

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HOME DEPOT U.S.A., INC.,
Petitioner,

v.

RAVENWHITE SECURITY, INC.,
Patent Owner.

IPR2024-01316
Patent 10,594,823 B1

Before ST. JOHN COURTENAY III, MICHAEL R. ZECHER, and
FRANCIS L. IPPOLITO, *Administrative Patent Judges*.

ZECHER, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner, Home Depot U.S.A., Inc. (“Home Depot”), filed a Petition requesting an *inter partes* review (“IPR”) of claims 1–10 of U.S. Patent No. 10,594,823 B1 (Ex. 1001, “the ’823 patent”). Paper 1 (“Pet.”). Patent Owner, RavenWhite Security, Inc. (“RavenWhite”), filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Based on the authority delegated to us by the Director under 37 C.F.R. § 42.4(a), we may not institute an IPR unless the information presented in the Petition and any preliminary response thereto shows “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). Taking into account RavenWhite’s Preliminary Response, we conclude that the information presented in the Petition establishes that there is a reasonable likelihood that Home Depot would prevail in demonstrating at least one of claims 1–10 of the ’823 patent is unpatentable. Pursuant to § 314, we hereby institute an IPR as to these claims of the ’823 patent.

A. Real Parties in Interest (“RPIs”)

Home Depot identifies itself and The Home Depot, Inc. as RPIs. Pet. 72. RavenWhite identifies itself and RavenWhite Licensing LLC, who purportedly is an exclusive licensee with “all substantial rights” to the ’823 patent, as RPIs. Paper 8 (RavenWhite’s Mandatory Notices), 1 n.1.

B. Related Matters

The parties indicate that the ’823 patent is, or was previously, the subject of the following four district court cases: (1) *RavenWhite Licensing LLC v. The Home Depot, Inc.*, No. 2:24-cv-00688 (E.D. Tex. filed Aug. 21, 2024) (“EDTX Litigation”); (2) *RavenWhite Licensing LLC v. Walmart*,

Inc., No. 2:24-cv-00689 (E.D. Tex. filed Aug. 21, 2024); (3) *RavenWhite Licensing LLC v. The Home Depot, Inc.*, 2:23-cv-00423 (E.D. Tex. dismissed); and (4) *RavenWhite Licensing LLC v. Walmart, Inc.*, 2:23-cv-00418 (E.D. Tex. dismissed). Pet. 72; Paper 8, 1.

C. The '823 Patent

The '823 patent, titled “Method and Apparatus for Storing Information in a Browser Storage Area of a Client Device,” issued from U.S. Patent Application No. 15/706,556, filed on September 15, 2017. Ex. 1001, codes (54), (21), (22). The '823 patent has a priority chain of continuation applications that ultimately results in a claim of priority to U.S. Patent Application No. 11/590,083, filed on October 31, 2006—now U.S. Patent No. 8,533,350 B2 (“the '350 patent”). *Id.* at code (63). The '823 patent also claims priority to U.S. Provisional Patent Application No. 60/732,025, filed on November 1, 2005. *Id.* at code (60).

The '823 patent generally relates to “client-server communications” and, more specifically, “to causing a browser to store information in a browser storage area of a client device.” Ex. 1001, 1:31–34. The '823 patent states that “[a] user typically uses a Web browser, such as Microsoft’s Internet Explorer, to access a [w]eb page over the Internet.” *Id.* at 1:35–36. A web page may be customized for a user by employing a cookie, which is “a message transmitted to a browser by a server” that “include[s] user-specific identifiers or personal information about the user.” *Id.* at 1:46–49. The browser typically stores the cookie in a text file and then sends the cookie “back to the server each time the browser requests [the] [w]eb page from the server.” *Id.* at 1:49–52.

The '823 patent further states that there are benefits (e.g., increasing user satisfaction with a web page) and drawbacks (e.g. sharing of the user's personal information without consent) associated with using cookies, with the drawbacks leading "some people [to] block or clear cookies" by using software controls associated with their browsers. Ex. 1001, 1:60–2:24. According to the '823 patent, "there remains a need to identify a client device when the user (i.e., browser) accesses a [w]eb page that the user has previously visited without many of the privacy issues associated with cookies." *Id.* at 2:41–44.

The '823 patent purports to address this need by providing "one or more servers" that "'write' and 'read' a cache cookie to and from a browser storage area associated with a browser." Ex. 1001, 2:66–3:3. "The browser storage area may include a history cache and/or a Temporary Internet Files (TIFs) area." *Id.* at 3:3–4. Figure 2 of the '823 patent, reproduced below, illustrates "a high level block diagram of a browser storage of the client device." *Id.* at 2:54–56.

FIG. 2

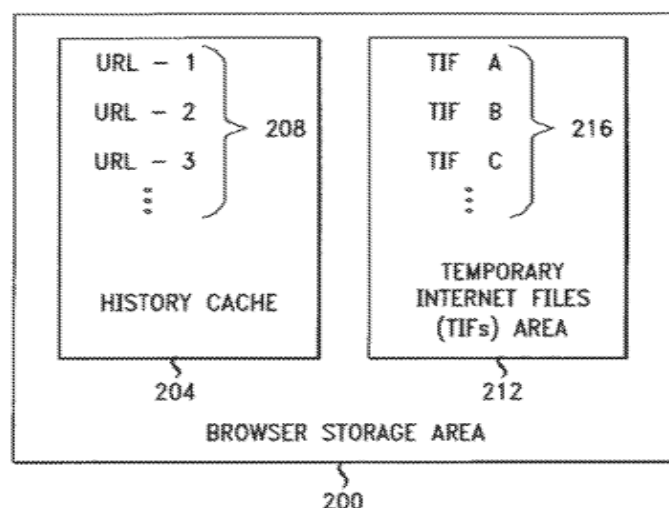


Figure 2 illustrates “browser storage area 200” that includes “history cache 204 that contains Uniform Resource Locators (URLs) 208 recently visited by the browser (also called browser history)” and TIFs “area 212 for storing TIFs 216 (e.g., TIF A, TIF B, and TIF C).” *Id.* at 6:5–8, 6:54–56. History cache 204 “contains a list of URLs [208] to which the client device has connected over some prior time period,” along with “a wide variety of cache cookies . . . to, for instance, facilitate the identification of [the] client device (or user).” *Id.* at 6:17–19, 6:22–24. TIFs area 212 contains “one or more TIFs” that represent “files containing information embedded in [w]eb pages” visited by the user, such as “particular graphics (e.g., one or more icons).” *Id.* at 6:56–60. Notably, the ’823 patent distinguishes between the cache cookies associated with URLs 208 stored in history cache 204 and the TIFs 216 stored in TIFs area 212 by indicating that the cookie caches are capable of being deleted, but the “TIFs typically have no expiration—they persist indefinitely (as long as the browser doesn’t delete a TIF to maintain its memory cap on the amount of disk space devoted to TIFs).” *Id.* at 6:64–67.

D. Challenged Claims

Claims 1 and 6 are independent. Independent claim 1 recites “[a] system,” whereas independent claim 6 recites “[a] method.” Ex. 1001, 15:33, 16:29. Claims 2–5 directly depend from independent claim 1 and claims 7–10 directly depend from independent claim 6. Ex. 1001, 16:13–28, 17:3–17. Independent claim 1 is illustrative of the challenged claims and is reproduced below.

1. [1.pre] A system, comprising:
 - [1.a] one or more processors configured to:
 - [1.b.i] receive a network resource request from a client device, wherein the network resource request corresponds to a

first cookie of a first type that was caused to be stored to the client device during a first previous network session, [1.b.ii] wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the first previous network session, [1.b.iii] wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, [1.b.iv] wherein a second cookie of a second type different from the first type was caused to be stored at the client device during a second previous network session, and [1.b.v] wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area;

[1.c] based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the first previous network session, determine information that was encoded and stored in the client device;

[1.d.i] perform a first identification of at least one of the client device and a user of the client device using the first cookie of the first type, [1.d.ii] wherein the first identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device;

[1.e] perform a second identification of at least one of the client device and the user of the client device using the second cookie of the second type; and

[1.f] perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie; and

[1.g] a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

Id. at 15:33–16:12 (with bracketed annotations provided by Home Depot in the Petition).

E. Asserted Prior Art References

Home Depot relies on the prior art references set forth in the table below.

Name ¹	Reference	Dates	Exhibit No.
Varghese	US 7,908,645 B2	issued Mar. 15, 2011; filed Apr. 28, 2006 ²	1004
Hinton	US 2003/0115267 A1	published June 19, 2003; filed Dec. 19, 2001	1005

F. Asserted Grounds of Unpatentability

Home Depot challenges claims 1–10 of the ’823 patent based on the asserted grounds of unpatentability set forth in the table below. Pet. 1, 8–67.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–10	103(a) ³	Hinton, the knowledge of a person of ordinary skill in the art
1, 3–6, 8–10	103(a)	Varghese, the knowledge of a person of ordinary skill in the art
2, 7	103(a)	Varghese, Hinton

¹ For clarity and ease of reference, we only list the first named inventor.

² We understand Home Depot to assert that Varghese qualifies as prior art to the ’823 patent because “[RavenWhite’s] purported exclusive licensee only asserted a priority claim [for the ’823 patent] of October 31, 2006.” Pet. 1 (citing Ex. 1008, 5; Ex. 1002 ¶ 57)

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the ’823 patent is a continuation of the ’350 patent, which was filed before this date, the pre-AIA version of § 103 applies. Ex. 1001, code (63).

II. ANALYSIS

A. Discretionary Denial Arguments Under § 314(a)

1. Parties' Arguments

In the Petition, Home Depot contends that we should not exercise our discretion to deny the Petition under § 314(a) based on the EDTX Litigation because the factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (Order Authorizing Supplemental Briefing on Discretionary Denial) (precedential) (“*Fintiv*”) weigh against discretionary denial. *See* Pet. 67–71. In the Preliminary Response, RavenWhite contends “[we] should exercise [our] discretion to deny the Petition because (1) *Fintiv* factors one through five support discretionary denial; and (2) the Petition does not provide a compelling, meritorious challenge (*Fintiv* factor six).” Prelim. Resp. 30; *see also id.* at 30–32 (arguing the six factors set forth in *Fintiv*). After RavenWhite filed its Preliminary Response, we granted Home Depot authorization to file a stipulation consistent with the stipulation filed in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (Decision Granting Institution) (precedential as to § II.A) (“*Sotera*”). Paper 11.

2. *Fintiv* Analysis

It is well settled that institution of an IPR is discretionary. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he [U.S. Patent and Trademark Office] is permitted, but never compelled, to institute an IPR proceeding.”); 35 U.S.C. § 314(a) (“The Director *may not* authorize an [IPR] to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 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.” (emphasis added)). In *Fintiv*, the Board discussed potential applications of *NHK Spring Co. v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (Decision Denying Institution) (precedential), as well as a number of other cases dealing with discretionary denial under § 314(a). *Fintiv* identifies a nonexclusive list of six factors parties may consider addressing, particularly where there is a related district court case involving the same patent and whether such a case provides any basis for discretionary denial. *Fintiv*, Paper 11 at 5–16. Those factors are as follows:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. at 5–6. In evaluating the factors, we take “a holistic view of whether efficiency and integrity of the patent system are best served” by denying or granting institution of an IPR. *Id.* at 6.

a. Factor 1

Home Depot contends that, although it has not requested a stay in the EDTX Litigation, it plans to seek a stay if we were to institute this proceeding because the investment by the district court and the parties in the EDTX Litigation has been minimal. Pet. 68. Home Depot argues that this

factor is neutral because we should not attempt to predict how the district court will proceed if a stay is requested by either party. *Id.* RavenWhite contends that no stay has been requested in the EDTX Litigation, and there is no indication the district court would grant a stay if we were to institute this proceeding. Prelim. Resp. 30. As a result, RavenWhite argues that this factor is neutral. *Id.*

“In the absence of specific evidence, we will not attempt to predict how the district court in the related district court litigation will proceed because the court may determine whether or not to stay an individual case, including the related one, based on a variety of circumstances and facts beyond our control and to which the Board is not privy.” *Sand Revolution II, LLC v. Continental Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (Decision Granting Request for Rehearing) (informative) (“*Sand Revolution*”). If Home Depot were to file a motion to stay in the EDTX Litigation, we decline to speculate how the district court would rule on such a motion. Accordingly, this factor is neutral.

b. Factor 2

Home Depot contends that, when considering the median time to trial for the U.S. District Court for the Eastern District of Texas, the expected trial date in the EDTX Litigation would be 21.6 months from the filing of the complaint on August 21, 2024, thereby putting the trial date somewhere in June 2026. Pet. 68 (citing Ex. 1006, 1). Home Depot argues that, because the projected Final Written Decision in this proceeding would be at or around March 2026, this factor weighs against discretionary denial. *Id.* at 68–69. RavenWhite contends that the trial in the EDTX Litigation is

scheduled to begin on April 20, 2026. Prelim. Resp. 30 (citing Ex. 2001, 1). RavenWhite argues that, because the projected Final Written Decision in this proceeding is due at or around March 2026, this factor should be considered neutral. *Id.*

The parties present us with the following two data points: (1) the median time to trial for the Eastern District of Texas of 21.6 months; and (2) a trial date of April 20, 2026. Ex. 1006, 1; Ex. 2001, 1. Beginning with the median time to trial for the Eastern District of Texas of 21.6 months, the complaint in the EDTX Litigation was filed on August 21, 2024, so the projected trial date would occur somewhere in June 2026. Ex. 1007, 69. With a projected Final Written Decision in this proceeding due at or around March 2026, this factor would weigh against discretionary denial. Turning to the trial date of April 20, 2026, with a projected Final Written Decision in this proceeding due at or around March 2026, this factor would weigh against discretionary denial. Bottom line, using all data points provided by the parties, this factor weighs against discretionary denial.

c. Factor 3

Home Depot contends that “the EDTX Litigation was just initiated on August 21, 2024” and, at the time of filing the Petition, no scheduling order had been entered by the district court. Pet. 69. Home Depot, therefore, asserts that this factor weighs against discretionary denial. *Id.* RavenWhite contends that there was an initial complaint filed against Home Depot on September 18, 2023, which was dismissed without prejudice, prior to the new complaint spawning the EDTX Litigation that was filed on August 21, 2024. Prelim. Resp. 31 (citing Ex. 2002). RavenWhite asserts that, since September 18, 2023, the parties have made significant investment in

litigating the '823 patent, including the start of discovery and the exchange of infringement and invalidity contentions. *Id.* (citing Ex. 2001, 4–5).

RavenWhite, therefore, asserts that this factor weighs somewhat in favor of discretionary denial. *Id.*

We recognize that the parties have invested some effort in the EDTX Litigation, most notably the start of discovery and the exchange of infringement and invalidity contentions. Ex. 2001, 4–5. Significant effort, however, remains to be expended in the EDTX Litigation. For example, claim construction briefing does not begin until June 2025 and the claim construction hearing is not scheduled until October 2025. *Id.* at 4. Briefing regarding dispositive motions is not scheduled to be completed until January 2026. *Id.* at 3. Accordingly, this factor weighs against discretionary denial.

d. Factor 4

As we note above, after RavenWhite filed its Preliminary Response, Home Depot filed a *Sotera* stipulation. Paper 11. Home Depot's *Sotera* stipulation "mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions." *Sotera*, Paper 12 at 19 (citing *Sand Revolution*, Paper 24 at 12). Accordingly, this factor weighs against discretionary denial.

e. Factor 5

Home Depot contends that RavenWhite's exclusive licensee—not RavenWhite itself—is a party in the EDTX Litigation. Pet. 69. Home Depot, therefore, asserts that this factor weighs against discretionary denial. *Id.* RavenWhite contends that Home Depot is both the Petitioner in this proceeding and the defendant in the EDTX Litigation. Prelim. Resp. 32. RavenWhite acknowledges that its exclusive licensee is the plaintiff in the

EDTX Litigation, but argues that its exclusive licensee also is an RPI in this proceeding. *Id.* RavenWhite, therefore, asserts that this factor weighs against discretionary denial. *Id.*

The guidance in *Fintiv* with respect to this factor focuses on the relationship between a petitioner and a defendant in a related district court case—not the relationship of a patent owner (i.e., RavenWhite) and a plaintiff in the related district court case (i.e., RavenWhite’s licensee, RavenWhite Licensing LLC).⁴ *Fintiv*, Paper 11 at 13–14. Because Home Depot is both Petitioner in this proceeding and the defendant in the EDTX Litigation, this factor weighs in favor of discretionary denial.

f. Factor 6

Home Depot contends that because “[t]he challenged claims are clearly invalid, [it has] not previously challenged any related patents based on the references relied upon in this [P]etition, and the ’823 patent has never been challenged in a post-issuance proceeding,” this factor weighs against discretionary denial. Pet. 70. RavenWhite contends that because “the Petition fails to establish that multiple claim elements are taught by the prior art” and Home Depot’s expert, Dr. Craig Wills, “largely repeats the Petition verbatim without providing additional analysis or corroborating evidence,” this factor favors discretionary denial. Prelim. Resp. 33.

“[I]f the merits of the grounds raised in the petition seem particularly strong on the preliminary record, this fact has favored institution.” *Fintiv*,

⁴ See Pet. 72 (“2. Related Matters . . . The ’823 patent is subject to the following actions: *RavenWhite Licensing LLC v. The Home Depot, Inc. et al.*, 2:24-cv- 00688 (EDTX).”).

Paper 11 at 14–15; *see also Sand Revolution*, Paper 24 at 13 (explaining that, when a petition sets forth a strong case, “this factor weighs in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a)”). As we explain below in more detail, Home Depot’s arguments and evidence for the asserted ground of unpatentability based on Hinton appear strong with respect to at least one claim. *See infra* Section II.D.4. We recognize that RavenWhite has only submitted preliminary arguments and no testimonial evidence at this stage of the proceeding, and the record will fully develop during trial. Accordingly, this factor weighs against discretionary denial.

3. *Summary*

For the reasons we identify above, four factors weigh against discretionary denial, including: the projected Final Written Decision in this proceeding will likely issue before the trial date in the EDTX Litigation, there has been a minimal level of investment by the district court and parties in the EDTX Litigation, Home Depot’s *Sotera* stipulation ensures no overlap between the issues raised in the Petition and in the EDTX Litigation, and Home Depot’s preliminary showing of unpatentability with respect to at least one claim appears strong. One factor is neutral because a stay has not been requested in the EDTX Litigation. One factor weighs in favor of discretionary denial because Home Depot is both the Petitioner in this proceeding and the defendant in the EDTX Litigation. Consequently, when considering the factors as part of a holistic analysis, we decline to exercise our discretion under § 314(a) to deny this IPR.

B. Discretionary Denial Arguments Under 35 U.S.C. § 325(d)

In the Petition, Home Depot contends that “[we] should not exercise [our] § 325(d) discretion to deny institution” because the asserted grounds of unpatentability are not “substantially the same as those considered during prosecution” of the ’823 patent. Pet. 71. In the Preliminary Response, RavenWhite contends we should exercise our discretion to deny the Petition under § 325(d) because, among other reasons, the same arguments regarding flash cookies were presented during prosecution of the ’823 patent. Prelim. Resp. 24–26.

1. § 325(d) Analysis

We have the authority to deny a petition when “the same or substantially the same prior art or arguments previously were presented” in another proceeding before the Office. 35 U.S.C. § 325(d). A determination as to “[w]hether to deny institution of trial on the basis of 35 U.S.C. § 325(d) is a fact-dependent decision.” Consolidated Trial Practice Guide at 62 (Nov. 2019).⁵

The question of whether a petition presents art or arguments that are “the same or substantially the same” as art or arguments previously presented to the Office may be resolved by reference to the factors set forth in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (Decision Granting Institution) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickenson*”). The precedential section of that decision sets forth the following factors for consideration:

⁵ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. Factors (a), (b), and (d) provide guidance as to whether the art or arguments presented in the petition are the same or substantially the same as those previously presented to the Office, whereas factors (c), (e), and (f) “relate to whether the petitioner has demonstrated a material error by the Office” in its prior consideration of such art or arguments. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 10 (PTAB Feb. 13, 2020) (Decision Denying Institution) (precedential) (“*Advanced Bionics*”). “At bottom, this [two-part] framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

a. Becton, Dickinson Factors (a), (b), and (d)

Home Depot contends that the asserted grounds of unpatentability presented “in [the] Petition rel[y] on Hinton, Varghese, and a combination of Varghese and Hinton,” which are not “substantially the same as those considered during prosecution” of the ’823 patent. Pet. 71. In the

Preliminary Response, RavenWhite contends we would be “on solid ground to exercise [our] discretion under 35 U.S.C. § 325(d)” to deny institution “because the same arguments regarding flash cookies were considered and overcome during prosecution.” Prelim. Resp. 24. More specifically, RavenWhite argues that, during prosecution of the ’823 patent, the Examiner repeatedly rejected the originally presented claims as obvious over a reference titled “Local Shared Objects – ‘Flash Cookies’” (“Flash”). *Id.* (citing Ex. 1003, 81, 84–89, 97–103, 151–155, 162–164, 167–168, 204–213, 216–218⁶; Ex. 1014). RavenWhite further argues that, in response to the Examiner’s obviousness rejections based on Flash, the applicant amended the claims to require a “first client device browser storage area” and a “second client device browser storage area.” *Id.* (citing Ex. 1003, 346 (underlining newly amended language)). According to RavenWhite, because “the same arguments (based on cumulative art) were previously presented to, and thoroughly considered by, the Office during prosecution,” we should not reconsider the same arguments and evidence now presented in the Petition. *Id.* at 25.

RavenWhite does not dispute Home Depot’s assertion that the Examiner did not meaningfully address Hinton and Varghese, either alone or in combination, during prosecution of the ’823 patent. *See* Ex. 1003. Stated differently, with respect to factor (a), the Examiner did not apply the teachings of Hinton and Varghese, either alone or in combination, to teach

⁶ All references to the page numbers in the prosecution history of the ’823 patent refer to the page numbers inserted by Home Depot in the bottom, right-hand corner of each page in Exhibit 1003.

or suggest the limitations of the originally presented claims of the '823 patent, nor did the Examiner apply the teachings of these references to account for language that was added via amendment during prosecution (i.e., a “first client device browser storage area” and a “second client device browser storage area”). With respect to factor (b), RavenWhite does not provide an explanation as to how the teachings of Flash that were applied by the Examiner during prosecution of the '823 patent are cumulative to the teachings of Hinton and Varghese applied by Home Depot in the Petition.

Turning to factor (d), RavenWhite asserts that there is overlap between arguments that were presented during prosecution of the '823 patent to distinguish the then-pending claims over Flash and the arguments presented in the Preliminary Response to distinguish the challenged claims over Hinton and Varghese. *See* Prelim. Resp. 25. This overlap, by itself, does not warrant discretionary denial because, as we explain below, Home Depot persuasively explains how the teachings of Hinton and Varghese account for the claimed “first client device browser storage area” and “second client device browser storage area.” *See infra* Section II.D.4.b and II.E.2.b. Accordingly, we are not persuaded by RavenWhite’s arguments that the Petition presents substantially the same art or arguments that were considered previously by the Examiner during prosecution of the '823 patent.

b. Becton, Dickinson Factors (c), (e), and (f)

Advanced Bionics further informs our evaluation of factors (c), (e), and (f). *Advanced Bionics* indicates that satisfying the first part of the framework is a prerequisite to reaching the second part of the framework. *See Advanced Bionics*, Paper 6 at 8, 10. As we explain above, we determine

that the Petition does not present the same or substantially the same art or arguments that were presented previously to the Office during prosecution of the '823 patent. As a result, we need not reach whether Home Depot has demonstrated that the Office erred in a manner material to the patentability of the challenged claims of the '823 patent.

2. Summary

For the reasons given above, we conclude that the circumstances presented here do not warrant exercising our discretion to deny institution under § 325(d). Notably, the Examiner did not meaningfully address Hinton and Varghese, either alone or in combination, during prosecution of the '823 patent. As a result, we decline to exercise our discretion to deny institution under § 325(d).

C. Claim Construction

In this IPR, claim terms are construed using the same claim construction standard as in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b). That is, claim terms generally are construed in accordance with their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art, in view of the specification and the prosecution history pertaining to the patent at issue. *See id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary artisan after reading the entire patent,” and “as of the effective filing date of the patent application.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 1321 (Fed. Cir. 2005) (en banc).

In the Petition, Home Depot “applie[s] [RavenWhite’s] purported exclusive licensee’s proposed claim constructions of the plain meaning . . . for all claim terms” in the dismissed district court case where Home Depot

was a party. Pet. 7 (citing Exs. 1007, 1011). According to Home Depot, both the Board and the U.S. Court of Appeals for the Federal Circuit “approved of this procedure in several matters.” *Id.* (citing, e.g., *Abbott Diabetes Care Inc. v. Dexcom, Inc.*, IPR2022-00913, Paper 14 (PTAB Nov. 3, 2022) (Decision Granting Institution); *Spherix Inc. v. Matal*, 703 F. App’x 982, 983 (Fed. Cir. 2017)). In the Preliminary Response, RavenWhite contends that, “[a]t this preliminary stage, no [claim] term needs explicit construction to resolve the controversies between the parties.” Prelim. Resp. 7.

Based on the preliminary record, there is no readily discernible controversy between the parties that requires us to construe any claim terms at this time. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Obviousness over Hinton In View of the Knowledge of a Person of Ordinary Skill in the Art

Home Depot contends that claims 1–10 of the ’823 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Hinton in view of the knowledge of a person of ordinary skill in the art. Pet. 8–36. Home Depot contends that the teachings of Hinton in view of the knowledge of a person of ordinary skill in the art account for the subject matter of each challenged claim. *Id.* Home Depot submits a Declaration of Dr. Wills to support its positions. *See* Ex. 1002.

Based on the preliminary record, we determine that Home Depot has shown that there is a reasonable likelihood that it would prevail in demonstrating at least one of claims 1–10 of the '823 patent is unpatentable. We begin our analysis with the principles of law that generally apply to an asserted ground based on obviousness, we then assess the level of skill in the art, next we provide an overview of Hinton, and then we address the parties' contentions with respect to independent claims 1 and 6.

1. Principles of Law

A claim is unpatentable under § 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.” *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 skill in the art; and (4) when in evidence, objective indicia of obviousness or non-obviousness (i.e., secondary considerations, such as commercial success, long-felt but unsolved need, failure of others, etc.).⁷ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). We analyze the asserted grounds based on obviousness with the principles we identify above in mind.

⁷ At this stage in the proceeding, RavenWhite does not present arguments or evidence of secondary considerations. *See* Prelim. Resp.

2. *Level of Skill in the Art*

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The “person having ordinary skill in the art” is a hypothetical construct, from whose vantage point obviousness is assessed. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

Factors pertinent to a determination of the level of ordinary skill in the art include “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Env’t Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 696 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). “Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case.” *Id.* at 696–97.

Relying on the testimony of Dr. Wills, Home Depot argues the following:

[a] person of ordinary skill in the art at the time of the alleged invention of the ’823 patent (October 31, 2006) . . . would have had a Bachelors’ degree in electrical or computer engineering or a comparable field of study, plus approximately two to three years of professional experience with computer networks and digital information transmission techniques or other relevant

industry experience. Additional graduate education could substitute for professional experience, and significant experience in the field could substitute for formal education.

Pet. 6 (citing Ex. 1002 ¶ 65). In the Preliminary Response, “[RavenWhite] applies [Home Depot’s] definition of a person of ordinary skill in the art.” Prelim. Resp. 6 (citing Pet. 6). At this stage of the proceeding, we adopt Home Depot’s uncontested assessment of the level of skill in the art because (1) it is consistent with the ’823 patent and the asserted prior art; and (2) it is supported by the testimony of Dr. Wills.

3. Overview of Hinton

Hinton generally relates to “online user identification, authentication, and authorization systems and methods” and, more specifically, “to cross-domain log on technologies and technologies which create and manage virtual communities of online users.” Ex. 1005 ¶ 7. According to Hinton, the disclosed invention addresses the following:

a need in the art for a cross-domain single-sign-on system and methods which allows an Internet user to establish a long-term relationship with participating domains, and which gives the user the ability to go directly to participating domains, via bookmarks or direct URL’s for example, without having to go through a home domain first.

Id. ¶ 15.

Hinton further discloses that “[a]n e-community has, in general, more than two participants,” with one example showing “three participants in the e-community: [(1)] the user’s home domain (103), [(2)] an ‘other’ domain (106) and [(3)] ‘another’ domain (108).” Ex. 1005 ¶ 49, Fig. 1. Upon enrolling in the e-community, “a user will have a ‘domain identity cookie’ (‘DIDC’) established by each of the participating e-community domains.”

Id. ¶ 70. Members of the e-community use their DIDC to implement the single-sign-on functionality. *Id.* The DIDC has three purposes, one of which is “to identify the user’s ‘home’ domain.” *Id.* ¶ 71.

In addition, Hinton discloses that, after authentication of a user in his/her home domain, a “plug-in generates an ‘e-Community Cookie’ (an eCC or e-community cookie) that acts as an ‘authenticator bookmark.’” Ex. 1005 ¶ 130. The eCC “is a-memory cookie that is valid within the DNS domain, and will therefore be sent to any other server within the DNS domain.” *Id.* “As such, a user has one [eCC] set for each domain at which it has a current, authenticated (or vouched-for) session.” *Id.* ¶ 132. The eCC “indicates the security server or other plug-in location, and a [Uniform Resource Identifier (‘URI’)] at a plug-in location that can provide an authentication ‘vouch for’ token for that user.” *Id.* ¶ 133. Hinton further discloses that “[a]n eCC is valid . . . only for the duration of a browser session” and the eCC “expire[s] when a user invokes logout functionality.” *Id.* ¶ 249.

4. *Claims 1 and 6*

Our analysis below focuses on the limitations of independent claim 1 by relying on the bracketed annotations provided by Home Depot in the Petition. *See* Pet. viii, 10–30. The same arguments and evidence Home Depot provides to explain how the teachings of Hinton in view of the knowledge of a person of ordinary skill in the art account for all the limitations of independent claim 1 equally apply to the corresponding limitations of independent claim 6. *Compare* Pet. 10–30, *with id.* at 33–34.

The preamble of independent claims 1 recites [1.pre]—“[a] system.” Ex. 1001, 15:33. To the extent the preamble should be treated as limiting,

Home Depot contends that Hinton teaches a system because it discloses an e-community that includes home domain 103 and an affiliated domain (e.g., other domain 106 or another domain 108), each of which is associated with, and implemented by, one or more servers. Pet. 10–11 (citing Ex. 1005, code (57), ¶¶ 45, 49, Fig. 1; Ex. 1002 ¶ 79).

Independent claim 1 recites limitation [1.a]—“one or more processors configured to” perform certain steps. Ex. 1001, 15:34. Home Depot contends that Hinton teaches this limitation because it discloses one or more servers associated with each affiliated domain. Pet. 11–12 (citing Ex. 1005, code (57), claim 10). Relying on the testimony of Dr. Wills, Home Depot argues that, although “Hinton does not explicitly state that the affiliated domain server includes a processor, . . . a [person of ordinary skill in the art] would have understood . . . that a server includes a processor.” *Id.* at 12 (citing Ex. 1002 ¶¶ 81, 82).

Independent claim 1 recites limitation [1.b.i]—“receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a first previous network session.” Ex. 1001, 15:35–39. Home Depot contends that Hinton teaches this limitation because it discloses that an affiliated domain’s processor receives a request from the user’s browser 100 to access content within its domain. Pet. 12 (citing Ex. 1005 ¶¶ 71, 81, 87, 88, 93–97, 137). According to Home Depot, this request corresponds to an enrollment process where the user’s home domain 103 authenticates the user and generates a first cookie of the DIDC type for storage in the persistent cookie store of the user’s browser 100. *Id.* at 12–13 (citing Ex. 1005 ¶¶ 81, 87, 88, 93–97; Ex. 1002 ¶ 84). Home Depot asserts

that Hinton discloses performing this enrollment process before initiating the request triggering a vouch-for process. *Id.* at 13–14 (citing Ex. 1005 ¶¶ 71, 137; Ex. 1002 ¶ 85).

Independent claim 1 recites limitation [1.b.ii]—“wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the first previous network session.” Ex. 1001, 15:39–43. Home Depot contends that Hinton teaches this limitation because it discloses that, as part of the enrollment process, the user’s home domain 103 builds a DIDC (i.e., a first cookie) and sends the DIDC to the user’s device. Pet. 14 (citing Ex. 1005 ¶¶ 25, 87). Home Depot argues that the response from the user’s home domain 103 causes the user to initiate a set of network resource requests by redirecting the response from the user’s home domain 103 to the other affiliated domains. *Id.* at 14–15 (citing Ex. 1005 ¶¶ 88, 89). Home Depot further argues that the network resource requests sent by the user to the other affiliated domains triggers these other domains to enroll the user. *Id.* at 15 (citing Ex. 1005 ¶ 90). Home Depot asserts that, as a result of this process, Hinton’s user device stores a DIDC with indicators that the user is enrolled in the other affiliated domains. *Id.* (citing Ex. 1005 ¶¶ 26, 90, 91).

Independent claim 1 recites limitation [1.b.iii]—“wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device.” Ex. 1001, 15:43–46. Home Depot contends that Hinton teaches this limitation because it discloses that, when generating the DIDC stored on the user’s device, the user’s home domain 103 generates enrollment tokens for the user, which, in turn, are sent to the affiliated

domains within the e-community through a series of network redirects. Pet. 16–17 (citing Ex. 1005 ¶¶ 87, 89, 90, 91). Home Depot argues that the process of building up the DIDC results in the user’s browser 100 on the user’s device “receiv[ing] a persistent domain identity cookie set by each of the e-community members (103, 106, 108) in which the user has successfully enrolled.” *Id.* at 17 (quoting Ex. 1005 ¶ 92). Home Depot, therefore, asserts that (1) the DIDC amounts to data representative of the set of network resource requests that are stored on the user’s device, and (2) the DIDC has been received because the user’s device initiated the set of network resource requests. *Id.* at 17–18 (citing Ex. 1002 ¶ 88).

Independent claim 1 recites limitation [1.b.iv]—“wherein a second cookie of a second type different from the first type was caused to be stored at the client device during a second previous network session.” Ex. 1001, 15:47–50. Home Depot contends that Hinton teaches this limitation because it discloses an eCC, which is a second cookie of a second type different from the DIDC, that “is a-memory cookie that is valid within the DNS domain.” Pet. 18–19 (quoting Ex. 1005 ¶ 130) (citing Ex. 1005 ¶¶ 93–97, 137, 147, 153, 172–175; Ex. 1002 ¶¶ 90–92). According to Home Depot, “[d]uring a session subsequent to the session that created the DIDC, when a user requests access to an affiliated domain, the affiliated domain generates an eCC for that domain and [then] causes the eCC . . . to be stored at the user’s device by sending the eCC . . . to the user.” *Id.* at 19 (citing Ex. 1005 ¶¶ 137, 177, 178). Home Depot, therefore, asserts that Hinton’s system saves the eCC in a different session than the DIDC. *Id.* (citing Ex. 1002 ¶ 93).

Independent claim 1 recites limitation [1.b.v]—“wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area.” Ex. 1001, 15:50–54. Home Depot contends that Hinton teaches this limitation because it discloses (1) storing the DIDC in the persistent cookie store of the user’s browser 100, and (2) storing the eCC in the cookie memory of the user’s browser 100. Pet. 20 (citing Ex. 1005 ¶¶ 88, 233, 248). Home Depot argues that, because Hinton discloses that the storage areas for the DIDC and eCC have different names, “a [person of ordinary skill in the art] would have understood that the two storage areas are different browser storage areas.” *Id.* Relying on the testimony of Dr. Wills, Home Depot argues that “[a person of ordinary skill in the art] would have understood . . . that because the browser’s cookie store is persistent and the browser’s cookie memory is temporary, they are different storage areas for the browser.” *Id.* (citing Ex. 1002 ¶ 94).

Independent claim 1 recites limitation [1.c]—“based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the first previous network session, determine information that was encoded and stored in the client device.” Ex. 1001, 15:55–60. Home Depot contends that Hinton teaches this limitation because it discloses that the affiliated domain determines information from the DIDC by parsing it “to determine the user’s home domain [103], a URI in their home domain that can vouch for the user’s identity, the e-community in which they are enrolled, and a creation/update timestamp.” Pet. 21 (quoting Ex. 1005 ¶ 155) (citing

Ex. 1005 ¶ 236). Home Depot also argues Hinton disclose hashing the information in the DIDC, which is a type of encoding of stored data. *Id.* at 22 (citing Ex. 1005 ¶¶ 239, 245). Relying on the testimony of Dr. Wills, Home Depot asserts that “[a person of ordinary skill in the art] would have understood . . . that hashing the information in the DIDC, such as through a keyed hash, constitute[s] an encoding of information.” *Id.* (citing Ex. 1002 ¶ 97).

Independent claim 1 recites limitation [1.d.i]—“perform a first identification of at least one of the client device and a user of the client device using the first cookie of the first type.” Ex. 1001, 15:61–63. Home Depot contends that Hinton teaches this limitation because it discloses the affiliated domain’s processor identifies the user’s device by using the DIDC stored in the persistent cookie store of the user’s browser 100. Pet. 22–24 (citing Ex. 1005 ¶¶ 27, 71, 92, 88, 89, 137, 139, 141, 143, 144, 161, 162; Ex. 1002 ¶¶ 99–101).

Independent claim 1 recites limitation [1.d.ii]—“wherein the first identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device.” Ex. 1001, 15:63–67. Home Depot contends that Hinton teaches this limitation because, for the same reason it identifies above with respect to limitations [1.c] and [1.d.i], Hinton discloses that the affiliated domain’s processor uses the information (i.e., vouch for URI) in the DIDC, which is both encoded and stored in the user’s device, to identify the user. Pet. 24–25 (citing Ex. 1005 ¶¶ 138, 139, 245; Ex. 1002 ¶¶ 103, 104).

Independent claim 1 recites limitation [1.e]—“perform a second identification of at least one of the client device and the user of the client

device using the second cookie of the second type.” Ex. 1001, 16:1–3.

Home Depot contends that Hinton teaches this limitation because it discloses that, when a user requests to access resources in an affiliated domain, the affiliated domain’s processor authenticates and vouches for the user and, if successful, creates an eCC. Pet. 26 (citing Ex. 1005 ¶¶ 129, 132). Home Depot argues that, after creating the eCC for the affiliated domain, the user uses the eCC to access any server within that domain. *Id.* (citing Ex. 1005 ¶¶ 132, 133). Home Depot further argues that, when the user requests access to one of the servers in the affiliated domain that created the eCC, that server checks to see if the user has the appropriate eCC. *Id.* at 26–27 (citing Ex. 1005 ¶ 154). Lastly, Home Depot asserts that the eCC, which is stored in the cookie memory on the user’s browser 100, identifies the user’s device. *Id.* at 27 (citing Ex. 1005 ¶¶ 131, 167, 248; Ex. 1002 ¶¶ 107, 108).

Independent claim 1 recites limitation [1.f]—“perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie.” Ex. 1001, 16:4–9. Home Depot contends that Hinton teaches this limitation because, for the same reason it identifies above with respect to limitations [1.b.ii] and [1.b.iv], Hinton discloses how the affiliated domain’s processor generates and stores both the DIDC and the eCC to the user’s device based on network resource requests. Pet. 28 (Ex. 1005 ¶ 137). According to Home Depot, Hinton discloses performing the vouch-for process based on determining the presence of the DIDC and the absence of the eCC. *Id.* at 28–29 (citing Ex. 1005 ¶ 137).

Finally, independent claim 1 recites limitation [1.g]—“a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.” Ex. 1001, 16:10–12. Home Depot contends that Hinton teaches this limitation because it discloses that each affiliated domain includes at least one server. Pet. 29 (citing Ex. 1005, code (57)). Relying on the testimony of Dr. Wills, Home Depot argues that “[a person of ordinary skill in the art] would have understood . . . the affiliated domain’s server to include memory coupled to its processor and configured to provide the processor with instructions.” *Id.* at 29–30 (citing Ex. 1005, claim 10; Ex. 1002 ¶ 111).

Based on the preliminary record, we discern no deficiency in Home Depot’s characterizations of Hinton and the general background knowledge in the art. In addition, for purposes of institution, we are persuaded by Dr. Wills’s testimony concerning the relevant disclosures in Hinton. At this stage of the proceeding, RavenWhite argues that Hinton does not teach the following two limitations: (1) limitation [1.b.iv]; and (2) limitation [1.b.v]. Prelim. Resp. 12–18. We address these limitations in turn.

a. Limitation [1.b.iv]—“wherein a second cookie of a second type different from the first type was caused to be stored at the client device during a second previous network session”

In the Preliminary Response, RavenWhite contends that Hinton does not teach limitation [1.b.iv] because the eCC, which Home Depot maps to the claimed “second cookie,” is not “*stored at the client device during a second **previous** network session.*” Prelim. Resp. 13. Instead, RavenWhite argues that Hinton’s eCC “is generated and valid only during the *current* network session.” *Id.* (citing Ex. 1005 ¶¶ 137, 249). That is, RavenWhite argues that Hinton discloses generating and using the eCC within “a current,

authenticated session” that results in generation of the DIDC—not within a “previous network session” as required by limitation [1.b.iv]. *Id.* at 14. (quoting Ex. 1005 ¶ 132). According to RavenWhite, Home Depot does not even allege that Hinton’s eCC is stored “at the client device during a second previous network session,” but rather takes the position that Hinton’s system saves the eCC in a “**different** session” than the DIDC. *Id.* at 15 (citing Pet. 19). RavenWhite, however, asserts that Home Depot’s claim mapping relies on the same network request to access an “affiliate domain” to satisfy both the claimed “network resource request” associated with generating the DIDC and the claimed “previous network session” associated with generating the eCC. *See id.* (citing Pet. 12, 19).

Based on the preliminary record, Home Depot has presented sufficient evidence that would support a finding that Hinton teaches storing the eCC at the user’s device during “a second previous network session” that is different from “a first previous network session” that resulted in storing the DIDC to the user’s device. Pet. 18–19. As an initial matter, the parties do not dispute that the Hinton’s DIDC and eCC amount to two different types of cookies. *Compare* Ex. 1005 ¶¶ 92–97 (disclosing the information contained within the DIDC), *with id.* ¶¶ 171–175 (disclosing the information contained within the eCC).

The parties dispute turns on whether Hinton teaches generating the DIDC in a first network session that is different from a second network session that results in generating the eCC. Home Depot takes the position that Hinton generates the DIDC during a network session associated with an enrollment process that is separate and distinct from generating the eCC during a network session associated with a vouch-for process. *See* Pet. 14–

15 (citing Ex. 1005 ¶¶ 25, 87, 90), 19 (citing Ex. 1005 ¶¶ 137, 177, 178). Home Depot’s position appears to be corroborated by Hinton because it separately describes and distinguishes the enrollment process within an e-community that is illustrated in Figure 5 and its corresponding description (Ex. 1005 ¶¶ 80–90, Fig. 5) from the vouch-for process (*id.* ¶¶ 137–142). Consequently, there appears to be sufficient evidentiary support for Home Depot’s assertion that “Hinton’s system discloses saving the eCC cookie in a different session than the DIDC cookie” because the enrollment process results in generating the DIDC and the vouch-for process results in generating the eCC. Pet. 19 (citing Ex. 1002 ¶ 93).

At this stage in the proceeding, we do not agree with RavenWhite’s arguments that Hinton’s generation of a valid eCC during a current, authenticated network session is distinguishable from the requirement in limitation [1.b.iv] of storing “second cookie of a second different type . . . at the client device during a second previous network session.” *See* Prelim. Resp. 12–16. Although Hinton teaches that the eCC is valid for only “a current, authenticated session,” RavenWhite fails to appreciate that this particular session occurs during the vouch-for process. Ex. 1005 ¶ 132 (disclosing “a user has one [eCC] set for each domain at which it has a *current, authenticated (or vouched-for) session*” (emphasis added)); *see also id.* ¶ 249 (disclosing the “eCC is valid for only for the duration of the browser session”). In our view, the current, authenticated session that occurs during the vouch-for process that results in generating the eCC appears to be a different network session that occurs later in time from the network session associated with an enrollment process that results in generating the DIDC. Absent evidence that the network session that results

in generating the DIDC is the same as the network session that results in generating the eCC, we preliminarily disagree with RavenWhite's underlying assertion that Hinton generates the DIDC and eCC during the same network session.

b. Limitation [1.b.v]—“wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area”

In the Preliminary Response, RavenWhite contends that Hinton does not teach “a second client device browser storage area different from the first client device browser storage area” because the persistent cookie store of the user's browser 100 that stores the DIDC and the cookie memory of the user's browser 100 that stores the eCC do not amount to two different browser storage areas. Prelim. Resp. 16–17 (citing Ex. 1005 ¶¶ 88, 248; Pet. 20). RavenWhite argues that Hinton provides no additional details for storing its cookies, and the word “memory” that appears in Hinton “may refer to *both* persistent and temporary memory.” *Id.* at 17. To support its argument, RavenWhite provides dictionary definitions for the word “memory,” one which states that “[t]he term [‘memory’] **is synonymous with storage and store.**” *Id.* (quoting Ex. 2003, 311–312) (citing Ex. 2004, 4–5). Based on these dictionary definitions for the word “memory,” RavenWhite asserts that Home Depot fails to establish that Hinton's persistent cookie store of the user's browser 100 and the cookie memory of the user's browser 100 “refer to two different browser storage areas in Hinton.” *Id.* (citing Ex. 1005 ¶¶ 88, 248).

Based on the preliminary record, Home Depot has presented sufficient evidence that would support a finding that Hinton teaches that the persistent

cookie store of the user's browser 100 that stores the DIDC and the cookie memory of the user's browser 100 that stores the eCC amount to two different browser storage areas. Pet. 20. Hinton discloses storing the DIDC "in the browser's persistent cookie store," which, as one example, includes "storing [the DIDC] in a cookie folder on a hard disk drive." Ex. 1005 ¶ 88. Hinton separately discloses the eCC "resides in the user's browser cookie memory." *Id.* ¶ 248. Given that Hinton uses different terminology to describe the storage locations for the DIDC and eCC, we preliminary agree with Dr. Wills's supporting testimony that "[a person of ordinary skill in the art] would have understood . . . that because the browser's cookie store is persistent and the browser's cookie memory is temporary, they are different storage areas for the browser." Ex. 1002 ¶ 94.

At this stage in the proceeding, we do not agree with RavenWhite's arguments that Hinton's persistent cookie store of the user's browser 100 that stores the DIDC and the cookie memory of the user's browser 100 that stores the eCC do not amount to two different browser storage areas. *See* Prelim. Resp. 16–18. RavenWhite's arguments are premised on construing the claim term "memory," which appears only once in the challenged claims, as meaning both persistent and temporary memory. *See* Ex. 2003, 311–312. RavenWhite's arguments do not address the scope and meaning of the claimed "first client device browser storage area" and the "second client device browser storage area," which, absent evidence to the contrary, are

presumed to have different meanings than the claim term “memory” because they are different claim elements.⁸ Ex. 1001, 15:50–54, 16:10–12.

Even if we were to treat the word “memory” as synonymous with the “first client device browser storage area” and the “second client device browser storage area,” the fact that the word “memory” may refer to both persistent and temporary memory appears to constitute sufficient evidence that memory is capable of taking the following three forms: (1) persistent; (2) temporary; or (3) both. Contrary to RavenWhite’s assertions, this distinction appears to support Home Depot’s position that, because Hinton discloses that the cookie store of the user’s browser 100 is “persistent,” it is different from the cookie memory of the user’s browser 100 that is temporary. *See* Pet. 20; Ex. 1002 ¶ 94.

c. Summary

In summary, Home Depot has shown a reasonable likelihood that it would prevail on its assertions that the subject matter of independent claims 1 and 6 would have been obvious over the teachings of Hinton in view of the knowledge of a person of ordinary skill in the art.

5. Claims 2–5 and 7–10

Based on the preliminary record, Home Depot’s arguments and supporting evidence with respect to dependents claims 2–5 and 7–10 are sufficient for purposes of institution. *See* Pet. 30–32, 34–35, At this stage

⁸ “Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct component[s]’ of the patented invention.” *Becton, Dickinson & Co. v. Tyco Healthcare Grp.*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (quoting *Gaus v. Conair Corp.*, 363 F.3d 1284, 1288 (Fed. Cir. 2004)).

of the proceeding, RavenWhite does not address separately Home Depot's arguments and supporting evidence as to how the teachings of Hinton in view of the knowledge of a person of ordinary skill in the art account for the additional limitations of these dependent claims. *See* Prelim. Resp. 12–18. When considering Home Depot's un rebutted arguments and supporting evidence, Home Depot has demonstrated a reasonable likelihood that it would prevail on its assertions that the subject matter of dependent claims 2–5 and 7–10 would have been obvious over the teachings of Hinton in view of the knowledge of a person of ordinary skill in the art.

E. Obviousness over Varghese In View of the Knowledge of a Person of Ordinary Skill in the Art

Home Depot contends that claims 1, 3–6, and 8–10 of the '823 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Varghese in view of the knowledge of a person of ordinary skill in the art. Pet. 36–64. Home Depot contends that the teachings of Varghese in view of the knowledge of a person of ordinary skill in the art account for the subject matter of each challenged claim. *Id.* Home Depot submits a Declaration of Dr. Wills to support its positions. *See* Ex. 1002.

Based on the preliminary record, we determine that Home Depot has shown that there is a reasonable likelihood that it would prevail in demonstrating at least one of claims 1–10 of the '823 patent is unpatentable. We begin our analysis with an overview of Varghese and then we address the parties' contentions with respect to independent claims 1 and 6.

1. Overview of Varghese

Varghese generally relates to “systems and methods for providing protection against identify theft over a computer network.” Ex. 1004, 1:16–

18. More specifically, Varghese discloses using “secure cookies, flash objects and other technologies to recognize and to fingerprint . . . from which device a user access[es] an application, whether it is a computer, laptop, mobile device, or any other.” *Id.* at 5:64–67. “Information concerning these user devices is fingerprinted and stored into a device token or device [identifier (‘id’)] for one-time use.” *Id.* at 6:2–4. These device tokens or device ids are capable of being “assigned to a particular user device, stored on the particular user device as persistent data (e.g., a cookie), and also stored so as to be accessible to the authentication services of [the disclosed] invention.” *Id.* at 6:12–16.

Varghese discloses using the following two types of cookies to identify a user device during login or authentication attempts: (1) secure cookies; and (2) flash cookies. Ex. 1004, 24:23–27. “[S]ecure cookies refers to a standard cookie that has been secured against modification or tampering,” where “[a] standard cookie is a data packet sent by a web server to a web browser for saving to a file on the host machine.” *Id.* at 25:30–32, 6:25–27. Varghese refers to “secure cookies” as “persistent data on a user device.” *Id.* at 25:22–25. Varghese distinguishes secure cookies from flash cookies, which are “[g]raphical software applications and/or plug-ins from Macromedia, and generally identified by the trade name ‘Flash,’ [that] are currently resident on many user devices.” *Id.* at 25:34–36. “Flash cookies can be stored locally on a flash plug-in user’s device, are updatable, and have the advantage [of] not being as easily removed from the user’s device as . . . standard cookies.” *Id.* at 25:40–43.

2. *Claims 1 and 6*

Because Home Depot has demonstrated a reasonable likelihood of success in demonstrating that at least one claim of the '823 patent is unpatentable, we institute an IPR as to claims 1–10 of the '823 patent and all the grounds challenging these claims raised in the Petition. *See* 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide another assessment of independent claims 1 and 6 under this asserted obviousness ground based on the teachings of Varghese in view of the knowledge of a person of ordinary skill in the art. Nevertheless, we separately address these independent claims to provide additional guidance to the parties..

Similar to our analysis above, we focus on the limitations of independent claim 1 by relying on the bracketed annotations provided by Home Depot in the Petition. *See* Pet. viii, 40–60. The same arguments and evidence Home Depot provides to explain how the teachings of Varghese in view of the knowledge of a person of ordinary skill in the art account for all the limitations of independent claim 1 equally apply to the corresponding limitations of independent claim 6. *Compare* Pet. 40–60, *with id.* at 61–63.

The preamble of independent claims 1 recites [1.pre]—“[a] system.” Ex. 1001, 15:33. To the extent the preamble should be treated as limiting, Home Depot contends that Varghese’s system 1302, system 1304 and authentication server 1306 collectively teach a system. Pet. 40 (citing Ex. 1004, 8:40–44, 8:46–48, 8:60–9:3, Fig. 13A; Ex. 1002 ¶¶ 150, 151).

Independent claim 1 recites limitation [1.a]—“one or more processors configured to” perform certain steps. Ex. 1001, 15:34. Home Depot contends that Varghese teaches this limitation because it discloses that

authentication server 1306 “is generally structured as known in the art, and includes a [central processing unit (‘CPU’)].” Pet. 41 (quoting Ex. 1004, 8:50–51) (citing Ex. 1002 ¶¶ 152, 153).

Independent claim 1 recites limitation [1.b.i]—“receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a first previous network session.” Ex. 1001, 15:35–39. Home Depot contends that Varghese teaches this limitation because it discloses that authentication server 1306 receives network resource requests from a client device. Pet. 41–42 (citing Ex. 1004, 6:21–23, 10:17–23, 24:40–41, Fig. 13A). Relying on the testimony of Dr. Wills, Home Depot asserts that “[a person of ordinary skill in the art] would have understood . . . that [the] authentication server’s processor is configured to receive those requests.” *Id.* at 42 (citing Ex. 1002 ¶¶ 154, 155).

Independent claim 1 recites limitation [1.b.ii]—“wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the first previous network session.” Ex. 1001, 15:39–43. Home Depot contends that Varghese teaches this limitation because it discloses that, when users attempt to authenticate themselves, their browsers provide the authentication server with a secure cookie generated during a previous session with the server. Pet. 42–43 (citing Ex. 1004, 2:4–8, 15:31–40, 24:40–41; Ex. 1002 ¶ 157). Home Depot argues that Varghese’s client device receives and stores the secure cookie generated by the authentication server. *Id.* at 43–44 (citing Ex. 1004, 24:67–25:3, 25:25–32, 26:4–11; Ex. 1002 ¶ 158). Home Depot further argues that Varghese generates a

secure token during a login attempt by the user. *Id.* at 44 (citing Ex. 1004, 10:17–19, 24:40–42, 26:13–14). Home Depot asserts that “[a person of ordinary skill in the art] would have understood that a login prompt is a network request that . . . causes the user to initiate a set of network resource requests.” *Id.* According to Home Depot, Varghese discloses authentication details together with corresponding user interfaces that use flash software being sent to the user device, “which [a person of ordinary skill in the art] would [have] recognize[d] as requiring a subsequent request for a [f]lash object (*i.e.*, a network resource request).” *Id.* (citing Ex. 1004, 29:42–58; Ex. 1002 ¶¶ 159, 160). Lastly, Home Depot argues that Varghese discloses generating the secure token upon receiving an authentication request and then using the secure token in subsequent network sessions. *Id.* at 44–45 (citing Ex. 1004, 15:31–34; Ex. 1002 ¶ 161).

Independent claim 1 recites limitation [1.b.iii]—“wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device.” Ex. 1001, 15:43–46. Home Depot contends that Varghese teaches this limitation because it discloses that the secure cookie includes information representative of the login request. Pet. 45 (citing Ex. 1004, 10:53–60, 24:50–51, 24:67–25:3). Home Depot also argues that Varghese’s client device stores this information after receiving the secure cookie for storage purposes. *Id.* at 45–46 (citing Ex. 1004, 6:2–7).

Independent claim 1 recites limitation [1.b.iv]—“wherein a second cookie of a second type different from the first type was caused to be stored at the client device during a second previous network session.” Ex. 1001, 15:47–50. Home Depot contends that Varghese teaches this limitation

because it discloses using a flash cookie stored locally, which is a second cookie of a second type different from the secure cookie,. Pet. 46 (citing Ex. 1004, 25:25–32, 25:40–43; Ex. 1002 ¶ 65). Home Depot argues that “[a person of ordinary skill in the art] would [have] recognize[d] that [f]lash software sent to the user device for use with the authentication interface would have caused the software to store [f]lash cookies at the client device during a second previous session.” *Id.* (citing Ex. 1001, 29:51–54). Home Depot further argues that Varghese discloses removing secure cookies from the browser’s memory when the user clears the browser’s cookies, but flash cookies cannot be removed so easily. *Id.* at 46–47(citing Ex. 1004, 25:40–43). Home Depot also argues that Varghese discloses replacing the cookies routinely with each login (i.e., new network session). *Id.* at 47 (citing Ex. 1004 26:13–14). Based on these disclosures, Home Depot asserts that “a [person of ordinary skill in the art] would have understood . . . that Varghese discloses a scenario in which the flash cookie was created and stored in a second previous session than the secure cookie.” *Id.* As examples of cookies being created in different network sessions, Home Depot alleges that Table 8 of Varghese contemplates scenarios where only one of the secure cookie or flash cookie is present. *Id.* at 47–48 (citing Ex. 1004, Table 8; Ex. 1002 ¶ 166).

Independent claim 1 recites limitation [1.b.v]—“wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area.” Ex. 1001, 15:50–54. Home Depot contends that Varghese teaches this limitation because “[a person of ordinary skill in the art] would have

understood . . . to store the secure cookie in a first client device browser storage area different from the [second] client device browser storage area where the flash cookie is stored, because it was obvious to a [person of ordinary skill in the art] to organize different types of files in different folders.” Pet. 48–49 (citing Ex. 1004, 25:25–32, 25:40–43; Ex. 1002 ¶¶ 167, 168).

Independent claim 1 recites limitation [1.c]—“based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the first previous network session, determine information that was encoded and stored in the client device.” Ex. 1001, 15:55–60. Home Depot contends that Varghese teaches this limitation because it discloses that the “captured device information,” such as the device id stored with the secure cookie, includes persistent data. Pet. 49 (citing Ex. 1004, 6:8–14). Home Depot argues that Varghese’s persistent data includes information that is encrypted to secure against modification, and the server uses this persistent data to identify the user during subsequent login attempts. *Id.* at 49–50 (citing Ex. 1004, 25:10–15, 25:7–14, 25:54–56). According to Home Depot, Varghese’s server identifies the persistent information that was encrypted or encoded previously when it extracts the device id information in a subsequent login or authentication attempt. *Id.*

Independent claim 1 recites limitation [1.d.i]—“perform a first identification of at least one of the client device and a user of the client device using the first cookie of the first type.” Ex. 1001, 15:61–63. Home Depot contends that Varghese teaches this limitation because it discloses using the device id stored with the secure cookie to identify the client device

during subsequent login attempts. *See* Pet. 51 (citing Ex. 1004, 14:67–15:3, 25:7–14, 25:25–32, 25:55–56, 26:4–6, 26:9–12, Table 3). Home Depot argues that Varghese’s device id includes information identifying the client device, such as, but not limited to, “[Internet Protocol (‘IP’)] addresses, adapter [Media Access Control (‘MAC’)] addresses, local time and/or time zone, network connection speed such as download and/or upload times, microprocessor type and/or processing and/or serial number, and so forth.” *Id.* at 51–52 (quoting Ex. 1005, 25:48–51) (citing Ex. 1002 ¶ 173).

Independent claim 1 recites limitation [1.d.ii]—“wherein the first identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device.” Ex. 1001, 15:63–67. Home Depot contends that Varghese teaches this limitation because it discloses storing various information with the secure cookie, such as post-authentication information that includes “user identifications.” Pet. 52–53 (quoting Ex. 1004, 14:67–15:3, Table 3). Relying on the testimony of Dr. Wills’s, Home Depot asserts that [a person of ordinary skill in the art] would have understood . . . that the encoded information in the secure cookie would be used for the identification of the user because the secure cookie was created as part of the authentication process and Table 3 discloses that[,] after the authentication process, in post-authentication, the user identification is available.” *Id.* at 53 (citing Ex. 1002 ¶ 174).

Independent claim 1 recites limitation [1.e]—“perform a second identification of at least one of the client device and the user of the client device using the second cookie of the second type.” Ex. 1001, 16:1–3. Home Depot contends that Varghese teaches this limitation because it

discloses using the flash cookie to identify the client device during subsequent login attempts by using a device id stored therewith. Pet. 54 (citing Ex. 1004, 25:7–14, 25:54–56, 26:4–6, 26:8–10). Home Depot reiterates that Varghese’s device id includes information identifying the client device, such as, but not limited to, “IP addresses, adapter MAC addresses, local time and/or time zone, network connection speed such as download and/or upload times, microprocessor type and/or processing and/or serial number, and so forth.” *Id.* (quoting Ex. 1005, 25:48–51) (citing Ex. 1002 ¶ 177). Home Depot further argues that Varghese discloses storing various information with the flash cookie, such as post-authentication information that includes “user identifications.” *Id.* at 55 (quoting Ex. 1004, 14:67–15:3, Table 3). Relying on the testimony of Dr. Wills’s, Home Depot asserts that [a person of ordinary skill in the art] would have understood . . . that the encoded information in the flash cookie would be used for the identification of the user because the flash cookie was created as part of the authentication process and Table 3 discloses that[,] after the authentication process, in post-authentication, the user identification is available.” *Id.* at 55–56 (citing Ex. 1002 ¶ 178).

Independent claim 1 recites limitation [1.f]—“perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie.” Ex. 1001, 16:4–9. Home Depot contends that Varghese teaches this limitation because, for the same reason it identifies above with respect to limitations [1.b.ii], Varghese’s network resource request amounts to an authentication request. Pet. 56. Home Depot

argues that Varghese’s security server uses a security model to determine whether a request presents a security problem, and Table 8 illustrates how the security model instructs the security server to act depending on the presence or absence of either the secure cookie or flash cookie. *Id.*

According to Home Depot, there are number of examples set forth in Varghese with respect to determining a valid network resource request if either the secure cookie or flash cookie is present and the other cookie is absent. *See id.* at 56–59 (citing Ex. 1004, 19:54–56, 19:58–65, Table 8, App’x A; Ex. 1002 ¶¶ 181, 182).

Finally, independent claim 1 recites limitation [1.g]—“a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.” Ex. 1001, 16:10–12. Home Depot contends that Varghese teaches this limitation because it discloses that authentication server 1306 (also known as system server 1306) “includes a CPU, [random-access memory] memory, disc or other database memory 1308, communication interfaces, optional user interface equipment, and the like.” Pet. 59–60 (quoting Ex. 1004, 8:51–53). Relying on the testimony of Dr. Wills’s, Home Depot argues “a [person of ordinary skill in the art] would have understood that system server’s 1306 memory would need to include instructions that are provided to the authentication server’s processor otherwise the processor would not know how to perform the generation and validation steps.” *Id.* at 60 (citing Ex. 1002 ¶¶ 184, 185).

Based on the preliminary record, we discern no deficiency in Home Depot’s characterizations of Varghese and the general background knowledge in the art. In addition, for purposes of institution, we are persuaded by Dr. Wills’s testimony concerning the relevant disclosures in

Varghese. At this stage of the proceeding, RavenWhite argues that Varghese does not teach the following two limitations: (1) limitation [1.b.iv]; and (2) limitation [1.b.v]. Prelim. Resp. 19–24, 26–29. We address these limitations in turn.

- a. Limitation [1.b.iv]—“wherein a second cookie of a second type different from the first type was caused to be stored at the client device during a second previous network session”*

In the Preliminary Response, RavenWhite contends that Varghese does not teach limitation [1.b.iv] because Home Depot does not establish that Varghese discloses storing the secure cookie and the flash cookie in two different “*previous network session[s]*.” Prelim. Resp. 26–27. More specifically, RavenWhite argues that Varghese provides not support for Home Depot’s hypothetical scenario that involves creating and storing the flash cookie in a second network session that is different from the network session that results in the creation and storage of the secure cookie. *Id.* at 27 (citing Pet. 46–47). Instead, RavenWhite argues that Varghese teaches replacing both the secure cookies and flash cookies upon each login (i.e., during the same network session). *Id.* at 27–28 (citing Ex. 1004, 24:33–35, 26:4–11, 26:13–29). According to RavenWhite, there would be no reason to modify Varghese to generate and store secure cookies and flash cookies in different network sessions because Varghese counsels against doing so to prevent “stolen fingerprints, tokens, or device ids” from being “fraudulently reused.” *Id.* at 28 (quoting Ex. 1004, 26:13–29). RavenWhite argues that Home Depot’s reliance on Table 8 of Varghese fares not better because it does not teach creating a secure cookie or flash cookie upon performing a security check. *Id.* at 28–29 (citing Ex. 1004, 19:28–30, 19:62–67, Table 8).

Based on the preliminary record, Home Depot has presented sufficient evidence that would support a finding that Varghese teaches storing the flash cookie at the user's device during "a second previous network session" that is different from "a first previous network session" that resulted in storing the secure cookie at the user's device. Pet. 46–48. As an initial matter, the parties do not dispute that the Varghese's secure cookie and flash cookie amount to two different types of cookies. *Compare* Ex. 1004, 25:22–32 (disclosing that a secure cookie is a standard cookie), *with id.* 25:33–40 (disclosing a flash cookie).

The parties dispute turns on whether Varghese teaches generating the secure cookie in a first network session that is different from a second network session that results in generating the flash cookie. Home Depot takes the position that Varghese's graphical user interface uses flash software that generates flash cookies during a network session. *See* Pet. 46–47 (citing Ex. 1004, 29:51–54). Varghese distinguishes flash cookies from standard cookies (e.g., secure cookies) by stating that "[f]lash cookies . . . have the advantage [of] not being as easily removed from the user's device as are standard cookies." *Id.* at Ex. 1004, 25:40–43. Given this distinction between secure cookies and flash cookies, Home Depot argues—and we preliminarily agree—that, if Varghese's user clears the browser's cookies during login, thereby removing any secure cookies created and stored in a previous network session, the next or current network session may result in the flash software generating flash cookies. *See* Pet. 47. This scenario would appear to support Home Depot's assertion that "Varghese contemplates the [secure and flash] cookies being created in different network sessions." *Id.*

At this stage in the proceeding, we do not agree with RavenWhite's arguments that (1) Varghese teaches replacing both the secure cookies and flash cookies upon each login (i.e., during the same network session); and (2) Varghese counsels against generating and storing secure cookies and flash cookies in different network sessions. *See* Prelim Resp. 27–28. Although Varghese states that “[a] feature of the invention relates to the replacement of the cookie on the user's machine upon each login,” Varghese does not clarify what type of cookie it is referring to in this particular context. Ex. 1004, 26:12–13. The paragraph following this statement concludes by stating that “[c]ookies, and device token generally, are also stored for comparison with the token when later retrieved,” which appears to undermine RavenWhite's argument that Varghese replaces all types of cookies, including both secure cookies and flash cookies, upon each login. *Id.* at 26:25–27. We also fail to see how Varghese's disclosure of storing cookies for later comparison to ensure that “stolen fingerprints, tokens, or device ids cannot be fraudulently reused” counsels against generating and storing secure cookies and flash cookies in different network sessions. *Id.* at 26:27–28.

We also do not agree with RavenWhite's argument that Home Depot's reliance on Table 8 of Varghese is misplaced because this table does not teach creating a secure cookie or flash cookie upon performing a security check. *See* Prelim. Resp. 28–29. We understand Home Depot to rely on Table of 8 of Varghese as evidence demonstrating scenarios in which one of a secure cookie or a flash cookie is present during a security check, thereby bolstering its argument that different types of cookies are capable of being created in different network sessions. *See* Pet. 47–48. Consequently,

whether RavenWhite is correct that a secure cookie or a flash cookie is not created upon performing a security check is of no moment, because we understand Home Depot to rely on Table 8 as merely demonstrating a network session where: (1) a secure cookie is present, but a flash cookie is absent; and (2) a flash cookie is present, but a secure cookie is absent. We encourage the parties to further develop this issue during the course of trial.

b. Limitation [1.b.v]—“wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area”

In the Preliminary Response, RavenWhite contends that Varghese does not teach limitation [1.b.v] because flash cookies are not stored in a “**browser storage area.**” Prelim. Resp. 21. RavenWhite argues that Home Depot and its declarant, Dr. Wills, took the position that Varghese stores flash cookies in a “special directory” on the user’s hard disk that is associated with flash software—not with the user’s browser. *Id.* at 22 (citing Ex. 1002 ¶ 168; Ex. 1014, 2). RavenWhite further argues that, because Varghese discloses that flash cookies “have the advantage [of] not being as easily removed from the user’s device as are standard cookies,” flash cookies are designed to “persist *outside* of browser storage.” *Id.* at 22–23 (quoting Ex. 1004, 25:40–43) (citing Ex. 2005, 2; Ex. 2006, 2–3 Ex. 1002 ¶ 168). RavenWhite then asserts that storing Varghese’s flash cookies in a “browser storage area” would run counter to both its express teachings and the purpose of flash cookies themselves. *Id.* at 23.

Based on the preliminary record, Home Depot has presented sufficient evidence that would support a finding that it would have been obvious to a person of ordinary skill in the art for Varghese to store secure cookies and

flash cookies in two different browser storage areas. Pet. 48. Varghese discloses storing secure cookies “to a file on the hosted machine” associated with the user’s browser, and separately storing flash cookies “locally on a flash plug-in user’s device.” Ex. 1004, 25:25–27, 25:40–43. Given that Varghese uses different terminology to describe the storage locations for secure cookies and flash cookies, we preliminary agree with Dr. Wills’s supporting testimony that “[a person of ordinary skill in the art] would have known that the secure cookie is stored in a first client device browser storage area different from the [second] client device browser storage area where the flash cookie is stored.” Ex. 1002 ¶ 168.

At this stage in the proceeding, we do not agree with RavenWhite’s arguments that Varghese stores flash cookies in a storage location that is designed to persist outside of browser storage. *See* Prelim. Resp. 21–23. RavenWhite’s arguments turns on whether Varghese’s flash plug-in user’s device that locally stores flash cookies amounts to a claimed “browser storage area.” As an initial matter, the claimed “browser storage area” is broad in scope. Although the specification of the ’823 patent identifies history cache 204 and TIFs area 212 as two examples of the claimed “browser storage area,” independent claim 1 is not so limiting. Ex. 1001, 3:3–4, 6:5–8, 6:54–56, Fig. 2. In our view, Varghese’s flash plug-in user’s device is nothing more than a plug-in provided by flash software that works together with the browser running on the user’s device. Given this affiliation, we are of the view that the Varghese’s flash plug-in user’s device is a local storage location for flash cookies that is accessible by the user’s browser and, therefore, teaches a “second client device browser storage area” different from a “first client device browser storage area”

(i.e., Varghese's file on the hosted machine that is associated with the user's browser) that stores the secured cookies.

c. Summary

In summary, Home Depot has shown a reasonable likelihood that it would prevail on its assertions that the subject matter of independent claims 1 and 6 would have been obvious over the teachings of Varghese in view of the knowledge of a person of ordinary skill in the art.

3. Claims 3–5 and 8–10

Based on the preliminary record, Home Depot's arguments and supporting evidence with respect to dependents claims 3–5 and 8–10 are sufficient for purposes of institution. *See* Pet. 60–61, 63. At this stage of the proceeding, RavenWhite does not address separately Home Depot's arguments and supporting evidence as to how the teachings of Varghese account for the additional limitations of these dependent claims. *See* Prelim. Resp. 18–24, 26–28. When considering Home Depot's unrebutted arguments and supporting evidence, Home Depot has demonstrated a reasonable likelihood that it would prevail on its assertions that the subject matter of dependent claims 3–5 and 8–10 would have been obvious over the teachings of Varghese in view of the knowledge of a person of ordinary skill in the art.

F. Obviousness over Varghese and Hinton

Home Depot contends that claims 2 and 7 of the '823 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Varghese and Hinton. Pet. 64–67. Home Depot contends that the combined teachings of Varghese and Hinton account for the subject matter of each challenged claim, and provides reasoning as to why a person

of ordinary skill in the art would have been prompted to modify the teachings of these references. *Id.* Home Depot submits a Declaration of Dr. Wills to support its positions. *See* Ex. 1002.

Based on the preliminary record, Home Depot's arguments and supporting evidence with respect to dependent claims 2 and 7 are sufficient for purposes of institution. *See* Pet. 64–67. Apart from the arguments that RavenWhite presents with respect to the obviousness ground based on Varghese in view of the knowledge of a person of ordinary skill in the art, which, as we explain above, we preliminarily disagree with, RavenWhite does not address separately Home Depot's arguments and supporting evidence as to how the combined teachings of Varghese and Hinton account for the additional limitations of dependent claims 2 and 7. *See* Prelim. Resp. 18–24, 26–28. When considering Home Depot's un rebutted arguments and supporting evidence, Home Depot has demonstrated a reasonable likelihood that it would prevail on its assertions that the subject matter of dependent claims 2 and 7 would have been obvious over the combined teachings of Varghese and Hinton.

III. CONCLUSION

Taking into account RavenWhite's Preliminary Response, we conclude that the information presented in the Petition demonstrates that there is a reasonable likelihood that Home Depot would prevail in challenging at least one of claims 1–10 of the '823 patent as unpatentable. Accordingly, we institute an IPR as to all challenged claims and all the grounds raised in the Petition. *See* 37 C.F.R. § 42.108(a). At this stage of the proceeding, we have not made a final determination with respect to the construction of any claim term or the patentability of the challenged claims.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), an IPR is hereby instituted as to all challenged claims and all the grounds raised in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of a trial; the trial will commence on the entry date of this Decision.

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Patent 10,594,823 B1

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