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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON DIGITAL SERVICES, INC., AMAZON FULFILLMENT SERVICES, INC., HULU, LLC, and NETFLIX, INC,
Petitioner,

v.

UNILOC LUXEMBOURG S.A.,
Patent Owner.

Case IPR2017-00948
Patent 8,566,960 B2

Before DAVID C. MCKONE, BARBARA A. PARVIS, and MICHELLE N. WORMMEESTER, *Administrative Patent Judges*.

MCKONE, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Amazon.com, Inc., Amazon Digital Services, Inc., Amazon Fulfillment Services, Inc., Hulu, LLC, And Netflix, Inc. (collectively "Petitioner") filed a Petition (Paper 1, "Pet.") to institute an *inter partes* review of claims 1–25 of U.S. Patent No. 8,566,960 B2 (Ex. 1001, "the '960 patent"). Uniloc Luxembourg S.A. ("Patent Owner") filed a Preliminary Response (Paper 9, "Prelim. Resp."). Upon consideration of the Petition and Preliminary Response, we conclude, under 35 U.S.C. § 314(a), that Petitioner has established a reasonable likelihood that it would prevail with respect to each of the challenged claims. Accordingly, we institute an *inter partes* review of claims 1–25 of the '960 patent.

B. Related Matters

The parties indicate that the '960 patent has been asserted in several lawsuits in the United States District Court for the Eastern District of Texas. Pet. 2–3; Paper 6, 2. The '960 patent also was the subject of *Unified Patents Inc. v. Uniloc USA, Inc.*, Case IPR2016-01271 (PTAB). Pet. 3.

C. Evidence Relied Upon

Petitioner relies on the following prior art:

Ex. 1003 ("DeMello")	US 7,047,411 B1	May 16, 2006
Ex. 1004 ("Staruiala,")	IE 02/0429	Nov. 27, 2002

Petitioner also relies on the Declaration of Aviel Rubin, Ph.D. (Ex. 1002, "Rubin Decl.").

Patent Owner relies on the Declaration of Val DiEuliis, Ph.D. (Ex. 2001, "DiEuliis Decl.").

D. The Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 5):

Reference(s)	Basis	Claims Challenged
DeMello	§ 102(b)	1–5, 7–10, 12–14, 16–18, and 22–25
DeMello	§ 103(a)	6, 7, 11, 12, 15, and 16
DeMello and Staruiala	§ 103(a)	1–25

E. The '960 Patent

The '960 patent describes techniques for monitoring and adjusting software usage under software licenses. Ex. 1001, 1:16–20. The '960 patent discusses problems with existing software licensing schemes, including that "consumers of software have normal patterns of use that include the installation and use of digital products on multiple devices" and that "computers are also bought, sold and replaced so over time maybe two or three times this number of computers may be used by the user over time with a legitimate need to install and use the software on every computer." *Id.* at 1:31–41. The '960 patent addresses these problems with "an improved technique for allowing for a changing number of device installations on a per license basis over time." *Id.* at 1:67–2:2.

Figure 2, reproduced below, illustrates an example:

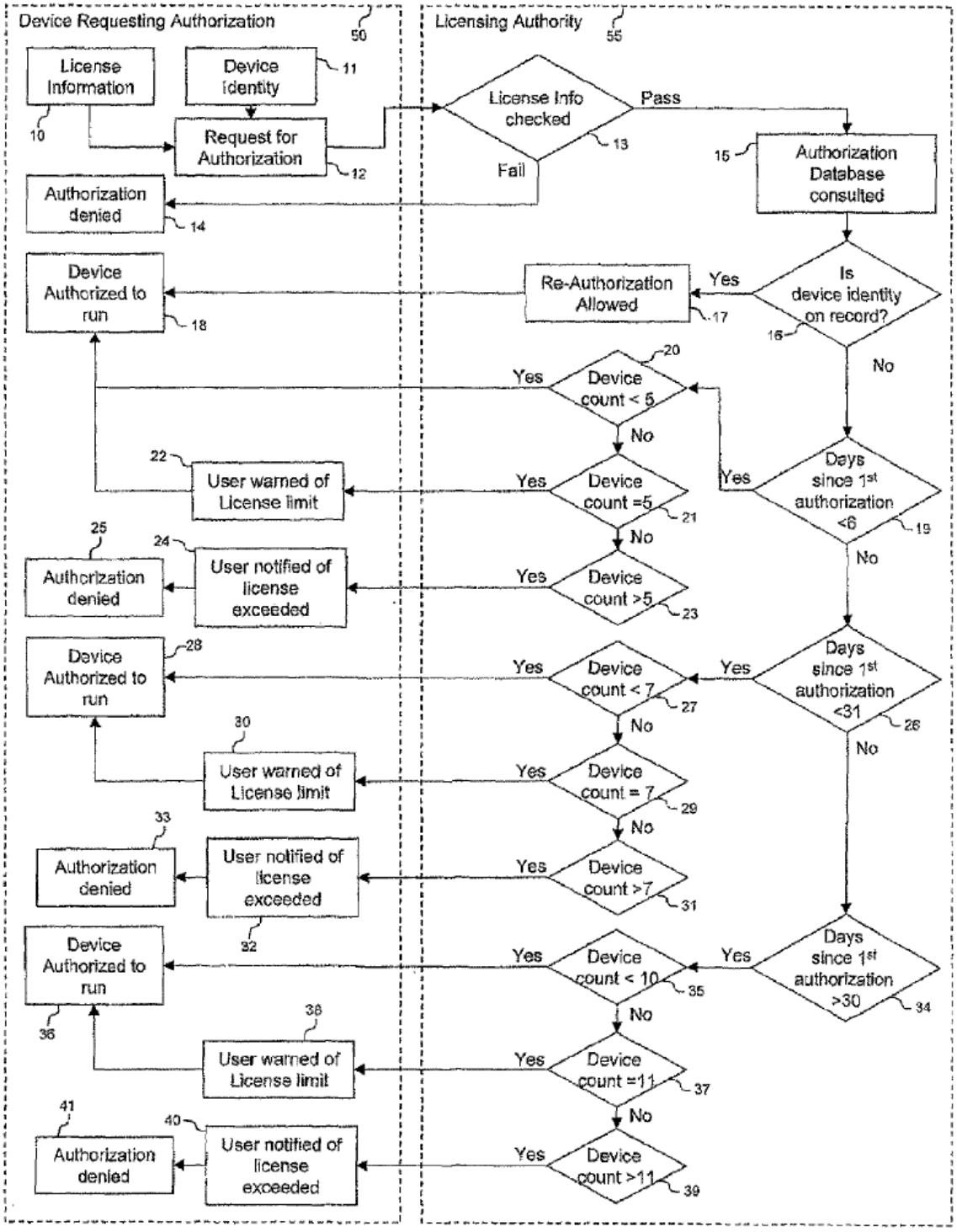

Figure 2

Figure 2 is a flowchart for an approach to adjusting a license for a digital product. *Id.* at 3:20–21. In Figure 2, device 50 requests authorization from

licensing authority 55 (e.g., a publisher or distributor) to use a copy of a software license. *Id*. at 4:50–55.

Device 50 gathers information about itself, including license related information 10 and unique device identifying information 11, and sends a request for authorization 12 to licensing authority 55. *Id.* at 4:56–59. Licensing authority 55 checks whether the requesting device's unique identifying information 11 exists in its database of prior authorizations 15 and, if so, reauthorizes device 50 and allows the software to run on the device. *Id.* at 5:1–12 (steps 13–18).

If unique identifying information 11 is not in its database of prior authorizations 15, and if the request comes within the first five days of the licensing period, licensing authority 55 determines a device count of the number of successful authorizations for new devices that have been allowed and, if the device count is less than a device count limit of five, licensing authority 55 sends device 50 a message allowing the software to be used. *Id*. at 5:13–26 (steps 18–19). If the device count is equal to five, licensing authority 55 can send a message to device 50 allowing the device to run, but also informing the user that the limit on available devices has been reached and that subsequent requests may be denied. *Id.* at 5:26–32 (step 22). If the device count is greater than five (step 23), licensing authority 55 sends a message to device 50 denying authorization (step 24). *Id.* at 5:33–40.

If request 12 comes between six and thirty-one days from the first successful authorization, licensing authority 55 performs similar tests, this time with a device count limit of seven. *Id.* at 5:41–60 (steps 19–33). Likewise, if request 12 comes after thirty-one days, licensing authority 55

performs similar tests with a device count limit of eleven. *Id.* at 5:61–6:7 (steps 34–41).

Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A system for adjusting a license for a digital product over time, the license comprising at least one allowed copy count corresponding to a maximum number of devices authorized for use with the digital product, comprising:
>
> a communication module for receiving a request for authorization to use the digital product from a given device;
>
> a processor module in operative communication with the communication module;
>
> a memory module in operative communication with the processor module and comprising executable code for the processor module to:
>
> verify that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the given device;
>
> in response to the device identity already being on a record, allow the digital product to be used on the given device;
>
> in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period, the allowed copy count corresponding to a maximum number of devices authorized to use the digital product;
>
> calculate a device count corresponding to total number of devices already authorized for use with the digital product; and

when the calculated device count is less than the first upper limit, allow the digital product to be used on the given device.

II. ANALYSIS

A. Claim Construction

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–45 (2016). In applying a broadest reasonable construction, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

1. "verify[ing] that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the [given device/computer]" (claims 1, 22, 25)

Claim 1 recites "verify that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the given device" ("the 'verify' limitation"). That recitation is followed by two clauses, "in response to the device identity already being on a record, allow the digital product to be used on the given device" and "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period." Independent claims 22 and 25 include similar recitations.

Although neither party proposes an express construction for the "verify" limitation, the parties' respective application of this language to the prior art reveals a dispute.

As explained in more detail below, Petitioner contends that this limitation is disclosed by DeMello's description of an activation server checking whether a machine ID (derived from hardware information) is on record in an activation database as activated for a Microsoft Passport ID associated with a user and the user's eBook licenses. Pet. 27–28. Thus, Petitioner contends that verifying license data based in part on a device identity encompasses determining whether the device identity is on record as activated for data associated with a license. Petitioner, then, ties claim 1's "verify" limitation to the following two limitations, "in response to the device identity already being on a record . . ." and "in response to the device identity not being on the record . . . ." In other words, Petitioner essentially contends that the "verify" limitation sets forth a test and that the two "in response to" limitations set forth alternative actions taken depending on the result of the test.

Patent Owner disagrees that the "verify" limitation should be associated with the "in response to" limitations, and argues that "Petitioner erroneously conflates the claimed verification of the validity of 'license data' with the separately claimed conditional responses based, instead, on whether or not the 'device identity' is presently 'on a record.'" Prelim. Resp. 19. Patent Owner (*id.* at 20) argues that the '960 patent's specification supports its position, quoting it at length, which we also reproduce here:

> Typically the device 50 requesting authorization collects license related information 10 and unique device identifying information

> 11, compiles the collected information into a communication and sends it to the authorization authority 55. Upon receipt of this communication from the device 50, the license authority 55 checks that the license information is valid (step 13). If the request fails, an authorization is disallowed (step 14) and the device based software is sent a message to this effect. In practice this may involve further action by the device based software to notify the user of the failure to authorize and then either terminate the software or allow the software to continue in some form of trial mode or the like.
>
> If the request for authorization 12 includes license information/data that is valid, the license information checking process (at step 13) will pass and the requesting device[']s unique identity information 11 is checked to see if it exists in the database of prior authorizations 15. If the device identity exists (step 16), meaning that the software has been successfully registered on the same device in the past, then according to the license terms 60 for the software a reauthorization is automatically allowed (step 17).

Ex. 1001, 4:56–5:13. Patent Owner argues that this description, and the corresponding depiction in Figure 2 (reproduced above), "expressly distinguishes the validity check (e.g., step 13) from the separate determination of whether the device identity is presently on record (e.g., step 16)." Prelim. Resp. 21.

We agree with Patent Owner that the specification is informative, although we do not reach Patent Owner's conclusion. Patent Owner is correct that Figure 2 shows step 13 ("License Info checked") and steps 15 and 16 ("Authorization Database consulted," "Is device identity on record?") as separate tests. Nevertheless, it is only the second test, corresponding to steps 15 and 16, that is based at least in part on a device identity. According to the quoted passage, a device seeking authorization to play content associated with a license sends both license information and unique device

information to an authorization authority. At step 13, "the license authority 55 checks that the license information is valid," but there is no description of including device information in this check. Ex. 1001, 4:60–62. Device information is checked only after step 13: "If the request for authorization 12 includes license information/data that is valid, the license information checking process (at step 13) will pass and the requesting device[']s unique identity information 11 is checked to see if it exists in the database of prior authorizations 15." *Id.* at 5:1–5. Determining whether the unique device information is on record for a license, at steps 15 and 16, is a determination whether the license is valid for the corresponding device and is the only test that the specification describes as based at least in part on the unique device information. Thus, the test of steps 15 and 16 most closely aligns with the "verify" limitation. Step 13, on the other hand, is described as a separate validity check that does not involve the unique device information and, thus, does not correspond to the "verify" limitation. In short, the specification supports Petitioner's view that the "verify" limitation can encompass checking whether unique device information is reflected in a database as authorized for a license.

We note that we have considered the parties' respective expert declaration testimony but that both experts largely repeat the arguments of the respective briefs without adding to those arguments meaningfully. Ex. 1002 ¶¶ 110–117; Ex. 2001 ¶¶ 56–61.

Patent Owner makes a separate argument for the "verify" limitation as it pertains to claim 25. Specifically, Patent Owner argues that Petitioner's application of the term, as applied to the "verify" limitation of claim 25, "would make it impossible for an *initial authorization* attempt to succeed."

Prelim. Resp. 22. Claim 25 differs from claim 1, *inter alia*, in that, where claim 1 recites "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period," claim 25 recites "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period *after an initial authorization of the digital product*." According to Patent Owner, "[i]f 'license data' is deemed valid only upon confirmation that a 'machine ID' is included within a list of previously activated devices, then no initial authorization could pass as valid because there would be no previously activated device and, consequently, the list would remain empty." Prelim Resp. 22. We, however, do not read "verify that a license data associated with the digital product is valid" to mean that the license is being "deemed valid." Rather, it recites a test for verifying validity based in part on a device identity, the result of which is evaluated in the following two "response to" limitations of claim 25. According to claim 25, the allowed copy count is set if the device identity is not on the record, e.g., the test of the "verify" limitation is not met. Thus, we are not persuaded that Petitioner's application of the "verify" limitation conflicts with other limitations of claim 25.

In sum, we agree with Petitioner that "verify[ing] that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the [given device/computer]," as recited in claims 1, 22, and 25, can encompass checking whether unique device information is reflected in a database as authorized for a license.

2. "set[ting] the allowed copy count to a first upper limit for a first time period" (claims 1, 22)

Petitioner does not propose an express construction for "set[ting] the allowed copy count to a first upper limit for a first time period" ("the 'setting' limitation"), as recited in claims 1 and 22. Petitioner, however, does contend that the preambles of claim 1 and 22 are not limitations. Pet. 21, 43. The preamble of claim 1 recites "[a] system for adjusting a license for a digital product over time, the license comprising at least one allowed copy count corresponding to a maximum number of devices authorized for use with the digital product." The preamble of claim 22 similarly recites "[a] method for adjusting a license for a digital product over time, the license comprising at least one allowed copy count corresponding to a maximum number of devices authorized for use with the digital product."

Patent Owner, in essence, contends that the "setting" limitation should be read as "adjusting the allowed copy count from at least one value to an upper limit." Patent Owner argues that, in light of the preambles of claims 1 and 22, "the 'allowed copy count' variable must be temporarily 'set' from the 'at least one' value introduced in the preamble to, instead, an *adjusted* value expressly-distinguished as 'a first upper limit,'" and that it "would be incorrect to interpret the expressly-distinguished values 'at least one' and 'first upper limit' to be one and the same."[1] Prelim. Resp. 24–25. This

[1] The preamble of claim 25 is not similar to that of claims 1 and 22 and Patent Owner does not propose an "adjusting" limitation for the language "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period after an initial authorization of the digital product," as recited in claim 25.

argument depends on Patent Owner's contention that the preambles of claims 1 and 22 are both limiting and introduce a "core 'adjusting' concept" that is reflected in the bodies of claims 1 and 22, specifically, the "setting" limitation. *Id.* at 12–13. According to Patent Owner, "'adjusting' the 'allowed copy count' from one value to another, as claimed, must be understood in light of the limiting preamble language." *Id.* at 14.

"In general, a preamble is construed as a limitation if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim," but "is not limiting, however, where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." *Symantec Corp. v. Computer Associates Int'l, Inc.*, 522 F.3d 1279. 1288 (Fed. Cir. 2008) (internal quotation marks and citations omitted). We are not persuaded by Patent Owner's arguments. Regardless of whether the preambles of claims 1 and 22 are limiting, Patent Owner has not explained persuasively why "adjusting," from the preambles, must be read into the body of the claims to change "set the allowed copy count to an upper limit" to "adjust the allowed copy count from at least one value to an upper limit."

Patent Owner argues that the preambles provide antecedent basis for the terms "digital product" and "allowed copy count" recited in the bodies of claims 1 and 22 and "define the 'allowed copy count' as 'corresponding to a maximum number [of] devices authorized for use with the digital product'" and "introduce that adjustable limit as having a positive value of 'at least one.'" Prelim. Resp. 13–14. We agree with Patent Owner that "the allowed copy count," recited in the body of claim 1, derives antecedent basis from "at least one allowed copy count," recited in the preamble. Nevertheless, the

preamble does not recite that the allowed copy count is "adjustable." Rather, the language "[system/method] for adjusting a license for a digital product over time" constitutes a statement of intended purpose, and does not purport to modify any particular claim language.

Patent Owner argues that "allowed copy count" is a variable in the code executed by claim 1's processor module that is initially set to "at least one" value, in the preamble, and adjusted to another value, "a first upper limit," in the body of the claim. Prelim. Resp. 25. According to Patent Owner, the "setting" limitation "provides the condition upon which the adjustable variable 'allowed copy count' must be temporarily 'set' from the positive 'at least one' value introduced in the preamble to, instead, an *adjusted* value expressly-distinguished as 'a first upper limit'." *Id.* at 14. Patent Owner acknowledges that "the bodies of Claims 1 and 22 do not recite the 'allowed copy count' is conditionally 'set' to be the same 'at least one' value introduced in the preamble," but argues that "while the name of the variable 'allowed copy count' relies on antecedent basis from the preamble, the temporarily-adjusted value for that variable (expressed as 'a first upper limit') does not." *Id.* at 25. Dr. DiEulliis largely repeats these arguments in his testimony. Ex. 2001 ¶¶ 66–67. Patent Owner's argument is not persuasive as it, without sufficient textual support in the claim, attempts to transform the preamble's introduction of an allowed copy count into an additional, unrecited step directed by the executable code.

Patent Owner further argues that dependent claims confirm its position. Prelim. Resp. 25–26. For example, Patent Owner argues, "Claim 9, which depends from Claim 1, also uses the word 'set' in expressing the adjustment of the 'allowed copy count' from one value to

another (i.e., from a 'first upper limit' to a 'second upper limit')." *Id.* at 25. Thus, Patent Owner argues, the claims use "set" synonymously with "adjust." *Id.* at 26. Dr. DiEulliis largely repeats this argument in his testimony. Ex. 2001 ¶¶ 68–69. We are not persuaded. Although setting the allowed copy count to a second upper limit, as recited in claim 9, may result in changing the value from the first upper limit, that, by itself, does not redefine "set" to mean "adjust."

Patent Owner also argues that the language in the body of claim 1, "for a first time period," is a "temporal qualification" and that once this time period expires, the allowed copy count must revert back to something. Prelim. Resp. 26. According to Patent Owner:

> Because the "first upper limit" has only a finite duration, it follows that upon expiration of the "first time period" the "first upper limit" no longer controls and, consequently, the "allowed copy count" readjusts (e.g., back to the "at least one" value referenced in the preamble or to some other value instead, such as the "second upper limit" recited in certain dependent claims).

Id. Nevertheless, we do not see sufficient support in the claim language or the specification for inferring that setting the allowed copy count to a first upper limit requires adjusting the allowed copy count from an initial value merely because the first time period could expire. Claim 1 itself does not recite what must happen when the first time period expires.

Patent Owner argues that the specification of the '960 patent supports its position. Prelim. Resp. 26–27 (citing Ex. 1001, 3:48–4:2, 6:34–35). None of the cited passages, however, describes setting an allowed copy count to an initial "at least one" value and later setting the allowed copy count by "adjusting" it to a new value. Thus, Patent Owner's arguments are inapposite.

Finally, Patent Owner argues that the prosecution history of the '960 patent supports its position. Specifically, Patent Owner argues that "[a]pplicant successfully distinguished the claimed 'cause-and-effect relationship' from art that teaches, instead, that its 'limit is established prior to [i.e., *not in response to*] determining whether a terminal identifier is recognized as being present on the terminal identifier list.'" Prelim. Resp. 28 (quoting Ex. 1005, 32) (underlining in original, brackets and italics Patent Owner's). Patent Owner's argument is not persuasive, because the cited prosecution history was not addressing the impact of the preambles of the claims on the "setting" limitation. Rather, the applicant focused on the additional claim language "in response to the device identity not being on the record," preceding the "setting" limitation in the body of the claim that became claim 1, and argued that this limitation must be read along with the "setting" limitation. Ex. 1005, 32. The applicant did not argue that the "setting" limitation must be read in conjunction with the preamble or that the preamble otherwise imposed a limitation on what became claim 1. Thus, the prosecution history does not support Patent Owner's argument.

In sum, we are not persuaded that the preamble of claim 1, the intrinsic evidence, or expert testimony establishes that "set[ting] the allowed copy count to an upper limit" must be read as "adjust[ing] the allowed copy count from at least one value to an upper limit."

B. Asserted Grounds of Unpatentability

To anticipate, a reference must "show all of the limitations of the claims arranged or combined in the same way as recited in the claims." *Net*

MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1370 (Fed. Cir. 2008); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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." We resolve the question of obviousness 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

1. Alleged Anticipation of Claims 1–5, 7–10, 12–14, 16–18, 22–25 by DeMello

Petitioner contends that claims 1–5, 7–10, 12–14, 16–18, and 22–25 are anticipated by DeMello. Pet. 21. For the reasons given below, Petitioner has demonstrated a reasonable likelihood that it would prevail on this ground.

a. Overview of DeMello

DeMello describes a server architecture for a digital rights management system. Ex. 1003, Abstract. Figure 4, reproduced below, illustrates an example:

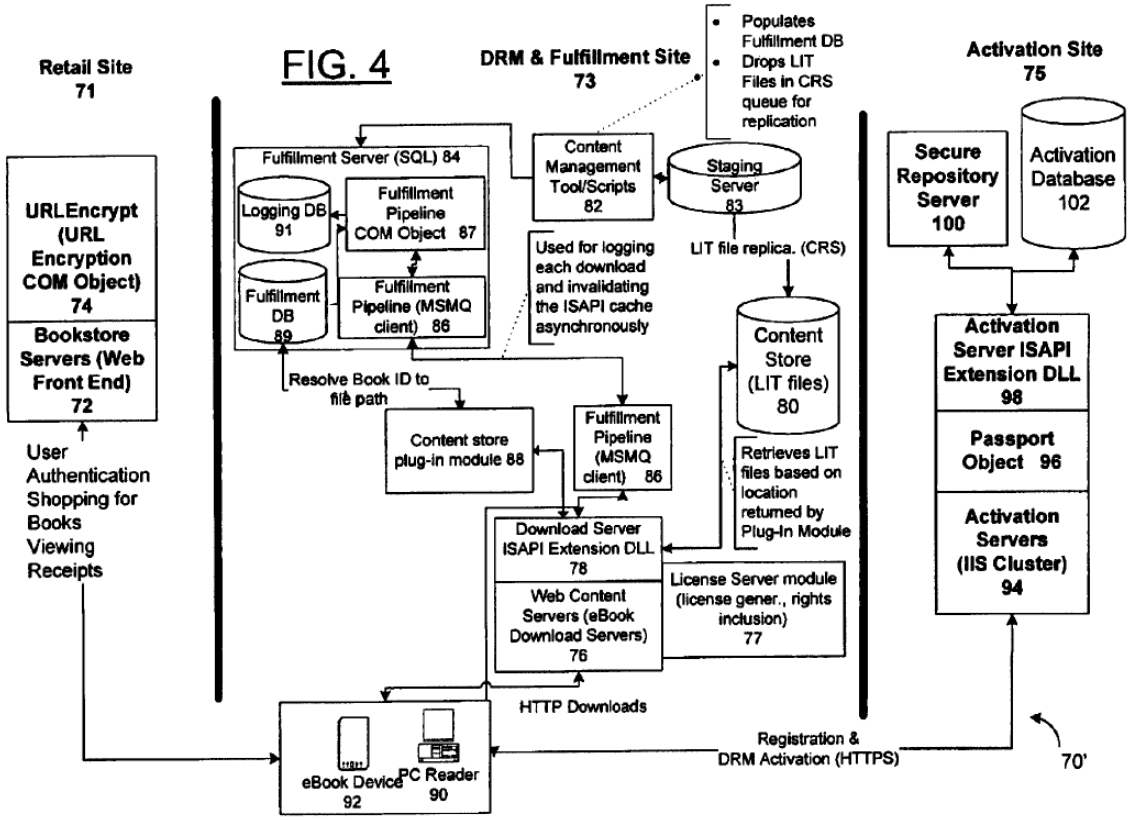

Figure 4 is a block diagram of a server architecture implementing aspects of a digital rights management system. *Id.* at 4:26–28. Bookstore servers 72 associated with retail site 71 are network servers that host a commercial website that allows users to shop for and purchase eBook titles. *Id.* at 10:66–11:8. Download server ISAPI Extension 78 and its sub-component, license server module 77, validates each download request, seals copies of eBooks, requests licenses for copies of eBooks, and returns eBook titles to end users. *Id.* at 11:26–34, 11:46–51. Activation servers 94 of activation site 75 provide each client reader (eBook device 92 and PC Reader 90) with a secure repository and an activation certificate that associate the activated readers with an online persona, e.g., a Microsoft Passport ID. *Id.* at 13:14–29.

The process of activating a reader in Figure 4 is illustrated in Figure 8, reproduced below:

FIG. 8

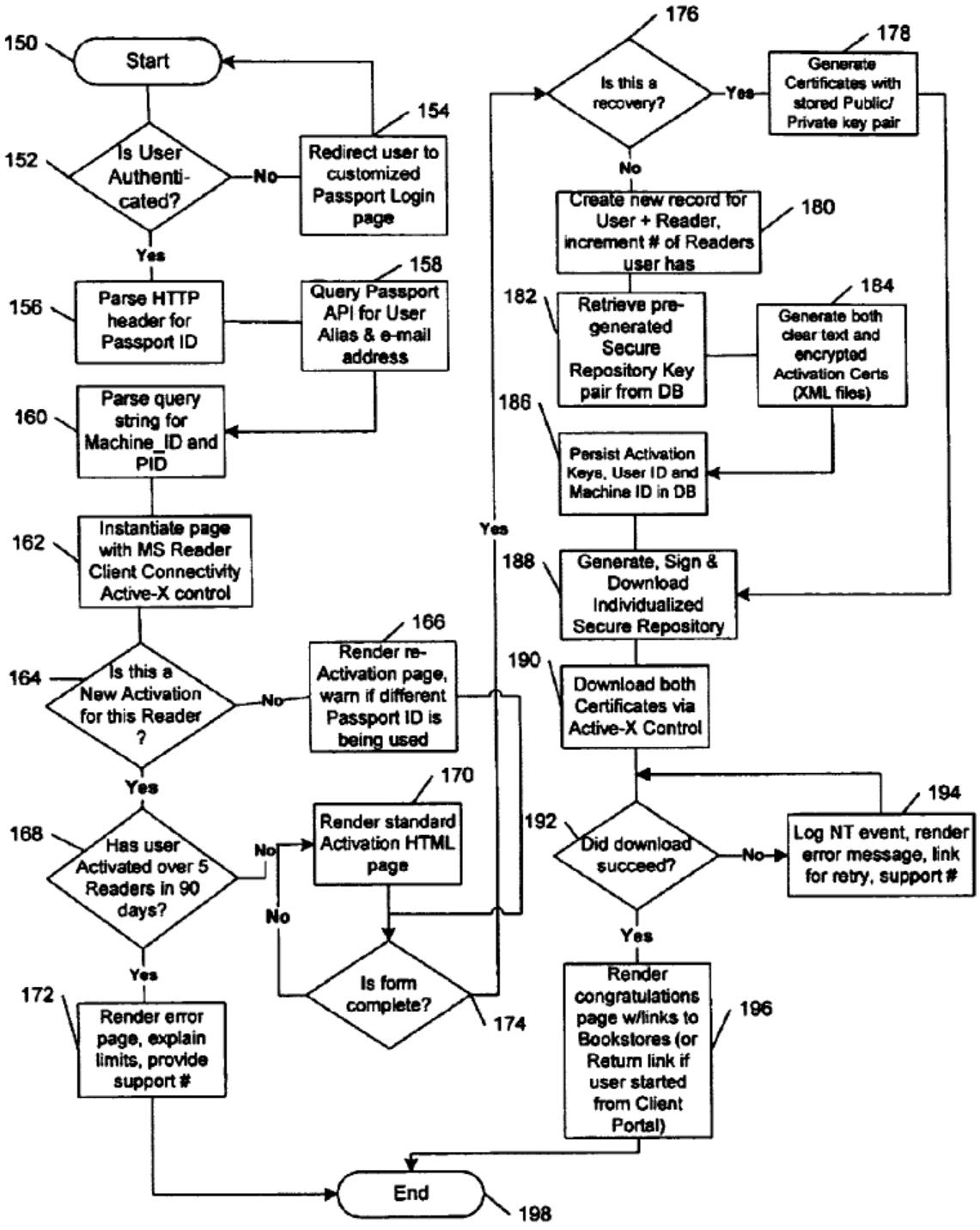

Figure 8 is a flow diagram of a client reader activation process. *Id.* at 4:39–41. To start the process, a client reader (alternately referred to as a reader client) connects to activation servers 94, and the user of the client reader is prompted to log in using Microsoft Passport credentials. *Id.* at 22:33–39 (steps 150, 152). After the Passport credentials are authenticated, activation servers 94 upload from the client a unique hardware ID (e.g., derived from hardware components on the user's computing device that uniquely identify the device) and determine if the client reader has been activated previously or if, instead, the user is requesting a new activation. *Id.* at 22:44–53 (steps 156–164).

DeMello describes having a limit to the number of devices activated for the most secure licenses associated with a Passport ID. In Figure 8, users are limited to five activations within 90 days of the first activation of a reader. *Id.* at 22:59–66. "The limit on activations may also allow for additional activations as time passes-e.g., one additional activation for each 90 day period after the first 90 days, up to a limit of 10 total activations." *Id.* at 23:4–8.

In the case of a new activation, if the user already has activated the maximum number of readers, an error message is rendered. *Id.* at 22:54–58 (steps 168, 172). Otherwise, the user fills out and returns an activation form, a new record is created for the user and reader, the number of readers activated for the Passport account is incremented, a secure repository key pair is retrieved from a database, activation certificates are generated, and the activation keys, user ID, and machine ID are persisted in a database. *Id*. at 23:11–25 (steps 170, 174–186). Activation servers 94 then generate, digitally sign, and download to the client reader an individualized secure

repository executable tied to the uploaded machine ID and an activation certificate tied to the user's Passport ID. *Id.* at 23:49–56 (steps 188, 190). The user then is informed that activation of the client reader is complete. *Id.* at 23:66–24:2 (step 196).

b. Claims 1, 22, and 25

Claim 1 recites "[a] system for adjusting a license for a digital product over time" that includes a processor and executable code for performing various functions of activating a digital license for a device; claim 22 recites "[a] method for adjusting a license for a digital product over time," and includes steps substantially similar to the functions of claim 1's executable code; claim 25 recites "[a] computer program product" with "a non-transitory computer readable medium" with code for causing a computer to perform functions similar to those of claim 1. Petitioner's and Patent Owner's arguments regarding these three claims are largely the same. We treat claim 1 as representative except where noted below.

Claim 1 recites "a communication module for receiving a request for authorization to use the digital product from a given device." Petitioner contends that DeMello's client reader 90 or 92 is "a given device" and that activation servers 94 receive a request for authorization to use an eBook, a digital product, from the client reader. Pet. 23–24. Petitioner argues that, because the client reader communicates a request to activation servers 94, as indicated by the captioned arrow connecting client reader 90/92 with activation servers 94, activation servers 94 include "a communication module" for receiving the requests. *Id.* at 24–25. As to "a processor module in operative communication with the communication module," as recited in

claim 1, Petitioner points to DeMello's processing unit 21 (shown in Figure 2 as part of a "general purpose computing device in the form of a conventional personal computer or network server") and activation servers 94, which Petitioner contends necessarily include a processor in communication with a communication module. *Id.* at 25. Regarding "a memory module in operative communication with the processor module and comprising executable code for the processor module," as recited in claim 1, Petitioner argues that processing unit 21 communicates with memory such as hard drive 27 and RAM 25 and further argues that, for activation servers 94 to perform the steps shown in Figure 8, their processor must be in active communication with a memory containing code that the processor can execute. *Id.* at 26. Petitioner's evidence supports findings that DeMello discloses these aspects of claim 1 and the corresponding limitations of claims 22 and 25.

Regarding executable code for the processor module to "verify that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the given device," as recited in claim 1 and similarly recited in claims 22 and 25, Petitioner contends that DeMello describes a client reader associated with a user ID seeking activation uploading to activation servers 94 a unique hardware ID derived from hardware components on the client reader, and the activation servers 94 checking, when the activation request is made, whether a machine ID derived from the unique hardware ID is on a list of activations for the user ID. Pet. 27–28. Citing Dr. Rubin's declaration testimony, Petitioner argues that DeMello's use of descriptors such as "unique hardware ID" and "unique machine ID" signify generating device

identifiers by sampling physical parameters. *Id.* at 28 (citing Ex. 1002 ¶¶ 113–116).

Regarding executable code for the processor module to, "in response to the device identity already being on a record, allow the digital product to be used on the given device," as recited in claim 1, Petitioner argues that this is disclosed by DeMello's description of reactivating a client reader when the client reader is on the list of previous activations corresponding to the user ID. Pet. 28–29. In particular, Petitioner points to Figure 8 of DeMello, steps 176 (determining that the request is for recovery), 178, 188, 190, and 192 (generating and downloading to the client reader the proper certificates to activate the eBook), and 196 (informing the user of the client device of successful activation). *Id.* at 29 (citing Ex. 1003, 23:45–24:2).

As to executable code for the processor module to, "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period, the allowed copy count corresponding to a maximum number of devices authorized to use the digital product," recited in claim 1, Petitioner points to DeMello's description of handling a request for a new activation. *Id.* at 30–31. In particular, if activation servers 94 determine that the client reader is not on the list of activated devices (step 164), the process of Figure 8 proceeds to step 168 ("Has user Activated over 5 Readers in 90 days?"). Ex. 1003, 22:51–56. According to DeMello, "In the example of FIG. 8, users are limited to five activations within 90 days after the first activation of the reader." *Id.* at 22:64–66. Focusing on the language of step 168 "after the first activation of the reader," Petitioner argues that "[a]s the date of first activation is unknown until it occurs, DeMello's teaching that the first time period begins on the date of first

activation requires the device limit to be set for the first time period at the time of first activation" and that "[t]he determination that the first device is not on record is the event that triggers the initial setting of the device authorization limit to five devices (i.e., the upper limit of the allowed copy count) for an initial time period." Pet. 30–31. We agree with Petitioner that DeMello's description of determining whether a number of devices have been activated "after the first activation of the read" supports a finding that DeMello discloses setting the limit of step 168 "in response to the device identity not being on the record," as recited in claim 1, at least for the first device to seek activation.[2]

Patent Owner argues that DeMello does not disclose executable code for a processor module to "verify that a license data associated with the digital product is valid based at least in part on a device identity generated by sampling physical parameters of the given device," as recited in claim 1, and the corresponding limitations of claims 22 and 25. As explained in detail in our discussion of claim construction in Section II.A.1 above, Patent Owner argues that Petitioner improperly reads claim 1's "verify" and two "in response to" limitations as part of the same test, where they ought to be read as a validity check and separate determination of whether a device

[2] As noted above, claim 25 differs from claims 1 and 22 in that it recites "in response to the device identity not being on the record, set the allowed copy count to a first upper limit *for a first time period after an initial authorization of the digital product*." As to this aspect of claim 25, Petitioner cites to DeMello's description of a limit on activations for a time period of the first 90 days following a first activation. Pet. 47–48 (citing Ex. 1003, 2:60–67, 14:33–40, 24:55–63). We agree with Petitioner that this description supports a finding that DeMello discloses this aspect of claim 25.

identity is on record. Prelim. Resp. 19–22. As explained in Section II.A.1 above, we are not persuaded by Patent Owner's arguments and, instead, preliminarily determine that the "verify" limitation can encompass checking whether unique device information is reflected in a database as authorized for a license. We agree with Petitioner that this is disclosed in DeMello, for example in the description of steps 160–164 of Figure 8. Ex. 1003, 22:46–53.

Patent Owner further contends that DeMello does not disclose executable code for a processor module to, "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period," as recited in claim 1 and similarly recited in claim 22. Prelim. Resp. 23–31. Patent Owner does not advance this argument for the corresponding limitation of claim 25. As explained in detail in our discussion of claim construction in Section II.A.2 above, Patent Owner argues that "set the allowed copy count to a first upper limit" requires adjusting the allowed copy count from at least one value to an upper limit. Under this proposed framework, Patent Owner argues that Petitioner "consciously ignored" the alleged "adjusting" limitations in its analysis of DeMello and that the Petition's evidence of an initial setting of a device authorization limit to five is insufficient to show adjusting that limit. Prelim. Resp. 28–31.

As explained in Section II.A.2 above, we are not persuaded by Patent Owner's arguments and, instead, preliminarily determine that "set[ting] the allowed copy count to an upper limit" does not require adjusting the allowed copy count from at least one value to an upper limit. On this record, DeMello's description of setting a number of activations within 90 days after

the first activation of a reader to five discloses "in response to the device identity not being on the record, set the allowed copy count to a first upper limit for a first time period, the allowed copy count corresponding to a maximum number of devices authorized to use the digital product," as recited in claim 1 and similarly recited in claims 22 and 25.

As to the limitations "calculate a device count corresponding to total number of devices already authorized for use with the digital product" and "when the calculated device count is less than the first upper limit, allow the digital product to be used on the given device," as recited in claim 1, Petitioner points to DeMello's description of determining whether an activation is new for the client reader, checking whether the user ID has already activated more than five readers in 90 days and, if not, beginning the activation process (DeMello's Figure 8, steps 164, 168, 170, 180, 182). Pet. 32. Petitioner's evidence supports findings that DeMello discloses these aspects of claim 1 and the corresponding limitations of claims 22 and 25.

On this record, Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to claims 1, 22, and 25 as anticipated by DeMello.

c. Claims 2–5, 8–10, 13, 14, 17, 18, 23, and 24

Claims 2–5, 8–10, 13, 14, 17, and 18 depend from claim 1. Claims 23 and 24 depend from claim 22. We have considered Petitioner's showing as to these dependent claims. *See* Pet. 33–42, 45. Patent Owner does not present separate argument as to these claims. On this record, Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to claims 2–5, 8–10, 13, 14, 17, 18, 23, and 24 as anticipated by DeMello.

d. Claims 7, 12, and 16

Claim 7 depends from claim 1 directly and recites "wherein the processor module is adapted to, in response to the calculated device count equaling the first upper limit, send a warning regarding the allowed copy count to the given device." Claims 12 and 16 depend from claim 1 indirectly and include similar recitations, with claim 12 reciting "the second upper limit" introduced in claim 9 and claim 16 reciting "the third upper limit" introduced in claim 14.

DeMello describes the following, relied upon by Petitioner (Pet. 36–37):

> If it is determined that this is a new activation at step 164, then the process proceeds to step 168 to determine whether an activation limit has been reached. If the limit has been reached, then an error message is rendered at step 172, preferably including a support telephone number.

Ex. 1003, 22:54–58. Petitioner characterizes DeMello as disclosing that "the error message issues in response to two conditions being satisfied: (1) the calculated device count equaling the first upper limit; and (2) a request arriving from a new device that is not on record and would cause the limit to be exceeded." Pet. 37. According to Petitioner, "[t]his is exactly how Claim 7 of the '960 Patent operates." *Id.*

Claim 1 recites (brackets added to reflect Petitioner's annotations of the claim):

> [1g] calculate a device count corresponding to total number of devices already authorized for use with the digital product; and
>
> [1h] when the calculated device count is less than the first upper limit, allow the digital product to be used on the given device.

As can be seen from this language, Petitioner is correct that "[i]n Claim 1, from which Claim 7 depends, step 1[g], calculating the device count (corresponding to the total number of devices ***already*** authorized), occurs ***before*** a new device (i.e., a device whose device identity is not already on the record) is allowed access at the final step, 1[h]." Pet. 37. Read in the context of claim 1, the condition of claim 7 "the calculated device count equaling the first upper limit" refers to the device count calculated before the newly authorized device is authorized. Thus, as Petitioner notes, the newly authorized device equaling the first upper limit is not the condition that triggers the warning of claim 7. Rather, it is the device count caused by the previously authorized device. We agree with Petitioner that this is how DeMello describes its technique. Claims 12 and 16 recite similar limitations for the "second upper limit" and "third upper limit."

On this record, Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to claims 7, 12, and 16 as anticipated by DeMello.

2. Alleged Obviousness of Claims 6, 7, 11, 12, 15, and 16 over DeMello

Petitioner contends that claims 6, 7, 11, 12, 15, and 16 would have been obvious over DeMello. Pet. 48. For the reasons given below, Petitioner has demonstrated a reasonable likelihood that it would prevail on this ground as to claims 6, 11, and 15.

a. Claims 6, 11, and 15

Claim 6 depends from claim 5 and recites "wherein the defined number of days comprises six days since the initial authorization, and wherein the first upper limit comprises five authorized devices." Claim 11 recites a defined number of days of thirty-one and a corresponding second upper limit of seven devices. Claim 15 recites a third upper limit of eleven devices. Petitioner contends that the '960 patent describes specific device limits and time periods as merely exemplary and does not attach any particular utility to the device limits and time periods recited in claims 6, 11, and 15. Pet. 48–49, 51. According to the '960 patent,

> It is noted that the various numbers used to describe the embodiments herein, such as, for example, the allowed copy counts, the maximum number of devices authorized for use, the upper limit on the number of devices for a given time period, or the like, are purely exemplary, and that other numbers, data, values, or algorithms may be used in lieu of the exemplary numbers herein.

Ex. 1001, 4:4:35–41.

As Petitioner points out (Pet. 49), DeMello also describes its particular time periods and device limits as "merely exemplary," and that "any limit on activations may be used without departing from the spirit and scope of the invention." Ex. 1003, 23:8–10.

We have considered Patent Owner's arguments to the contrary (Prelim. Resp. 31–34), but we agree with Petitioner that implementing the particular limits of claims 6, 11, and 15 would have been simple and obvious design choices.

b. Claims 7, 12, and 16

Petitioner advances this challenge "[t]o the extent that the Board finds that Claim 7 requires sending a warning immediately when the number of authorized devices equals the device limit." Pet. 50. We do not understand claim 7 to have such a limitation. Accordingly, we do not reach whether it would have been obvious.

3. Alleged Obviousness of Claims 1–25 over DeMello and Staruiala

Petitioner contends that claims 1–25 would have been obvious over DeMello and Staruiala. Pet. 52. For the reasons given below, Petitioner has demonstrated a reasonable likelihood that it would prevail on this ground.

a. Overview of Staruiala

Staruiala describes a system for obtaining unique fingerprints from computer equipment. Ex. 1004, Abstract. According to Staruiala, "in the manufacturing process of any device, there are tolerable imperfections introduced. These are differences that do not compromise the functionality of the device so long as component performance lies within certain bounds." *Id.* at 4. Staruiala explains that "[i]t is possible, in principle, to differentiate between systems through the analysis of their individual responses to identical stimuli." *Id.* at 5. Staruiala describes various techniques for creating fingerprints based on the unique responses individual components and systems of computer hardware give to known stimuli. *Id.* at 8–11.

Staruiala also describes a "challenge-response system" in which a system sends a log-on request to another system, which responds with a

token. The first system hashes a user's password with the challenge and includes it in a response to the second system. *Id.* at 11–12. "To individualize a specific user, explicit and intrinsic private uniqueness can be combined with a user's password or passphrase for a hash-based challenge-response or zero knowledge system. The combination of the user's passphrase and the computer's identification will suffice to track and identify a particular user." *Id.* at 12. According to Staruiala, "[t]he concept can be applied to scaled down (or minimal) devices and be used in copyright protection schemes," and "can be extended up to identify and authenticate networks (Figure 4) of computers or to device copyright protection schemes for software." *Id.* at 13.

b. Claims 1–18 and 22–25

As to claims 1–18 and 22–25, Petitioner proposes combining DeMello with Staruiala if we should find that DeMello does not, by itself, disclose "verify that a license data associated with the digital product is valid based at least in part on a device identity generated *by sampling physical parameters of the given device*," as recited in claim 1 (emphasis added) and similarly recited in claims 22 and 25. As explained above, Petitioner's evidence supports a finding that DeMello alone discloses this limitation. Nevertheless, as the Federal Circuit has stated, "[i]t is well settled that anticipation is the epitome of obviousness." *In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002) (internal quotation marks and citations omitted). Thus, because Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 1–5, 7–10, 12–14, 16–18, and 22–25 are anticipated by DeMello and claims 6, 11, and 15 would have been

obvious over DeMello, Petitioner also has demonstrated a reasonable likelihood that it would prevail in showing that claims 1–18 and 22–25 would have been obvious over DeMello and Staruiala.

Petitioner has articulated reasons to combine the teachings of DeMello and Staruiala. Specifically, relying on the Rubin Declaration, Petitioner argues that Staruiala provides a detailed teaching of how to generate a unique hardware ID, such as that described in DeMello. Pet. 55 (citing Ex. 1002 ¶¶ 194–195). Petitioner also argues that Staruiala provides express reasons to combine with digital rights management systems such as DeMello, including that

> Such an identification method is highly desirable for authenticating remote access providers. Copyright infringement could be prevented by authenticating the system on which music is being played, videos are being displayed, and software is being executed using a unique identifier based on the physical characteristics of the system. *Any system providing use on a restricted basis can benefit from the security provided by unique identifiers based on physical device properties*.

Id. at 55–56 (quoting Ex. 1004, 1 (emphasis Petitioner's)). As we note above, Staruiala states that its "concept can be applied to scaled down (or minimal) devices and be used in copyright protection schemes," and "can be extended up to identify and authenticate networks (Figure 4) of computers or to device copyright protection schemes for software." Ex. 1004, 13. We are persuaded that Petitioner's reasons to combine have rational underpinning.

c. Claims 19, 20, and 21

Claims 19, 20, and 21 each depend from claim 18. Claim 19 adds "wherein the unique device identifying information comprises at least one

user-configurable parameter and at least one non-user-configurable parameter of the given device," claim 20 adds "wherein the device identity is generated by utilizing at least one irreversible transformation of the at least one user-configurable and the at least one non-user-configurable parameters of the given device," and claim 21 adds "wherein the device identity is generated by utilizing a cryptographic hash function on the at least one user-configurable and the at least one non-user configurable parameters of the given device."

Regarding claim 19, Petitioner argues that Staruiala teaches that unique identifiers based on both non-user configurable information, such as latency and imperfections in system components, can be combined with user-configurable information such as user passwords. Pet. 58–59. As to claim 20, Petitioner contends that Staruiala teaches subjecting the user-configurable information and non-user-configurable information to a secure hash function, which Dr. Rubin testifies is an irreversible transformation. *Id*. at 59–60 (citing Ex. 1002 ¶ 211). Regarding claim 21, Petitioner similarly points to Staruiala's description of subjecting the information to a secure hash function, which Petitioner contends corresponds to the "cryptographic hash function" of claim 21. *Id.* at 61. As explained above, Petitioner has provided reasons, with rational underpinning, to combine the teachings of DeMello and Staruiala.

On this record, Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 19–21 would have been obvious over DeMello and Staruiala.

III. CONCLUSION

Petitioner has established a reasonable likelihood that claims 1–25 are unpatentable.

IV. ORDER

For the reasons given, it is:

ORDERED that *inter partes* review is instituted on the following grounds:

Claims 1–5, 7–10, 12–14, 16–18, and 22–25, under 35 U.S.C. § 102(b), as anticipated by DeMello;

Claims 6, 11, and 15, under 35 U.S.C. § 103(a), as obvious over DeMello; and

Claims 1–25, under 35 U.S.C. § 103(a), as obvious over DeMello and Staruiala;

FURTHER ORDERED that the trial is limited to the grounds identified above, and no other ground is authorized; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of U.S. Patent No. 8,566,960 B2 is hereby instituted commencing on the entry date of this Decision, 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.

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