993. Ex. 1007 ¶ 38. Dr. Madisetti testifies to the introduction of Windows 3.1 in April 1992, the release of Apple's System

Software in 1984, System 7 in 1991, and LINUX in 1991. *Id.* The '216 patent also identifies existing operating system environments. Ex. 1001, 2:32–36. These facts are not disputed by Patent Owner. Therefore, if Schull's traditional computer did not include an operating system environment on which software can be run, it would have been obvious to modify Schull with a computer that did include an operating system environment. Accordingly, the preponderance of the evidence supports our finding that claims 10 and 11 would have been obvious over Schull.

3. Logan (Ex. 1003) and Grundy (Ex. 1004)

Petitioner asserts that claims 12–14 are anticipated under 35 U.S.C. § 102(e) by Logan (Pet. 37–41) and claims 15 and 16 would have been obvious under 35 U.S.C. § 103(a) over the combination of Logan and Grundy (id. at 41–46). Claim 12 requires that the registration system "is replicated at a registration authority and used for the purposes of checking by the registration authority that the information unique to the user is correctly entered at the time that the security key is generated by the registration system." Ex. 1001, 14:45–49. Claim 15 depends from claim 12 and further requires that "said registration system checks at the time of boot of said software as to whether it is a first boot of the software to be protected or a subsequent boot". *Id.* at 14:57–60.

a. Overview of Logan

Logan discloses a method and system for protecting a software program. Ex. 1003, Abstr. A first software code or serial number is provided by the vendor that is unique to each original copy of the software. *Id.* at 4:19–

31. A second software code is stored within the software that the software supplier is able to identify by reference to the first software code. *Id.* at 4:32–43. The user must provide the software supplier with the hardware and software serial numbers. *Id.* at 6:33–39. An activation code is generated by the software supplier by adding together the serial numbers and in the same manner accomplished by the software locally to generate a first intermediate code. *Id.* at 6:51–67. A mathematical operation is performed on the first intermediate code and the activation code to produce a second intermediate code. *Id.* at 5:53–65. The program compares the second intermediate code with the second software code and, if they are identical, then the user is permitted to operate the software uninhibited. *Id.* at 5:67–6:7.

b. Anticipation of Claims 12–14

Petitioner asserts that the disclosures in Logan anticipate claims 12– 14. Pet. 37–41. Petitioner identifies Logan's first intermediate code as the security key required by independent claim 12 and Logan's first software code or serial number as the information uniquely associated with a person who intends to become a licensee that the user inputs. *Id.* at 38–39. Logan's software supplier is identified as the registration authority that checks whether the software serial number entered by the user is accurate because the second intermediate code will not match the stored hidden number if the serial number is not correctly input by the user. *Id.* at 40.

Patent Owner contends that the first intermediate code derived in Logan "is not generated from information unique to the user because different users who install copies of the software will have the same software serial number." PO Resp. at 41–42 (citing Ex. 2008 ¶ 121;

Ex. 1003, 6:7–29). According to Patent Owner, vendor-supplied information may be an input to generate a "security key," but it is not necessarily "information that is uniquely associated with a person" as recited in claim 12. *Id.* at 43. Patent Owner also contends that Logan's system does not anticipate the final element required by claim 12, "checking by the registration authority that the information unique to the user is correctly entered at the time the security key is generated by the registration system" because "the temporal aspect of the checking (i.e. 'at the time the security key is generated') is not disclosed anywhere in Logan." *Id.* at 45 (citing Ex. 2008 ¶ 131). Patent Owner further contends that Petitioner's citation to Logan for this element is misleading because Logan "describes actions that take place on the user's computer, not actions taken by the software supplier." *Id.*

Regarding whether Logan's first intermediate code is an identifier associated with the licensee, the uniqueness of the identifier will vary depending on the inputs by the user, which may include vendor supplied information and does not require personal information of the user according to the claim construction analysis of record. *See* Ex. 1008, 16–21; Ex. 1009, 11. Logan teaches that the software serial number is unique to each original copy of the software and that it is combined with the hardware serial number input by the user to generate the first intermediate code. Ex. 1003, 4:19–31 ("Each original copy or embodiment of the computer software has a first software code which is uniquely associated with that one particular embodiment"), 4:65–5:30; *see* Pet. 38–39. The preponderance of evidence in this record also supports a serial number supplied by a vendor being unique to the

user. Ex. 1046, 27:1–3 (the inventor of the '216 patent testifying that "the serial numbers of each piece of software . . . identifies the owner of the software . . ."), 29:1–3 (the inventor of the '216 patent testifying that his idea was "linking a serial number to a specific machine"); Ex. 1044, 10 (Patent Owner arguing in district court that it "expressly contemplates information that is not one-of-a-kind"); Ex. 1016, 39 (Patent Owner arguing during reexamination that nexus between the claims and some commercial embodiments was satisfied because they used "a unique serial number . . . that is assigned to each copy of the software"); Ex. 1008, 12 (District Court finding in its claim construction of "unique" that "[t]o construe the word unique to mean no possibility of duplication would simply be inconsistent with the specification."). In addition, the claim construction analysis explicitly rejected "one-of-a-kind information that describes/identifies a person" when construing "information . . . which uniquely identifies an intended registered user" recited in claim 12. Ex. 1008, 22.

At the oral hearing, Patent Owner conceded that the Federal Circuit held that vendor-provided information "could be" the basis for a licensee unique ID, but argued that whether a particular vendor supplied information is uniquely associated with a licensee is a fact question. Tr. 61–62. In Logan, the software serial number is input by the user together with the hardware serial number to generate the first intermediate code. Therefore, the information inputted by the user is not solely platform related and together with the hardware serial number "uniquely identifies an intended registered user" as recited in claim 12 compared to the software serial number

alone. Accordingly, we are persuaded that the first intermediate code meets the recited "security key" requirement of claims 12–14, as that term is construed.

Logan also teaches that the accuracy with which the software serial number is input by the user would be checked by the registration authority because "the software supplier is able to identify the second software code for each particular embodiment of the software by reference to the first software code or serial number." Ex. 1003, 4:37–40. It is also checked by the registration authority in Logan by preventing full access to the digital data if the second intermediate code does not match the stored hidden number. *Id.* at 5:65–6:7; *see* Pet. 39–40. Regarding whether algorithms are replicated at a registration authority in Logan, Patent Owner does not dispute that the same algorithm is replicated at the registration authority to produce the first intermediate code. We do not read into the claims a temporal limitation requiring that the security key is generated at the same time at the local and remote locations, as argued by Patent Owner. Claim 12 requires that the registration system is replicated at the registration authority for the purpose of check on the information unique to the user. Therefore, we are persuaded that the registration authority disclosed by Logan meets the requirements of claims 12–14.

After considering Petitioner's and Patent Owner's positions, as well as their supporting evidence, we determine that Petitioner has shown by a preponderance of the evidence that claims 12–14 would have been anticipated by Logan.

c. Overview of Grundy

Grundy is directed to "a computer-based method and apparatus to control the distribution of information . . . whereby a user of computer software becomes the primary agent of manufacture and distribution of the software under the direct monitoring and control of a centralized control point." Ex. 1004, 1:7–13. The software is "capable of being operated in two modes." *Id.* at 4:28–29. "The first mode is a full-function mode, where all the functions and features of the software product are available to the user" and "[t]he second mode is an evaluation mode, where only certain functions, decided by the software developer, can be accessed by the user." *Id.* at 4:29–34. The software product in evaluation mode is distributed to the user community *Id.* at 9:3–6. The user "is in fact supplied with a complete copy of the software, but can not operate the software in full-function mode until after the registration process . . . is completed." *Id.* at 9:14–17. An ownership check is performed "[e]ach time a user starts the software product" in order to determine whether the software should be executed in an "evaluation mode" or "full-function mode". *Id.* at 5:37–48.

d. Obviousness of Claims 15 and 16

Petitioner asserts that, like Logan, Grundy also teaches a system for ensuring that copied software is properly registered (Pet. 41), but differs from Logan in that the software runs in both a demonstration or evaluation mode and a full-function mode depending on an ownership check each time the software is executed (*id.* at 41–42). Petitioner argues that it would have been obvious to one of ordinary skill in the art to combine the option of running software in a demonstration mode, as taught by Grundy, with the software protection system

of Logan, because Grundy teaches "the benefit of providing an evaluation mode to a software consumer is to allow the consumer to try and evaluate features of the product prior to making a decision to purchase." *Id.* at 42 (citing Ex. 1004, 4:27–36, 9:6–11; Ex. 1007 ¶¶ 49–57). Petitioner contends that modifying the software registration system of Logan with the ownership check process of Grundy would have been within the skill and common sense for a skilled artisan; it would have provided the predictable result of executing the software in two different modes as described by Grundy; and claims 15–16 would have been obvious over the combination. *Id.* at 42–46. Petitioner provides the Madisetti Decl. as evidence to support the obviousness of claims 15 and 16 over the combination of Logan and Grundy. *Id.* (citing Ex. 1007 ¶¶ 52–57).

Patent Owner contends that "[t]here is no disclosure in Grundy's system to check at the time of boot whether it is a first or subsequent boot." PO Resp. 47. According to Patent Owner, Grundy teaches away from claim 15 because it "emphasi[zes] an entirely different check—the mode check— at start up." *Id.* (citing Ex. 2008 ¶ 139). Patent Owner further contends that the requirements of claim 15 are not met because "neither *Logan* nor *Grundy* disclose detecting first or subsequent boots." *Id.* at 48 (citing Ex. 2008 ¶ 142). Regarding the reason to combine Logan and Grundy, Patent Owner argues that one skilled in the art would have not modified Logan with the demo mode feature of Grundy because "[t]he common sense approach to adding a demonstration mode to a software product in view of Logan and Grundy would have been to abandon Logan and incorporate Grundy alone." *Id.* at 49 (citing Ex. 2008 ¶ 146).

After considering Petitioner's and Patent Owner's positions as to claims 15 and 16, as well as their supporting evidence, we determine that Petitioner has shown by a preponderance of the evidence that those claims are unpatentable under 35 U.S.C. § 103(a) as obvious over Logan and Grundy. Regarding detecting first or subsequent boots as required by claim 15, Grundy discloses the step of determining "if this is the first use," which indicates a first or subsequent boot, by checking whether an ownership details record exists every time the software is executed. *See* Ex. 1004, 16:41–49; Ex. 1007 ¶ 52. If no details are present, an initialized ownership record will be created. Ex. 1004, 16:41–49. On a subsequent boot, an ownership record will exist and be checked to determine whether the software should run in evaluation or full-function mode. *Id.* at 5:37–48, 16:18–17:39. Therefore, the preponderance of the evidence supports Petitioner's argument that claims 15 and 16 would have been obvious over the combined teachings of Logan and Grundy. Petitioner also provides a reason for combining this particular feature of Grundy with the system of Logan, namely, "allow[ing] potential users to try and evaluate features of the software product" as stated by Grundy. Ex. 1004, 4:34–36; Pet. 42. Therefore, Petitioner's reason to modify the teachings of Logan with the teachings of Grundy is apparent from Grundy and has a rational underpinning. *See KSR*, 550 U.S. at 418.

4. Haines (Ex. 1005) and Manduley (Ex. 1006)

Petitioner contends that claims 12–14 would have been obvious under 35 U.S.C. § 103(a) over Haines and Manduley. Pet. 46–53.

a. Overview of Haines

Haines discloses a system for reconfiguring postage meters that selectively enable and disable features. Ex. 1005, Abstr. The user's meter generates a request code number from user-entered information in both systems. *Id.* at 5:1–6:48. Haines discloses that the meter and the data center each use the same encryption routine and input numbers so that the data center can control the feature set of the meter. *Id.* at 4:17–26. The data center computer in Haines checks that its configuration request code matches the configuration request code generated by the user's meter. Haines states that if "the agent has improperly entered numbers," the codes will not match. *Id.* at 7:15–26.

b. Overview of Manduley

Manduley also discloses a system that selectively activates and unactivates features in a data processing device, such as a parcel manifest system. Ex. 1006, Abstr., 1:35–39. The user's meter generates a request code number from user-entered information as in Haines' system. *Id.* at 5:63–6:50. Manduley expressly discloses location data is entered by the user, such as "zip code or other data identifying the location" of the device. *Id.* at 5:53–6:50. "From that information, the data center determines the identity of the customer holding that device 20 and checks the customer's file to determine whether the request is appropriate (step 210)." *Id.* at 7:63– 8:2.

c. Obviousness of Claim 12

Petitioner argues that it would have been obvious to one of ordinary skill in the art to modify the system of Haines with the use of location data as the information

that the user inputs because Manduley teaches the benefit of using location data is to allow the data center to determine the customer identity. Pet. 47 (citing Ex. 1006, 7:63–8:2). Petitioner provides as evidence in support of its position the Madisetti Declaration, which characterizes the modification of Haines as a substitution that is contemplated by Haines's suggestion that "other meter specific identifying information" may be used instead of an ascending register value in generating a request code. Ex. 1007 ¶ 61 (citing Ex. 1005, 5:28–30). Petitioner also argues that the use of a zip code, as in Manduley, is exemplified as a user input to generate the security key in the '216 patent. Pet. 47 (citing Ex. 1001, Fig. 4).

Patent Owner contends that Haines and Manduley are not analogous art to the '216 patent because "neither reference is directed towards a user who desires to obtain a license, install, and use software on their computer" and, as such, one skilled in the art would not look to these references "to solve the problems that the inventor of the '216 Patent faced." PO Resp. 52 (citing Ex. 2008 ¶ 152); *id.* at 55. Patent Owner asserts that neither discloses "licensing procedures or a registration system" or "installation of software into a user's computer" because both teach "select[ing] operating features already installed in a device." *Id.* at 52 (citing Ex. 2008 ¶ 154); *id.* at 54.

Patent Owner further contends that Haines has not been shown to disclose the "registration system" preamble of claim 12 because "none of the cited passages disclose any licensing procedure". *Id.* at 56. In addition, Patent Owner asserts that neither Haines nor Manduley discloses the use of information that is uniquely associated with a person who intends to become a licensee as

required by independent claim 12. *Id.* at 57. Patent Owner also argues that Petitioner's reason for combining Haines's system with the zip code input taught by Manduley is not supported by the record because Manduley identifies the location of the device, not the agent, and "the data center computer in Haines already knows the identity of the agent." *Id.* In addition, Patent Owner asserts that the "agent" disclosed by Haines and Manduley cannot be the "intended registered user of said software on a computer on which said software is to be installed" as recited in claim 12 because "the owner of the business or home (or a post office) is the user of the meter." *Id.* at 58 (citing Ex. 2008 ¶ 180). According to Patent Owner, Petitioner has not identified "an intended registered user of said software on a computer on which said software is to be installed", "any user's computer on which software is to be installed", or "'licensee,' 'licenses,' or 'licensing procedures'" as recited in claim 12. *Id.* (citing Ex. 2008 ¶¶ 181, 182).

Based on the trial record, we find the preponderance of the evidence supports Petitioner's assertion that claim 12 would have been obvious over the combination of Haines and Manduley. As an initial matter, we find Haines and Manduley to be analogous art. The PTO and its reviewing courts have developed and applied a two-step "test" to determine whether a prior art reference is "analogous" art and therefore may be used as evidence with respect to a question of obviousness under § 103. *See In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992); *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992); *In re Wood*, 599 F.2d 1032 (CCPA 1979). Step 1 requires an answer to the following question: "Is the reference within the field of the inventor's endeavor?" If the answer is "yes," then the

reference is "analogous" and therefore may be used as evidence. If the answer is "no," then Step 2 requires an answer to the following question: "Is the reference reasonably pertinent to the particular problem the inventor was trying to solve?" If the answer is "yes," then the reference is analogous and therefore may be used as evidence.

Haines and Manduley are analogous art because, like the '216 patent, they relate to systems for remotely permitted use of software on a device. Ex. 1007 ¶ 59. The scope of the '216 patent is not limited to personal computers, but, rather, any "platform" on which software runs. Ex. 1001, 2:52–55 ("In broad terms, the system according to the invention is designed and adapted to allow digital data or software to run in a use mode on a platform . . . ."), 2:24–30 ("[T]he term 'platform' denotes an environment to be associated with a computer device such as a microprocessor or other data processing device which permits execution of the digital data . . . ."). Even if the Haines and Manduley references could be considered in a different field of endeavor than the '216 patent because their intended use is postage and parcel systems rather than a personal computer, they are analogous art for the additional reason that they relate to the problem of restricting access to software to those who have a right to use it. Ex. 1001, 2:40–44 ("In this specification, 'use mode' refers to use of the digital data or software by its execution on a platform so as to fulfill the seller's/licensor's obligations in relation to the sale or license of the right to execute the digital data or software in the use mode."); Ex. 1005, Abstr., 1:41–49 ("only authorized meter reconfigurations can occur"), 11:13–17; Ex. 1006, Abstr, 1:29–32 ("the marketer may wish to charge the customer a separate

amount for each software function or each variety of data and the customer may wish to pick and choose among the functions and/or varieties"), 2:31–63.

Petitioner demonstrates by a preponderance of the evidence that Haines discloses a "registration system" as recited in the preamble of claim 12 and construed in the table above. Pet. 48–49. The reconfiguration process of Haines is a licensing procedure because it is a system that provides security for the authorized use of software features. Ex. 1005, 1:45–47, 4:17–26; *see* Pet. 48–49. Patent Owner argues that Haines does not disclose a registration system "because it does not disclose any licensing procedure that must be followed by a prospective user," citing paragraph 172 of the DiEuliis Declaration. PO Resp. 56. The argument appears to be that there is no *ipsis verbis* disclosure of the term "license" in Haines because Haines does disclose a system to protect authorized use. Dr. DiEuliis acknowledged that licensing means you have obtained permission to use something. Ex. 1048, 106:6–8 ("Licensing is, if you buy a — a product, a software product, and you have the license to use it, which means you're allowed to use it."). Accordingly, the preponderance of the evidence is that Haines discloses a registration system as recited in claim 12.

Petitioner has shown by a preponderance of the evidence that Haines's registration system, as modified by Manduley, generates "a security key from information input to said software", as required by claim 12. Pet. 46–52. Haines's registration system generates a "request code" from the meter serial number, other meter-specific information, and user-entered information. Ex. 1005, 5:1–6:48. The request code generated in Manduley's registration system reflects user-entered location data. Ex.

1006, 5:63–6:50 ("zip code or other data identifying the location"); *see* Ex. 1001, Fig. 4 ("ADDRESS," "CITY," and "ZIP/POST CODE" listed as examples of personal information inputs), 5:10–12. The preponderance of the evidence shows that one of ordinary skill in the art would have considered it obvious to have modified Haines by substituting information inputs disclosed in Haines for generating the "request code" with Manduley's input of a zip code "which uniquely identifies an intended registered user of said software on a computer on which said software is to be installed", as further recited by claim 12, for the reason disclosed in Manduley. Pet. 46–48; Ex. 1007 58–63. Manduley itself discloses the benefit of user-entered location data as allowing the data center to determine the customer's identity. Ex. 1006, 7:63–8:2 (the location data entered by the user is used to "determine[] the identity of the customer holding that device"). Dr. Madisetti states that substitution of the inputs used in Haines is contemplated by Haines, particularly with respect to "other meter specific identifying information". Ex. 1007 ¶ 61 (quoting Ex. 1005, 5:28–30). According to Dr. Madisetti's testimony, using Manduley's device zip code, or other location data, instead of Haines's ascending register value, is nothing more than simple substitution of one known element for another and that the modification would achieve the result described by Manduley without undue experimentation. *Id.* ¶¶ 61–63.

The preponderance of the evidence also shows that Haines's registration system, as modified by Manduley, is "replicated at a registration authority and used for the purposes of checking by the registration authority that the information unique to the user is correctly entered at

the time that the security key is generated by the registration system" as further required by claim 12. Haines explicitly states that the request code "is checked by the data center computer which generates the configuration request code using the same algorithm." Ex. 1005, Abstr., 1:59–64, 4:17–26. Patent Owner's argument regarding the "owner of the business or home" rather than the "agent" in Haines being the "intended registered user" as recited in claim 12 is not persuasive. Manduley explicitly teaches "the user enters data". Ex. 1006, 6:39–41. Who can be properly characterized as the "intended registered user" of the registration system in Haines and Manduley is not relevant. It is the teachings of the references regarding a registration system that are pertinent to the obviousness analysis of claim 12. Dr. DiEuliis conceded that the person entering information in the registration system of claim 12 is irrelevant. Ex. 1041, 111:17–22 ("There's no explicit reference to [] any one person entering this [user] information [of claim 12]").

We also are not persuaded by Patent Owner's argument regarding the degree of uniqueness that should be accorded a zip code in identifying the agent in Manduley (PO Resp. 57) because the claim construction analysis explicitly rejected "one-of-a-kind information that describes/identifies a person" when construing "information . . . which uniquely identifies an intended registered user" as recited in claim 12. Ex. 1008, 22.

d. Obviousness of Claim 13

Claim 13 depends from claim 12 and further requires that "said security key is generated by a registration number algorithm." Ex. 1001, 50–51. Petitioner has shown that Haines's registration system explicitly states

that a non-linear encryption algorithm is used to generate its request code. Pet. 52; Ex. 1005, 9:66–10:19 ("[T]he configuration request code and the configuration enable code are generated by an encryption routine, stored both in the meter ROM and in the data center computer. The encryption routine is a nonlinear algorithm that generates a number that is apparently random to an outside person."), 6:43–50.

Patent Owner contends that obviousness of claim 13 has not been shown because the Petition contradicts itself as to whether the "security key" recited in claim 13 is disclosed in Haines. PO Resp. 59 (citing Pet. 50, 52; Ex. 2008 ¶¶ 186–87). We have considered Patent Owner's argument and are not persuaded. Petitioner argues that one of ordinary skill in the art would have modified the registration system of Haines, particularly the request code generated in Haines, with the location input taught by Manduley. Pet. 46–53. This is clear from the complete statements on pages 50 and 52 of the Petition that Patent Owner cites:

> Haines does not expressly disclose that the configuration request code (i.e., security key) is generated from inputted information that is uniquely associated with a person who intends to become a licensee. However, Manduley discloses generation of a request code that reflects user entered location data, such as the "zip code or other data identifying the location" of the device, which is used by the data center to "determine[] the identity of the customer holding that device."

Id. at 50, 52–53.

e. Obviousness of Claim 14

Claim 14 depends from claim 13 and further requires that the "registration number algorithm combines information entered by a prospective registered user unique to that user with a serial number generated from information provided by the environment in which the software to be protected is to run." Ex. 1001, 53–56. Petitioner has shown that Haines, as modified by Manduley's location data, generates a request code, which includes information entered by a prospective register user unique to that user and a meter serial number, using a non-linear encryption algorithm. Pet. 52–53; Ex. 1005, 5:1–6:50, 9:66–10:19; Ex. 1006, 5:39– 6:50, 7:63–8:2.

Patent Owner asserts that Petitioner's argument is flawed because claim 14 depends from claim 13 and the analysis of whether Haines discloses the required "security key" required by claim 13 is contradicted by the analysis of claim 14. PO Resp. 59 (citing Pet. 52–53). Patent Owner further contends that "Petitioners fail to point to any evidence that either *Haines* or *Manduley* discloses combining information 'provided by the environment in which the software to be protected is to run,' as recited in claim 14." *Id.* at 59–60 (citing Ex. 2008 ¶ 190).

For the reason explained above in connection with claim 13, we are not persuaded that Petitioner failed to show that the combination of Haines and Manduley discloses the "security key" recited in claim 13. Regarding the "information provided by the environment in which the software to be protected is to be run" recited in claim 14, Petitioner has shown that Haines discloses generating a request code from information that includes a meter serial number. Pet. 52, 47; Ex. 1005, 5:1–6:48; Ex. 1007 ¶

60. Therefore, the preponderance of the evidence demonstrates that claim 14 would have been obvious in view of Haines and Manduley.

f. Conclusion

In sum, the preponderance of the evidence shows that claims 12–14 would have been obvious over Haines and Manduley.

D. Conclusion

Petitioner has demonstrated by a preponderance of the evidence that (1) claims 1–11 and 17–20 of the '216 patent are anticipated under § 102(e) by Schull; (2) claims 10 and 11 of the '216 patent are unpatentable under § 103(a) over Schull; (3) claims 12–14 of the '216 patent are anticipated under § 102(e) by Logan; (4) claims 15 and 16 of the '216 patent are unpatentable under § 103(a) over the combination of Logan and Grundy; and (5) claims 12–14 of the '216 patent are unpatentable under § 103(a) over the combination of Haines and Manduley.

III. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1–20 of the '216 patent are held to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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APPENDIX D

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Paper 11
Entered: March 10, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SEGA OF AMERICA, INC., UBISOFT, INC., KOFAX, INC., and CAMBIUM LEARNING GROUP, INC.,
Petitioner,

v.

UNILOC USA, INC. and UNILOC LUXEMBOURG S.A.,
Patent Owner.

Case IPR2014-01453
Patent 5,490,216 C2

Before WILLIAM V. SAINDON, DONNA M. PRAISS, and PATRICK R. SCANLON, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

SEGA of America, Inc., Ubisoft, Inc., Kofax, Inc., and Cambium Learning Group, Inc. (collectively, "Petitioner") filed a Petition (Paper 6, "Pet.") to institute an *inter partes* review of claims 1–5 and 7–20 of U.S. Patent No. 5,490,216 ("the '216 patent") pursuant to 35 U.S.C. §§ 311–319. A Preliminary Response (Paper 10, "Prelim. Resp.") was filed by Uniloc USA, Inc. and Uniloc Luxembourg S.A. (collectively, "Patent Owner"). We have jurisdiction under 35 U.S.C. § 314. For the reasons that follow, we authorize institution of an *inter partes* review.

I. BACKGROUND

We have jurisdiction under 35 U.S.C. § 314, which provides that an inter partes review may be authorized only if "the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a).

Petitioner challenges claims 1–20 of the '216 patent under 35 U.S.C. § 103(a). Pet. 1–2. We institute an inter partes review as to claims 1–20 as discussed below.

A. Related Proceedings

The '216 patent was asserted in complaints filed in the U.S. District Court for the Eastern District of Texas against SEGA of America, Inc. (No. 6:13-cv-627), Ubisoft, Inc. (No. 6:13-cv-628), Cambium Learning, Inc. (No. 6:14-cv-419), and Kofax, Inc. (No. 6:14-cv-427). *Id.* at 54. Additional pending litigations in which the '216 patent has been asserted are listed in Ex. 1031. A petition for covered business method review of the '216 patent (CBM2014-00183) was filed concurrently by Petitioner.

Pet. 55. Another petition for *inter partes* review of the '216 patent (IPR2015-00178) is also pending.

The '216 patent was the subject of *Uniloc USA, Inc. v. Microsoft Corp.*, No. 03-0440 (D.R.I.) in which a decision on claim construction was issued (Ex. 1008) and affirmed by the Federal Circuit (Ex. 1009; Ex. 1010). Prelim. Resp. 7; Pet. 3. The '216 patent was also the subject of two reexamination proceedings (Control Nos. 90/010831 and 90/012179). Pet. 12–15.

B. The '216 Patent (Ex. 1001)

The '216 patent, titled "System for Software Registration," is directed to a system that allows software to run without restrictions ("use mode") if a specified licensing procedure has taken place. Ex. 1001, Abstr. A code portion in the digital data to be protected may include an algorithm that generates a registration number unique to a licensee of the digital data. *Id.* The algorithm in the code portion is duplicated at a remote location under the control of the licensor. *Id.* A mode switching means compares the local and remote registration numbers and, if they match, the program enters into a use mode. *Id.* at 4:49–54, 13:37–41. If they do not match, the program enters into a "demo mode" in which features of the program are disabled. *Id.*

The block diagram of Figure 8 of the '216 patent is reproduced below to illustrate the registration system:

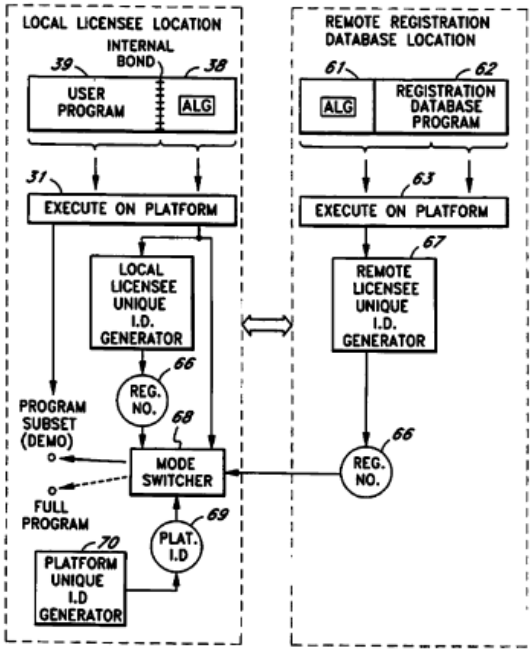

FIG. 8

The registration system depicted in Figure 8 operates in the manner generally described by the embodiments disclosed in the '216 patent. *Id.* at 11:43–45.

C. Illustrative Claims

Independent claims 1 and 12 are illustrative of the claims at issue (paragraphing, indentations, and bracketed matter added):

> 1. A registration system for licensing execution of digital data in a use mode, said digital data executable on a platform, said system including

[a] local licensee unique ID generating means and remote licensee unique ID generating means,

[b] said system further including mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID first generated by said local licensee unique ID generating means has matched a licensee unique ID subsequently generated by said remote licensee unique ID generating means; and

[c] wherein said remote licensee unique ID generating means comprises software executed on a platform which includes the [sic] algorithm utilized by said local licensee unique ID generating means to produce said licensee unique ID.

12. A registration system attachable to software to be protected,

[a] said registration system generating a security key from information input to said software which uniquely identifies an intended registered user of said software on a computer on which said software is to be installed; and

[b] wherein said registration system is replicated at a registration authority and used for the purposes of checking by the registration authority that the information unique to the user is correctly entered at the time that the security key is generated by the registration system.

D. The Prior Art

Petitioner relies on the following prior art:

Reference	Publication	Date	Exhibit
Haines	US 5,077,660	Dec. 31, 1991	1005
Logan	US 5,199,066	Mar. 30, 1993	1003
Grundy	US 5,291,598	Mar. 1, 1994	1004
Schull	US 5,509,070	Apr. 16, 1996	1002
Manduley	US 5,956,505	Sept. 21, 1999	1006

Petitioner also relies on the Declaration of Vijay K. Madisetti dated September 5, 2014 ("Madisetti Decl." Ex. 1007).

E. The Asserted Grounds

Petitioner challenges claims 1–20 of the '216 patent on the following grounds:

Claims Challenged	Basis	Reference(s)
1–11, 17–20	§ 102(e)	Schull
12–14	§ 102(e)	Logan
15, 16	§ 103(a)	Logan and Grundy
12–14	§ 103(a)	Haines and Manduley
10, 11	§ 103(a)	Schull

F. Claim Interpretation

As a first step in our analysis, we determine the meaning of the claims. The challenged patent expired on September 21, 2013. Because the claims of an expired patent are not subject to amendment, the rule of "broadest reasonable construction" per 37 C.F.R. § 42.100(b) does not apply. In this circumstance, the Board's review of the claims is similar to that of a district court. *In re Rambus, Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Specifically, the claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313–1317 (Fed. Cir. 2005) (en banc). For purposes of this Decision, and after thorough review of the record, we agree with the analysis by the District Court for the District of Rhode Island and adopt the claim construction issued in *Uniloc USA, Inc. v. Microsoft Corp.*, No. 03-CV0440 ("Microsoft litigation"). *See* Ex. 1010 (claim construction decision and order dated Aug. 22, 2006); Ex. 1012, 27–28 (summary judgment decision clarifying claim construction dated Oct. 19, 2007). The table below summarizes the court's construction of claim terms in the '216 patent.

Claim Term	Claim Construction
Licensee Unique ID (claims 1, 19, 20) Security Key (claims 12, 13) Enabling Key (claim 17)	A unique identifier associated with a licensee

Claim Term	Claim Construction
Information uniquely descriptive of an intending licensee (claim 2) Information . . . which uniquely identifies an intended registered user (claim 12)	Information that is uniquely associated with a person who intends to become a licensee so as to access full functionality of the digital data
Algorithm (claims 1, 13, 14, 19, 20)	A set of instructions that can be followed to carry out a particular task
Includes the algorithm utilized by said licensee unique ID generating means to produce said licensee unique ID (claims 1, 19, 20)	Includes the identical algorithm used by the local licensee unique ID generating means to produce the licensee unique ID
Generated by a third party means of operation of a duplicate copy of said registration key generating means (claim 17)	Generated by a third party's use of a duplicate copy of the registration key generating means
Use mode (claims 1, 7, 19, 20) Fully enabled mode (claim 17) Full version run (claim 15)	A mode/version that allows full use of the digital data or software in accordance with the license
Partly enabled or demonstration mode (claim 17) Demonstration mode (claim 15)	A mode that allows partial use of the digital data or software
Has matched (claims 1,	A comparison between

Claim Term	Claim Construction
17, 19, 20)	the locally generated licensee unique ID/registration key and the remotely generated licensee unique ID/enabling key shows that the two are the same
Mode switching means will permit said data to run in said use mode in subsequent execution . . . only if said platform unique ID has not changed (claim 7)	The mode switching means will permit the data to run in the use mode only if the platform unique ID is identical to what it was previous time the digital data were run
Registration system (claims 1, 12, 19, 20)	A system that allows digital data or software to run in a use mode on a platform if and only if an appropriate licensing procedure has been followed
Provided to said mode-switching means by said intending user (claim 17)	Provided to the mode-switching means by the person who intends to become a licensee
Communicated to said intending user (claim 17)	Communicated to the person who intends to become a licensee
Checking by the registration authority that the information unique to the user is correctly entered (claim 12)	Verification by the registration authority that information unique to the user and entered by the user is accurate

Claim Term	Claim Construction
Wherein said registration system is replicated at the registration authority (claim 12)	Wherein the portion of the registration system that generates a security key from information input to software to be protected is reproduced exactly at the registration authority. This clarifies that only the portion of the registration system responsible for generating the security key must be replicated exactly at the registration authority, not the entire registration system.
Serial number (claim 14)	A number that is one of a series
Local licensee unique ID generating means (claims 1, 19, 20) Remote licensee unique ID generating means (claims 1, 19, 20) Registration key generating means (claim 17)	**Function**: to generate a local or remote licensee unique ID **Structure**: a summation algorithm or a summer and equivalents thereof
Mode switching means (claims 1, 19, 20) Mode-switching means (claim 17)	**Function**: to permit the digital data or software to run in a use mode if the locally generated licensee unique ID matches the remotely generated licensee

Claim Term	Claim Construction
	unique ID **Structure**: program code which performs a comparison of two numbers or a comparator and equivalents thereof
Platform unique ID generating means (claims 7–9)	**Function**: to generate a platform unique ID **Structure**: a summation algorithm or a summer and equivalents thereof

II. ANALYSIS

We turn now to Petitioner's asserted grounds of unpatentability under 35 U.S.C. § 103(a) to determine whether Petitioner has met the threshold standard of 35 U.S.C. § 314(a).

A. Challenges Based on Schull

Based on our review of the arguments and supporting evidence submitted by Petitioner and Patent Owner, we are persuaded that Petitioner has shown, on the current record, that there is a reasonable likelihood that it would prevail in its challenge to claims 1–11 and 17–20 over Schull.

Petitioner asserts that Schull is prior art under 35 U.S.C. § 102(e) because claims 1–11 and 17–20 of the '216 patent are not entitled to priority before the Sep-

tember 21, 1993 filing date of the '216 patent. Pet. 19. Petitioner contends that neither of the two Australian provisional applications (Ex. 1025; Ex. 1026) demonstrate possession of the claimed "local licensee unique ID generating means" (along with corresponding terms "remote licensee unique ID generating means" and "registration key generating means", hereinafter "generating means") and "mode switching means" limitations of independent claims 1, 17, 19, and 20. Pet. 16–17.

Regarding the generating means limitations, Petitioner asserts that the Australian priority applications do not disclose a "summer or summation algorithm." *Id.* Patent Owner argues that the Australian priority applications disclose an algorithm that "combines" information similar to the information summed in the '216 patent. Prelim. Resp. 16–18. Patent Owner argues that "combines" reasonably conveys "binary addition." *Id.*

A patentee demonstrates possession of the invention by describing it "in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). Importantly, "it is not a question of whether one skilled in the art might be able to construct the patentee's device from the teachings of the disclosure [but] whether the application necessarily discloses that particular device." *Id.* Petitioner's declarant, Mr. Vijay K. Madisetti, testifies that "there were multitudes of ways to 'combine' information in 1992." Ex. 2007 ¶ 24. If there are "multitudes" of ways to "combine" information, it is not necessarily the case that one must combine by binary addition. Reviewing the record before us, we determine that Petitioner has made a threshold showing that the '216 patent is not entitled to priority

date of the Australian priority applications for claims containing the generating means limitations.

Regarding the "mode switching means" limitation, Petitioner asserts that the Australian priority applications do not disclose a "comparator" or code for performing a comparison. Pet. 17–18; Ex. 2007 ¶ 27 ("a hardware comparator and code for performing a comparison . . . are not present in [the Australian priority applications]"). Patent Owner argues that the Australian priority applications disclose a "security routine" and "registration routine" that "serve the same function of [the comparator or code for comparing]." Prelim. Resp. 19–20. The test for possession, however, is not whether the priority document discloses something similar; it is whether the priority application "necessarily discloses that particular device." *Lockwood*, 107 F.3d at 1572. Notably, the limitation at issue is not a broad functional limitation but rather a "means for" limitation limited to the particular device(s) enumerated in the specification and their equivalents. Accordingly, Petitioner has made a threshold showing that the '216 patent is not entitled to priority date of the Australian priority applications for claims containing the "mode switching means" limitation.

Having determined that it is appropriate to consider Petitioner's asserted ground based on the intervening Schull reference, we turn to the disclosures in Schull. Schull teaches a method of distributing, registering, and purchasing digital information whereby access to advanced features of the digital information is given in the presence of a valid password that is generated on the user's system. Ex. 1002, Abstr. The password is generated using ID target information that can be unique to

the user, such as the user's voice or telephone number, or specific to the user's computer. *Id.* at 5:20– 47; 6:65–7:27; 8:26–30; 17:13–20. An algorithm is used to transform the information into a unique ID. *Id.* at 7:16–27. The preferred algorithm taught by Schull is a summation algorithm or an equivalent, according to the Madisetti Decl., for the reason that it prominently uses addition to perform the function of generating an ID. Ex. 1007 ¶¶ 40–47. The same passwordgenerating algorithm is used on a licensing processor that is remote from the user's computer to transmit the password back to the user's processor where it is installed and found for subsequent boots. Ex. 1002, 6:1–11, 8:55–9:4, 11:8–13, 35–40, 51–54. A check is conducted by the programmer's program to determine whether the installed password correctly matches the password generated in the user's processor. *Id.* The protected software may then be run on a user's processor, which "is typically a traditional computer." *Id.* at 6:46–53.

Petitioner argues that the presence of an operating system, as required by dependent claims 10 and 11, is implicitly if not expressly present in Schull's disclosure because traditional personal computers were almost universally being used by 1993, thus any program running on a computer would have been adapted to run under that operating system or in an operating system environment. Pet. 22–23. Petitioner alternatively argues that claims 10 and 11 would have been obvious in view of Schull. *Id.* at 53. For both positions, Petitioner provides the Madisetti Decl. as evidence. Ex. 1007 ¶ 38.

Patent Owner disputes that Schull is a prior art reference to the '216 patent but not the teachings of Schull itself. Prelim. Resp. 22–23.

Based on the cited disclosures (Pet. 19–37), Petitioner persuades us that, on the current record, there is a reasonable likelihood it will prevail in showing that claims 1–11 and 17–20 would have been anticipated by Schull and that claims 10 and 11, at least, would have been obvious over Schull.

B. Challenges Based on Logan

Based on our review of the arguments and supporting evidence submitted by Petitioner and Patent Owner, we are persuaded that Petitioner has shown, on the current record, that there is a reasonable likelihood that it would prevail in its challenge to claims 12–14 under 35 U.S.C. § 102(e) as anticipated by Logan and to claims 15 and 16 under 35 U.S.C. § 103(a) as obvious over Logan and Grundy.

Logan discloses a method and system for protecting a software program. Ex. 1003, Abstr. A first software code or serial number is provided by the vendor that is unique to each original copy of the software. *Id.* at 4:19–31. A second software code is stored within the software that the software supplier is able to identify by reference to the first software code. *Id.* at 4:32–43. The user must provide the software supplier with the hardware and software serial numbers. *Id.* at 6:33–39. An activation code is generated by the software supplier by adding together the serial numbers and in the same manner accomplished by the software locally to generate a first intermediate code. *Id.* at 6:51–67. A mathematical operation is performed on the first intermediate code and the activation code to produce a second intermediate code. *Id.* at 5:53–65. The program compares the second intermediate code with the second software code and if they

are identical, then the user is permitted to operate the software uninhibited. *Id.* at 5:67–6:7.

Petitioner asserts that the disclosures in Logan anticipate claims 12– 14. Pet. 37–41. Petitioner identifies Logan's first intermediate code as the security key required by independent claim 12 and Logan's first software code or serial number as the information uniquely associated with a person who intends to become a licensee that the user inputs. *Id.* at 38–39. Logan's software supplier is identified as the registration authority that checks whether the software serial number entered by the user is accurate since the second intermediate code will not match the stored hidden number if the serial number is not correctly input by the user. *Id.* at 40.

Petitioner further asserts that Grundy also teaches a system for ensuring that copied software is properly registered (*id.* at 41), but differs from Logan in that the software runs in both a demonstration or evaluation mode and a full function mode depending on an ownership check each time the software is executed (*id.* at 41–42). Petitioner argues that it would have been obvious to one of ordinary skill in the art to combine the option of running software in a demonstration mode, as taught by Grundy, with the software protection system of Logan, because Grundy teaches "the benefit of providing an evaluation mode to a software consumer is to allow the consumer to try and evaluate features of the product prior to making a decision to purchase." *Id.* at 42 (citing Ex. 1004, 4:27–36, 9:6–11; Ex. 1007 ¶¶ 49–57). Petitioner contends that modifying the software registration system of Logan with the ownership check process of Grundy would have been within the skill and common sense for a skilled artisan; it would have provided the

predictable result of executing the software in two different modes as described by Grundy; and claims 15–16 would have been obvious over the combination. *Id.* at 42–46. Petitioner provides the Madisetti Decl. as evidence to support the obviousness of claims 15 and 16 over the combination of Logan and Grundy. *Id.* (citing Ex. 1007 ¶¶ 52–57).

Patent Owner argues that Logan already was vetted by the USPTO during original prosecution. Prelim. Resp. 23. Patent Owner also contends that the first intermediate code derived in Logan is not an identifier associated with a licensee (*id.* at 24–28) and that Logan's system, therefore, cannot check the accuracy of the information entered by the user (*id.* at 33). Patent Owner also contends that Logan's system does not replicate the algorithm at the registration authority because the user's computer and the registration authority use different algorithms to generate a second intermediate code. *Id.* at 29–32.

Based on the current record, we are persuaded by Petitioner's arguments. Although both Logan and Grundy were presented during the original prosecution of the '216 patent, the permissive language of 35 U.S.C. § 325(d)[1] does not require a petition be rejected simply because certain arguments or art were considered previously by the Office, and we decline to do so in this case. Regarding whether Logan's first intermediate code is an identifier associated with the licensee, the uniqueness of

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[1] "In determining whether to institute or order a proceeding . . . , the Director may take into account whether, and reject the petition request because, the same or substantially the same prior art or arguments previously were presented to the Office."

the identifier will vary depending on the inputs by the user, which may include vendor supplied information and does not require personal information of the user according to the claim construction analysis of record. *See* Ex. 1008, 18–20; Ex. 1009, 11. Logan teaches that the software serial number is unique to each original copy of the software and that it is combined with the hardware serial number input by the user to generate the first intermediate code. Ex. 1003, 4:19–31, 4:65–5:30; *see* Pet. 38–39. Therefore, we are persuaded that the first intermediate code meets the recited "security key" requirement of claims 12–14, as that term is construed. The combination of the software serial number and the hardware serial number together being input by the user to generate the first intermediate code also "uniquely identifies an intended registered user" as recited in claim 12 compared to the software serial number alone. The claim construction analysis explicitly rejected "one-of-a-kind information that describes/identifies a person" when construing "information . . . which uniquely identifies an intended registered user" recited in claim 12. Ex. 1008, 22.

Logan also teaches that the accuracy with which the software serial number is input by the user would be checked by the registration authority because "the software supplier is able to identify the second software code for each particular embodiment of the software by reference to the first software code or serial number." Ex. 1003, 4:37–40. It is also checked by the registration authority in Logan by preventing full access to the digital data if the second intermediate code does not match the stored hidden number. *Id.* at 5:65–6:7; *see* Pet. 39–40. Regarding whether algorithms are replicated at a registration authority in Logan, Patent Owner does not dispute

that the same algorithm is replicated at the registration authority to produce the first intermediate code. Therefore, we are persuaded that the registration authority disclosed by Logan meets the requirements of claims 12–14 as those claims are construed.

In sum, Petitioner persuades us that, on the current record, there is a reasonable likelihood it would prevail in showing that claims 12–14 are anticipated by Logan and that claims 15 and 16 would have been obvious in view of the combination of Logan and Grundy.

C. Haines and Manduley

Based on our review of the arguments and evidence in the Petition and the Preliminary Response, we are persuaded that Petitioner has shown, on the current record, that there is a reasonable likelihood that it would prevail in its challenge to claims 12–14 under 35 U.S.C. § 103(a) over Haines and Manduley.

Haines and Manduley both disclose systems for reconfiguring postage meters that selectively enable and disable features. Ex. 1005, Abstr.; Ex. 1006, Abstr., 1:35–39. The user's meter generates a request code number from user-entered information in both systems. Ex. 1005, 5:1–6:48; Ex. 1006, 5:63–6:50. Haines discloses that the meter and the data center each use the same encryption routine and input numbers so that the data center can control the feature set of the meter. Ex. 1005, 4:17–26. The data center computer in Haines checks that its configuration request code matches the configuration request code generated by the user's meter. Haines states that if "the agent has improperly entered numbers," the codes will not match. Ex. 1005, 7:15–26. Manduley expressly discloses location data is entered by the user,

such as "zip code or other data identifying the location" of the device. Ex. 1006, 5:53–6:50; Pet. 47. "From that information, the data center determines the identity of the customer holding that device 20 and checks the customer's file to determine whether the request is appropriate (step 210)." Ex. 1006, 7:63–8:2.

Petitioner argues that it would have been obvious to one of ordinary skill in the art to modify the system of Haines with using location data as the information that the user inputs because Manduley teaches the benefit is to allow the data center to determine the customer identity. Pet. 47 (citing Ex. 1006, 7:63–8:2). Petitioner provides as evidence in support of its position the Madisetti Decl., which characterizes the modification of Haines as a substitution that is contemplated by Haines' suggestion that "other meter specific identifying information" may be used instead of an ascending register value in generating a request code. Ex. 1007 ¶ 61 (citing Ex. 1005, 5:28–30). Petitioner also argues that the use of a zip code, as in Manduley, is exemplified as a user input to generate the security key in the '216 patent. Pet. 47 (citing Ex. 1001, Fig. 4).

Patent Owner contends that neither Haines nor Manduley disclose the use of information that is uniquely associated with a person who intends to become a licensee as required by independent claim 12. Patent Owner argues that the zip code input taught by Manduley does not meet this requirement because it is associated with more than one person:

> A zip code that is not included with other information that characterizes the licensee (such as name, address, city, credit card number, etc. as taught in '216 Patent — see Ex. 1001 at FIG. 4)

> cannot possibly be uniquely associated with a person, because a lone zipcode is associated with thousands or even millions of persons.

Prelim. Resp. 43–44. Patent Owner also argues that Petitioner's reason for combining Haines and Manduley is not supported by the record because Manduley identifies the location of the device, not the customer, and Haines' request code already includes the meter serial number to identify the device, thereby negating any advantage realized by the proposed substitution. *Id.* at 45–47.

We are not persuaded by Patent Owner's arguments because if a person of ordinary skill can implement a predictable variation in either the same field or a different one, the combination is likely obvious. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007). The zip code input taught by Manduley would be a predictable variation of the other meter specific identifying information taught by Haines according to the Madisetti Decl. Ex. 1007 ¶ 61. We also are not persuaded by Patent Owner's argument regarding the degree of uniqueness that should be accorded a zip code because the claim construction analysis explicitly rejected "one-of-a-kind information that describes/identifies a person" when construing "information . . . which uniquely identifies an intended registered user" as recited in claim 12. Ex. 1008, 22.

In sum, Petitioner persuades us that, on the current record, there is a reasonable likelihood it would prevail in showing that claims 12–14 would have been obvious over Haines and Manduley.

D. Secondary Considerations

Patent Owner contends that the obviousness challenges in the Petition have no reasonable likelihood of

success because they fail to take into account secondary considerations of obviousness presented in the two reexamination proceedings and the Microsoft litigation. Prelim. Resp. 34–41. We decline to deny the Petition to institute *inter partes* review based on the obviousness challenges solely because Petitioner does not address all arguments presented by Patent Owner during proceedings other than the current proceeding. Once a prima facie case of obviousness is established, it is Patent Owner's burden to introduce evidence supporting such objective indicia. *See In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996); *In re Applied Materials, Inc.*, 692 F.3d 1289, 1299 (Fed. Cir. 2012). The ultimate burden of persuasion on the obviousness challenge itself, however, never shifts to the Patent Owner.

Patent Owner asserts that the finding of infringement of claim 19 by Microsoft's activation system established a nexus between the '216 patent claims and the commercial success of Microsoft's product, which was represented as $19.28 billion in "total software sales revenue generated by Microsoft's activation server" (*id.* at 35 citing Ex. 1010, 34) and "positively impact[ed] over 70% of Microsoft's total revenue" (*id.* citing Ex. 1018, 37). Patent Owner also asserts that "the '216 patent has been licensed to dozens of other software companies" as additional evidence of commercial success. *Id.* at 36 (citing Ex. 2003, 14, 15, 48). Patent Owner further asserts that the '216 patent solved a long-felt need to control unauthorized copying of software that is evidenced by an open letter to hobbyists in 1976 and software piracy statistics in 1996. *Id.* at 36–37 (citing Ex. 1018, 39).

We are not persuaded by Patent Owner's arguments because a primary consideration in demonstrating actual

commercial success is whether sales of the claimed invention has captured a substantial share of the marketplace. *In re Huang*, 100 F.3d at 140 ("[E]vidence related solely to the number of units sold provides a very weak showing of commercial success, if any."). Here, Patent Owner's contentions and objective evidence are not sufficient to support nonobviousness of the claims of the '216 patent because the evidence in this record does not establish adequately that Microsoft's sales of its activation product found to infringe claim 19 of the '216 patent constitute commercial success when considered in relation to overall market share. Patent Owner does not direct us to any data pertaining to overall market share, and there is no indication that the sales number represents a substantial quantity in the overall market share. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991) ("Information solely on numbers of units sold is insufficient to establish commercial success"). In short, Patent Owner has not shown the percentage of the market acquired by the claimed invention of the '216 patent. The supporting evidence identified by Patent Owner does not add sufficiently to the record to warrant a conclusion of nonobviousness, because the evidence before us does not demonstrate adequately that Microsoft's activation product was commercially successful.

We also are not persuaded by Patent Owner's argument regarding commercial success being evidenced by licensing of the '216 patent. Patent Owner's supporting evidence is a PowerPoint presentation submitted during reexamination 90/010,831 in which no agreement was reached, the Grundy reference was solely at issue, and the PowerPoint document only lists names of alleged licensees of the '216 patent. Prelim. Resp. 36; Ex. 2003, 3,

14, 15, 48. The current record does indicate the scope of the licenses, for example whether other patents are also included in the licenses or are crosslicensed, nor does the current record reflect the market share represented by the alleged licenses under the '216 patent.

We also are not persuaded by Patent Owner's arguments regarding a long-felt but unresolved need because a long-felt need must not have been satisfied by another before the invention by the patent owner. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988) ("[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved."). Here, the evidence in the present record does not support the existence of a long-felt and unresolved need in the software industry, as alleged by Patent Owner. Namely, similar solutions—software registration systems enabling the use of digital data sought to be protected—were available in the prior art at the time of the invention, to fulfill the purported "long-felt need" of protecting software piracy. *See, e.g.*, Ex. 1002, Abstr.; Ex. 1003, Abstr.; Ex. 1004, Abstr.; Ex. 1005, Abstr.; Ex. 1006, Abstr. Additionally, Patent Owner's evidence of long-felt unsolved need purports to show recognition of software piracy in 1976 and losses due to software copying in 1996, but has not shown that the industry recognized that the subject matter of the '216 patent claims satisfies a long-standing need in the industry.

In summary, we have weighed objective evidence, proffered by Patent Owner, that allegedly demonstrates nonobviousness against the evidence of obviousness in the present record. For the foregoing reasons, we conclude that, on balance, the strong evidence of obviousness outweighs the weak evidence of nonobviousness.

See Leapfrog Enters., Inc. v. Fisher-Price, Inc., 485 F.3d 1157, 1162 (Fed. Cir. 2007) (holding that the objective considerations of nonobviousness presented, including substantial evidence of commercial success, praise, and long-felt need, were inadequate to overcome a strong showing of primary considerations that rendered the claims at issue invalid).

E. Conclusion

For the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1–5 and 7–20 of the '216 patent.

The Board has not made a final determination on the patentability of any challenged claim.

III. ORDER

Accordingly, it is

ORDERED that *inter partes* review is *instituted* with respect to the following grounds of unpatentability:

(1) claims 1–11 and 17–20 as anticipated by Schull under 35 U.S.C. § 102(e);

(2) claims 10 and 11 as obvious over Schull 35 U.S.C. § 103(a);

(3) claims 12–14 as anticipated by Logan under 35 U.S.C. 102(e);

(4) claims 15–16 as obvious over Logan and Grundy under 35 U.S.C. § 103(a); and

(5) claims 12–14 as obvious over Haines and Manduley under 35 U.S.C. § 103(a);

FURTHER ORDERED that no ground other than those specifically instituted above is authorized for the *inter partes* review; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '216 patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

APPENDIX E

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Paper No. 10
Filed: August 3, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PERFECT WORLD ENTERTAINMENT, INC.,
Petitioner,

v.

UNILOC USA, INC. and UNILOC LUXEMBOURG S.A., Patent Owner.

Case IPR2015-01026
Patent 5,490,216 C2

Before WILLIAM V. SAINDON, DONNA M. PRAISS, and PATRICK R. SCANLON, *Administrative Patent Judges.*

PRAISS, *Administrative Patent Judge.*

DECISION

Institution of *Inter Partes* Review
37 C.F.R. § 42.108

Grant of Motion for Joinder
37 C.F.R. § 42.122(b)

I. INTRODUCTION

Perfect World Entertainment Inc. ("Petitioner") filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–20 of U.S. Patent No. 5,490,216 C2 ("the '216 patent"). Paper 1 ("Pet."). Concurrently, Petitioner filed a Motion for Joinder. Paper 3 ("Joinder Motion"). The Joinder Motion seeks to join this proceeding with *Sega of America, Inc., Ubisoft, Inc., Kofax, Inc., and Cambium Learning Group, Inc. v. Uniloc USA, Inc. and Uniloc Luxembourg S.A.*, Case IPR2014-01453 ("the '1453 IPR"), which conerns the '216 patent at issue here. Joinder Motion 1.

Uniloc USA, Inc. and Uniloc Luxembourg S.A. ("Patent Owner") filed a Preliminary Response (Paper 9, "Prelim. Resp.") as well as an Opposition to Joinder (Paper 6, "Opposition"). Petitioner filed a Reply to Patent Owner's Opposition to Motion for Joinder (Paper 7, "Reply"). We instituted trial in the '1453 IPR on March 10, 2015. '1453 IPR, Paper 11 ("the '1453 Institution Decision"). For the reasons described below, we institute an *inter partes* review of claims 1–20 and grant Petitioner's Motion for Joinder.

II. INSTITUTION OF INTER PARTES REVIEW

A. References

Petitioner relies on the same references as those in the '1453 IPR:

Reference	Publication	Date	Exhibit
Haines	US 5,077,660	Dec. 31, 1991	1005
Logan	US 5,199,066	Mar. 30, 1993	1003

Reference	Publication	Date	Exhibit
Grundy	US 5,291,598	Mar. 1, 1994	1004
Schull	US 5,509,070	Apr. 16, 1996	1002
Manduley	US 5,956,505	Sept. 21, 1999	1006

Petitioner also relies on essentially the same Declaration of Vijay K. Madisetti, Ph.D., as in the '1453 IPR, but dated April 8, 2015 for this proceeding. Ex. 1007 ("Madisetti Decl.").

B. Grounds Asserted

The Petitioner in this proceeding asserts the same grounds as those on which we instituted review in the '1453 IPR. Those are:

Claims Challenged	Basis	Reference(s)
1–11, 17–20	§ 102(e)	Schull
12–14	§ 102(e)	Logan
15, 16	§ 103(a)	Logan and Grundy
12–14	§ 103(a)	Haines and Manduley
10, 11	§ 103(a)	Schull

C. Decision

We have reviewed the Petition, Preliminary Response, and the evidence cited therein. In view of the challenges to the '216 patent in this Petition and in the petition in the '1453 IPR, we institute an *inter partes* review in this proceeding on the same grounds as those on which we instituted *inter partes* review in the '1453 IPR.

III. MOTION FOR JOINDER

An *inter partes* review may be joined with another *inter partes* review, subject to the provisions of 35 U.S.C. § 315(c):

> (c) JOINDER.—If the Director institutes an inter partes review, the Director, in his or her discretion may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time of filing such a response, determines warrants the institution of an inter partes review under section 314.

As the moving party, Petitioner bears the burden of proving that it is entitled to the requested relief. 37 C.F.R. § 42.20(c).

To be considered timely, a motion for joinder must be filed no later than one month after the institution date of the *inter partes* review for which joinder is requested. 37 C.F.R. § 42.122(b). The Petition in this proceeding has been accorded a filing date of April 9, 2015 (Paper 4). This date is within one month after the date of institution in the '1453 IPR, which was instituted on March 10, 2015. The Petition, therefore, is timely.

A motion for joinder should: (1) set forth the reasons joinder is appropriate; (2) identify any new ground(s) of unpatentability asserted in the petition; and (3) explain what impact (if any) joinder would have on the trial schedule for the existing review. *See Kyocera Corporation v. Softview LLC*, IPR2013-00004 (Paper 15, 4) (PTAB Apr. 24, 2013); *see also* Frequently Asked Question H5,

http://www.uspto.gov/patents-application-process/appealing-patent-decisions/trials/patent-review-processing-system-prps-0 (last visited July 29, 2015).

Petitioner contends that joinder will not impact the Board's ability to complete its review in the statutorily prescribed time frame. Joinder Motion 6–7. Petitioner proposes an accelerated schedule in this proceeding in order to "reach a decision on institution prior to the June 8, 2015 deadline for Patent Owner's Response in the ['1453] IPR." *Id.* at 7. Petitioner contends that the grounds asserted in this Petition are the same grounds of unpatentability asserted in the '1453 IPR. *Id.* at 5–6. Petitioner's arguments regarding the asserted references are identical to the arguments raised in the '1453 IPR, and Petitioner has submitted, in support of its Petition, substantially the same declaration of the same technical expert as submitted in the '1453 IPR (excluding some minor changes made to reflect Petitioner's subsequent engagement of the same expert). *Id.*

Petitioner further contends that joinder will promote efficiency by avoiding redundancy. *Id.* at 6–7. According to Petitioner, the Board can minimize any scheduling impact by requiring consolidated filings and coordination among petitioners. *Id.*

Patent Owner opposes joinder, contending that joinder would impact the trial schedule because a decision on the joinder motion would coincide with the time that Petitioner's Reply is due in the '1453 IPR. Opposition 5–6; *see also* '1453 IPR, Paper 12, 6 (Scheduling Order, setting the due date for Petitioner's reply to September 8, 2015). Patent Owner also contends that because the Preliminary Response in this proceeding includes new argument not previously considered by the Board in the '1453 IPR, "the

risk arises that one of the parties in the pending IPR2014-01453 would be unfairly advantaged by an untimely decision whether to institute trial for the present Petition." *Id.* at 6.

In response to Patent Owner's concerns about the impact on the trial schedule, Petitioner states:

> Petitioner has no intention to revisit the already conducted depositions, despite suggestions otherwise by the Opposition (p. 5). Rather, Petitioner simply seeks to join the ongoing ['1453] IPR, adopting its status upon the grant of joinder.

Reply 3.

As discussed above, joinder is a matter within the Board's discretion based on the particular circumstances of each proceeding. In this proceeding, we are persuaded that Petitioner has demonstrated that joinder with the '1453 IPR would avoid duplication and promote the efficient resolution of both proceedings. Petitioner has brought the same challenges presented by the '1453 IPR; thus, the substantive issues would not be unduly complicated by joining the proceedings. Joinder merely introduces the same grounds presented originally in the '1453 IPR, where all the same prior art is involved. Patent Owner will therefore be able to address the challenges in a single proceeding.

Patent Owner asserts that the '1453 IPR will have reached its substantive stages by the time a decision on Petitioner's joinder motion is made requiring revision of the scheduling order in the '1453 IPR. Opposition 6. We are not persuaded by this argument that joinder should be denied. Petitioner's Reply is not due until September 8, 2015 in the '1453 IPR and Petitioner in this proceeding

is not seeking to revisit what has transpired in the '1453 IPR prior to the grant of joinder.

Finally, Patent Owner argues that accelerating the scheduling and decision-making with respect to new arguments made in its Preliminary Response to the Petition in this case would unfairly advantage the parties to the '1453 IPR. *Id.* We do not find this argument persuasive because Patent Owner filed its Preliminary Response in this proceeding after it filed its Response in the '1453 IPR.

IV. CONCLUSION

Based on the record before us, we institute an *inter partes* review in IPR2015-01026 and grant Petitioner's motion to join that proceeding to IPR2014-01453.

V. ORDER

In view of the foregoing, it is:

ORDERED that *inter partes* review in IPR2015-01026 is hereby instituted;

FURTHER ORDERED that Petitioner's Motion for Joinder is granted, and IPR2015-01026 is joined with IPR2014-01453;

FURTHER ORDERED that the grounds on which IPR2014-01453 was instituted are unchanged, and no other grounds are included in the joined proceeding;

FURTHER ORDERED that the Scheduling Order entered in IPR2014-01453 (Paper 12) is not modified by this Order and shall govern the schedule of the joined proceedings;

FURTHER ORDERED that, throughout the joined proceeding, all petitioners will file papers, except for motions that do not involve the other party, as a single, consolidated filing; that such consolidated filings will be identified as a "Consolidated Filing"; and that the petitioners will conduct coordinated (not separate) discovery;

FURTHER ORDERED that IPR2015-01026 is terminated under 37 C.F.R. § 42.72 and all further filings in the joined proceedings are to be made in IPR2014-01453;

FURTHER ORDERED that a copy of this Decision will be entered into the record of IPR2014-01453; and

FURTHER ORDERED that the case caption in IPR2014-01453 shall be changed to reflect joinder with this proceeding in accordance with the attached example.

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Example Case Caption for Joined Proceeding

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SEGA OF AMERICA, INC., UBISOFT, INC., KOFAX, INC. CAMBIUM LEARNING GROUP, INC., and PERFECT WORLD ENTERTAINMENT, INC.,
Petitioner,

v.

UNILOC USA, INC. and UNILOC LUXEMBOURG S.A., Patent Owner.

Case IPR2014-01453[1]
Patent 5,490,216 C2

[1] Case IPR2015-01026 has been joined with this proceeding.