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Paper 42
Date: June 25, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTUIT INC.,
Petitioner,

v.

SAMESURF, INC.,
Patent Owner.

IPR2023-00339
Patent 9,185,145 B2

Before KARL D. EASTHOM, BARBARA A. BENOIT, and PHILLIP A. BENNETT, *Administrative Patent Judges.*

BENOIT, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Claims Unpatentable
35 U.S.C. § 318(a)
Denying Petitioner's Motion to Exclude
Denying Petitioner's Motion to Strike
37 C.F.R. § 42.64

I. INTRODUCTION

In this *inter partes* review instituted pursuant to 35 U.S.C. § 314, Intuit Inc. ("Petitioner") challenges the patentability of claims 1–18 ("the challenged claims") of U.S. Patent No. 9,185,145 B2 (Ex. 1001, "the 145 patent"), owned by Samesurf, Inc. ("Patent Owner").

We have jurisdiction under 35 U.S.C. § 6. We base our decision on the preponderance of the evidence standard. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

Having reviewed the arguments of the parties and the supporting evidence, we determine that Petitioner demonstrates by a preponderance of evidence that the challenged claims are unpatentable for the reasons set forth in this Final Written Decision pursuant to 35 U.S.C. § 318(a).

A. Procedural History

Petitioner filed a Petition (Paper 2, "Pet.") requesting institution of *inter partes* review of the challenged claims, to which Patent Owner filed a Preliminary Response (Paper 9; "Prelim. Resp."). On June 28, 2023, we instituted an *inter partes* review of the challenged claims on all grounds asserted by Petitioner. Paper 12 ("Dec." or "Institution Decision").

Subsequent to the Institution Decision, Patent Owner filed a Response (Paper 21, "PO Resp."), to which Petitioner filed a Reply (Paper 26, "Pet. Reply"). In response, Patent Owner filed a Sur-reply (Paper 27, "PO Sur-reply"). A hearing was held on March 27, 2024.[1] *See* Paper 41 ("Transcript" or "Tr.")

[1] At the parties' joint request (Paper 29), a consolidated hearing for this proceeding and two related proceedings was held. *See* Paper 32 (Order setting oral argument); Paper 41. This Decision is based on the record of this proceeding.

B. Real Parties in Interest

The Petition indicates Intuit Inc. is the real party in interest. Pet. 3. Patent Owner identifies itself as the real party in interest. Paper 4 (Patent Owner's Mandatory Notices), 2.

C. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), each party identifies various judicial or administrative matters that would affect or be affected by a decision in this proceeding. Pet. 3; Paper 4, 2. The parties identify the following district court case: *Samesurf, Inc. v. Intuit, Inc.*, No. 3:22-cv-00412 (S.D. Cal.). Pet. 3; Paper 4, 2. The parties also each identify two concurrently filed petitions challenging different patents: IPR2023–00341 (challenging U.S. Patent No. 9,483,448 B2) and IPR2023–00342 (challenging U.S. Patent No. 8,527,591 B2). Pet. 3; Paper 4, 2.

D. The '145 Patent

The '145 patent is titled "Method and Apparatus for the Implementation of a Real-Time Sharable Browsing Experience on a Guest Device." Ex. 1001, code (54). The patent relates to a "sharable browsing experience" through "a synchronized browsing session on a guest device utilizing the transfer of URL [uniform resource locator], form data, script, and other information." *Id.* at 1:15–19.

1. The Written Description

The techniques described by the '145 patent address the need for "all users in a session to interact with, discuss, log in separately or together, and share internet browsing in real time for online activities." *Id.* at 2:47–50. In contrast, "desktop or screen sharing" approaches "allow users to simply

view the same internet content" but "do not enable all users in a session to click, input, and log into those experiences in a simultaneous or nearly simultaneous manner." *Id.* at 2:25–30. The '145 patent criticizes "desktop or screen sharing" methods "because they work by broadcasting continuous screenshots of the host screen in large files or packets and require high levels of bandwidth and computer processing power." *Id.* at 2:30–34. Also, such methods "afford little protection for the broadcasting host's private information since all participants in a particular session see the host screen as s/he enters sensitive information such as user names or passwords or when the host toggles back and forth in other areas on their desktop." *Id.* at 2:38–43.

Figure 2(a), reproduced below, illustrates communication between various devices "to initialize a synchronized browsing session." *Id.* at 4:18–21.

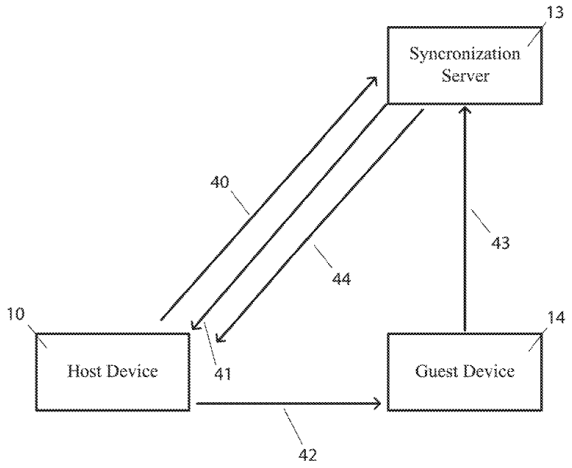

Figure 2(a) is a block diagram showing communication between host device 10, synchronization server 13, and guest device 14 to initialize a synchronized browsing session between host device 10 and guest device 14. *Id.* at 10:13–19; Fig. 2(a). Examples of host and guest devices include personal computers, mobile phones, and electronic tables with "a visual user

interface and network connection." *Id.* at 6:14–22 (identifying example host devices), 6:23–32 (identifying example guest devices). "Host device 10 transmits an initialization request 40 to synchronization server 13," which responds by sending confirmation message 41 that includes session identifier 19 for the synchronized browsing session. *Id.* at 10:20–28. Host device 10 transmits session invitation 42 to guest device 14. *Id.* at 10:29–32.

To join the synchronized browsing session with host device 10, guest device 14 transmits request to join 43, which includes session identifier 19, to synchronization server 13. *Id.* at 10:39–44. Synchronization server 13 "records identification and routing information of guest device 14" and, in some embodiments, sends "notification 44 to host device 10 [that] guest device 14 has joined the synchronized browsing session." *Id.* at 10:50–53.

Figure 5(a), reproduced below, illustrates communication between various devices during a synchronized browsing session with a website server. *Id.* at 4:51–54.

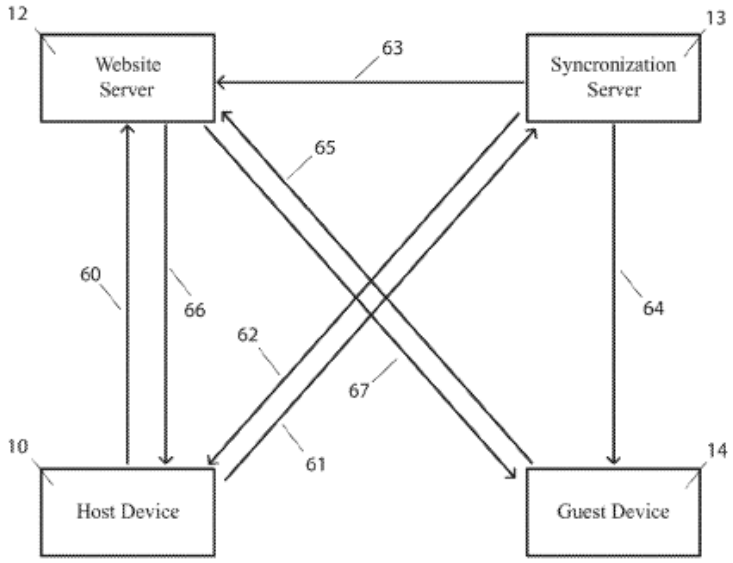

Figure 5(a) is a block diagram showing communication between website server 12, host device 10, synchronization server 13, and guest device 14 during a synchronized browsing session. *Id.* at 15:53–58. Host device 10 communicates with website server 12 to receive website content. *Id.* at 15:59–16:11. Host device 10 also transmits "website interaction information" to synchronization server 13. *Id.* at 16:12–23. Examples of website interaction information include the URL of website server 12, cookie information, form data, java script, other types of user inputted information, or attached files. *Id.* at 16:15–23. Synchronization server 13 then forwards the communication message to guest device 14. *Id.* at 16:42–51, 16:62–67. Guest device 14 uses the communication message to send website request 65 to website server 12. *Id.* at 16:67–17:4. "In exemplary embodiments, website request 65 should be similar to or identical to website request 60." *Id.* at 17:4–6. In one such exemplary embodiment, this enables synchronized browsing between host device 10 and guest device 14 because identical website content is provided by website server 12 to each device in response to identical requests sent by each device to the website server 12. *Id.* at 17:38–48.

Figure 5(d), reproduced below, illustrates steps used by a guest device during a synchronized browsing session with a host device. *Id.* at 19:8–10.

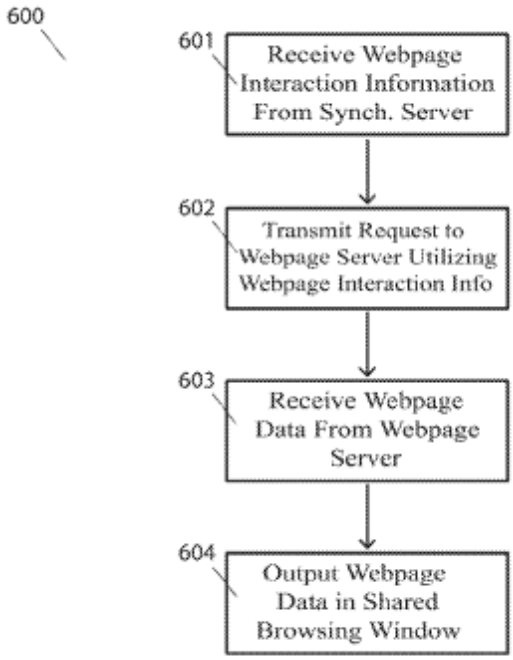

Figure 5(d) is "a flow chart of method 600 utilized by guest device 14 for the execution of a synchronized browsing session with host device 10." *Id.* "In step 601, guest device 14 receives communication message 64 from synchronization server 13." *Id.* at 19:16–18. As described previously, communication message 64 "is designed to be forwarded by synchronization server 13 to guests in the synchronized browsing session, such as guest 14, to perform the synchronized browsing session." *Id.* at 16:42–45. "In exemplary embodiments, communication message 64 may be a duplicate of [host device's] website request 60, or may comprise the URL address of the website server." *Id.* at 16:45–47. "In other embodiments, communication message 64 may also include other transmitted data from [host device's] website request, such as cookie information, form data, java script, or other user inputted information, or attached files." *Id.* at 16:47–51.

"Guest device 14 formulates website request 65 by processing communication message 64." *Id.* at 19:23–25. "In step 602, guest device 14 transmits website request 65 to website server 12." *Id.* at 19:18–19. "In

step 603, guest device 14 receives content reply 67 from website server 12." *Id.* at 19:28–29. "Finally, in step 604, guest device 14 outputs content reply 67" through a user interface of guest device 14. *Id.* at 19:29–30. As shown, Figure 5(d) describes "content reply 67" as "webpage data." The user interface may be part of specialized synchronization browsing software or may be output using a standard internet browser window. *Id.* at 19:30–36.

2. Challenged Claims

All eighteen claims of the '145 patent are challenged, of which claims 1 and 9 are independent. Illustrative claim 1 follows, with bracketed annotations added for reference:

> 1. A method performed by a guest device for joining a synchronized browsing session administered by a synchronization server, comprising:
>
> [1a] receiving from the synchronization server a session invitation including a session identifier associated with a host device;
>
> [1b] activating the session invitation to send a request to join said synchronized browsing session to said synchronization server;
>
> [1c] receiving web browsing interaction data from said synchronization server, wherein said web browsing interaction data is associated with:
>
> a website server that is independent of the synchronization server, and
>
> the host device that has initiated the session invitation and
>
> [1d] operating an application based on said web browsing interaction data received from said synchronization server to

> access a website server[2] independent of the synchronization server subsequent to the activation of the session invitation.

Ex. 1001, 22:62–23:15.

E. Grounds of Institution and Testimonial Evidence

1. Grounds of Institution

We instituted trial on the following grounds (Dec. 9, 47):

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–18	103[3]	Lebrun[4] and Wang[5]
1–18	103	Prajapat[6] and Wang

[2] As we noted in our Institution Decision, claim 1 recites "a website server" twice. *See* Ex. 1001, 23:7, 13; *but see* Ex. 1001, 24:7, 13 (claim 9 reciting "a website server" and "the website server"). Dec. 8, n.1. Neither party has raised this antecedent basis issue. In any event, for purposes of this trial, we are able to discern the meaning of the claim as interpreted by Petitioner and Patent Owner and as reflected by claim 9, which Petitioner argues on the same basis as claim 1. *See generally* Pet. 34–37, 59–62; PO Resp. 12 (Patent Owner indicating independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9."); *see also* Prelim. Resp. 51 (Patent Owner indicating claims 1 and 9 have "analogous limitations"), 59 (same).

[3] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amending 35 U.S.C. § 103, was effective on March 16, 2013. The '145 patent claims the filing benefit of a patent that issued from an application filed on May 20, 2010, which is before the effective date of the applicable AIA amendment. Ex. 1001, code (63), 1:15–19. We, therefore, apply the pre-AIA version of § 103 for purposes of this proceeding. *See also* Pet. 6 n.2 (noting Petition references are to the pre-AIA version of the statute).

[4] WIPO International Publication No. WO 00/48110, published August 17, 2000 (Ex. 1005). *See* Pet. 5 (asserting the reference is prior art under pre-AIA 35 U.S.C. § 102(a), § 102(b)).

[5] U.S. Patent Appl. Pub. No. US 2005/0033656 A1, published February 10, 2005 (Ex. 1006). *See* Pet. 5 (asserting the reference is prior art under pre-AIA 35 U.S.C. § 102(b), § 102(e)).

[6] U.S. Patent Appl. Pub. No. US 2005/0021626 A1, published January 27,

2. Testimonial Evidence

In support of their positions, Petitioner and Patent Owner each cite the declaration testimony of their respective experts. Specifically, Petitioner cites the declaration testimony of Henry A. Lieberman in support of its Petition (Ex. 1003) and its Reply (Ex. 1034) to Patent Owner's Response. Patent Owner cites the declaration testimony of Stacy Friedman (Ex. 2004). Additionally, Petitioner cites the cross-examination testimony of Mr. Friedman (Ex. 1033).

II. ANALYSIS

A. Legal Standards Concerning Demonstrating Unpatentability

To prevail in challenging the patent claims, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e) (2012); 37 C.F.R. § 42.1(d) (2017). "In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied on). This burden never shifts to Patent Owner except in limited circumstances not present here. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech.*

2005 (Ex. 1007). *See* Pet. 5 (asserting the reference is prior art under pre-AIA 35 U.S.C. § 102(b), § 102(e)).

Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner cannot satisfy its burden of proving obviousness by employing "mere conclusory statements." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

Petitioner asserts that the challenged claims are unpatentable under 35 U.S.C. § 103(a). A patent claim is unpatentable under 35 U.S.C. § 103(a) "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a); *accord KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of nonobviousness.[7] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Consideration of the Graham factors "helps inform the ultimate obviousness determination." *Apple v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc).

B. Level of Ordinary Skill in the Art

We review Petitioner's asserted obviousness contentions in view of the understanding of a person of ordinary skill in the art at the time of the

[7] Patent Owner has not offered objective evidence of non-obviousness. *See generally* PO Resp.; PO Sur-reply; *see also* Pet. 22 (indicating Petitioner is not aware of any evidence of secondary considerations).

invention. *Graham*, 383 U.S. at 17. The level of ordinary skill in the art at the time of the invention is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)).

In the Institution Decision, after considering the respective proposals of the parties, we found that a person of ordinary skill in the art ("POSITA") "would have had (1) at least a bachelor's degree in computer science, computer engineering, or electrical engineering, or a similar field, and (2) at least two years of work experience in software development and/or web-based software," which reflected Petitioner's proposal. Dec. 11–12; *see* Dec. 9–12 (discussing the respective proposals and level of ordinary skill reflected in the challenged patent and asserted prior art). Patent Owner accepts this level of ordinary skill in the art. PO Resp. 42. Accordingly, we apply this determination of the level of ordinary skill in the art for purposes of this Decision.

C. Prior Art Disclosures

1. Lebrun's Disclosure

Lebrun is a WIPO (World Intellectual Property Organization) international application published under the PCT (Patent Cooperation Treaty) and titled "Personalized Access to Web Sites." Ex. 1005, code (54). Among other features, Lebrun indicates "multiple related users can simultaneously access a sequence of web sites (web surfing), such that each

of the related users has substantially the same content presented at the same times." *Id.* at 4:6–9.[8]

Figure 3[9], reproduced below, illustrates a system for group access to web sites. *Id.* at 29:25.

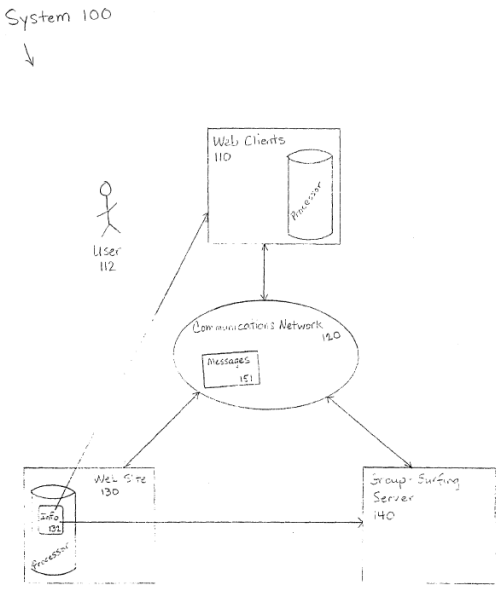

Figure 3 is a block diagram of "system 100 that includes a set of web clients 110 [top], a communication network 120 [middle], at least one web site 130 [bottom left], and a group surfing server 140 [bottom right]." *Id.* at 29:27–28. Lebrun describes creating a "group-surfing session" in which "a first web client 110 sends a session-creation message 151 to the group-surfing server" 140 to create a group-surfing session. *Id.* at 32:9–11. The message is sent in response "to an action by the user of the web client software 111, such as by selecting a web page or a link to a web page." *Id.*

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[8] Page numbers refer to the original page numbers in the lower center of the document pages (i.e., not the page numbers added by Petitioner in the lower left of the document pages). This is consistent with Petitioner's citations. *See, e.g.,* Pet. 25 (citing Ex. 1005, 33:2–3; quoting "add[s] itself to the session").

[9] Best available quality from Ex. 1005.

at 32:5–7; Fig. 1 (showing web client software 111 of web client 110). Session-creation message 151 may include "an identifier for the group-surfing session, so that other web clients 110 can add themselves to the session." *Id.* at 32:11–12. Lebrun further indicates that "group-surfing server 140 can also assign the identifier in a reply to the session-creation message 151." *Id.* at 32:12–14.

"The group-surfing server 140 receives the session-creation message 151 and responds by (1) creating a group-surfing session and (2) informing the other web clients 110 participating in the group-surfing session." *Id.* at 32:26–31. "To add itself to the session, a second (or further) web client 110 sends a session-join message 151," which in a preferred embodiment includes the identifier for the group-surfing session, to the group-surfing server 140. *Id.* at 33:2–4.

Lebrun also describes group surfing server 140 adding web clients 110 to a group-surfing session in relation to steps in a flow chart shown in Figure 4. *Id.* at 44:18–26. After receiving the session-join message 151 from "the new web client 110," the group-surfing server 140 sends to the new web client 110 "a program fragment (preferably a Java applet and JavaScript code)" that is used to process web pages received as part of the group-surfing session. *Id.* at 44:29–31. In general, in response to a link on a web page being selected to request another web page, the program fragment "intercepts the request before it is sent to the web site 130, and redirects the selection to the group-surfing server 140." *Id.* at 44:31–33. The group-surfing server 140 is then able to "assure" that the next web page selected is "presented to all participating web clients 110." *Id.* at 44:1–2.

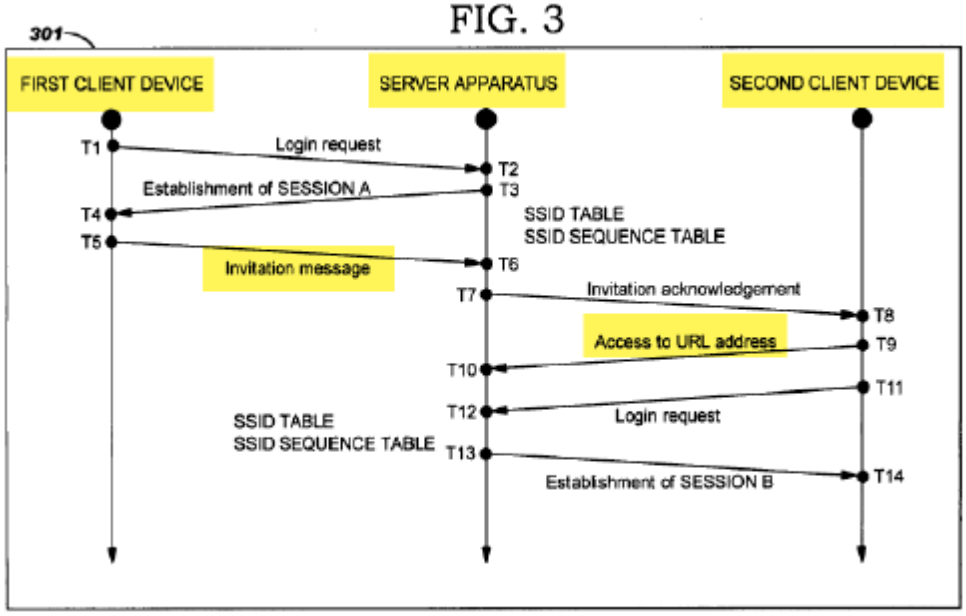
Lebrun describes a more particular example of group-surfing server, web clients, and web site communication during a group-surfing session in which web page selections from first web client 110 (or "controlling web client 110") are presented at each of the other web clients participating in the group-surfing session. *Id.* at 45:6–46:15. First web client 110 receives a web page 153 from group-surfing server 140 (which in turn had received that page from the web site 130). *Id.* at 45:13–14. First web client 110 selects a link 152 on web page 153, and "the selection is caught by the program fragment, which sends the selection" including "a next-page message 151 to the group-surfing server 140, indicating next page 153 in the progression of pages in the session." *Id.* at 45:14–16, 45:21–23. Group-surfing server 140 adds "proper cookie or other identity information" and "directs the target web site 130 to deliver the next page 153 to the group-surfing server 140 itself." *Id.* at 45:25–28. "The group-surfing server 140 then re-sends that page 153 to those web clients 110 participating in the session." *Id.* at 45:28–29.

Lebrun continues, "[i]n a preferred embodiment, in order to reduce load on the group-surfing server 140, the group-surfing server 140 sends only the page 153 itself without any multimedia elements (such as embedded sound, images, or program fragments)." *Id.* at 45:29–46:1. "Each participating web client 110 requests those multimedia elements directly from the web site 130." *Id.* at 46:1–2 (describing step 234). "At step 235, the page 153 is presented at each of the web clients 110 participating in the session." *Id.* at 46:4–5.

2. Wang's Disclosure

Wang is a published patent application titled "Collaboration System Suitable for On-Line Shopping." Ex. 1006, code (54). Wang's server receives and responds to requests from multiple client devices and synchronizes the displays on each of the client devices. *Id.*, code (57). A client device receives an invitation to join a group shopping session. *Id.* ¶¶ 46–48, Fig. 3. The invitation includes "URL address to be used" to access the shopping session. *Id.* ¶ 48. Figure 3, reproduced below as annotated by Petitioner, illustrates a process to establish a group session. Pet. 27; Ex. 1006 ¶ 27.

FIG. 3



Wang's Figure 3 is a "timing diagram for a process" that illustrates messages sent between two client devices and a server to establish "a group session," which refers to "a session which enables client devices including in a group designated by a fixed identification value to access a common application service." Ex. 1006 ¶¶ 27, 46. Wang indicates an example of a

common application service may be "a virtual shopping system," in which case the group session "may be referred to as a shopping session." *Id.* ¶ 46.

More specifically, Figure 3 shows various messages sent between a first client device and a server apparatus and between the server apparatus and a second client device. *See id.* ¶¶ 47–49, Fig. 3. Among the messages exchanged, is an "invitation message" that the first client device sends to the server apparatus to invite "other client devices to the shopping session." *Id.* ¶ 47. In response, the server apparatus sends to the second device a message, such as an email, that includes "a URL address to be used" to join the shopping session. *Id.* ¶¶ 48–49, Fig. 3. The second client then "accesses the designated URL address," and the server apparatus receives an access notice and login request from the second client. *Id.* ¶ 49. The server apparatus subsequently "completes the establishment of the group session." *Id.*

3. Prajapat's Disclosure

Prajapat relates to peer-to-peer web content sharing, such as may be used in a call center to share content with a customer. Ex. 1007 ¶¶ 1–2. Figure 1, reproduced below, illustrates an example of such a communication system. *Id.* ¶ 12.

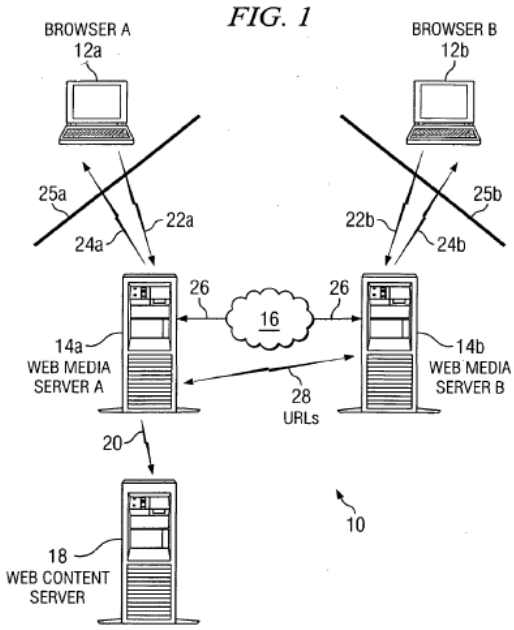


Figure 1 shows communication system 10 that includes browsers 12a and 12b, web media servers 14a and 14b, and web content server 18. *Id.* ¶ 12. Web media servers 14a and 16b are "coupled via network 16," and web content server 18 is "coupled to web media server 14a via link 20." *Id.*

A user associated with browser 12a may "desire to co-browse or share one or more web pages" with a user associated with browser 12b. *Id.* ¶ 16. Prajapat uses the term "co-browse" to describe a variety of situations, including (i) browsers 12a and 12b displaying "the same web pages at substantially the same time," (ii) browser 12b viewing web pages alterations by browser 12a, and (iii) similarly, browser 12a viewing web pages alterations by browser 12b. *Id.* ¶ 12.

Prajapat describes an example of peer-to-peer dynamic web page sharing. *Id.* ¶ 34; Fig. 2. "[B]rowser 12a establishes a communication session with media server 14a" and submits a request to co-browse with browser 12b. *Id.* at ¶ 35. After receiving the request, web media server 14a locates and establishes a communication session with "web media server

14b with which browser 12b is associated." *Id.* A communication session also is established between web media server 14b and browser 12b. *Id.*

In response to browser 12a request for a web page, web media server 14a requests the web page from web content server 18, which, in turn, provides the requested web page to the web media server 14a. *Id.* ¶ 36–37. Web media server 14a communicates the web page or a notification that the web page is available to browser 12a, which retrieves the web page from web media server 14a. *Id.* ¶ 38. Web media server 14a also communicates the web page in some form to web media server 14b. *Id.* ¶ 39. Web media server 14b communicates the web page or a notification that the web page is available to browser 12b. *Id.* Browser 12b retrieves the web page from web media server 14b. *Id.*

In another example, Prajapat describes "peer-to-peer simple web page sharing" using a web content server that returns the requested web page to a browser. *Id.* ¶ 43. Figure 3, reproduced below, illustrates an example of such a communication system. *Id.* ¶¶ 10, 41.

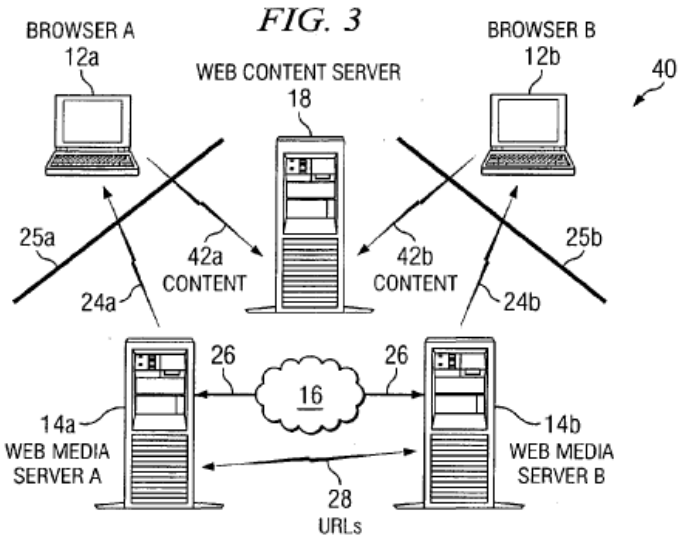


Figure 3 shows communication system 40 that, like Figure 1, includes browsers 12a and 12b, web media servers 14a and 14b, and web content

server 18. *Id.* ¶ 41. Similarly to described above, browser 12a submits to web media server 14a a request for a web page sharing session with browser 12b; web media server 14a locates the web media server 14b associated with browser 12b; and web media server 14a establishes a "media session" with web media server 14b that allows the web media servers to communicate "media between each other." *Id.* ¶¶ 41–42.

In contrast to the process described above with respect to Figure 1, in this example, browser 12a submits a request for a web page to web content server 18, which returns the requested web page to requesting browser 12a. *Id.* ¶ 43. Browser 12a communicates "the URL and any other suitable information regarding the requested web page to web media server 14a," which, in turn, communicates that information to web media server 14b. *Id.* Web media server 14b then communicates "the URL or other suitable information to browser 12b." *Id.* Browser 12b uses the information "to request from web content server 18 the web page that browser 12a requested." *Id.*

D. Claim Construction

In *inter partes* reviews, the Board construes claims using the same claim construction standard employed in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2020). Under the principles set forth by our reviewing court, the "words of a claim 'are generally given their ordinary and customary meaning,'" as would have been understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "In determining the meaning of the disputed claim limitation,

we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc*., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Claims should be interpreted in light of the specification, but limitations from the specification should not be read into the claims. *Vitronics Corp. v. Conceptronic, Inc*., 90 F.3d 1576, 1582 (Fed. Cir. 1996), *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014).

Furthermore, only claim terms that are in controversy need to be construed and only to the extent necessary to resolve the controversy. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those 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))).

1. "web browsing interaction data"

Independent claims 1 and 9 each recites "web browsing interaction data." In our Institution Decision, we agreed with the parties that no claim terms needed to be expressly construed to determine whether to institute an *inter partes* review. Dec. 12 (citing Pet. 12; Prelim. Resp. 32). We did note, however, that Patent Owner's arguments regarding the asserted grounds of unpatentability in its Preliminary Response raised particular claim scope contentions regarding "web browsing interaction data" recited in each of the independent claims. Dec. 12–13. Based on the preliminary record at the time of institution, we concluded "the scope of 'web browsing interaction data' encompasse[d] web page data used for browsing and interacting with a web site." Dec. 28.

Patent Owner disagrees and contends that "web browsing interaction data" should be construed as "data describing interactions performed on a website by a host device" and "does not include the data resulting from the interactions." PO Resp. 39, 40, 41; *see* PO Sur-reply 4. According to Patent Owner, this proposed construction excludes the "webpage data returned from the website [that] is the result of interactions performed on a website by a host device." PO Resp. 41; *see* PO Resp. 30–33 (arguing "web browsing interaction data" of the claims does not encompass webpages or partially filled webpages); PO Sur-reply 4 (contending "web browsing interaction data" does not include "webpage data received in response to a web request").

In Reply, Petitioner contends that the "'web browsing interaction data' should be afforded its plain and ordinary meaning," which is "data related to web browsing interactions." Pet. Reply 5. Petitioner further contends that Patent Owner's proposed construction is overly narrow and should not be limited to "interactions performed by a 'host device'" and should not be limited to "data 'describing' such interactions." Pet. Reply 8.

Because the term "web browsing interaction data" is disputed, we address the claim construction of that term. *See WesternGeco LLC v. ION Geophysical Corp.*, 889 F.3d 1308, 1328 (Fed. Cir. 2018) ("[T]he Board [is] permitted to issue a new construction in the final written decision given that claim construction was a disputed issue during the proceedings.").

a. Claim Language

We begin our analysis with the words of the claim. *Phillips*, 415 F.3d at 1312 (explaining "it is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude" (internal quotation marks and citation omitted)). Claim 1 broadly

recites "receiving web browsing interaction data" that "is associated with a website server . . . and the host device that has initiated the session invitation" and uses that data "to access a website server independent of the synchronization server." Ex. 1001, 23:4–15 (limitations [1c] and [1d]). Independent claim 9 recites similar limitations. Ex. 1001, 23:42, 24:4–15 (reciting "a processor configured to: . . . receive web browsing interaction data . . . to access the website server that is independent of the synchronization server); *see also* PO Resp. 12 (Patent Owner indicating independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9.").

Patent Owner does not identify particular claim language to support its proposed construction of "data describing interactions performed on a website by a host device" that "does not include the data resulting from the interactions." PO Resp. 39, 40, 41; *see* PO Sur-reply 4. Nor do we perceive any such claim language. The concept of "interactions performed on a website by a host device" is missing from the plain language of the claim itself. That the "web browsing interaction data" is associated with both "a website server that is independent of the synchronization server" and "the host device that has initiated the session invitation" (limitation [1c]) does not require the claimed "web browsing interaction data" to describe interactions performed on a website by a host device. Nor does "operating an application based on web browsing interaction data . . . to access a website server" (limitation [1d]) require "web browsing interaction data" to describe interactions performed on a website by a host device. Nothing in the plain language of the independent claims requires "web browsing interaction data" to be limited to data describing interactions performed on a website by a host

device. Nor does the independent claim language otherwise exclude data resulting from interactions performed on a website by a host device from "web browsing interaction data."

Turning to dependent claims that relate to "web browsing interaction data," claims 4, 5, 7, and 8 depend from independent claim 1 (directly or indirectly) and additionally indicate web browsing interaction data further comprises "cookie information associated with the website server" (claim 4), "information related to shared user input web browsing interactions depicted in a first web browser window" (claim 5), "form data associated with the website server" (claim 7), and "a log-in into a restricted access webpage" (claim 8). Claim 15, which depends indirectly from independent claim 9, further recites "wherein information related to said shared user input web browsing interactions comprises web browsing interaction data."

The plain language of these dependent claims does not provide additional limitations that affirmatively include data resulting from interactions performed on a website by a host device. Neither does the plain language expressly exclude such data from the scope of "web browsing interaction data." Nor has Patent Owner argued that any language of the dependent claims requires excluding data resulting from interactions performed on a website by a host device from the recited "web browsing interaction data." *See generally* PO Resp. 28–41; PO Sur-reply 3–6.

Petitioner contends that dependent claims 5 and 8 indicate that "web browsing interaction data" is not limited to data describing interactions performed on a website by a host device and so conflict with Patent Owner's proposed construction. *See* Pet. Reply 8 (citing Ex. 1001, 6:64–66; Ex. 1034 ¶ 15). Claim 5 further requires "web browsing interaction data" to be information related to shared user input web browsing interactions depicted

in a browser window. Citing Dr. Lieberman's testimony, Petitioner argues that, because the written description indicates more than one device can control a synchronized browsing session (Ex. 1002, 6:64–66), "web browsing interaction data . . . related to shared user input web browsing interactions depicted in a" browser window may be performed by any controlling device and are not limited to interactions performed by a host device. Ex. 1034 ¶ 15; *see* Pet. Reply 8 (citing Ex. 1001, 6:64–66; Ex. 1034 ¶ 15). We credit Dr. Lieberman's testimony that naturally follows from the written description passage on which it relies. Ex. 1034 ¶ 15. Because a strong presumption exists against excluding a disclosed embodiment (here, webpage interactions by any controlling party), we agree with Petitioner that claim 5 undermines Patent Owner's proposed construction limiting "web browsing interaction data" to "data describing interactions performed on a website by a host device." *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011) (As a general rule, "there is a strong presumption against a claim construction that excludes a disclosed embodiment.").

Similarly, claim 8 recites "wherein said web browsing interaction data further comprise a log-in into a restricted access webpage" but does not limit the claim to log-in by a host device. *See* Pet. Reply 8 (citing Ex. 1001, 6:64–66; Ex. 1034 ¶ 15). As such, we also agree with Petitioner that claim 8 undermines Patent Owner's proposed claim construction.

Accordingly, we conclude that the plain language of the claims does not require "web browsing interaction data" to be limited to data describing interaction performed on a website by a host device.

b. No Definition Provided by Written Description

We turn to the specification because the meaning of "web browsing interaction data" is informed "not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. The written description does not provide a definition or clear meaning for "web browsing interaction data." Patent Owner acknowledges the term is not expressly used in the written description. PO Resp. 17. Patent Owner, however, identifies "information related to a shared web browsing interaction" as a term that is interchangeable with "web browsing interaction data." PO Resp. 18, 29.

We recognize the specification term "information related to a shared web browsing interaction" is substantially similar[10] to Petitioner's proposed plain and ordinary meaning of "web browsing interaction data" as "data related to web browsing interactions."[11] Patent Owner identifies three passages that each describe the present invention as receiving information related to a shared web browsing interaction performed by a host device and performing the shared web browsing interaction based on the received information. PO Resp. 17–18 (block quoting Ex. 1001, Abstract, 3:10–24).

The identified passages, however, do not show intention to manifestly limit "web browsing interaction data" to data describing interactions

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[10] We recognize that "shared" is included in the specification phrase but not in Petitioner's proposed plain and ordinary meaning of "web browsing interaction data."

[11] Our analysis does not distinguish the use of the terms "data" and "information." *See* Ex. 2004 ¶ 40 (Patent Owner's expert testifying that "[t]here is no semantic distinction evident in the specification between 'data' and 'information.'"); PO Resp. 18–19 (citing Ex. 2004 ¶ 40).

performed on a website by a host device that does not include the data resulting from the interactions, as Patent Owner proposes. Rather, the quoted portions add qualifications not present in the claims themselves—"receiving information . . . performed by a host device" and "performing the shared web browsing interaction based on the received information." *See, e.g.,* Ex. 1001, Abstract, 3:10–24. In contrast to the identified passages, claim 1 requires operating an application based on the received web browsing interaction data *to access a website server*—not to perform the shared web browsing interaction of the host device. We decline to read the additional requirements related to "information related to a shared web browsing interaction" from the written description into the broad language of the claim 1 without an indication in the specification of such an intent.

Patent Owner cites Mr. Friedman's testimony for support that "information related to a shared web browsing interaction" is interchangeable with "web browsing interaction data" and, as a result, this portion of the specification should limit the claim term. PO Resp. 18–19 (quoting Ex. 2004 ¶ 40). The quoted portion of Mr. Friedman's testimony, however, addresses other terms in the specification and not "information related to a shared web browsing interaction." PO Resp. 18–19 (quoting Ex. 2004 ¶ 40). As such, the testimony cited by Patent Owner does not support Patent Owner's position. Accordingly, we determine that the patentee has not acted as a lexicographer to set forth a definition of "web browsing interaction data" in the written description.

c. Plain and Ordinary Meaning

Because the patentee has not acted as a lexicographer to set forth a definition of "web browsing interaction data," we look to the plain and ordinary meaning of the term. *See Edwards Lifesciences LLC v. Cook Inc.*,

582 F.3d 1322, 1329 (Fed. Cir. 2009) (indicating a definition that is different from the ordinary meaning will be adopted "when the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history" (internal quotation marks omitted)); Pet. Reply 5 (Petitioner arguing that "web browsing interaction data" should be afforded its plain and ordinary meaning) (citing Ex. 1034 ¶ 13).

Notably, both Dr. Lieberman and Mr. Friedman agree that the plain and ordinary meaning of "web browsing interaction data" is sufficient to inform how one of ordinary skill would have understood the term. Ex. 1034 ¶ 13 (Dr. Lieberman testifying: "The plain meaning of 'web browsing interaction data' is data related to web browsing interactions. No additional definition or limitation is required in my opinion, nor is there any special or specific meaning given to the term in the specification of the '145 patent."); Ex. 1033, 171:5–16 (Patent Owner's expert, Mr. Friedman, testifying that "the plain and ordinary meaning is sufficient.").

According to Petitioner, the plain and ordinary meaning is "data related to web browsing interactions." Pet. Reply 5 (citing Ex. 1034 ¶ 13); Ex. 1034 ¶ 13 ("The plain meaning of 'web browsing interaction data' is data related to web browsing interactions."). Patent Owner's expert declined to opine on what the plain and ordinary meaning of "web browsing interaction data" other than it excludes webpages and partially filled webpages related to a web browsing interaction. *See* Ex. 1033, 171:5–16.

Petitioner's proposed meaning reflects the claim language and does not impermissibly import any limitations from the specification or otherwise add requirements. Moreover, as noted above, additionally, the Abstract and written description use the term "information related to a shared web

browsing interaction." Ex. 1001, Abstract, 3:10–24; *see* PO Resp. 17–18 (citing Ex. 1001, Abstract, 3:10–24). This provides further support for Petitioner's similar proposed construction based on the plain and ordinary meaning as "data related to web browsing interactions."

For these reasons, we determine "web browsing interaction data" as used in the claims would be understood by one of ordinary skill as "data related to web browsing interactions," as Petitioner proposes.

d. Allegedly Excludes Data Resulting From Host Device Interactions

This determination of the plain and ordinary meaning, however, does not settle the parties' dispute as to the scope of the claim term "web browsing interaction data." We turn to Patent Owner's contention, which Petitioner opposes, that "web browsing interaction data" excludes the "webpage data returned from the website [that] is the result of interactions performed on a website by a host device." PO Resp. 41; *see* PO Resp. 30–33 (arguing "web browsing interaction data" of the claims does not encompass webpages or partially filled webpages); PO Sur-reply 4 (contending "web browsing interaction data" does not include "webpage data received in response to a web request"); Pet. Reply 5–6 (arguing Patent Owner improperly imports limitations from embodiments in the specification). In its arguments regarding its proposed claim construction, Patent Owner also uses language from an embodiment in Lebrun's disclosure that "web browsing interaction data" does not encompass "webpages" or "partially filled webpages" provided by the synchronization server. We understand this as another way to state Patent Owner's position that "web browsing interaction data" should be construed as "data describing interactions performed on a website by a host device" and "does not include

the data resulting from the interactions." PO Resp. 39, 40, 41; *see* PO Sur-reply 4.

(i) Allegedly Interchangeable with "Webpage Interaction Information" and "WebPage Interactions"

Patent Owner contends that other terms in the written description—"webpage interactions" and "webpage interaction information"—are "interchangeable terms for the 'web browsing interaction data' used in the claims." PO Resp. 18; *see* PO Resp. 17–18 (citing Ex. 1001, 6:66–7:13, 18:35–38, Fig. 5(c) and 5(d), Abstract, 3:10–24); PO Resp. 29 (indicating "the terms—'webpage interactions,' 'webpage interaction information,' and 'information related to a shared web browsing interaction'—are interchangeable with the claim term 'web browsing interaction data'"). Based on this purported interchangeability, Patent Owner argues that the embodiment shown in Figure 5(d) differentiates "webpage interaction information" and "webpage data" and so limits "web browsing interaction data" to exclude webpages or partially filled webpages resulting from interactions performed on a website by a host device. PO Resp. 30–39 (Section arguing "Figure 5(d) makes clear that 'web browsing interaction data' is not the 'webpage data" received in later steps").

We do not agree with Patent Owner that "webpage interactions" and "webpage interaction information" used in the written description are interchangeable with "web browsing interaction data." Turning first to the plain language of the claim, "web browsing interaction data" is different from the written description terms "webpage interaction information" and "webpage interactions." *See* Pet. Reply 7–8. The patentee chose to use "web browsing interaction data" in the claims, and we decline to rewrite the claim language to "webpage interaction information," which is the effect of

Patent Owner's interchangeability argument. *Phillips*, 415 F.3d at 1313 (quoting *Vitronics Corp. v. Conceptronic, Inc.,* 90 F.3d 1576 (Fed.Cir.1996) (indicating "we look to the words of the claims themselves . . . to define the scope of the patented invention").

Additionally, the claim language does not draw the same distinction between "web browsing interaction data" and "webpage data" that would have supported Patent Owner's argument that "webpage interaction information" is interchangeable with "web browsing interaction data."[12] *See* Ex. 1001, Fig. 5(d); PO Resp. 30–39 (Section arguing "Figure 5(d) makes clear that 'web browsing interaction data' is not the 'webpage data" received in later steps"). We agree with Petitioner's expert who testifies that "[a]lthough the specification draws a distinction between the information in a request from the information that results from the request, the claims make no such distinction." Ex. 1034 ¶ 14.

Even if we were to agree that "web browsing interaction data" was interchangeable with "webpage interaction information" and "webpage interactions" as Patent Owner contends, however, we do not agree that the Figure 5(d) embodiments that distinguish "webpage interaction information' and "webpage data" requires "web browsing interaction data" to exclude "data resulting from host device interactions performed on a website" (including webpages or partially filled webpages).

Even a single disclosed embodiment should not be read to limit the claims absent a clear intention expressed in the written description. *Liebel-*

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[12] For example, claim 1 of the related U.S. Patent No. 9,483,448 B2 challenged in IPR2023-00341 recites "webpage content" and "information related to the shared web browsing interaction." *See* IPR2023-00341, Ex. 1001, 23:47, 50–51.

Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906 (Fed. Cir. 2004) ("Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction."). Patent Owner has not identified words or expressions of manifest exclusion or restriction; nor are we aware of any. *See generally* PO Resp. 28–41; *see also* Pet. Reply 6–7 (arguing no clear intention to limit the claims). This distinction of webpage information, however, is not sufficient for us to exclude "webpages or partially filled webpages" from the claim term "web browsing interaction data" that recites "web browsing" and not "webpage."

Additionally, Patent Owner's argument relies on exemplary embodiments in the written description. *See, e.g.,* PO Resp. 33–39 (Section titled "Figure 5(d) Makes Clear that "Web Browsing Interaction Data" is Not the "Webpage Data" Received in Later Steps"). Patent Owner's expert and Petitioner's expert each recognizes that these figures are not limiting embodiments. Ex. 1033, 95:2–12, 179:13–180:4 (Patent Owner's expert agreeing that Figs. 5(a), 5(c), and 5(d) are exemplary and not limiting embodiments); Ex. 1034 ¶ 14 (Petitioner's expert so testifying); *see* Pet. Reply 6–7 (citing Ex. 1033, 95:2–12, 179:13–180:4). We decline to limit a claim term based on a written description embodiment that is an example not intended to be limiting.

Moreover, the specification itself expressly indicates that the scope of the invention is not to be limited by the "detailed description" but only by the claim language. Ex. 1001, 22:56–60 ("It is intended that the scope of the invention not be limited by this detailed description, but by the claims and the equivalents to the claims."); *see also* Ex. 1001, 5:19–21 ("It is to be

understood that other embodiments may be utilized and changes may be made without departing from the scope of the present invention."). Here, too, we would be remiss to ignore the express intention of the patentee as stated in the specification.

Patent Owner relies on its expert's testimony that "web browsing interaction data" "cannot include the webpage data that is sent by a website server in response to a web request sent by the claimed guest device to that website server, because the specification distinguishes the request from the response." PO Resp. 41 (quoting Ex. 2004 ¶ 45); *see* PO Resp. 41 (citing Ex. 2004 ¶¶ 36–45). We give that testimony little weight, however, because it is premised on "webpage interaction information" being interchangeable with the broader claim term "web browsing interaction data" (Ex. 2004 ¶ 45) and also is based on exemplary, non-limiting embodiments in the written description limiting the claim term (Ex. 2004 ¶¶ 36–45). Rather, as noted earlier, we agree with Petitioner's expert who testifies that "[a]lthough the specification draws a distinction between the information in a request from the information that results from the request, the claims make no such distinction." Ex. 1034 ¶ 14.

(ii) Written Description

To be sure, the claim term "web browsing interaction data" must be construed to implement the invention described in the specification. *See Phillips,* 415 F.3d at 1316 ("The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction."). Claim 1 broadly recites "receiving web browsing interaction data" that "is associated with a website server . . . and the host device that has initiated the session invitation" and uses that data "to access a website server independent of the

synchronization server." *See* Pet. Reply 7–8 (quoting Dec. 26). This breadth is reflected in the written description, which states

> [i]n exemplary embodiments of the present invention, a variety of internet content and media may be shared between attendees of a synchronized browsing session. . . . [A]ny form of web-based content may be activated by a leading device[13] to be relayed by synchronization server 13, and on to following devices[14] within the synchronized browsing session.

Ex. 1001, 8:31–38. As such, exemplary embodiments include relaying web-based content activated by a host device, relayed to the synchronization server, and then to the guest device. These broad statements describing relayed web-based content undermine Patent Owner's position that "web browsing interaction data" precludes webpages, partially filled webpages, or other webpage content included in a webpage content reply returned from the website server. *See* Ex. 1001, 19:28–32 (describing website content reply in steps 603 and 604); PO Resp. 30–39. This passage also undermines Mr. Friedman's testimony that "there is no written description in the specification to support a claim scope for 'web browsing interaction data' that includes webpage data sent in response from a web server." Ex. 2004 ¶ 45; *see* PO Resp. 41 (citing Ex. 2004 ¶ 45).

Additionally, the specification includes two embodiments of synchronized browsing sessions that include viewing web pages and communicating URLs of the viewed webpages. In one example, "website information sent from host device 10 include[s] a URL comprising http://www.uspto.gov." Ex. 1001, 9:66–67. In another example, the synchronization server forwards to the guest device a communication

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[13] A host device is an example of a leading device. Ex. 1001, 6:66–7:2.
[14] A guest device is an example of a following device. Ex. 1001, 7:8–10.

message 64 that includes "the URL address of website server 12," which is used to formulate a request to be sent to the website server 12. Ex. 1001, Fig. 5(a), 15:66–16:3, 16:42–47, 16:65–17:6 (describing a synchronized browsing session involving the United States Patent and Trademark Office ("USPTO") webpage). These examples bolster our conclusion that the scope of "web browsing interaction data" includes webpages or partially filled webpages.

To the extent that Patent Owner argues that "web browsing interaction data" does not include webpage content including a URL identifying a webpage,[15] we disagree for the reasons discussed above and also because the written description includes various examples that identify a URL as an example of information communicated in messages during a synchronized browsing session. *See, e.g.,* Ex. 1001, 19:19–65.

Additionally, Patent Owner relies on other portions of the written description that describe a synchronized browsing session in which the guest device mimics the web browsing interactions performed by the host device. PO Resp. 39–40 (citing Ex. 1001, 3:10–16, Abstract, 3:10–24, 6:62–7:4, 7:66–8:5, Figs. 5(a), Fig. 5(d)). We do not agree that "web browsing interaction data" should be limited based on non-limiting, exemplary embodiments or statements that do not show manifest intent to exclude or restrict the claim language of "web browsing interaction data."

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[15] During oral argument, Patent Owner's counsel indicated that sending a URL itself without any other information describing the web browsing interaction would not be sufficient to be "web browsing interaction data." Tr. 103:10–15. Rather, "web browsing interaction data" is "the information necessary to perform the same web browsing interaction on the guest device." Tr. 103:3–4.

Patent Owner is correct that the written description describes in various figures how messages may be sent among a website server, a host device, a synchronization server, and a guest device during a synchronized browsing session. *See, e.g.,* Ex. 1001, Figs. 5(a)–5(d). Claim 1, however, does not recite the specific architecture and process argued by Patent Owner. *See, e.g.,* PO Resp. 16–28 (Section titled "The Method by Which the 'Synchronization Server' Established and Facilitates a "Synchronized Browsing Session' Among a 'Host Device' and a 'Guest Device'"). For example, claim 1 does not recite replicating actions of the host, receiving information about webpage interactions performed by the host device, transmitting a request to the website server utilizing the received interaction information, or receiving webpage data from webpage server. Rather, claim 1 broadly recites "receiving web browsing interaction data" that "is associated with a website server . . . and the host device that has initiated the session invitation" and using that data "to access a website server independent of the synchronization server."

Accordingly, we do not agree with Patent Owner that "web browsing interaction data" excludes "data resulting from host device interactions performed on a website" (including webpages or partially filled webpages).

(iii) Efficiency Required by Invention

Patent Owner also contends that the written description statement that "utilization of the present invention does not materially impose more bandwidth or processing power requirements than simply browsing the internet using standard, conventional methods" (Ex. 1001, 5:33–36) precludes "web browsing interaction data" from including "webpages or partially filled webpages related to a web browsing interaction." PO Sur-reply 5–6 (citing *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d

1295, 1308 (Fed. Cir. 2007)). Patent Owner argues that such a requirement means that "only conventional web requests are used" and "no webpage data is included with the 'web browsing interaction data.'" PO Sur-reply 5. For support, Patent Owner describes a scenario in which webpage data is sent from the synchronization server to the guest device (limitation [1c]) and then then used to access a website server (limitation [1d]). Patent Owner contends that this scenario results in "an extra transmission of the webpage data," which "would impose materially more bandwidth and processing power requirements than simply browsing the internet using standard, conventional methods, and therefore would be ***inconsistent*** with the 'present invention.'" PO Sur-reply 6.

In other words, Patent Owner's scenario transmits the same webpage data twice—once from the synchronization server to the guest device (to meet limitation [1c]) and once from the guest device to the website server (to meet limitation [1d]). We disagree that this specific scenario precludes "web browsing interaction data" from including webpages or partially filled webpages related to a web browsing interaction. For example, a partially filled web page that does not include multimedia elements may be sent by a synchronization server to the guest device (to meet limitation [1c]) and then used by the guest device to access the website server to directly request the multimedia elements from the website server (to meet limitation [1d]).[16] This does not result in an extra or duplicate transmission of the webpage from the guest device to the web server as Patent Owner hypothesizes in its scenario.

[16] Lebrun describes such a scenario. *See* Ex.1005, 45:29–46:5.

Accordingly, we do not agree that efficiency statements in the specification preclude the recited "web browsing interaction data" from including webpages or partially filled webpages related to a web browsing interaction.

(iv) Conclusion

In conclusion, we agree with Petitioner and determine that the claim term "web browsing interaction data" includes "data resulting from host device interactions performed on a website" (including webpages or partially filled webpages).[17]

We agree with Patent Owner's expert, however, that webpage interaction information described in the written description would be encompassed within the claim term "web browsing interaction data." Ex. 2004 ¶ 40 (testifying that "'webpage interaction information' . . . corresponds to the claimed "web browsing interaction data" and "a webpage interaction is a web browsing interaction, and webpage interaction information is web browsing interaction data"); *see* PO Resp. 18–19 (citing Ex. 2004 ¶ 40). This is because, as a general rule, "there is a strong presumption against a claim construction that excludes a disclosed embodiment." *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (noting that a claim construction excluding a preferred embodiment "is rarely, if ever, correct").

[17] Although the prosecution history of the challenged patent is in evidence (Ex. 1002), neither Patent Owner nor Petitioner has argued its relevance to claim construction.

e. Claim Construction of "web browsing interaction data"

In summary, although we recognize that the exemplary embodiments in the written description of the challenged patent operate in the manner Patent Owner describes (*see, e.g.,* PO Resp. 12–28), the written description does not use the term "web browsing interaction data" or even "information related to a shared web browsing interaction" when describing the exemplary embodiments. Particularly in light of the breadth of the claim language, the written description statements of relaying "any form of web-based content" to the guest device (Ex. 1001, 8:31–38), and statements indicating the claims are not to be limited by the embodiments (*id.* at 22:52–60), we decline to limit the claims by those exemplary embodiments.

Accordingly, for the reasons set forth above, and having considered the arguments and evidence of record, we conclude "web browsing interaction data" as used in the challenged claims would have been understood by one of ordinary skill in light of the specification as data related to web browsing interactions. Additionally, we conclude "web browsing interaction data" as used in the claims (i) encompasses (but is not limited to) data resulting from host device interactions performed on a website (including webpages and partially filled webpages related to web browsing interactions) and (ii) encompasses (but is not limited to) data describing interactions performed on a website by a host device.

2. Guest device replaying host device interactions

Patent Owner contends that the challenged claims require a particular manner of achieving the claimed synchronized browsing sessions:

> Pursuant to the claims of the '145 Patent, the "synchronized browsing sessions" of the inventions are achieved by transmitting "web browsing interaction data" from a host

> device to a "synchronization server." The "synchronization server" then transmits the "web browsing interaction data" to a "guest device." The "guest device" uses the received "web browsing interaction data" to perform the same web browsing interactions that the host device performed. As a result, the "host device" and the "guest device" are synchronously sharing the same web browsing experiences in real time, *i.e.*, the devices are participating in a "synchronized browsing session."
>
> Importantly, according to these claimed steps, the "synchronization server" relays the "web browsing interaction data" from the "host device" to the "guest device." It is thus the "host device" and the "guest device" that transmit requests for webpage data from a website server, and it is the website server that transmits the requested webpage data to the "host device" and to the "guest device."

PO Resp. 1–2; *see, e.g.,* PO Resp. 19–23 (contending the specification description with respect to Fig. 5(a) is required by claim 1). Similarly, Patent Owner contends that the challenged claims require the lightweight architecture of the written description that enables the guest device to execute similar messages to those used by the host device for web browsing and so replay host web browsing interactions. PO Resp. 27–32 (arguing "[i]n a 'synchronized browsing session,' the 'guest device' mimics the web browsing interactions performed by the 'host device'" in a particular manner). Petitioner disagrees that the claims are limited to the specific architecture and steps of the written description. Pet. Reply 7–8.

Patent Owner argues with particularity the language recited in claim 1 in support of its position that the claims require the particular manner described by the written description. *See, e.g.,* PO Resp. 12–28. Patent Owner also contends that independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9." PO Resp. 12.

We generally agree with Patent Owner that claim 1 is "directed to a "synchronized browsing session' using a 'synchronization server,' 'web browsing interaction data,' and a 'guest device' that uses the 'web browsing interaction data" to access a 'website server.'"[18] PO Resp. 11; *see* Ex. 1001, 22:62–64 (preamble), 23:11–15 (limitation [1d]). We also agree with Patent Owner that claim 1 describes a method by which "the 'guest device' joins a 'synchronized browsing session' that is administered by a 'synchronization server'" according to the recited steps. PO Resp. 12; *see* Ex. 1001, 22:62–64 (preamble).

The plain language of claim 1, however, does not recite the specific architecture shown in Figures 1(a) or 5(a)–5(d) or recite the specific steps of the guest device replaying the host device web browsing interactions by executing similar messages that Patent Owner identifies. *See, e.g.,* PO Resp. 12–28. To be sure, claim 1 is directed to a method "performed by a guest device for joining a synchronized browsing session administered by a synchronization server" that includes receiving and activating a session invitation to join a synchronized browsing session (limitations [1a] and [1b]). Further with regard to the synchronized browsing session, claim 1 recites two broad steps—receiving web browsing interaction data from the synchronization server (limitation [1c]) and "operating an application based on said web browsing interaction data . . . to access a website server independent of the synchronization server" (limitation [1d]).

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[18] More precisely, claim 1 recites "*operating an application based on said web browsing interaction data* received from said synchronization server *to access a website server* independent of the synchronization server subsequent to the activation of the session invitation." Ex. 1001, 23:11–15 (emphasis added). Claim 1 does not recite *using* web browsing interaction data to access a website server.

The plain language of claim 1 does not require the guest device (i) to use the received "web browsing interaction data" to perform the same web browsing interactions that the host device performed, (ii) to synchronously share the same web browsing experiences in real time with the host device, (iii) to transmit a request for webpage data from a website server, or (iv) to receive the requested webpage data from the website server. *See* PO Resp. 1–2 (contending claim 1 requires those steps). Patent Owner attempts to address this gap between the specification descriptions and the language of the claims in a variety of ways, which we address below. PO Resp. 1–41; PO Sur-reply 1–12.

a. Recited devices: "guest device," "host device," and "synchronization server"

Claim 1 recites three devices—a guest device, a host device, and a synchronization server. As Patent Owner argues, claim 1 requires the guest device to receive "web browsing interaction data" from the synchronization server and operate an application based on the "web browsing interaction data" to access a web server. PO Resp. 13; *see* Ex. 1001, 23:4–15.[19] Furthermore, we agree with Patent Owner that the host device recited in claim 1 is the device "that has initiated the session invitation" received by the guest device. PO Resp. 13; *see* Ex. 1001, 23:9–10. Notably absent is

[19] Patent Owner cites a portion of the Institution Decision summary of the written description of the challenged patent apparently in support of how the guest device operates. PO Resp. 13–14 (citing Institution Decision, 5 ("Guest device 14 uses the communication message to send website request 65 to website server 12. Ex. 1001, 16:67–17:4.")). The context of the Institution Decision portion cited by Patent Owner, however, is the summary of the written description and does not refer to the scope of claim 1. *See* Institution Decision 3–7 (describing the written description of the challenged patent).

any language regarding the host device performing any web browsing interactions or the guest device performing the same web browsing interactions that the host device performed.

Patent Owner points out various descriptions of the host and guest devices related to Figure 1(a). PO Resp. 13–14 (citing Ex. 1001, 6:14–16, 6:66–7:13, 6:19–22, 6:29–32, Fig. 1(a)). To the extent that Patent Owner implies that this description somehow limits claim 1 to the particular embodiment in which "the host device shares webpage interactions with the guest device via the synchronization server," we disagree. PO Resp. 14 (quoting Ex. 1001, 6:66–7:13) (internal quotations omitted). To be sure, we agree that claim 1 encompasses this embodiment. *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011) (indicating "there is a strong presumption against a claim construction that excludes a disclosed embodiment").

We do not agree, however, that claim 1 requires the host device to share webpage interactions with the guest device via the synchronization server in the manner described with respect to Figure 1(a). Rather, the written description indicates that Figure 1(a) is "an exemplary embodiment of the present invention" and identifies "alternative embodiments of the present invention" in which a synchronized browsing session is conducted by more than one device. Ex. 1001, 6:1–3, 6:62–7:30. Moreover, the written description expressly indicates that the scope of the invention is not to be limited by the written description but only by the claim language. Ex. 1001, 22:50–60. This further disfavors limiting the claim language by any particular embodiment.

Patent Owner also contends that the "synchronized browsing session" recited in claim 1 requires a host device to share its internet browsing

interactions with a website with a guest device via the synchronization server in a simultaneous fashion as described by the written description. PO Resp. 15 (citing Ex. 1001, 2:44–53, 5:22–23, 5:37–67). We do not agree that the term "synchronized browsing session" in the preamble narrows claim 1 to the particular embodiments in the written description. As noted above, the language of claim 1 itself merely requires the host device be the device "that has initiated the session invitation" received by the guest device. Moreover, also as noted above, the written description expressly indicates that the scope of the invention is not to be limited by the written description. Ex. 1001, 22:50–60.

Turning to the "synchronization server" recited in claim 1, the synchronization server administers the synchronized browsing session according to the recited method steps. Ex. 1001, 22:62–64; *see* PO Resp. 15 (indicating "[t]he manner in which the 'synchronization server' establishes and facilitates a 'synchronized browsing session' among a 'host device' and a 'guest device' is set forth in the steps of exemplary claim 1"). Those steps recite that the guest device receives a session invitation from the synchronization server (limitation [1a]), sends to the synchronization server a request to join the synchronized browsing session (limitation [1b]), and receives "web browsing interaction data" from the synchronization server (limitation [1c]). *See* PO Resp. 16–17. The plain language, however, does not require the guest device to replay web browsing interactions of the host device by executing similar message.

In sum, the devices recited in claim 1—the host device, the guest device, and the synchronization server—do not limit claim 1 to the particular manner of synchronized browsing as Patent Owner contends—the guest device replaying the host device web browsing interactions by executing

similar messages. To be sure, however, the claims are not untethered from the written description but must be read in light of the specification. Given the broad language of the claims and the non-limiting express statements in the written description, however, there is no basis for limiting the guest device, host device, or synchronization server of claim 1 to the specific architecture of replaying the host web browsing interaction. Patent Owner does not argue with particularity language in claims other than claim 1.

b. Recited method steps

We turn to the steps performed by the method recited in claim 1 to determine whether these steps require the particular manner of synchronized browsing asserted by Patent Owner.

We agree with Patent Owner that the first two steps relate to receiving and activating a session invitation (limitations [1a] and [1b]) and the guest device receives "web browsing interaction data" from the synchronization server in the third recited step (limitation [1c]). PO Resp. 16. None of these recited steps require synchronized browsing limited to the guest device replaying the host device web browsing interactions by executing similar messages.

Patent Owner describes in detail how the written description describes host device 10, website server 12, synchronization server 12, and guest device 14 transmitting data communication for the synchronized browsing session as illustrated in Figure 5(a). PO Resp. 19–23. To the extent that Patent Owner means by this discussion that the recited steps are limited by the written description, we disagree. To be clear, we agree that the steps of claim 1 would encompass this embodiment, but we do not agree that the written description limits the recited steps to the steps described with respect to Figure 5(a). The written description expressly indicates that Figure 5(a)

illustrates "*exemplary data communication* transferred between components of the present invention during a synchronized browsing session" and further indicates that the invention is not to be limited to the described embodiments. Ex. 1001, 15:53–55 (emphasis added), 22:50–60.

Claim 1 also recites "*operating an application based on* said web browsing interaction data received from said synchronization server *to access a website server* independent of the synchronization server subsequent to the activation of the session invitation" (limitation [1d]). Ex. 1001, 23:11–15. We note that this limitation does not require a particular method of operating an application to access a website server other than doing so "based on" the received web browsing interaction data and doing so "subsequent to the activation of the session invitation."

For this limitation, Patent Owner describes in detail the written description of "communication message 64" being used by the guest device to formulate a website request to mimic the web browsing interactions by the host device. PO Resp. 24–28 (discussing Fig. 5(a)). Here, too, for the reasons noted above, we agree that limitation [1d] would encompass the embodiment described by Patent Owner, but we do not agree that limitation [1d] is limited to that particular embodiment.

c. Determination pursuant to 35 U.S.C.§ 101

Patent Owner also points to the Southern District of California Court determination that the claims of the '145 patent are not directed to an abstract idea because the claims offer a specific technological solution—use of a synchronization server—to address identified problems of bandwidth and processing issues of the prior art. PO Resp. 42 (citing Ex. 2005).

Patent Owner, however, does not explain how this determination that the claims are directed to patentable subject matter pursuant to 35 U.S.C.

§ 101 supports Patent Owner's position that the claims require the particular manner of synchronized browsing described with respect to Figure 5(a) or otherwise require the guest device to replay host device interactions by executing similar messages sent to the web site server. PO Resp. 42. In its Sur-reply, Patent Owner relies on the District Court's decision to support its contention that the preamble of claim 1 is limiting and therefore the claims require "sharing internet browsing 'in real time' and in a 'simultaneous fashion from different devices and/or locations.'" PO Sur-reply 8–9.

The District Court, however, did not find the claims require "in real time" or in a "simultaneous fashion from different devices and/or locations." *See* Ex. 2005, 10:5–15; *see* PO Sur-reply 7 (quoting Ex. 2005, 10:5–7), PO Sur-reply 8 (quoting Ex. 2005, 10:5–15). Rather, the District Court concluded

> the asserted claims are specifically directed to performing a synchronized browsing session between two electronic devices (a host device and a guest/invitee device) via a synchronized server. . . . The body of independent claim 1 [of the '591 patent] then provides the method steps for performing this synchronized browsing session via a synchronized server, a host device, and a guest device.

Ex. 2005, 10:5–15.

We also note that the portion of the decision quoted by Patent Owner relies on the use of claim 1 of the '591 patent as a representative claim for its §101 analysis, which is not a claim at issue here. Ex. 2005, 7:12–28 (discussing use of representative claim). In contrast, claim 1 here is directed to a method performed by a guest device for joining a synchronized browsing session administered by a synchronization server and only recites that the host device "has initiated the session invitation" received by the guest device. Ex. 1001, 22:62–64, 23:9–10; *see also* Ex. 1001, 23:37–39

(claim 9 recites "[a] guest device for performing a synchronized browsing session administered by a synchronization server"). Accordingly, we do not agree that the claims at issue here are directed to "the method steps for performing this synchronized browsing session via a synchronized server, a host device, and a guest device," as Patent Owner contends. PO Sur-reply 8 (quoting Ex. 2005, 10:5–15).

d. Claims do not require the particular method described in the Specification

In sum, the plain language of claim 1 does not require the guest device to operate in the particular manner described in the written description with regard to Figures 1(a) or 5(a) or elsewhere, as Patent Owner contends. Nor is there evidence in the written description that the claims should be so limited. Rather, the written description expressly describes the portions cited by Patent Owner as exemplary embodiments and the written description itself indicates that the claims are to be limited by their language and not the written description. *See* Ex. 1001, 6:1–3, 15:53–55, 22:50–60.

Accordingly, we do not agree that claim 1 requires "the guest device to make its own request to the web server to thereby independently replicate the host's web browsing interactions in real time." PO Sur-reply 1. Rather, for the reasons discussed above, we agree with Petitioner's position that the claim language is not limited to the particular descriptions in the specification on which Patent Owner relies. Pet. Reply 7; *see also* Pet. Reply 6–9.[20]

[20] Petitioner's position is consistent with the Institution Decision that claim 1 is not limited to the "specific architecture and the precise detailed process described in portions of the specification cited by Patent Owner" in its Preliminary Response. Pet. Reply 7–8 (quoting Dec. 26, 31).

3. Other Claim Terms

In addition, we discuss claim interpretation to the extent it is necessary in the context of analyzing the asserted grounds.

E. Asserted Obviousness of Claims 1–18 over Lebrun and Wang

Petitioner asserts that claims 1–18 would have been obvious under 35 U.S.C. § 103 based on the combined teachings of Lebrun and Wang.

1. Independent Claim 1

Petitioner relies on specific passages in Lebrun and Wang as disclosing or suggesting the limitations recited by independent claim 1 and declaration testimony of Dr. Lieberman for support. Pet. 22–34. In general, Petitioner relies on descriptions in Lebrun for most limitations recited in claim 1. Pet. 22–34. Petitioner additionally relies on Wang's techniques for acknowledging an invitation sent through electronic mail to a shopping session. *See* Pet. 26–28. Petitioner further relies on declaration testimony of Dr. Lieberman regarding Petitioner's proposed combination. Pet. 19–20 (citing Ex. 1003 ¶¶ 154–57); Pet. 28 (citing Ex. 1003 ¶¶182–84).

a. Preamble

Claim 1's preamble recites "[a] method performed by a guest device for joining a synchronized browsing session administered by a synchronization server." Petitioner relies on Lebrun's group surfing session created by group surfing server 140 for disclosing a synchronized browsing session administered by a synchronization server recited in claim 1. *See* Pet. 22–23 (citing Ex. 1005, 32:9–11, 32:11–12). Petitioner relies on Lebrun's web client that adds itself to the group-surfing session for teaching a guest device that joins the browsing session as required by the claim. *See* Pet. 23 (citing Ex. 1005, 32:9–11, 11–12, 26–31; 33:2–4; 30:19–24; 44:21–

27; Fig. 4 (step 212)). Petitioner does not take a position whether the preamble is limiting but contends Lebrun discloses the preamble. Pet. 22–23.

Patent Owner argues that the preamble is limiting because "the reference to a 'synchronized browsing session' and 'synchronization server' in the preamble provide antecedent basis for the same terms in" limitations [1a] and [1b]. PO Sur-reply 8–9 (citing *In re Fought*, 941 F.3d 1175, 1178 (Fed. Cir. 2019)). Patent Owner further contends that "synchronized browsing session" requires doing so between a host device and guest device "in a simultaneous real-time fashion" and "in a *simultaneous fashion* from different devices and/or locations." PO Resp. 15 (citing Ex. 1001, 2:44–53, 5:22–23, 5:37–67).

As an initial matter, we note that the preamble recites "[a] method performed by a guest device *for joining a synchronized browsing session* administered by a synchronization server." Even setting aside the language in the preamble of *joining* a synchronized browsing session, we find that Lebrun's collaborative web browsing system meets the "synchronized browsing session" requirement of claim 1. Lebrun identifies the problem being addressed as "providing, for a group of related users *simultaneous access* to a sequence of web sites" and presenting techniques enabling "multiple related users [to be able to] *simultaneously access a sequence of web sites* (web surfing), such that each of the related users *has substantially the same content presented at the same times*." Ex. 1005, 4:1–4, 4:6–9 (emphases added); *see* Pet. 13 (quoting Ex. 1005, 4:1–4, 4:6–11; citing Ex. 1005, 4:14–20); *see also* Ex. 1005, 7:3–4 (similarly stating "[m]ultiple related users can simultaneously access a sequence of web sites, such that

each of the related users has substantially the same content presented at the same times").

What naturally follows from Lebrun's teaching of a synchronized browsing session that provides "simultaneous access . . . such that each of the related users has substantially the same content presented at the same times" is that Lebrun's group-surfing server of Lebrun's collaborative web browsing system that participates as required in the steps recited in claim 1 (as further described below) meets the claim requirements of simultaneous access and administration as a "synchronization server." *See, e.g.,* PO Resp. 15. In that Lebrun describes "each of the related users has substantially the same content presented at the same times," we do not agree with Patent Owner that Lebrun does not disclose or suggest "simultaneous browsing from different devices and/or locations." *See* PO Resp. 15.

Accordingly, to the extent that the preamble may be limiting, we find that Lebrun discloses or suggests these features.

b. Limitation [1a]

For "receiving from the synchronization server a session invitation including a session identifier associated with a host device" (Limitation [1a] or "the receiving limitation"), Petitioner relies on Lebrun's description of group-surfing server informing the web client participants in the group-surfing session for disclosing the guest device receives a session invitation from the synchronization server. *See* Pet. 24 (citing Ex. 1005, 32:26–28); *see also* Pet. 23 (citing Ex. 1005, 32:3–7). For the recited host device, Petitioner relies on Lebrun's first web client 110 that sends the session-creation message 151 to the group surfing server 140. *See* Pet. 24 (citing Ex. 1005, 32:9–11). For the "session invitation associated with a host device," Petitioner notes that session-creation message 151 sent to the

group-surfing server 140 to request the creation of the session "includes an identifier for the group-surfing session, so that other web clients 110 can add themselves to that session" and the group-surfing server assigns the identifier in a reply message to session-creation message 151. Pet. 24 (citing Ex. 1005, 32:9–14). According to Petitioner, the action of the group-surfing server assigning the identifier discloses or suggests including an identifier associated with the host device in the session invitation. Pet. 25.

Patent Owner argues that Lebrun fails to teach or suggest this limitation because Lebrun does not, according to Patent Owner, teach or suggest the synchronization server as required by limitations [1c] and [1d]. PO Resp. 53. Patent Owner does not provide particular arguments regarding the other requirements recited by this limitation.

As discussed above, Lebrun's group-surfing server responds to receiving a session-creation message 151 from the first web client (corresponding to the recited host device) by "(1) creating a group-surfing session, and (2) informing the participants in the group-surfing session." Ex. 1005, 32:26–28; *see* Pet. 24 (quoting Ex. 1005, 32:26–28). In describing "creating a group-surfing session," Lebrun describes using a session-creation message 151 and a session-join message 151 to communicate between web clients and the group-surfing server. Ex. 1005, 32:1–33:10. We find Lebrun description of the group-surfing server informing the web client participants in the group-surfing session discloses or suggests the group-surfing server sending a message to a web client to join the group-surfing session. Ex. 1005, 32:26–28. Accordingly, we find that Lebrun discloses or suggests a guest device "receiving from the synchronization server a session invitation."

Our finding is bolstered by Dr. Lieberman's testimony that "[a] POSITA would have recognized and found obvious that the 'other web clients 110' being informed by the 'group-surfing server' of the 'group-surfing session" comprises receiving from the synchronization server a session invitation." Ex. 1003 ¶ 169; *see* Pet. 24 (quoting Ex. 1005, 32:26–28). Dr. Lieberman's testimony naturally follows from Lebrun's unambiguous description of 'informing participants" and Lebrun's context of using messages to communicate between the group-surfing server and web clients to create a group-surfing session. *See* Ex. 1005, 32:3–31 (describing "creating a group-surfing session" using a session-creation message 151 and a session-join message 151); Ex. 1005 33:2–4 ("To add itself to the session, a second (or further) web client 110 sends a session-join message 151 to the group-surfing server 140.").

We also find that Lebrun discloses or suggests that the "session invitation includ[es] a session identifier associated with a host device." The session-creation message 151 sent by the first web client 110 to the group-surfing server 140 to create the group-surfing session "includes an identifier for the group-surfing session, so that other web clients 110 can add themselves to that session." Ex. 1005, 32:9–12; Pet. 24 (quoting Ex. 1005, 32:9–12). Because the identifier for the group-surfing server session is included in the first web client's request, this session identifier discloses or suggests a session identifier that is associated with the first web client 110 that initiated the session (corresponding to the recited host device). Because the identifier can be used by other web clients 110 to add themselves to the session, Lebrun teaches or suggests the message inviting the other web clients 110 includes the session identifier. *See also* Ex. 1005, 33:2–4 (describing that the session-join message 151 sent by the second (or further)

web client to add itself to the session includes "the identifier for the group-surfing session").

For these reasons, we find that Lebrun discloses or suggests "receiving from the synchronization server a session invitation including a session identifier associated with a host device" (limitation [1a]).

c. Limitation [1b]

For "activating the session invitation to send a request to join said synchronized browsing session to said synchronization server" (limitation [1b] or "the activating limitation"), Petitioner relies on a combination of Lebrun and Wang. Pet. 25–28. Patent Owner argues that Lebrun fails to teach or suggest this limitation because Lebrun does not, according to Patent Owner, teach or suggest the synchronization server as required by limitations [1c] and [1d]. PO Resp. 53. Patent Owner does not provide particular arguments regarding the other requirements recited by this limitation.

As discussed above, Lebrun describes that the second or other client device (corresponding to the recited guest device) "add[s] itself to the session" by sending a session-join message 151 to the group-surfing server 140. Ex. 1005, 33:2–7; *see* Pet. 25–26 (citing Ex. 1005, 33:2–3, 44:21–27, 32:13–14, 32:3–7, 32:21–24). Based on this unambiguous description, we find that Lebrun discloses or suggests the guest device sending a request to join the synchronized browsing session to the synchronization server.

Petitioner additionally relies on Wang's description of a second client device accessing a URL address provided by the server apparatus as disclosing "activating the session invitation," as recited in claim 1. Pet. 26–27 (citing Ex. 1006 ¶¶ 47–49). We agree with Petitioner that Wang discloses activating the session invitation as required in claim 1. Wang's

unambiguous description of messages between the server apparatus and second client device shown in Figure 3 (as summarized above in Section II.B.2) discloses the second device sending an access notice and login request to the server apparatus, which subsequently establishes the group session.

For these reasons, we find that Petitioner's combination of Lebrun and Wang discloses or suggests this limitation.

d. Limitations [1c] and [1d]

Claim 1 recites "receiving web browsing interaction data from said synchronization server, wherein said web browsing interaction data is associated with: a website server that is independent of the synchronization server, and the host device that has initiated the session invitation" (Limitation [1c] or "the receiving web browsing interaction data limitation"). Claim 1 also recites "operating an application based on said web browsing interaction data received from said synchronization server to access a website server independent of the synchronization server subsequent to the activation of the session invitation" (Limitation [1d]).

Each of limitations [1c] and [1d] recites "web browsing interaction data." As explained in Section II.D.1, "web browsing interaction data" would have been understood by one of ordinary skill as data related to browsing interactions, which encompasses (but is not limited to) webpages and partially filled webpages related to web browsing interactions, and encompasses (but is not limited to) data describing interactions performed on a website by a host device.

(i) Petitioner's contentions

For the recited "web browsing interaction data," Petitioner relies on web pages delivered to web clients participating in the group-surfing session, the program fragment used to present the web pages, and HTML form information. Pet. 29–30 (citing Ex. 1003 ¶ 189; indicating "that the web pages delivered in the group-surfing session to the web clients for display, the web clients using a program fragment to present web pages and HTML form information meets" the limitation "receiving web browsing interaction data from said synchronization server"); Pet. 31 (indicating "the web interaction data identified above—the web pages displayed on the web clients that come from the web site"). As Dr. Lieberman testifies, each of Lebrun's examples of web pages, program fragment, and HTML form information meets the recited "web browsing interaction data." Ex. 1003 ¶ 189.

Petitioner relies on Lebrun's preferred embodiment in which the group-surfing server (corresponding to the recited synchronization server) "sends the web page 153 itself without any multimedia elements (such as embedded sound, images, or program fragments)" and each participating web client 110 (corresponding to the recited guest device) "requests those multimedia elements directly from the web site 130." Ex. 1005, 45:29–46:2); Pet. 32–34 (quoting Ex. 1005, 45:31–32, 46:1–2). According to the Petitioner, the web client receiving the web page itself from the group-surfing server discloses or suggests limitation [1c], whereas the web client requesting the multimedia elements directly from the web site discloses or suggests limitation [1d]. *See* Pet. 28–34. Petitioner additionally relies on Lebrun's description that web clients include software such as "Netscape Navigator" and "Internet Explorer" and Dr. Lieberman's testimony to

support Petitioner's contention that the web clients operate "a common internet browser application." Pet. 33 (quoting Ex. 1005, 66:9–12; citing Ex. 1003, ¶¶ 201–02).

(ii) Patent Owner's contentions

Patent Owner contends that Lebrun does not disclose or suggest the web browsing interaction data, the synchronization server, or that the guest device receives and uses web browsing interaction data. PO Resp. 43–53. Patent Owner, however, acknowledges Lebrun discloses "the group-surfing server 140 re-sending a partial webpage 153 to those web clients 110 participating in the session and the web clients requesting the multimedia elements directly from the website." PO Resp. 50; *see* PO Resp. 46 (quoting Ex. 1005, 45:31–46:3). Lebrun does so, as discussed above, to "provid[e], for a group of related users *simultaneous access* to a sequence of web sites" and presenting techniques enabling "multiple related users can *simultaneously access a sequence of web sites* (web surfing), such that each of the related users *has substantially the same content presented at the same times*." Ex. 1005, 4:1–4, 4:6–9 (emphases added); *see* Pet. 13 (quoting Ex. 1005, 4:1–4, 4:6–11; citing Ex. 1005, 4:14–20). As discussed in more detail below, Patent Owner's contentions conflict with Lebrun's disclosure.

Many of Patent Owner's arguments are predicated on its improperly narrow construction of "web browsing interaction data." *See, e.g.,* PO Resp. 51 (arguing webpages including "those which contain removed multimedia elements" are not the recited "web browsing interaction data"); PO Resp. 51 (arguing "responsive web page data is forwarded" to the guest device and not "web browsing interaction data"); PO Resp. 52 (arguing "partial webpages (those which contain removed multimedia elements . . . do not satisfy the claimed 'web browsing interaction data'"). Patent Owner

additionally argues that, because Lebrun's web clients do not receive "web browsing interaction data" from the group-surfing server, Lebrun's group-surfing server "is not a 'synchronization server'" as required by limitations [1a]–[1d]. PO Resp. 53. For the reasons explained in Section II.D.1, we do not agree with Patent Owner's narrow construction and, therefore, we do not agree with Patent Owner's contentions that Lebrun does not disclose or suggest limitations [1c] and [1d] on that basis.

In its Sur-reply, Patent Owner contends that Petitioner did not include in its Petition the argument that the partially filled webpage without multimedia elements meets limitation [1c] and only relied on the partially filled webpage embodiment for limitation [1d]. PO Sur-reply 14 (citing Pet. Reply 10, Pet. 33–34). Patent Owner argues that Petitioner has waived its Reply argument that the partially filled webpage meets limitation [1c]. PO Sur-reply 14. Patent Owner is correct that Petitioner, in its Petition, discusses Lebrun's group-surfing server delivering an initial web page and a progression web pages in its section titled "Lebrun discloses 1[c]" (Pet. 28–32) and discusses sending a web page without multimedia elements in the Petition section titled "Lebrun discloses [1d]" (Pet. 33–34). Petitioner, however, includes in the limitation [1d] section both sending to the participating web client a web page without multimedia elements and the participating web client requesting the multimedia elements directly from the web site. Pet. 33–34 (quoting Ex. 1001, 45:31–32; quoting Ex. 1001, 46:1–2).

Sending the web page without multimedia elements is an example of sending a web page that Petitioner explains in the previous section regarding limitation [1c]. Petitioner states that relationship in its Reply, but the relationship is clear in the Petition. *See* Pet. Reply 10 (indicating the

disclosure of sending the initial web page includes the partially filled webpage without any multimedia elements). That limitation [1d] recites "said web browsing interaction data" to refer back to "a web browsing interaction data" recited in limitation [1c] further supports our understanding that the multimedia element web page is an example of sending web pages expressly indicated by Petitioner as being "web browsing interaction data." The term "web browsing interaction data" in limitation [1d] refers back to the same term in limitation [1c] and directly connects limitations [1c] and [1d]. Moreover, Patent Owner discusses Lebrun's multimedia web page example extensively in its Response, including arguing that "the partial webpages (those which contain removed multimedia elements) . . . are clearly ***not*** the claimed 'web browsing interaction data.'" PO Resp. 51; *see, e.g.,* PO Resp. 46, 48, 51. Thus, we do not agree with Patent Owner that Petitioner's argument that Lebrun's partially filled web page corresponds to "web browsing interaction data" is a new argument made in its Reply.

Patent Owner also contends that Lebrun's disclosures are examples of "page sharing" approaches that "do not coordinate users' browsing activity in any meaningful way" and is distinct from the claimed invention. PO Sur-reply 10; *see also* PO Resp. 9. As discussed previously, Lebrun group access to website approach is intended to "provid[e], for a group of related users *simultaneous access* to a sequence of web sites" and presenting techniques enabling "multiple related users can *simultaneously access a sequence of web sites* (web surfing), such that each of the related users *has substantially the same content presented at the same times*." Ex. 1005, 4:1–4, 4:6–9 (emphases added); *see* Pet. 13 (quoting Ex. 1005, 4:1–4,

4:6–11; citing Ex. 1005, 4:14–20). This disclosure discusses coordinating users' browsing activity and undercuts Patent Owner's "page sharing" arguments. In any event, we address below Lebrun's disclosures relative to the challenged claims.

(iii) Findings

There is no dispute that Lebrun expressly discloses (1) the group-surfing server contacting the website server, (2) the website server delivering the webpage to the group-surfing server, (3) the group-surfing server re-sending a partial webpage without multimedia elements to the web clients participating in the group-surfing session, and (4) the participating web clients separately requesting the embedded multimedia elements directly from the website. *See, e.g.,* Ex. 1005, 45:25–46:2; PO Resp. 46–48; Pet. 28–29, 32–34. Nor is there a dispute that Lebrun expressly discloses the participating web clients operate an application (such as an internet browsing application) to access the website server after the activation of the session invitation. *See, e.g.,* Ex. 1005, 66:9–12; Pet. 33 (citing Ex. 1005, 66:9–12); PO Resp. 52 (arguing limitation [1d] is not met because the requirement of operating an application is not "based on said web browsing interaction data").

Based on unambiguous descriptions in Lebrun discussed above, we agree with Petitioner that Lebrun's partial webpage without multimedia elements sent from the group-surfing server to the web clients participating in the group-surfing session discloses or suggests "web browsing interaction data." The partial webpage is one of the progression of web pages displayed on each participating web client in the group-surfing session. *See, e.g.,* Ex. 1005, 35:26–28. As such, the partial webpage is related to web browsing interactions of the group-surfing session and discloses or suggests

"web browsing interaction data." The partial webpage is from a web site that is separate from the group-surfing server (as shown on Lebrun's Figure 3). As such, the partial webpage is associated with a website server that is independent of the group-surfing server (that corresponds to the recited synchronization server). *See, e.g.,* Pet. 30–31 (citing Ex. 1005, 31:27–30; Fig. 3). Because Lebrun's first web client (corresponding to the recited host device) initiates the progression of web pages displayed on each participating web client, the partial webpage is associated with "the host device that has initiated the session invitation," as recited by claim 1. *See, e.g.,* Pet. 31–32 (citing Ex. 1005, 35:26–28).

Additionally, as discussed above, there is no dispute that Lebrun expressly discloses the partial webpage is received by the participating web client (corresponding to the guest device) from the group-surfing server (corresponding to the synchronization server). Accordingly, for these reasons, we find that Lebrun discloses or suggests "receiving web browsing interaction data from said synchronization server, wherein said web browsing interaction data is associated with: a website server that is independent of the synchronization server, and the host device that has initiated the session invitation" (limitation [1c]).

Turning to limitation [1d], we note that the language of limitation [1d] itself is broad—requiring "operating an application based on said web browsing interaction data . . . to access a website server" subject to enumerated timing constraints ("subsequent to the activation of the session invitation"). There is no requirement, for instance, to replay host device interactions that are forwarded to the guest device, or to receive anything

from the website server (such as the end result of the host device's web interaction) as a result of operating "based on said web browsing interaction data." Rather, limitation [1d] requires operating an application "to access a website server."

Patent Owner contends that Lebrun does not disclose limitation [1d] because Lebrun's participating web client does not operate the application based on both the non-multimedia elements and the multimedia elements. PO Sur-reply 18. Rather, Patent Owner contends, "a POSITA would have understood that the links in the partial webpage are used to retrieve the multimedia elements from the webpage server ***rather than*** the non-multimedia webpage data." PO Sur-reply 18–19 (citing Ex. 2004 ¶¶ 69–70[21]). We do not agree with Patent Owner's argument that using links to retrieve multimedia content from the website server is somehow excluded from limitation [1d]. Rather, one of ordinary skill would have understood using links in the partially filled webpages (corresponding to "web browsing interaction data") to retrieve multimedia content from the website server as "operating an application based on said web browsing interaction data received said synchronization server to access a website server independent of the synchronization server," as Petitioner contends. *See, e.g.,* Pet. 32–33.

We also agree with Petitioner's contention, based on Lebrun descriptions that web clients include software such as "Netscape Navigator" and "Internet Explorer" and Dr. Lieberman's testimony, that one of ordinary skill would understand Lebrun's web clients to operate "a common internet browser application" to access the website to request the multimedia

[21] Mr. Friedman's testimony explains that web browsers work by including webpage data with links to fetch multimedia content, rather than including the multimedia content in the webpage data. Ex. 2004 ¶¶ 69–70.

elements of the partial webpage directly from the web site. As Petitioner notes, this action is performed by the web clients after joining the group-surfing session and so discloses or suggests doing so "subsequent to the activation of the session invitation" in limitation [1b].

Accordingly, Petitioner's combination of Lebrun and Wang discloses or suggests limitations [1c] and [1d].

e. Reasons Petitioner's Combination Would Have Been Obvious

Having determined that the combination of Lebrun and Wang as set forth by Petitioner (Pet. 22–34) discloses or suggests all limitations recited by claim 1, we consider Petitioner's conclusion that it would have been obvious to combine Lebrun and Wang in the manner proposed to arrive at the claimed invention. *See* Pet. 19–22.

(i) Articulated Reasoning

To demonstrate obviousness, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418. Petitioner contends that one of ordinary skill would have been motivated to combine Wang's activating a session invitation with Lebrun's invitation to join a group-surfing session. Pet. 28. Specifically, Petitioner contends that "activating an invitation via a designated URL address would further enable" Lebrun's group-surfing server "to coordinate and manage the group-surfing session, which would further Lebrun's objective of providing an 'improved technique for group access to web sites.'" Pet. 28 (citing Ex. 1005, 7:1). We agree with Petitioner that activating an invitation via a designated URL address would be a technique that helps coordinate a group-surfing session and would enable multiple related users being able to access "substantially the same

content presented at the same time," one of the stated benefits of Lebrun's techniques. Ex. 1005, 7:1–3; *see KSR*, 550 U.S. at 420 (indicating "[under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed").

We also agree, in light of on the level of ordinary skill discussed above and the high-level functional description of using URL addresses in Wang, that including a URL address in a message reflects "a combination of prior art elements according to known methods to yield predictable results," as Petitioner contends. *See* Pet. 28. We also credit Dr. Lieberman's testimony that incorporating Wang's hyperlink "URL address" in Lebrun's invitation would use "conventional web programming techniques." Ex. 1003 ¶ 155; *see* Pet. 20 (quoting Ex. 1003 ¶ 155). Dr. Lieberman's testimony further supports a finding that one of ordinary skill would have had a reasonable expectation of success in doing so.

Patent Owner contends that one of ordinary skill would not have been motivated to combine Lebrun and Wang "due to incompatible system architectures and purposes." PO Resp. 77 (citing Ex. 2004 ¶¶ 79–85).[22] Patent Owner follows this broad assertion with the specific contention that Lebrun teaches away from Wang's approach, which we address below. To the extent that Patent Owner contends that Lebrun and Wang are incompatible system architectures and cannot be bodily combined, we note that bodily incorporation is not required to show obviousness. *Allied Erecting and Dismantling Co., Inc. v. Genesis Attachments, LLC*, 825 F.3d

[22] Patent Owner does not contest that Lebrun or Wang is analogous art to the challenged claims.

1373, 1381 (Fed. Cir. 2016) (indicating "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference" (quoting *In re Keller*, 642 F.2d 413, 425 (CCPA 1981))).

Nor do we agree that Lebrun and Wang cannot be combined because of purported incompatible purposes. PO Resp. 77. Rather, we agree with Petitioner's position that Lebrun and Wang "[b]oth are directed to solving problems in the art regarding collaborative browsing of web pages by multiple users in a synchronized manner." Pet. 19 (quoting Ex. 1005, 4:1–4; Ex. 1006 ¶¶ 9–10; Ex. 1005, 4:6–10; Ex. 1006 ¶ 13). Petitioner's position is supported by unambiguous statements in Lebrun and Wang. *See* Ex. 1005, 4:1–4 (stating "there is no convenient and simple technique for providing, for a group of related users, simultaneous access to a sequence of web sites."); Ex. 1006, ¶¶ 9–10 (describing synchronization problems using conventional methods and explaining that such "problems may be solved if web pages are shared using the collaborative technology" described therein); *see also* Ex. 1005, 4:6-10 (describing an "embodiment of the invention in which multiple related users can simultaneously access a sequence of web sites (web surfing), such that each of the related users has substantially the same content presented at the same times"); Ex. 1006, ¶ 13 ("The present invention provides a collaboration environment that enables a plurality of users to access the same web page through their browsers while communicating with each other.").

Patent Owner contends that Lebrun's embodiment of sending a partial webpage without multimedia elements teaches away from Wang's snapshot data approach to collaborative web browsing and so provides reasons not to combine the references. PO Resp. 77; PO Sur-reply 19–20. "Prior art

teaches away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *Arctic Cat Inc. v. Bombardier Recreational Products Inc.*, 876 F.3d 1350, 1360 (Fed. Cir. 2017) (internal quotation marks and citation omitted). On the other hand, a reference that merely expresses a general preference for a technique but does not criticize, discredit, or otherwise discourage investigation into an alternative approach does not teach away from the combination of the references. *Cf. Meiresonne v. Google, Inc.*, 849 F.3d 1379, 1382 (Fed. Cir. 2017) (indicating "[a] reference merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into' the claimed invention does not teach away" (quoting *Galderman Labs., L.P. v. Tolmar, Inc.,* 737 F.3d 731, 738 (Fed. Cir. 2013))).

Patent Owner relies on Mr. Friedman's testimony that Wang's system sends "snapshot data" to participating client browsers, whereas Lebrun sends a webpage without multimedia elements. Ex. 2004 ¶ 83–84 (citing Ex. 1006 ¶¶ 40, 43, 61; Ex. 1005, 45:31–46:1; PO Resp. 77 (citing Ex. 2004 ¶¶ 79–85). According to Patent Owner and Mr. Friedman, Lebrun's embodiment of sending a partial webpage without multimedia elements "teaches away" from Wang's snapshot data approach because one of ordinary skill "would be discouraged from following the path set out in the reference." PO Resp. 77; Ex. 2004 ¶ 84; PO Sur-reply 19 (quoting *In re Chaganti,* 554 F. App'x 917, 921 (Fed. Cir. 2014)).

The different approaches used by Lebrun and Wang to send webpage data in a collaborative browsing session does not teach away or would not otherwise discourage one of ordinary skill from combining the references as

Petitioner proposes—incorporating Wang's hyperlink in Lebrun's invitation to join a collaborative browsing session. *See, e.g.,* Pet. 20, 28. Unlike *Chaganti* where the reference described prior art technology as "undesirable," Patent Owner does not identify any portion of Lebrun or Wang that criticizes or otherwise discourages the approach used in the other reference. *See* PO Resp. 77; *Chaganti,* 554 F. App'x at 921 (indicating "[w]hile Glassman describes the then-existing lock servers as "undesirable," we disagree that this constitutes a teaching away from mechanisms for controlling Internet access to copyrighted material."); Pet. Reply 20–21 (contending Lebrun and Wang teach different methods but do not teach away, which requires "criticizing or generally discouraging an approach"). Nor are we aware of any such criticism.

Moreover, "the mere disclosure of alternative designs does not teach away." *In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012) (internal quotation marks and citation omitted); *see also In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (indicating "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed in the [application at issue]").

Mr. Friedman does not explain sufficiently why Lebrun's preferred embodiment of sending a partial webpage would have discouraged one of ordinary skill from Wang's technology that uses snapshot data. Ex. 2004 ¶ 84. Rather, based on the portion of Lebrun quoted, Mr. Friedman seems to base his conclusion on the fact that Lebrun describes the embodiment as "preferred embodiment" that reduces the load on the group-surfing server and is a different approach than Wang's use of snapshot data. Ex. 2004 ¶ 84. The disclosure of a preferred alternative does not in itself teach away

or otherwise discourage from pursing an alternative solution. *Cf. Meiresonne*, 849 F.3d at 1382 (indicating "[a] reference that 'merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into' the claimed invention does not teach away (quoting *Galderma Labs.*, 737 F.3d at 738)).

For these reasons, we find that Lebrun's preferred embodiment does not teach one of ordinary skill away from incorporating Wang's hyperlink in Lebrun's invitation to join a collaborative browsing session. Our finding is bolstered by Dr. Lieberman's testimony that Lebrun and Wang's different methods of storing data—snapshot data or partial web pages—does not provide a reason why one of ordinary skill would *not* have been motivated to combine the disclosures of Lebrun and Wang. Ex. 1034 ¶ 23; *see* Pet. Reply 21 (citing Ex. 1034 ¶ 23). We credit Dr. Lieberman's testimony because it is consistent with Lebrun passages that describe the partial web page approach as a preferred embodiment but does not criticize the snapshot data approach of Wang.

Accordingly, for these reasons, we determine that Petitioner has demonstrated by a preponderance of the evidence that "a skilled artisan would have had reason to combine the teaching of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success from doing so." *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1193 (Fed. Cir. 2014).

(ii) Purported Failure to Identify Differences

Patent Owner also contends that Petitioner fails "to identify differences between the claimed subject matter and prior art, and does not discuss what obviousness-related modifications to Lebrun . . . should be made with the disclosure of Wang." PO Resp. 76. We disagree.

Rather, Petitioner discusses in detail how Lebrun's technology reads on the limitations recited in claim 1. *See, e.g.,* Pet. 23–25 (discussing limitation [1a]); Pet. 25–28 (discussing limitation [1b]); Pet. 28–32 (discussing limitation [1c]); Pet. 32–34 (discussing limitation [1d]). With regard to limitation [1b], Petitioner discusses how Wang's technology reads on limitation [1b].

Petitioner also discusses what obviousness-related modifications to Lebrun should be made with the disclosure of Wang. *See, e.g.,* Pet. 28. In contending limitation [1b] would have been obvious over Lebrun and Wang, Petitioner states

> [a] POSITA would have been motivated to combine activating a session invitation via the "Invitation acknowledgment, myURL address" of Wang into Lebrun's invitation to join a group-surfing session. [Ex. 1003] ¶182. Incorporating standard user interface and web technology, such as accessing and acting upon a designated URL address, into Lebrun's invitation would allow Lebrun to perform the functions described in Lebrun's disclosure. *Id.*, ¶183.

Pet. 28. Petitioner also states: "A POSITA would have recognized that the 'identifier' in the invitation of Lebrun (Ex. 1005, 32:21–24) could incorporate the hyperlink 'URL address' disclosed in Wang (Ex. 1006, ¶[0048]) using conventional web programming techniques." Pet. 20. Petitioner's combination incorporates Wang's hyperlink "myURL address" into Lebrun's invitation to join a group-surfing session.

(iii) Combining Lebrun Embodiments

Patent Owner contends that "Petitioner also fails to acknowledge in their Petition that elements from different embodiments are implicated, let alone provide any rationale for combin[ing] the various different embodiments from Lebrun." PO Resp. 76. As such, according to Patent

Owner, "Petitioner has failed to meet its burden" to "show with particularity why each challenged claim is unpatentable." PO Resp. 77 (quoting *Harmonic*, 815 F.3d at 1363). Patent Owner does not further identify particular embodiments or otherwise provide additional details as to the purported shortcomings of the Petition. *See generally* PO Resp. 76–77. As such, and understanding that Patent Owner does not have the burden of persuasion, we address reasons why we disagree with Patent Owner's general contention that Petitioner failed to provide a necessary rationale for combining different embodiments in Lebrun.

Petitioner's contentions and our conclusion regarding claim 1 generally rely on descriptions related to Figure 3 that "shows a block diagram of a system for group access to web sites" and Figure 4 that shows "a process flow diagram for a method of using a system for group access to web sites." Ex. 1005, 29:25, 43:26–27. As discussed above in detail, Figure 3 shows web clients 110, a communication network 120, a web site 130, and a group-surfing server 140. Ex. 1005, 29:27–28. In addition to describing the elements shown in Figure 3, the text associated with Figure 3 also describes creating a group-surfing session (Ex. 1005, 32:1–33:10), operating the group-surfing session (Ex. 1005, 33:12–36:17), and efficient group-surfing session activity by using a program fragment loaded on each client to reduce load on the group-surfing server (Ex. 1005, 36:19–37:17), as well as a variety of techniques used for special situations (Ex. 1005, 37:19–43:22).

Petitioner's contentions and our conclusion regarding claim 1 rely on Lebrun's preferred embodiment that sends partial webpages without multimedia elements (Ex. 1005, 45:31–46:2) for the web browsing interaction data and limitations [1c] and [1d]. Lebrun's preferred

embodiment is part of method 200 shown in Figure 4 and described under the heading of "System Operation" (Ex. 1005, 43:24–49:15, Fig. 4 (showing 25 steps in method 200)). Lebrun describes the method of Figure 4 as showing "a process flow diagram for a method of using a system for group access to web sites." Ex. 1005, 43:26–27.

Lebrun's Figures 3 and 4 are described as a system and a method for using a system for "group access to web sites." Ex. 1005, 29:25, 43:26–27. Notably, Lebrun describes method 200 shown in Figure 4 as being "performed by the system 100, including the web client 110, the communications network 120, the web server 130, and the group-surfing server 140." Ex. 1005, 43:29–30. Thus, Lebrun expressly indicates that the method 200 shown in Figure 4 is performed by the elements shown in Figure 3.

Lebrun expressly connects Figures 3 and 4 in another way. Specifically, and particularly relevant here, Lebrun indicates that the web client 110 sends the session-join message 151 to the group-surfing server 140 in step 221 shown in Figure 4 and does so "as described above." This is a reference to creating a group-surfing session described with respect to Figure 3. Ex. 1005, 33:2–3 (indicating web client 110 adds itself to the session by sending a session-join message 151 to the group-surfing server 140); *see generally* Ex. 1005, 32:1–33:10 (Section titled "Creating a Group-Surfing Session").

Based on these express statements showing the relationship and continuity between the system described in Figure 3 and the method described in Figure 4, we find that Lebrun in Figure 3 and 4 discloses a system and method for group access to web sites. Further supporting our finding is that Section II of Lebrun consists of Figures 3 and 4 description.

Ex. 1005, 29:21–49:15 (Section "II."). Lebrun's Section I describes a system for access to personalized web sites (Figure 1) and a method of using a system for access to personalized web sites (Figure 2). *See* Ex. 1005, 11:31–24:6 (describing Fig. 1), 24:8–29:20 (describing Fig. 2). Lebrun's Section III describes a system for summarization and aggregation of personalized information (Figure 5) and a method of using a system for summarization and aggregation of personalized information (collectively shown in Figures 6 and 7). *See* Ex. 1005, 49:18 (Section "III." begins); Ex. 1005, 53:12–57:17 (describing Fig. 5), Ex. 1005, 57:19–61:32 (describing Figs. 6 and 7). Lebrun's Section IV relates to a system for automated and intelligent structured data input, a data flow for the system for automated and intelligent structured data input, and five methods for operating a system for automated and intelligent structured data input. *See* Ex. 1005, 63:5 (Section "IV." begins); Ex. 1005, 66:1–30 (describing Fig. 8); Ex. 1005, 66:32–69:29 (describing Fig. 9), Ex. 1005, 69:31–74:30 (describing each method in Figs. 10–14).

In sum, the four sections of Lebrun relate to respectively (i) access to personalized web sites (Section I), (ii) group access to web sites (Section II), (iii) summarization and aggregation of personalized information (Section III), and (iv) automated and intelligent structured data input (Section IV). These four sections are also reflected in the brief description of drawings that divide the figures into the same four sections. Ex. 1005, 10:11–11:20.

Petitioner's contentions relate to a specific section and techniques disclosed in Lebrun related to group access to web sites. Thus, we do not agree with Patent Owner's position that Petitioner failed to meet its burden to show with particularity why each challenged claim is unpatentable because Petitioner "did not provide a rationale for combining the various

different embodiments from Lebrun." PO Resp. 76. Rather, we are persuaded by the consistent and parallel organization structure of Lebrun that one of ordinary skill would understand Section II as a set of features related to group access to web sites. We note that there is no persuasive evidence of record that the features of Lebrun's group access to web sites on which Petitioner relies are not combinable or that one of ordinary skill would not have the ability to use the various features described in Lebrun in conjunction with each other.

To be sure, Lebrun in its detailed description of Figures 3 and 4 in Section II describes various features as "in a preferred embodiment." *See, e.g.,* Ex. 1005, 32:21–22, 35:10, 45:31. In the context of Lebrun's express disclosures and consistent organization, however, we view this language as describing various features that may be combined and not as separate unrelated embodiments that cannot be combined. Moreover, to the extent that Figures 3 and 4 disclose separate embodiments that require a motivation to be identified for each feature, we find that looking at the Lebrun reference as a whole, combining the embodiments described with respect to Figures 3 and 4 would not "require a leap of inventiveness." *Cf. Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009) ("Combining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness"); *see* Pet. Reply 19 (citing *Boston Scientific*, 554 F.3d at 991).

Our finding is bolstered by Dr. Lieberman's testimony. In his reply declaration, Dr. Lieberman testifies that "Lebrun contemplates the processes of its various disclosed embodiments as being compatible." Ex. 1034 ¶ 18. We credit Dr. Lieberman's testimony because he supports his testimony with a passage from Lebrun that is consistent with his conclusion. Ex. 1034 ¶ 18

(stating "Lebrun describes several '*variations on the group-surfing session*,' which includes a subsection of 'multiple group surfing channels.' Ex. 1005, 37:19, 43:5 (emphasis in original)."). Naturally following from Lebrun's passage is Dr. Lieberman's testimony—"[a] POSITA would understand 'multiple group surfing channels' would be one example/scenario of the 'variations on the group-surfing session,' and the latter encompasses the former and the two embodiments are compatible and combinable." Ex. 1034 ¶ 18.

The obviousness inquiry is not so inflexible as to require Petitioner, in view of the express disclosures and consistent section organization of Lebrun, to address the combinability of Lebrun's group access features in its Petition as Patent Owner contends. *See KSR,* 550 U.S. at 419 (indicating "[t]he obviousness analysis cannot be confined by formalistic conception of the words teaching, suggestion, and motivation"); *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litigation*, 676 F.3d 1063, 1069 (Fed. Cir. 2012) (indicating that "the overall obviousness inquiry must be expansive and flexible"). "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR* 550 U.S. at 421 ("[A] person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.")

f. Conclusion regarding Claim 1

For the reasons discussed above, and having considered the arguments and evidence of record, we conclude that Petitioner has demonstrated by a preponderance of the evidence that Petitioner's combination of Lebrun and Wang would have rendered obvious the subject matter recited in claim 1.

2. Independent Claim 9

Independent claim 9 is directed to "[a] guest device for performing a synchronized browsing session administered by a synchronization server." Claim 9 recites the guest device comprises "a network interface adapted to communicate with said synchronization server" and a processor configured to perform various steps, which are substantially similar to the method steps recited in claim 1. *Compare* Ex. 1001, 22:62–23:15, *with id.* at 23:37–24:15; *see also* PO Resp. 12 (Patent Owner indicating independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9."); Prelim. Resp. 51 (Patent Owner indicating claims 1 and 9 have "analogous limitations"), 59 (same).

For independent claim 9, Petitioner generally relies on its arguments made with respect to substantially similar limitations recited in claim 1. *See* Pet. 34–37. More specifically, for the steps recited in claim 9, Petitioner relies on its arguments made with respect to substantially similar limitations recited in claim 1. *See* Pet. 36–37. Regarding the preamble of claim 9, "a guest device that joins and participates in a synchronized browsing session," Petitioner relies on its arguments made with respect to the preamble recited in claim 1. Pet. 34 (citing Ex. 1005, 32:9–12, 32:26–31, 30:19–24, 33:2–4, 44:21–27; Fig. 4 (step 212); Ex. 1003 235-36). Similarly, Patent Owner also relies on its arguments presented regarding independent claim 1. *See* PO Resp. 12 (Patent Owner indicating independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9.").

a. a network interface adapted to communicate with said synchronization server

Independent claim 9 recites that the guest devices comprises "a network interface adapted to communicate with said synchronization server." As discussed with respect to claim 1, Petitioner maps Lebrun's other or second web client 110 to the recited guest device and maps Lebrun's group-surfing server 140 to the recited synchronization server. Pet. 35 (indicating same mapping for independent claim 9). For this limitation, Petitioner relies on Lebrun's express description that the web client can be a general-purpose computer, such as a laptop or workstation. Pet. 35 (citing Ex. 1005, 30:19–24, 32:9–16, 32:26–31, 33:2–4, 43:27–30); Ex. 1005, 30:19–20 (indicating "the web clients 110 each include a general-purpose computer, such as a laptop or workstation"). Petitioner also relies on Lebrun's statements that the web client "includes any combination of devices or software taking on the role of a client in a client-server environment in the internet" (Ex. 1005, 30:1–3) and Lebrun's description of messages 151 transported over communications network 120 "between any two of the web clients 110, the web site 130, and the group-surfing server 140" (Ex. 1005, 31:4–5). Pet. 35 (citing Ex. 1005, 30:1–3, 30:30–31:15). Patent Owner does not address Petitioner's showing as to this limitation. *See generally* PO Resp.

As evident from the portions of Lebrun relied upon by Petitioner, Lebrun describes a general-purpose computer used as a web client 110 that is able to communicate with the group-surfing server 140 by sending messages over a communications network. *See, e.g.,* Ex. 1005, 30:1–3, 31:4–5). As such, we find that Lebrun discloses or suggests a guest device (corresponding to Lebrun's web client 110) that includes a network interface

adapted to communicate with the synchronization server (corresponding to Lebrun's group-surfing server 140). Our finding is bolstered by Dr. Lieberman's testimony on which Petitioner relies. Pet. 35 (citing Ex. 1003 ¶ 239). Dr. Lieberman's testimony that one of ordinary skill "would understand Lebrun's disclosure of a general-purpose computer configured to communicate over a network with a server that administers a group-surfing server to correspond with the claimed guest device with a network interface adapted to communicate with said synchronization server." Ex. 1003 ¶ 239. We credit this testimony that naturally follows from express descriptions in Lebrun on which it relies. Ex. 1003 ¶ 238 (citing Ex. 1005, 30:19–24, 32:9–16, 32:26–31, 33:2–4, 43:27–30).

Additionally, for the reasons discussed above with respect to claim 1, we agree with Petitioner that the combination of Lebrun and Wang discloses or suggests the guest device recited in claim 9. We, therefore, find that Petitioner has demonstrated that Lebrun discloses or suggests this limitation of a guest device having "a network interface adapted to communicate with the synchronization server."

b. a processor configured to perform recited steps

Claim 9 also recites that the guest device comprises "a processor configured to" perform four steps, which are the same four steps as recited in claim 1—limitations [1a], [1b], [1c], and [1d]. For the recited steps, Petitioner relies on its arguments made with respect to substantially similar limitations recited in claim 1. *See* Pet. 36–37. Patent Owner also relies on its arguments presented regarding independent claim 1. *See* PO Resp. 12 (Patent Owner indicating independent claim 9 is "similar to claim 1" and that "[t]he arguments presented regarding independent claim 1 also apply to independent claim 9.").

For the processor of the guest device, Petitioner relies on Lebrun's description "that the web clients 110 'each include **a processor** operating under control of web client software 111, such as a web browser, and disposed for use by an operator or user 112.'" Pet. 35 (quoting Ex. 1005, 30:14–15) (emphasis added by Petitioner). We agree with Petitioner that Lebrun discloses or suggests the web clients have a processor configured to join and participate in a group-surfing session based on Lebrun's passage on which Petitioner relies. Patent Owner does not address Petitioner's showing as to the processor limitation. *See generally* PO Resp.

Additionally, for the reasons discussed above with respect to claim 1, we agree with Petitioner that the combination of Lebrun and Wang discloses or suggests the guest device comprising a processor configured as required by claim 9. We, therefore, find that Petitioner has demonstrated that the combination of Lebrun and Wang discloses or suggests this limitation of a guest device having a processor configured to perform the four steps recited in claim 9.

We also note that the passages in Lebrun additionally relied on for disclosing or suggesting the network interface and processor are found in Lebrun's Section II that describes Figures 3 and 4, which collectively relate to a system for group access to web sites and a method of using a system for group access to web sites, as discussed above. *See, e.g.,* Ex. 1005, 10:20–24. For the reasons discussed above, we do not agree with Patent Owner's position that Petitioner failed to meet its burden to show with particularity why each challenged claim is unpatentable because Petitioner "did not provide any rationale for combining the various different embodiments from Lebrun." PO Resp. 76.

Furthermore, for the reasons discussed above with respect to claim 1, we determine that Petitioner has demonstrated by a preponderance of the evidence that "a skilled artisan would have had reason to combine the teaching of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success from doing so." *PAR Pharm.*, 773 F.3d at 1193.

c. Conclusion regarding claim 9

Accordingly, having considered the arguments and evidence of record, we conclude that Petitioner has demonstrated by a preponderance of the evidence that Petitioner's combination of Lebrun and Wang would have rendered obvious the subject matter recited in claim 9.

3. Dependent Claims 2–8 and 10–18

Claims 2–8 depend directly or indirectly from independent claim 1, and claims 10–18 depend directly or indirectly from independent claim 9. In its assertions that these claims would have been obvious over Lebrun and Wang, Petitioner maps the added limitations of the dependent claims to the asserted prior art and provides why one of ordinary skill would have combined the references with a reasonable expectation of success for purposes of institution. Pet. 37–50; *see also* Pet. 19–21 (discussing motivation to combine Lebrun and Wang). Patent Owner contends that neither Lebrun nor Wang discloses the additional limitations required by claims 4–6 and that Petitioner has not shown that claims 5, 6, 17, and 18 are disclosed in the cited references. PO Resp. 77–79.

a. Claims 2, 3, and 11

Claim 2 directly depends from claim 1 and additionally recites "wherein said invitation comprises a hyperlink associated with said

synchronized browsing session." Claim 3 directly depends from claim 1 and further recites "wherein said invitation is received via a viable means of communication." Claim 11 directly depends from independent claim 9 and additionally recites "wherein said invitation comprises a hyperlink associated with said synchronized browsing session and wherein said hyperlink is received from the host device via a viable means of communication."

Regarding "said invitation comprises a hyperlink associated with said synchronized browsing session" required by claims 2 and 11, Petitioner relies on Lebrun's invitation received by the guest device and Wang's description of a second client device accessing a URL address provided by the server apparatus (as discussed above with respect to limitation [1.b]) as disclosing or suggesting "a hyperlink associated with said synchronized browsing session. Pet. 38 (citing Ex. 1006 ¶¶ 47–49); *see also* Pet. 26–27 (discussing Wang with respect to limitation [1.b]).

Petitioner also relies on Dr. Lieberman's testimony that Wang's description of the second device accessing the URL address by acting on the "Invitation acknowledgment, myURL address" corresponds with activating a hyperlink. Pet. 38–39 (citing Ex. 1003 ¶ 211). We credit Dr. Lieberman's testimony that naturally follows from Wang's disclosure. Accordingly, we find that Petitioner's combination of Lebrun and Wang discloses or suggests the limitation additionally recited in claims 2 and 11—"said invitation comprises a hyperlink associated with said synchronized browsing session."

Regarding "wherein said invitation is received via a viable means of communication" recited in claim 3 and "wherein said hyperlink is received from the host device via a viable means of communication" recited in claim 11, Petitioner indicates, in addition to other references in Lebrun, that

Lebrun's method for group access to web sites "takes place within a communication network that 'is disposed for transporting messages 151 between any two of the web clients 110, the web site 130, and the group-surfing server 140." Pet. 40 (quoting 1005, 31:4–5); *see also* Pet. 40 (quoting Ex. 1005, 31:5–6). We agree with Petitioner that Lebrun discloses or suggests that "said invitation is received via a viable means of communication."

Regarding the additional requirement recited in claim 11 that the invitation is received from the host device, as discussed above with respect to limitation [1a], Petitioner relies on Lebrun's description of group-surfing server informing the web client participants in the group-surfing session for disclosing the guest device receives a session invitation from the synchronization server. *See* Pet. 24 (citing Ex. 1005, 32:26–28); *see also* Pet. 23 (citing Ex. 1005, 32:3–7).

For these reasons, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claims 2, 3, and 11.

b. Claim 4

Claim 4 directly depends from claim 1 and further recites "wherein said web browsing interaction data further comprises cookie information associated with the website server." Petitioner relies on its arguments regarding receiving web browsing interaction data required by limitation [1c]. Pet. 40 (citing Ex. 1005, 12:18–22, 31:27–30, 32:28–31, 35:5–8, 35:26–28, 36:21–25, 37:5–10, 39:4–10, Figs. 1, 3; Ex. 1003 ¶¶ 217–18). Petitioner further relies on Lebrun's description that information related to web sites provided to participating web clients includes cookies for the additional limitation recited by claim 4. Pet. 41 (quoting Ex. 1005, 49:1–11); Pet. Reply 22 (citing Ex. 1005, 43:26–27, 48:29–49, 49:5–8).

Patent Owner contends, relying on Mr. Friedman's testimony for support, that the cited portion of Lebrun describes the controlling web client sending an import-export message 151 to the group-surfing server 140 and "has nothing at all to do with a browsing session and therefore it is not 'web browsing interaction data.'" PO Resp. 78 (citing Ex. 2004 ¶¶ 54–55). Mr. Friedman testifies that Lebrun's

> import/export process is described at flow points 290–292 [of Figure 4], while the group-surfing session is performed at flow points 230–236. *See* Lebrun [Ex. 1005] at 45:6–46:15, 48:29–49:15, Figure 4. In other words, Lebrun does not teach that the import/export process is in any way related to the steps of performing the group-surfing session. Moreover, in my opinion, a POSITA would not have thought that a process labelled "import or export" and described as in Lebrun would have related to the synchronized browsing session as claimed.

Ex. 2004 ¶ 55.

Mr. Friedman's testimony is at odds with statements in Lebrun that method 200 shown in Figure 4 is "for a method of using a system for group access to web sites," the inclusion of flow points 230–236 and 290–292 as part of method 200 shown in Figure 4, and Lebrun's organization of Section II that relates to a system and method for group access to web sites, as discussed previously. Ex. 1005, 43:26–27, 29:21– 49:15 (Section II), Fig. 4; *see* Pet. Reply 22 (citing Ex. 1005, 43:26–27). Accordingly, we accord little weight to Mr. Friedman's testimony on this point (Ex. 2004 ¶¶ 54–55).

For these reasons, too, we disagree with Patent Owner's position that the controlling web client sending an import-export message 151 to the group-surfing server 140 and "has nothing at all to do with a browsing session and therefore it is not 'web browsing interaction data.'" PO Resp.

78 (arguing claims 4–6 together); Pet. Reply 22 (citing Ex. 1005, 43:26–27, 48:29–49, 49:5–8).

Rather, we find that Lebrun teaches cookie information associated with the website server is sent by the group-surfing server (corresponding to the recited synchronization server) to the web clients participating in the group-surfing session (corresponding to the recited guest device), as Petitioner argues. *See* Pet. 41 (citing Ex. 1005, 49:1–11). Lebrun describes "the controlling web client 110 sends an import-export message 151 to the group-surfing server 140 directing import or export of information related to web sites (such as . . . 'cookies'. . .)." Ex. 1005, 49:1–3; *see* Pet. 41. The cookie information is associated with the web site being accessed as part of the group-surfing session directed by the controlling web client (corresponding to the recited host device) and the import-export message originates from the controlling web client (corresponding to the recited host device). Ex. 1005, 49:1–3; Pet. 41 (citing Ex. 1005, 49:1–11). Thus, the cookie information is data related to "web browsing interaction" and is associated with the web site server independent of the synchronization server and the host device that has initiated the session invitation. Accordingly, the cookie information would have been understood by one of ordinary skill as "web browsing interaction data." *See, e.g.,* Pet. 41.

Lebrun describes that the "group surfing server 140 . . . exports the designated [cookie] information to selected databases at web clients 110 participating in the session." Ex. 1005, 49:6–8; Pet. 41 (citing Ex. 1005, 49:1–11); Pet. Reply (quoting Ex. 1005, 49:5-8). As such, we find that Lebrun discloses or suggests the guest device receiving the cookie web browsing interaction data from the synchronization server.

Accordingly, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claim 4.

c. Claim 5

Claim 5, which depends directly from claim 4, additionally recites "wherein said web browsing interaction data further comprises information related to shared user input web browsing interactions depicted in a first web browser window."

Regarding "information related to shared user input web browsing interactions" recited in claim 5, Petitioner relies on Lebrun's description of the controlling web client entering information on a web page form and that form information being sent to the group-surfing server 140, which then presents that information on the web page form at each participating web client 110. Pet. 42 (quoting Ex. 1005, 38:31–32, 39:4–10).

We agree with Petitioner that Lebrun expressly describes the group-surfing server (corresponding to the recited synchronization server) sharing web page form data entered by the controlling web client (corresponding to the recited host device) with the other participating web clients (corresponding to the guest device). Pet. 42 (quoting Ex. 1005, 38:31–32, 39:4–10); *see, e.g.,* Ex. 1005, 39:4–10 (indicating "when the controlling web client 110 enters information to complete the HTML form, and sends that information to the group-surfing server 140, the group-surfing server 140 may present that information on the HTML form at each participating web client 110, so that each participating web client 110 can see the HTML form being filled in.").

Accordingly, we find that "web browsing interaction data" encompasses Lebrun's form data being filled in a web page at the controlling web client, which is data related to the web browsing interaction

of sharing web pages and is associated with the controlling web client (corresponding to the recited host device) where the data originates and is associated with the web site independent of the synchronization server where the web page form originates. Furthermore, we agree with Petitioner that this web page form data would have been understood by one of ordinary skill as "web browsing interaction data" and is related to shared user input web browsing interactions.

Regarding the requirement of claim 5 that these web browsing interactions be "depicted in a first web browser window," Petitioner further relies on Lebrun's descriptions that web clients include "software applications such as 'Netscape Navigator' or 'Internet Explorer,'" which Dr. Lieberman testifies display the shared user input web browser interactions. Pet. 41–42 (citing Ex. 1005, 66:9–12; Ex. 1003 ¶ 223). We credit Dr. Lieberman's testimony that "[a] POSITA would understand that the information displayed based on the web browser interaction data (HTML forms and selected web pages) are displayed in web browser windows" because Dr. Lieberman's testimony naturally follows from Lebrun's express statements. Ex. 1003 ¶ 223 (citing Ex. 1005, 66:9–12); *see* Pet. 42 (quoting Ex. 1003 ¶ 223). We do not agree with Patent Owner's argument that Lebrun does not "disclose the use of browser windows" in view of Dr. Lieberman's testimony that relies on browser applications expressly disclosed in Lebrun. *See* PO Resp. 79–80 (Patent Owner arguing "[n]othing in these portions of Lebrun disclose the use of browser windows, let alone a first and a second window or a non-shared window."). Rather, we agree with Petitioner that Lebrun discloses or suggests user input web browser interactions being depicted in a web browser window.

We next address Patent Owner's position that Lebrun's architecture reflects "middleman" page sharing that "does not coordinate users' browsing activity in any meaningful way," and so does not meet the limitations of claim 5 or other dependent claims 6, 17, and 18. PO Sur-reply 10 (quoting Ex. 2004 ¶ 50); *see* Ex. 2004 ¶ 50 (Mr. Friedman explaining "middleman" page sharing); PO Resp. 78–79 (arguing limitations of claims 5, 6, 17, and 18 not met by Lebrun's "middleman" page sharing); PO Sur-reply 10 (arguing middleman Pet. Reply 22–23 (contesting Patent Owner's position).

As discussed above, we do not agree with Patent Owner that Lebrun's architecture does not coordinate users' browsing activity in any meaningful way. We do not agree because Lebrun describes (i) enabling "multiple related users [to be able to] simultaneously access a sequence of web sites (web surfing), such that each of the related users has substantially the same content presented at the same times"; (ii) sharing of a progression of webpages, and (iii) sharing of form data input entered by controlling web client. Ex. 1005, 4:6–9; *see* Ex. 1005, 35:26–28 (sharing progressing of web pages), 38:31–39:10 (sharing form data); Pet. 31–32 (citing Ex. 1005, 35:26–28); Pet. 29 (citing Ex. 1005, 39:4–8); Pet. 44 (citing Ex. 1005, 38:31–39:10). We also note that Mr. Friedman's testimony relied on by Patent Owner describes middleman page sharing techniques without addressing the specifics of Lebrun's disclosure. PO Sur-reply 10 (quoting Ex. 2004 ¶ 50); *see* Ex. 2004 ¶ 50 (Mr. Friedman explaining "middleman" page sharing).

Accordingly, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claim 5.

d. Claim 6

Claim 6, which depends directly from claim 5, further recites "wherein non-shared web browsing interactions are depicted in a second web browser window." The language of "non-shared web browsing interactions" recited in claim 6 is broad and is not limited to being "web browsing interaction data."

Petitioner relies on Lebrun's "web page look ahead feature" and "web page special access feature" for the additional limitations required by claim 6. Pet. 43 (citing Ex. 1005, 37:29–31, 38:1–17, 38:21–25). Lebrun's "web page look ahead" feature allows the controlling web client to select a web page for viewing before designating the web page in the progression of web pages to be shared. Ex. 1005, 37:29–31. Dr. Lieberman testifies that one of ordinary skill would understand the "look ahead" web page to be a non-shared web browsing interaction viewed in a second browser window. Ex. 1003 ¶ 225; *see* Pet. 43 (citing Ex. 1003 ¶ 225). We credit Dr. Lieberman's testimony in this regard because Dr. Lieberman provides reasoned explanation based on Lebrun's descriptions. Specifically, Dr. Lieberman testifies that "[i]t would be clear to a POSITA from Lebrun's disclosures that the first web client that 'looks ahead' to view and interact with the web page could view that web page in a non-shared second web browser window, in order to separately view and interact with the web site and not share that with the other clients." Ex. 1003 ¶ 226; *see* Pet. 43 (paraphrasing Ex. 1003 ¶ 226).

Accordingly, we agree with Petitioner that Lebrun's "web page look ahead feature" discloses or suggests "wherein non-shared web browsing interactions are depicted in a second web browser window," as recited in claim 6. For the reasons discussed above with claim 5, we do not agree with

Patent Owner's contention that nothing in Lebrun's web page look ahead descriptions "disclose the use of browser windows" as required by claims 5 or 6. PO Resp. 79–80.

Petitioner also argues that Lebrun's "web page special access feature" discloses or suggests the additional limitations recited in claim 6. Pet. 43 (citing Ex 1005, 38:21–25; Ex. 1003 ¶ 227). Lebrun's "web page special access feature" allows the controlling web client to "select web pages 153 for special access when designating those web pages 153 as next pages 153 in the progression of web pages 153 in the session." Ex. 1005, 38:21–23; *see* Pet. 43 (citing Ex 1005, 38:21–25; Ex. 1003 ¶ 227). As an example, Lebrun indicates that "the controlling web client 110 can enter information required for special access privately, without presenting that information to other web clients 110 participating in the session." Ex. 1005, 38:23–25; *see* Pet. 43 (citing Ex 1005, 38:21–25; Ex. 1003 ¶ 227). We credit Dr. Lieberman's reasoned explanation that "a POSITA would understand that the privately entered information in the special access feature to be a non-shared web browsing interaction in a second browser window because it requires a user interaction that is not shared with the group-surfing session." Ex. 1003 ¶ 227; *see* Pet. 43 (paraphrasing Ex. 1003 ¶ 227).

Accordingly, we agree with Petitioner that Lebrun's "web page special access feature" discloses or suggests "wherein non-shared web browsing interactions are depicted in a second web browser window," as recited in claim 6. For the reasons discussed above with claim 5, we do not agree with Patent Owner's contention that nothing in Lebrun's web page special access descriptions "disclose the use of browser windows" as required by claims 5 or 6. PO Resp. 79–80.

Accordingly, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claim 6.

e. Claim 7

Claim 7, which depends directly from independent claim 1, further recites "wherein said web browsing interaction data further comprises form data associated with the website server." For this limitation, Petitioner relies on Lebrun's description of sharing with participating web clients the web page form data entered by a controlling web client, which was discussed above relative to shared user input recited in claim 5. Pet. 44 (citing Ex. 1005, 38:31–39:10). Petitioner additionally relies on Dr. Lieberman's testimony that, based on Lebrun's description that the HTML form data entered by a controlling web client is shared in the group-surfing session, "[a] POSITA would understand that such HTML form data that is entered into a website associated with the website server comprises 'form data associated with the website server' as claimed." Ex. 1003 ¶ 229; Pet. 44 (citing Ex. 1005, 38:31–39:10; Ex. 1003 ¶ 229). We credit Dr. Lieberman's well-reasoned testimony based on Lebrun's descriptions.

For these reasons and the reasons discussed above particularly with respect to claim 5, we find that Lebrun discloses or suggests "wherein said web browsing interaction data further comprises form data associated with the website server."

f. Claim 8

Claim 8, which depends directly from independent claim 1, additionally recites "wherein said web browsing interaction data further comprise a log-in into a restricted access webpage."

For "a log-in into a restricted access," Petitioner again relies on Lebrun's "web page look ahead" feature involving password restrictions. Pet. 44–45 (citing Ex. 1005, 37:29–31, 38:1–12, 38:12–17). Lebrun describes specifically that "the controlling web client 110 can choose to accept such special access (such as entering a password or credit card number) without presenting the acceptance to other web clients 110 participating in the session." Ex. 1005, 38:15–17; Pet. 44–45 (quoting Ex. 1005, 38:12–17).

Petitioner additionally relies on Dr. Lieberman's testimony that, based on Lebrun's description of the web page look ahead feature used in the context of password restriction, "[a] POSITA would have understood Lebrun's disclosure of providing access to password restricted web pages by entering (but not sharing) a password comprises web browsing interaction data that comprises a log-in into a restricted access web page." Ex. 1003 ¶ 232; Ex. 1003 ¶ 231 (explaining Lebrun's web page look ahead feature used in the context of password restriction); Pet. 45 (citing Ex. 1003 ¶¶ 231–32). We credit Dr. Lieberman's well-reasoned testimony based on Lebrun's descriptions.

Accordingly, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claim 8.

g. Claim 10

Claim 10 depends from independent claim 9 and additionally recites "further comprising a memory adapted to store one or more software modules for controlling said processor."

For the memory recited in claim 10, Petitioner points to Lebrun's disclosure that the web client includes "a processor operating under control of the web client software 111, such as a web browser, and disposed for use

by an operator or user 112." Pet. 45 (quoting Ex. 1005, 30:14–15). We credit Dr. Lieberman's explanation that "a POSITA would know that the software executing to control the processor must be stored in memory, and that the web client software 111 comprises software modules as claimed." Ex. 1003 ¶ 249; *see* Pet. 45 (citing Ex. 1003 ¶ 249).

Accordingly, we find that Lebrun discloses or suggests the memory recited in claim 10.

h. Claim 12

Claim 12 depends from claim 11 and recites "further comprising a user interface adapted to initiate said processor to send said request in response to a user input."

Regarding the user interface recited in claim 12, Petitioner relies on Lebrun's description that the web client "includes a general purpose computer" and, as discussed above regarding claim 10, that "the web client includes "a processor operating under control of the web client software 111, such as a web browser, and disposed for use by an operator or user 112." Ex. 1005, 12:30–3, 12:24–25; *see* Pet. 45 (arguing "[t]he 'web client' includes devices such as general purpose computers, laptops, Palm Pilots, and cellular telephones, operating under control of 'web client software' such as a 'web browser.'"). Relying on Dr. Lieberman, Petitioner contends that the "web client sending a message to join the group-surfing session takes place via a user interface adapted to send the message response." Pet. 46 (citing Ex. 1003 ¶¶ 253–54).

We agree and find that Lebrun discloses or suggests "a user interface adapted to initiate said processor to send said request in response to a user input," as recited in claim 12.

i. Claim 13

Claim 13 depends from claim 12 and additionally recites "said user input comprises activation of said hyperlink for initializing sending of said request to join said synchronized browsing session." Petitioner contends that its combination previously discussed of Lebrun and Wang discloses or suggests the additional limitation recited in claim 13. Pet. 47 (citing Ex. 1005, 32:23–28, 33:2–3, 44:21–27, 7:1, 32:5–7, 32:9–16, 32:21–24; 32:26–31; Ex. 1006 ¶¶ 47–49); Ex. 1003 ¶¶ 259, 372).

We agree for reasons previously discussed. Accordingly, we find that the combination of Lebrun and Wang discloses or suggests the additional limitation recited in claim 13.

j. Claim 14

Claim 14 depends from independent claim 9 and recites "further comprising a user interface adapted to depict shared user input web browsing interactions in a shared web browsing window." Relying on many of the passages discussed previously, Petitioner contends Lebrun discloses this additional limitation. Pet. 47–49. For example, Petitioner identifies Lebrun's descriptions of the group-surfing server directing a web site to deliver web pages, HTML descriptions of form data interactions, and web browsers. *Id.* (citing Ex. 1005, 34:19–35:6, 35:5–8, 38:31–32, 38:32–39:1, 39:1–2, 39:4–10, 66:9–12).

For the reasons discussed above, we agree with Petitioner that Lebrun discloses or suggests a user interface adapted to enable the Lebrun's group-surfing sessions and discloses or suggests "shared user input web browsing interactions depicted in a first web browser window (as required by claim 5). Petitioner contends that "the shared user input web browser interactions are

depicted in a shared web browser window." Pet. 49. Petitioner's position is based on Lebrun's description that the "web client is operated by a user 11, and includes an input device 112 and a presentation device 113" and includes web client applications such as web browsers, "which display the shared user input web browsing interactions." Pet. 49 (citing Ex. 1005, 66:9–12).

We agree with Petitioner that one of ordinary skill would understand the shared user input web browsing interactions would be depicted in a shared web browser window—that is a web browser window showing the web browsing interactions that are shared in the group-surfing session. Pet. 49 (paraphrasing Ex. 1003 ¶¶ 263–65). We credit Dr. Lieberman's testimony that naturally follows from Lebrun's passages on which Dr. Lieberman relies. Ex. 1003 ¶¶ 264–65 (quoting Ex. 1005, 66:9–12).

For these reasons, we find that Lebrun the combination of Lebrun and Wang discloses or suggests the additional limitation recited in claim 14.

k. Claims 15–18

Claims 15–17 depend directly from claim 14, and claim 18 depends directly from claim 17. Petitioner relies on many of the passages discussed previously in its contentions that Lebrun discloses or suggests these additional limitations. *See* Pet. 49–50 (claim 15), 44–45 (claim 16), 41–42 (claim 17), 43–44 (claim 18). Patent Owner argues that claims 17 and 18 are not disclosed because, like claims 5 and 6 according to Patent Owner, nothing in the cited passages disclose browser windows. As discussed above, we do not agree with Patent Owner's position.

Regarding claim 15, we agree with Petitioner that the sharing of webpage form information comprises shared input web browsing

interactions for the reasons discussed above with respect to claim 5. *See* Pet. 49–50 (claim 15).

Regarding claim 16, we also agree with Petitioner that Lebrun discloses or suggests "wherein said shared user input web browsing interactions further comprise a log-in into a restricted access webpage" for the reasons discussed above with respect to claim 8. *See* Pet. 44–45 (arguing claims 8 and 16 together).

Regarding claim 17, we agree with Petitioner that Lebrun discloses or suggests "wherein said shared user input web browsing interactions are depicted in a first web browser window" for the reasons discussed above with respect to claim 5. *See* Pet. 41–42 (arguing claims 5 and 17 together).

Regarding claim 18, we further agree with Petitioner that Lebrun discloses or suggests "wherein non-shared web browsing interactions are depicted in a non-shared web browser window" for the reasons discussed above with respect to claim 6. *See* Pet. 43–44 (arguing claims 6 and 18 together).

For these reasons, we find that Petitioner's combination of Lebrun and Wang discloses the additional limitations required by claims 15–18.

l. Reasons Petitioner's Combination Would Have Been Obvious

We have determined that the combination of Lebrun and Wang as set forth by Petitioner (Pet. 22–34, 37–45) discloses or suggests all limitations recited by independent claims 1 and 9, and all limitations additionally recited by dependent claims 2–8 and 10–18 for the reasons set forth above. For the reasons discussed above, Petitioner provides why one of ordinary skill would have combined the references in this manner with a reasonable expectation of success. *See* Pet. 19–22. As discussed above with respect to claim 1, we agree that one of ordinary skill would have combined Lebrun

and Wang in the manner proposed by Petitioner and would have had a reasonable expectation of success in doing so.

Regarding the requisite articulated reasoning to support a conclusion of obviousness, we agree with Petitioner that one of ordinary skill "would have been motivated to combine Wang's teaching of including a hyperlink in a session invitation to Lebrun's invitation to join a group-surfing server" and "would allow Lebrun to perform the functions described in Lebrun's disclosure," which Dr. Lieberman identifies as "responding to a notice." Pet. 39 (citing Ex. 1003 ¶¶ 213–14); Ex. 1003 ¶ 213. In other words, one of ordinary skill would have looked to Wang's teaching of a hyperlink to perform the function of responding to an invitation to join a group-surfing session as described by Lebrun.

Dr. Lieberman's testimony further supports a finding that one of ordinary skill would have had a reasonable expectation of success in doing so. Also, as noted above and based on the level of ordinary skill discussed above and the high-level functional description of using URL addresses in Wang, a URL address in a message reflects "a combination of prior art elements according to known methods to yield predictable results," as Petitioner contends. *See* Pet. 28. Dr. Lieberman opines similarly here. Ex. 1003 ¶ 214 ("Such a combination is a combination of prior art elements according to known methods to yield predictable results."); Pet. 39 (citing Ex. 1003 ¶ 214). We credit Dr. Lieberman's opinion that explains his conclusion. Ex. 1003 ¶ 214 (explaining "creating and sending hyperlinks was a known technique" so modifying Lebrun's "message to include a hyperlink would be well within the technical skills of a POSITA").

We consider Patent Owner's contention discussed above with respect to claim 1 that Petitioner impermissibly combines different embodiments in Lebrun. We reiterate our finding that Lebrun's disclosure of a system for group access to web sites shown in Figure 3 and "a method of using a system for group access to web sites" shown in Figure 4 represent sufficient continuity that one of ordinary skill would understand these aspects of Lebrun's techniques for group access to web sites to be readily combinable for the reasons discussed above with respect to claim 1. Ex. 1005, 43:26–27; *see also* Ex. 1005, 29:25, 29:21– 49:15 (Section II).

We note Lebrun's features relied on by Petitioner for additionally recited limitations in the dependent claims—import-export message 151 that relates to cookie information, sharing webpage form information, the web page look ahead feature, and web page special access feature—each occur in the description of Lebrun's Figures 3 and 4, which are described as a system and a method for using a system for "group access to web sites," as discussed above. More specifically, as Patent Owner's expert acknowledges, the discussion of cookie information occurs within the method 200 process shown in Figure 4 and is described at steps 291 and 292. Ex. 1005, 49:1–6, Ex. 2004 ¶¶ 54–55; *see* PO Resp. 79 (citing Ex. 2004 ¶¶ 54–55); Pet. Reply 22. Lebrun's discussion of shared form data input is described with regard to Figure 3, as is the discussion of web page look ahead and web page special access. Ex. 1005, 37:27–39:10.

For the reasons discussed above, we determine that one of ordinary skill would have found the subject matter recited in claims 2–8 and 10–18 would have been be obvious in view of the disclosures of Lebrun and Wang.

m. Conclusion Regarding Dependent Claims

For the reasons discussed above, and having considered the arguments and evidence of record, we conclude that Petitioner has demonstrated by a preponderance of the evidence that Petitioner's combination of Lebrun and Wang would have rendered obvious the subject matter recited in claims 2–8 and 10–18.

F. Asserted Obviousness of Claims 1–18 over Prajapat and Wang

Petitioner asserts that claims 1–18 would have been obvious under 35 U.S.C. § 103 based on the combined teachings of Prajapat and Wang. Pet. 6, 20–21.

Because we determine that Petitioner has shown claims 1–18 are unpatentable as obvious over Lebrun and Wang, we do not reach Petitioner's challenge to these same claims based on Prajapat and Wang. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner "is entitled to a final written decision addressing all of the claims it has challenged"); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) (nonprecedential) ("We agree that the Board need not address [alternative grounds] that are not necessary to the resolution of the proceeding.").

G. Petitioner's Motion to Strike and Motion to Exclude

Petitioner moves to strike Exhibits 2006 and 2007. Paper 30. These exhibits comprise briefs filed by Petitioner in support of a motion to dismiss for lack of patent eligibility under 35 U.S.C. § 101 in the parallel district court litigation involving the challenged patents. The exhibits were submitted together with Patent Owner's Sur-reply (Paper 27). We have not

relied on Exhibit 2006 or Exhibit 2007 in our analysis. Accordingly, we deny the motion as moot.

Petitioner also moves to exclude Exhibits 2005–2007. Paper 33. For similar reasons as to denying as moot Petitioner's Motion to Strike, we deny as moot Petitioner's motion as to Exhibits 2006 and 2007.

Exhibit 2005 is a copy of the district court's opinion on the motion to dismiss pursuant to 35 U.S.C. § 101 that was the subject of the briefing in Exhibits 2006 and 2007. Exhibit 2005 was filed properly by Patent Owner with its Patent Owner Response to the Petition.

In its Motion to Exclude, Petitioner contends that these exhibits are irrelevant, unfairly prejudicial, and confusing. Paper 33, 3–4 (seeking exclusion under F.R.E. 402, 403). Petitioner argues that the district court order of Exhibit 2005 is irrelevant because "patentable subject matter is not a ground that can be raised in an IPR." *Id.* at 3. Patent Owner opposes, arguing that "Petitioner ignores the fact that validity under both Sections 101 and 103 depend on the scope of the claims and ignores the fact that Petitioner's District Court contentions, and the Court's findings, regarding claim scope are inconsistent with Petitioner's current PTAB contentions." Paper 36, 3.

We agree with Patent Owner that Petitioner has not demonstrated that the challenged exhibits are irrelevant and/or unduly prejudicial. Exhibit 2005 is relevant because it is evidence of how the '591 patent (related to the challenged patent here) has been characterized and interpreted by a district court in another proceeding. Petitioner argues that Exhibit 2005 is irrelevant because patent eligibility is not a ground that may be raised in an IPR proceeding. We disagree because it is well-established that claim interpretation is relevant to the determination of patent eligibility and patent

invalidity alike, and the Court's discussion in Exhibit 2005 implicates issues of claim scope. Nor do we find that Exhibit 2005 should be excluded under Federal Rule of Evidence 403 because the probative value of Exhibit 2005 outweighs any potential confusion of issues or prejudice to Petitioner stemming from our consideration of Exhibit 2005.

Accordingly, we deny Petitioner's Motion to Exclude Exhibits 2005–2007.

III. CONCLUSION[23]

Having considered all the arguments and evidence of record, we conclude that Petitioner has shown by a preponderance of the evidence that all challenged claims are unpatentable.

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–18	103	Lebrun, Wang	1–18	
1–18	103[24]	Prajapat, Wang		
Overall Outcome			1–18	

[23] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. §§ 42.8(a)(3), (b)(2).

[24] We do not reach this challenge because we determine that Petitioner has shown that claims 1–18 are unpatentable as obvious over Lebrun and Wang.

IV. ORDER

Accordingly, it is

ORDERED that claims 1–18 of the ’145 patent are unpatentable;

FURTHER ORDERED that Petitioner’s Motion to Strike (Paper 30) is denied;

FURTHER ORDERED that Petitioner’s Motion to Exclude (Paper 33) is denied; and

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

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