

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRILLER, INC.,
Petitioner,

v.

TIKTOK PTE. LTD.,
Patent Owner.

IPR2022-00180
Patent 9,992,322 B2

Before SALLY C. MEDLEY, JOHN D. HAMANN, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Triller, Inc. (“Petitioner”) filed a petition for *inter partes* review of claims 30–32, 35, 51, 55, and 56 (“the challenged claims”) of U.S. Patent No. 9,992,322 B2 (Ex. 1002, “the ’322 patent”). Paper 1 (“Pet.”). TikTok Pte. Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018); *see* 37 C.F.R. § 42.108 (2021). Upon consideration of the papers, we determine that the information presented shows that there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the challenged claims of the ’322 patent.

A. Real Parties-in-Interest

Petitioner identifies itself as a real party-in-interest, and identifies Triller Holdco LLC as its parent company. Pet. 1. Patent Owner identifies itself as a real party-in-interest. Paper 5, 1.

B. Related Matters

The parties identify *Bytedance Inc. v. Triller, Inc.*, 4:20-CV-07572 (N.D. Cal.) as a matter that may affect, or be affected by, a decision in this proceeding. Pet. 1; Paper 5, 1. In addition, Petitioner filed petitions for *inter partes* review of two additional patents that are related to the ’322 patent and owned by Patent Owner: (i) U.S. Patent No. 9,648,132 B2 (IPR2022-00179) and (ii) U.S. Patent No. 9,294,430 B2 (“the ’430 patent”) (IPR2022-0181).

C. The Challenged Patent

The '322 patent, in relevant part, relates to a portable wireless computing device (e.g., a smart phone), which allows for social network functionality, including allowing a user to create a profile, identify other users as friends, and interact with other users. *See generally* Ex. 1002, 1:26–34, 76:50–79:43. More specifically, the '322 patent teaches that a user of a social network can create a profile so that they can partake in community features and communicate with other users. *Id.* at 76:50–54. In creating their profile, the user can select a unique member name, an image, and a catchphrase, which can be displayed to other users. *Id.* at 76:57–63. The '322 patent also teaches ways for a user to become a friend with another user by allowing the user to view other users' profiles, or search for them by name or phone number, and send a friend request—a list of a user's friends is maintained in the user's profile. *Id.* at 78:65–67, 79:7–19. In accordance with the '322 patent, a user can make recommendations (i.e., recommend a music album, artist, playlist, or track) and send messages to other users who are their friends. *Id.* at 79:20–43.

D. The Challenged Claims

Petitioner challenges claims 30–32, 35, 51, 55, and 56 of the '322 patent, of which claim 30 is an independent claim. Claim 30 is illustrative of the challenged claims and is reproduced below:

30. Software application embodied on a non-transitory storage medium, wherein the software application is executable on a smartphone device, wherein the software application enables an end-user to interact with other users and (a) in which the software application allows the end-user to, over a wireless connection, create on a remote server one or more user accounts with associated profiles for that end-user, wherein the profiles are editable; and (b) the software application allows the end-user

to, over the wireless connection, view profiles created by other users of a service; and (c) the software application allows the end-user to, over the wireless connection, interact with other users of the service; and (d) the software application allows the end-user to, over the wireless connection, send and receive messages to and from other users of the service; and (e) the software application allows the end-user to, over the wireless connection, link his or her user account on the remote server to user accounts on the remote server of other users of the same service or of other services.

Ex. 1002, 90:28–46.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims of the '322 patent are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)/Basis²
30, 51, 55	102	Abrams ³
30, 31, 51, 55, 56	103	Abrams

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. At this stage of the proceeding, we apply the pre-AIA version of the statutory bases for unpatentability because the '322 patent claims priority to an application filed before March 16, 2013. Ex. 1002, 1:9–18. In addition, although Petitioner argues that the '322 patent is subject to post-AIA § 102 (Pet. 11 n.1, 39 n.4), the parties do not argue that the patentability analysis differs here based on what version applies.

² For certain challenged claims of certain asserted grounds, Petitioner also lists “the knowledge of [one of ordinary skill in the art] about multitasking and multithreading (as evidenced by *Java Threads* (Ex. 1015) and expert testimony (Ex. 1025)).” Pet. 3–4. Although we do not list such knowledge separately, we consider it as part of our obviousness analysis. See *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013). In addition, we view Petitioner’s listing of Exhibit 1015 as evidencing the alleged knowledge of one of ordinary skill, rather than including Exhibit 1015 as part of an asserted combination for an asserted ground.

³ US 2005/0021750 A1, published Jan. 27, 2005 (Ex. 1009, “Abrams”).

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)/Basis²
32, 35	103	Abrams, Khedouri ⁴
35	103	Abrams, Partovi ⁵
30, 31, 51, 55, 56	103	Abrams, CNET, ⁶ Collins ⁷
32, 35	103	Abrams, CNET, Collins, Khedouri
30, 31, 51, 55, 56	103	Abrams, CNET, Monas ⁸
32, 35	103	Abrams, CNET, Monas, Khedouri
30, 31, 51, 55, 56	103	Abrams, CNET, Collins, Monas
32, 35	103	Abrams, CNET, Collins, Monas, Khedouri
35	103	Abrams, CNET, Collins, Partovi
35	103	Abrams, CNET, Monas, Partovi
35	103	Abrams, CNET, Collins, Monas, Partovi
32, 35, 56	102	Knight ⁹
32, 35, 56	103	Knight

Pet. 3–5, 11–69. Petitioner submits in support of its arguments the Declaration of Michael Shamos, Ph.D. (Ex. 1025).

II. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise discretion under 35 U.S.C. § 325(d) to deny institution. *See* Prelim. Resp. 7 n.3, 25 n.7. In particular, Patent Owner argues that the Petition’s analysis of Abrams for the “software application” “element is ‘substantially the same’ as prior art [(i.e., Sittig)] applied in a substantive rejection and fails for the same reasons—both describe a generic browser/website pushed out by a web server, with all

⁴ US 2006/0008256 A1, published Jan. 12, 2006 (Ex. 1011, “Khedouri”).

⁵ US 8,572,169 B2, issued Oct. 29, 2013 (Ex. 1010, “Partovi”).

⁶ Pages from www.cnet.com archived on Wayback Machine (dated in 2005 and 2006) (Ex. 1019, “CNET”).

⁷ US 5,963,951, issued Oct. 5, 1999 (Ex. 1020, “Collins”).

⁸ Steve Monas, *YourSpace: A Friend’s Guide to MySpace.com: The Basics* (2006) (excerpts) (Ex. 1014, “Monas”).

⁹ US 2010/0031366 A1, published Feb. 4, 2010 (Ex. 1012, “Knight”).

of the functionality provided by the web server.” *Id.* at 7 n.3. Similarly, Patent Owner argues that the Petition’s analysis of Abrams for the “creat[ing] on a remote server one or more user accounts” “element is ‘substantially the same’ as prior art (the Reddick reference) applied in a substantive rejection during prosecution of the parent ’430 patent and fails for the same reasons—both references arguably describe allowing a user to edit profiles, but not allowing a user to *create* accounts.” *Id.* at 25 n.7 (citing Ex. 1005, 73–74).

In evaluating arguments under § 325(d), we use a two-part framework, with the first part being whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (addressing in a two part framework the factors presented in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, Case IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to Section III(C)(5), first paragraph)). As we discuss below, we are not persuaded that the first part of the framework is met.

Patent Owner does not argue that Abrams previously was presented to the Office. *See* Prelim. Resp. 7 n.3, 25 n.7. And we are not persuaded that Abrams is substantially the same art as Sittig or Reddick simply because Abrams may have one claimed feature in common with Sittig (i.e., “a generic browser”) and a different claimed feature in common with Reddick (i.e., allowing a user to edit, but not create, profiles). *Id.* Petitioner is relying on Abrams to teach multiple claimed features, and Patent Owner’s § 325(d) arguments address only a subset of those features. *Id.*

Moreover, as we discuss below, we disagree with Patent Owner that Sittig employing a browser was a reason that particular rejection was overcome. *See infra* Section IV (addressing Applicant’s remarks to a rejection). Rather, the rejection was overcome for failing to teach a limitation (i.e., that a software application allowed a user, *over a wireless connection*, to create a user account) that Abrams teaches. *See id.; infra* Section VI(B)(3) (applying Abrams). Nor do we agree with Patent Owner that Abrams (unlike Reddick) fails to teach allowing a user to create an account. *See infra* Section VI(B)(3) (applying Abrams).

In addition, Patent Owner does not address whether the same or substantially the same arguments previously were presented to the Office. *See* Prelim. Resp. 7 n.3, 25 n.7.

In light of the above, we find that the first part of the *Advanced Bionics* framework is not met, and thus, we do not proceed to the second part. *See Advanced Bionics*, Paper 6 at 10. Accordingly, we decline to exercise discretion to deny institution under 35 U.S.C. § 325(d).

III. LEVEL OF ORDINARY SKILL IN THE ART

To determine whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). In assessing the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962–63 (Fed. Cir. 1986)). “[O]ne or more factors may predominate.” *Id.*

Petitioner submits that one of ordinary skill in the art would have had “a bachelor’s degree in computer science, electrical engineering, or an equivalent discipline, or equivalent experience, including familiarity with multitasking and multithreading, wireless communications and client/server computing, and, in addition, familiarity with digital music distribution and DRM.” Ex. 1025 ¶ 62; Pet. 35.

Patent Owner submits that one of ordinary skill in the art would have had “a Bachelor’s degree in Computer Science, Computer Engineering, Human Factors, or an equivalent degree and at least two years of experience working in the fields of user interfaces, communications applications, networking applications, or media applications, or a person with equivalent education, work, or experience in such fields.” Prelim. Resp. 2.

The parties’ dispute regarding the level of ordinary skill in the art does not substantively impact our analysis for purposes of institution. Rather, we find in applying either parties’ definition for what comprises the level of ordinary skill in the art that Petitioner shows that there is a reasonable likelihood that it would prevail in proving the unpatentability of the challenged claims. At this stage of the proceeding, however, we adopt Petitioner’s proposed definition as it is supported by expert testimony, and Patent Owner’s is not.

During trial, and in accordance with our Rules, the parties should address what substantive effect, if any, different proposed definitions for the level of ordinary skill in the art have on analyzing what the prior art teaches or in otherwise evaluating unpatentability of the challenged claims.

IV. CLAIM CONSTRUCTION

Because the Petition was filed after November 13, 2018, we apply the same claim construction standard that would be used in a civil action under

35 U.S.C. § 282(b), following the standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b); 83 Fed. Reg. 51,340, 51,340–41, 51,343 (Oct. 11, 2018). In applying such standard, claim terms are generally given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “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).

Petitioner does not identify any specific claim term for construction. Pet. 5. Patent Owner submits that the claim term “software application” is defined in the Specification of the ’322 patent. Prelim. Resp. 3. More specifically, Patent Owner submits that the “Definitions” section of the Specification provides the following: “Software Application: The Client software application which is to be delivered over-the-air to, or pre-installed on, the Wireless Computing Device.” *See id.* (quoting Ex. 1002, 8:63–65).

We note that the definition for software application incorporates, based on the capitalization of defined words, the following additional definitions¹⁰ from the “Definitions” section of the Specification:

¹⁰ The definitions provided in the Specification sometimes also include examples to help further explain the term. We do not include such examples here as we view them as not limiting the definition for the term.

(i) “Client: A computing device connected to a network delivering the features and functions of a network-centric application to the user or consumer of the application”;

(ii) “Wireless Computing Device: A type of Client which connects to the network via a Wireless Network”; and

(iii) “Wireless Network: A network which provides wireless connectivity to client computing devices.” Ex. 1002, 8:25–26, 8:43–45, 8:53–55.

At this stage of the proceeding, we conclude that the term “software application” should be afforded the meaning provided by these definitions. *See Cont’l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 796 (Fed. Cir. 2019) (citing *Phillips*, 415 F.3d at 1316) (“When the patentee acts as its own lexicographer, that definition governs.”). We also note that the parties do not argue that these definitions are inconsistent with the plain and ordinary meaning of “software application,” or any other claim term.

In addition, at this stage of the proceeding, we disagree with Patent Owner that the Applicant limited the meaning of “software application” during the prosecution of the ’322 patent, thereby excluding a browser. *See* Prelim. Resp. 7–8. More specifically, we disagree that the Applicant distinguished a reference (i.e., Sittig) by arguing that “Sittig’s system lacked a ‘software application’ having the claimed features on the user device.” *Id.* at 7. Rather, the Applicant argued “Sittig fails to disclose that the software application of the portable wireless computing device allows the end-user to, over a wireless connection, create on a remote server one or more user accounts with associated profiles for that end-user.” Ex. 1006, 45. According to the Applicant, Sittig instead “teaches that the social network engine is used to enter details,” and “that the core functionality of the social

network resides in the social network engine 106, with which users are in communication, which teaches away from the software application of the portable wireless computing device allowing the end-user to, over a wireless connection, create on a remote server one or more user accounts.” *Id.* (citing Ex. 2004 ¶ 18).

We find that Applicant’s arguments are directed to Sittig’s teaching of “[u]sing the social network engine 106, the user 102A enters the details about the relationship.” Ex. 2004 ¶ 18. In other words, the Applicant argued that Sittig teaches that the social network engine is used to enter relationship details, in lieu of using a portable wireless device and a wireless connection to enter the relationship details. *See* Ex. 1006, 45; *see also* Ex. 2004 ¶ 16 (“Optionally, one or more of the users 102 may be able to access the social network engine 106 *directly*.”) (emphasis added), ¶ 18. At this stage of the proceeding, we view this finding as consistent with Applicant’s additional arguments, quoted by Patent Owner, that “Sittig lacks any disclosure of any key functionality on a portable wireless computing device[, and i]nstead, the key functionality in Sittig is disclosed to be in the social network engine.” Prelim. Resp. 7 (quoting Ex. 1006, 46).

Regardless, the Applicant’s arguments are at least amenable to multiple reasonable interpretations, and thus prosecution disclaimer is not established. *See Tech. Properties Ltd. LLC v. Huawei Techs. Co.*, 849 F.3d 1349, 1358 (Fed. Cir. 2017) (citing *MIT v. Shire Pharm., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016)). Rather, for prosecution disclaimer to apply, it must be “both clear and unmistakable to one of ordinary skill in the art.” *See id.* at 1357–58.

In addition, at this stage of the proceeding, we disagree with Patent Owner’s argument that “software application” does not encompass a

browser because the '322 patent “discusses ‘browsers’ generally as distinct from the claimed ‘software application.’” Prelim. Resp. 8. In particular, we disagree that “the '322 patent distinguishes its ‘software application’ (e.g., such as the example MusicStation software application described at length by the '322 [p]atent) from ‘Wireless Application Protocol’ [(WAP)] browsers,” as Patent Owner argues. *Id.* (citing Ex. 1002, 2:5–21, 17:28, 32:8–11). Instead, the '322 patent recognizes challenges and difficulties presented by using WAP (a protocol), rather than faulting the browser. Ex. 1002, 2:5–21. Although disavowal can be effectuated by language in a patent’s specification, “the standard for disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature.” *Poly-America, L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016). At this stage of the proceeding, Patent Owner does not identify statements in the '322 patent’s Specification that clearly evidence excluding a browser from the term “software application.”

In addition, we disagree with Patent Owner that Petitioner fails to provide how the challenged claims are to be construed, as required by 37 C.F.R. § 42.104(b)(3). Prelim. Resp. 11–12. Rather, we find that Petitioner’s statement identifies no claim terms as requiring express construction, which is consistent with the terms being provided their plain and ordinary meaning. Pet. 5; *see* Consolidated Trial Practice Guide (November 2019)¹¹ (“CTPG”) 44 (“[A] petitioner may include a statement that the claim terms require no express construction.”).

Lastly, we determine that we do not need to address other claim terms in order to determine whether to institute *inter partes* review. *See, e.g.,*

¹¹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”).

V. PRINCIPLES OF LAW

A claim is unpatentable under 35 U.S.C. § 102 “if each and every [claim] limitation is found either expressly or inherently in a single prior art reference.” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 851 F.3d 1270, 1273 (Fed. Cir. 2017). “A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present.” *Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003) (citing *Rosco, Inc. v. Mirror Lite, Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002)).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time of the invention to a person having ordinary skill in the art. *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness, if present.¹² *See Graham*, 383 U.S. at 17–18. When evaluating a claim for obviousness, we also must “determine whether there

¹² Patent Owner does not present arguments or evidence of such objective evidence of non-obviousness. *See generally* Prelim. Resp.

was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

VI. ALLEGED OBVIOUSNESS OVER ABRAMS

Petitioner argues that Abrams renders claims 30, 31, 51, 55, and 56 of the ’322 patent obvious. Pet. 4, 11–36. For the reasons that follow, we determine that Petitioner establishes a reasonable likelihood that it would prevail in showing that Abrams renders these claims obvious.

A. *Summary of Abrams*

Abrams “relates to computer data and information systems accessed over the Internet, and more particularly to a computer-based system for more effectively connecting people based on their positions within social networks.” Ex. 1009 ¶ 2. More specifically, Abrams teaches “a system for connecting people via an online database and . . . allows searching of social networks,” which “facilitates interaction among people connected through a social network.” *Id.* ¶ 41.

Abrams’ system provides a graphical interface to obtain descriptive data from a user to create a user account, “allowing the user to login securely and be identified by the system.” *Id.* ¶ 99. “Descriptive data generally describes characteristics and preferences of a user” (e.g., “a first and last name”; “attributes of the user, such as gender, marital status or occupation”; and hobbies). *Id.* ¶¶ 41, 64.

Abrams also teaches that a user can “view descriptive data about other users in her social network,” and “discover[] other users who have characteristics she finds appealing.” *Id.* ¶ 45. Based on the user’s judgment of the viewed descriptive data, the user may wish to contact another user through Abrams’ system. *Id.* More specifically, Abrams teaches “an

internal messaging system whereby users may send one another private messages.” *Id.* ¶ 97. In addition, Abrams teaches “allow[ing] users to invite friends or acquaintances to join the system.” *Id.* ¶ 43. “The invited friend or acquaintance may accept the invitation, and then become a user of the system, as a friend of the inviting user.” *Id.* Moreover, Abrams teaches “allow[ing] two users to confirm that they are ‘friends,’” before designating them as such in the system. *Id.*

B. Challenged Claim 30

1. Software Application Embodied on Non-transitory Medium

Petitioner argues that Abrams teaches a “software application embodied on a non-transitory storage medium, wherein the software application is executable on a smartphone device, wherein the software application enables an end-user to interact with other users,” as recited in claim 30. Pet. 20–22. More specifically, Petitioner argues that Abrams teaches having a Web browser (software application) “executing on user devices 106 and 108 so as to receive and render Web pages from a Web server.” *Id.* at 20 (citing Ex. 1009 ¶¶ 52–53, 77, Figs. 1, 3a–3b, 4–6; Ex. 1025, 61–62). Petitioner argues that Abrams teaches that devices 106 and 108 (i) are hosts for a Web browser, and (ii) can be cellular telephones or hand-held personal digital assistants, with no indication that the browser needs to be reinstalled after powering off the device, and thus, the browser “would inherently be ‘embodied on a non transitory storage medium.’” *Id.* (citing Ex. 1009 ¶¶ 74, 77; Ex. 1025, 61–62). “At the very least, it would have been obvious for the browser application to be ‘embodied on a non transitory storage medium’ so that it would not need to be reinstalled [e]very time the user device was powered off and on,” according to Petitioner. *Id.* at 20–21 (citing Ex. 1025, 61–62).

In addition, Petitioner argues that Abrams teaches that the Web browser executes on user devices 106 and 108, which can be cellular telephones, and “presents GUI displays such as 102, 104, 302, 304, 404, and 604 as shown in Figures” 3a–3b and 4–6. *Id.* at 21 (citing Ex. 1009 ¶¶ 74, 77, Figs. 1, 3a–3b, 4–6; Ex. 1025, 62, 75–76). According to Petitioner, “[a] cellular telephone capable of presenting the GUI displays shown in Abrams, running a browser, and doing all that Abrams discloses for it is inherently a ‘smartphone.’” *Id.* (citing Ex. 1025, 75–76). Petitioner alternatively argues that “it would have been obvious to [one of ordinary skill in the art] to use a smartphone for the ‘cellular telephone’ disclosed in Abrams, given all of the functions disclosed for it in Abrams.” *Id.* (citing Ex. 1025, 76). Moreover, CNET “shows that smartphones with browsers were well-known and commercially available by at least 2006,” according to Petitioner. *Id.* (citing Ex. 1019).

In addition, Petitioner argues that Abrams teaches that its browser “enables an end-user to interact with other users.” *Id.* at 22 (citing Ex. 1025, 62–63, 76). More specifically, Petitioner argues that Abrams enables an end-user to interact with other users, including teaching “a system for connecting people via an online database and . . . **further facilitates interaction among people connected through a social network.**” *Id.* (quoting Ex. 1009 ¶ 41) (alteration in original).

At this stage of the proceeding, we are persuaded that Petitioner demonstrates, for purposes of this institution decision, that Abrams teaches a “software application embodied on a non-transitory storage medium, wherein the software application is executable on a smartphone device, wherein the software application enables an end-user to interact with other users.” In particular, we find that Abrams teaches having a Web browser

(i.e., software application) executing on a user device (e.g., a cellular telephone) to receive and render Web pages from a Web server. *See* Ex. 1009 ¶¶ 52–53, 74, 77, Figs. 1, 3a, 3b, 4–6. At this stage of the proceeding, we agree with Petitioner and find that this disclosure from Abrams teaches that the browser is executable on Abrams’ cellular telephones. *See id.*; *see also* Ex. 1025, 61–62. At this stage of the proceeding, we also find that Abrams teaches that its cellular telephones can present GUI displays, which teaches “smartphones.” *See* Ex. 1009 ¶¶ 74, 77, Figs. 1, 3a–3b, 4–6; Ex. 1025, 62, 75–76. In addition, at this stage of the proceeding, we find that it would have been obvious to one of ordinary skill in the art to use a smartphone for the cellular telephone taught in Abrams, and that smartphones with browsers were well-known and commercially available by at least 2006. *See generally* Ex. 1019.

At this stage of the proceeding, we also agree with Petitioner and find that it would have been obvious to one of ordinary skill in the art for the browser to be “embodied on a non-transitory storage medium” so that the browser would not need to be reinstalled each time a user device powers up. *See* Ex. 1025, 62. In addition, at this stage of the proceeding, we agree with Petitioner and find that Abrams teaches that its browser “enables an end-user to interact with other users.” *See* Ex. 1009 ¶ 41 (teaching “a system [that] . . . facilitates interaction among people connected through a social network”); Ex. 1025, 62–63, 76.

At this stage of the proceeding, we find unavailing Patent Owner’s argument that the claimed “‘software application’ elements . . . require not merely any ‘software application’ generally, but a specific software application configured to perform the claimed functions.” Prelim. Resp. 4 (citing Ex. 1002, 90:28–46) (reciting claim 30). More specifically, Patent

Owner argues that “[r]ather than a dedicated software application for performing the claimed functions, the Petition identifies a generic ‘browser’ of Abrams” *Id.* As we discuss above, however, the term “software application” does not exclude a browser. *See supra* Section IV (construing “software application”). Thus, Patent Owner’s arguments that are premised on excluding a browser fail.

At this stage of the proceeding, we also find unavailing Patent Owner’s argument that Petitioner fails to show that Abrams teaches a software application that is “embodied on” the portable device because Petitioner—in addition to Abrams’ browser—relies on Abrams’ teachings involving a remote “Web server” to show the claimed functions that the software application allows. *See* Prelim. Resp. 5, 9–10 (citing Ex. 1009 ¶ 77). Patent Owner’s argument is premised on claim 30 requiring that the software application alone provides all of the claimed functions. *Id.* At this stage of the proceeding, however, we find that this premise is incorrect. Rather, the language of claim 30 recites that the software application “*enables* an end-user to interact with other users,” and “*allows* the end-user” to perform the claimed functions. Ex. 1002, 90:28–46 (reciting claim 30) (emphases added). Thus, although the claimed software application embodied on the storage medium is a necessary part of providing the claimed functions, it need not be everything. *See id.*; *see also In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998) (finding “the name of the game is the claim”). This conclusion aligns with how the ’322 patent defines “software application” as being, in part, a “Client software application,” and defines “Client” as “[a] computing device connected to a network delivering the features and functions of a network-centric application to the user or consumer of the application,” and that “[t]he Client typically connects to a

Server and requests Services.” Ex. 1002, 8:43–46, 8:63–65. In other words, the ’322 patent expressly describes its software application as connecting to a server to receive functions of a network-centric application, rather than alone providing the functions. *Id.*

At this stage of the proceeding, we also find unavailing Patent Owner’s argument that Petitioner fails to address the definition of “software application” as provided in the ’322 patent’s Specification. Prelim. Resp. 11. Rather, as we discuss above, Petitioner identifies Abrams’ browser as the claimed software application and argues that the browser would have been installed in non-volatile memory (“so that it would not need to be reinstalled”) on a cellular telephone, which comports with the definition provided for “software application” by the ’322 patent. *Compare* Pet. 20–21, *with* Ex. 1002, 8:63–65.

In sum, at this stage of the proceeding, we find that Abrams teaches this limitation.

2. Create on a Remote Server One or More User Accounts

Petitioner argues that Abrams teaches “(a) in which the software application allows the end-user to, over a wireless connection, create on a remote server one or more user accounts with associated profiles for that end-user, wherein the profiles are editable” as recited in claim 30. Pet. 22–25 (citing Ex. 1025, 63–65, 76–77). More specifically, Petitioner argues that “Abrams’ browser presents a user with interfaces that allow the user to enter descriptive data about the user,” including “profile data.” *Id.* at 22 (citing Ex. 1009 ¶¶ 41, 43, 91, 99, 108, Figs. 3a–3b). Petitioner argues that Abrams teaches that the descriptive data collected via the browser is stored on a remote server apparatus 110 in a database 200. *Id.* at 22–23 (citing Ex. 1009 ¶¶ 42, 76, 86, 88–89, Figs. 1–2). According to Petitioner, “[u]ser devices

106 and 108 communicate with server apparatus 110, and when implemented as the disclosed ‘cellular telephones,’ those devices inherently communicate with server apparatus 110 over a ‘wireless connection.’” *Id.* at 23 (citing Ex. 1009 ¶¶ 74, 77, Fig. 1; Ex. 1025, 63). Petitioner argues that Abrams teaches that each user has an account because (i) Abrams teaches “allowing the user to login securely and be identified by the system,” and (ii) “that data within the database 200, such as profile data 208, is specifically associated with a particular user.” *Id.* at 23–24 (citing Ex. 1009 ¶ 99; Ex. 1025, 63, 69).

In addition, Petitioner argues that one of ordinary skill in the art would “have found it obvious to make the information already in a profile ‘editable’ at least because (1) a user would need the ability to correct typographical errors in a profile; and (2) a user needs the ability to keep their profile up-to-date.” *Id.* at 24 (citing Ex. 1025, 76). According to Petitioner, “[m]aking information editable is common and would have been well within the knowledge of” one of ordinary skill in that art, as evidenced by Collins (cited in Abrams), which teaches users updating their personal profile. *Id.* (citing Ex. 1009 ¶ 29; Ex. 1020, 6:52–58).

At this stage of the proceeding, we are persuaded that Petitioner sufficiently demonstrates, for purposes of this institution decision, that Abrams teaches that “the software application allows the end-user to, over a wireless connection, create on a remote server one or more user accounts with associated profiles for that end-user, wherein the profiles are editable.” First, at this stage of the proceeding, we find that Abrams teaches that its browser presents a user with interfaces for the user to enter descriptive data (e.g., profile data) about the user. Ex. 1009 ¶¶ 41, 91, 99, 108, Fig. 3a. For example, Abrams teaches providing a user an interface “to obtain user

descriptive data,” and “collect[ing] data allowing the user to login securely and be identified by the system.” *Id.* ¶¶ 41, 99; *see also id.* Fig. 3a (illustrating a “Data Collection Interface”); Ex. 1025, 63 (citing Ex. 1009 ¶ 99 (highlighting that Abrams’ interface “allows the user to identify the reason she is joining the system”) (emphasis omitted), claim 24 (highlighting “profiles describing said users are created”) (emphasis omitted)). In addition, Abrams teaches that it stores this collected data in a database on a remote server. Ex. 1009 ¶¶ 42, 88, Figs. 1–2. In light of the above, we agree with Petitioner that Abrams teaches that each user has an account created.

Second, at this stage of the proceeding, we are sufficiently persuaded that Abrams teaches that its browser allows for this user account creation over a wireless connection. *See* Ex. 1009 ¶¶ 74, 77. More specifically, Abrams teaches that its user interface devices can be cellular telephones. *Id.* ¶ 74. At this stage of the proceeding, we credit Dr. Shamos’ testimony that “[w]ireless connections are disclosed in Abrams because the user device can be a wireless ‘cellular telephone’” Ex. 1025, 63. We also credit for purposes of institution Dr. Shamos’ testimony that “[a]ll interactions between the ‘server apparatus 110’ and user devices 106 and 108 are inherently via a ‘wireless connection’ when the user device is a ‘cellular telephone’” *Id.* This testimony appears to be consistent with Abrams’ teaching that its user devices can be cellular telephones.

Third, at this stage of the proceeding, we are sufficiently persuaded that one of ordinary skill in the art would have found it obvious to make the profiles editable, including to allow a user to keep their profile up-to-date. Ex. 1025, 76. At this stage of the proceeding, we find that making such

information editable was well-known to one of ordinary skill in that art. *See* Ex. 1020, 6:52–58.

At this stage of the proceeding, we find unavailing Patent Owner’s argument that Petitioner fails to “even allege[] that Abrams teaches ‘*creat[ing]*’ on a remote server one or more user accounts.” Prelim. Resp. 25 (citing Pet. 22–25) (second alteration in original). Rather, as we discuss above, Petitioner sets forth the limitation and argues that Abrams teaches it by citing to specific portions of Abrams, and relying on Dr. Shamos’ testimony. *See supra*; Pet. 22–25. To the extent that Patent Owner’s argument is directed to Petitioner also arguing that each Abrams user “has” an account—as opposed to again stating “create[s]”—we find that Patent Owner’s argument is unavailing as it is not directed to the substance of what Petitioner alleges Abrams teaches.

At this stage of the proceeding, we also find unavailing Patent Owner’s argument that “[d]uring the relevant time frame (prior to May 2006), early cellular phones capable of both voice and data communication relied upon a hybrid of wireless communications (for voice communications and certain limited data communication such as SMS messaging) and wired communications (for data communications).” Prelim. Resp. 15. We view this as arguing that cellular telephones before May 2006 were incapable of wireless communications for data of the type recited in claim 30. *Id.* We find that such an argument is attorney argument unsupported by expert testimony.

In addition, we question Patent Owner’s reliance on Haeusel,¹³ Lipsit,¹⁴ and Dickie.¹⁵ Rather than supporting Patent Owner’s argument, these references appear to undercut it. For example, Haeusel teaches that (i) it was known that a mobile phone could be used to download music, although doing so could be a prohibitive drain on the phone’s battery; and (ii) a trend at that time was for a mobile phone to be used for Internet browsing. *See* Ex. 2002 ¶¶ 2, 47. Dickie teaches that a known technique to interface a personal digital assistant and portable computer was “to utilize a wireless connection” (e.g., “RF”). Ex. 2001 ¶ 5. As to Lipsit, it relates to storing activation parameters in a cellular telephone so that the phone can be activated and used with a particular cellular service provider in a geographic location, which we find to be inapposite to Patent Owner’s argument. *See* Ex. 2003, 1:29–31, 2:55–3:3. However, even if Haeusel, Lipsit, and Dickie also teach communicating media content to a mobile phone using a wired connection, we are not persuaded, at this stage of the proceeding, that these references evidence that one of ordinary skill in the art would have understood that cellular telephones in May 2006 were incapable of wirelessly communicating data of the type recited in claim 30, as Patent Owner argues. *See* Prelim. Resp. 15–19.

Accordingly, at this stage of the proceeding, we afford little weight to this argument from Patent Owner. *See In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997) (explaining that attorney arguments and conclusory statements that are unsupported by factual evidence are entitled to little probative value).

¹³ US 2007/0130592 A1, published June 7, 2007 (Ex. 2002, “Haeusel”).

¹⁴ US 7,260,381 B2, issued Aug. 21, 2007 (Ex. 2003, “Lipsit”).

¹⁵ US 2004/0268005 A1, published Dec. 30, 2004 (Ex. 2001, “Dickie”).

At this stage of the proceeding, we also find unavailing Patent Owner’s argument that “there is simply no support in the record that ‘all’ of the communications involved in performing each of the distinct functions of [claim 30] would ‘*inherently occur*’ over a wireless connection.” Prelim. Resp. 14. Rather, we find that Abrams teaches that its user device, which communicates with Abrams’ remote server, can be a cellular telephone. *See* Ex. 1009 ¶¶ 74, 77. At this stage of the proceeding, we also are sufficiently persuaded that Abrams’ teaching of using a cellular phone for the user device teaches that the communications occur wirelessly (i.e., the cellular phone and the remote server have a “[w]ireless connection[]”). *See id.* at ¶¶ 74, 77; Ex. 1025, 63 (“Wireless connections are disclosed in Abrams because the user device can be a wireless ‘cellular telephone.’”).

As to the separate inherency issue, we find that Patent Owner equates the cellular telephones taught in Haeusel, Lipsit, and Dickie—which are cellular phones having specific, additional wired functionality—with the cellular telephone taught in Abrams, without providing a principled basis to do so. *See* Prelim. Resp. 15–19. Thus, a showing that wired communications can occur in the cellular telephones taught in Haeusel, Lipsit, and Dickie may be inapposite as to whether a wireless connection is necessarily present in Abrams’ cellular telephone. The parties should consider addressing this inherency issue for this obviousness ground during trial, in accordance with our Rules.

At this stage of the proceeding, we also find unavailing Patent Owner’s argument that Petitioner’s “insistence that the mere presence of a cellular phone somehow indicates each of the functions recited . . . are inherently performed ‘over a wireless connection’ essentially reads this

requirement entirely out of the claim.” Prelim. Resp. 20. Simply put, Patent Owner does not provide reasoning to explain this argument. *See id.*

In sum, at this stage of the proceeding, we are sufficiently persuaded that Abrams teaches “in which (a) the software application allows the end-user to, over a wireless connection,^[16] create on a remote server one or more user accounts with associated profiles for that end-user, wherein the profiles are editable.”

3. *View Profiles Created by Other Users*

Petitioner argues that Abrams teaches “(b) the software application allows the end-user to, over the wireless connection, view profiles created by other users of a service,” as recited in claim 30. Pet. 25–28. More specifically, Petitioner argues that Abrams teaches presenting to a user a web page that shows the other users within his social network. *Id.* at 25 (citing Ex. 1009 ¶ 102, Fig. 5). Petitioner argues that Abrams teaches that this web page can display the other users’ “photo and other information about them.” *Id.* at 25–26 (citing Ex. 1009 ¶¶ 102–103, Fig. 5). According to Petitioner, for each of the displayed other users, “the user interface provides an option to ‘View Profile.’” *Id.* at 26 (citing Ex. 1009, Fig. 5). Petitioner argues that Abrams teaches that if the user selects “View Profile” for another user, that other user’s profile is displayed to the user. *Id.* at 26–27 (citing Ex. 1009 ¶ 105, Fig. 6).

After reviewing Petitioner’s arguments and evidence, which are not separately addressed by Patent Owner at this stage of the proceeding, we are

¹⁶ Our reasoning regarding the parties’ arguments for the “over a wireless connection” limitation also applies to the additional recitals of the phrase in claim 30. *See infra* Section VI(B)(4)–(6). We thus do not repeat the parties’ arguments or our reasoning as we address these remaining limitations below.

persuaded that Petitioner demonstrates, for purposes of this institution decision, that Abrams teaches this limitation.

4. Interact with Other Users

Petitioner argues that Abrams teaches “(c) the software application allows the end-user to, over the wireless connection, interact with other users of the service,” as recited in claim 30. Pet. 28. More specifically, Petitioner argues that this limitation is met based on the same arguments Petitioner sets forth to show that Abrams teaches that its browser “enables an end-user to interact with other users.” *Id.* These arguments include that Abrams teaches “a system for connecting people via an online database and . . . **further facilitates interaction among people connected through a social network.**” *Id.* at 22 (quoting Ex. 1009 ¶ 41) (alteration in original).

After reviewing Petitioner’s arguments and evidence, which are not separately addressed by Patent Owner at this stage of the proceeding, we are persuaded that Petitioner demonstrates, for purposes of this institution decision, that Abrams teaches this limitation.

5. Send and Receive Messages to and from Other Users

Petitioner argues that Abrams teaches “(d) the software application allows the end-user to, over the wireless connection, send and receive messages to and from other users of the service,” as recited in claim 30. Pet. 28–29. More specifically, Petitioner argues that Abrams teaches a user interface that “provides an option to ‘Send Message.’” *Id.* at 28 (citing Ex. 1009, Fig. 5, ¶ 104). According to Petitioner, “Abrams explains that the system provides ‘an internal messaging system whereby users may send one another private messages.’” *Id.* at 28–29 (quoting Ex. 1009 ¶ 97); *see also id.* at 29 (citing Ex. 1009 ¶ 45) (arguing that Abrams teaches that a user may contact another user through the communication system).

After reviewing Petitioner’s arguments and evidence, which are not separately addressed by Patent Owner at this stage of the proceeding, we are persuaded that Petitioner demonstrates, for purposes of this institution decision, that Abrams teaches this limitation.

6. *Link His or Her User Account*

Petitioner argues that Abrams teaches “(e) the software application allows the end-user to, over the wireless connection, link his or her user account on the remote server to user accounts on the remote server of other users of the same service or of other services,” as recited in claim 30. Pet. 29–30. More specifically, Petitioner argues that Abrams teaches that “[a] user may link his or her account with someone who does not currently have an account by inviting a friend to join the system.” *Id.* at 29 (citing Ex. 1009 ¶¶ 43, 101, 106–108). “To do so, Abrams’ browser allows a user to provide the system with a friend’s email address, and the system sends an e-mail invitation to the friend to join the system,” according to Petitioner. *Id.* at 29–30 (citing Ex. 1009 ¶¶ 43, 53, 101, 106, Figs. 4, 7). Petitioner argues that Abrams teaches that “[t]he friend can accept the invitation and join the system by clicking on a link and entering ‘descriptive data’ about himself / herself.” *Id.* at 30 (citing Ex. 1009, Fig. 4, ¶¶ 43, 53, 101, 108). According to Petitioner, Abrams teaches that “[i]f the friend accepts the invitation and joins the system, the friend and the inviting user are ‘automatically defined within the system as ‘friends.’”” *Id.* (quoting Ex. 1009 ¶ 108). Petitioner argues that Abrams teaches that “[s]pecifically, the users are listed in the ‘friends data’ 216 in each other’s section of the database 200.” *Id.* (citing Ex. 1009, Fig. 2, ¶¶ 41, 43, 65, 70, 95; Ex. 1025, 69). In addition, Petitioner argues that Abrams teaches that “[a] user may also initiate friend requests

‘within the system,’ and two users can ‘confirm that they are “friends.”’” *Id.* (quoting Ex. 1009 ¶¶ 43, 95; citing Ex. 1025, 38–39).

After reviewing Petitioner’s arguments and evidence, which are not separately addressed by Patent Owner at this stage of the proceeding, we are persuaded that Petitioner demonstrates, for purposes of this institution decision, that Abrams teaches this limitation.

7. *Summary*

In summary, based on the current record, and for purposes of this institution decision, we determine that Petitioner shows a reasonable likelihood that it would prevail in showing that claim 30 would have been obvious to one of ordinary skill in the art in view of Abrams.

C. *Challenged Claims 31, 51, 55, and 56*

At this stage in the proceeding, Patent Owner does not address separately Petitioner’s arguments and evidence as to how Abrams teaches the limitations of claims 31, 51, 55, and 56. *See generally* Prelim. Resp. We have reviewed Petitioner’s arguments and evidence regarding these claims, and, on the current record, we find them persuasive for purposes of institution.

VII. ALLEGED ANTICIPATION BY ABRAMS

Petitioner argues that Abrams anticipates claims 30, 51, and 55. Pet. 3, 11–32. Petitioner already has demonstrated a reasonable likelihood of success in proving that at least one claim of the ’322 patent is obvious in light of Abrams. We, however, provide the below guidance for this ground. CTPG 6 (“If a trial is instituted, the Board generally will provide analysis of the strengths and weaknesses of all challenges in the petition in order to provide guidance to the parties for the upcoming trial.”).

As we discuss above, we question whether “over a wireless connection” is necessarily present from Abrams’ disclosure of a cellular telephone for its user device. *See supra* Section VI(B)(2). In addition, we question whether (i) the browser would inherently be embodied on a non-transitory storage medium in Abrams, (ii) Abrams’ cellular telephone would inherently be a smartphone, and (iii) the profiles would inherently be editable. *See supra* Section VI(B)(1)–(2). The parties should consider addressing these issues during trial, in accordance with our Rules.

VIII. REMAINING GROUNDS INVOLVING ABRAMS

Petitioner asserts additional obviousness grounds that involve Abrams. Pet. 4–5, 11–36. At this stage in the proceeding, Patent Owner does not address separately Petitioner’s arguments and evidence as to how these combinations teach these claims. *See generally* Prelim. Resp.

Petitioner already has demonstrated a reasonable likelihood of success in proving that at least one claim of the ’322 patent is unpatentable. In order to provide guidance to the parties, we have reviewed Petitioner’s arguments and evidence for these grounds. CTPG 6. From our review, we question whether Petitioner has provided sufficiently articulated reasoning with rational underpinning to support combining (i) Abrams with Khedouri, and (ii) Abrams and Partovi. *See Kahn*, 441 F.3d at 988. The parties should consider addressing this issue during trial, in accordance with our Rules.

IX. GROUNDS INVOLVING KNIGHT

Petitioner argues that Knight anticipates and renders obvious claims 32, 35, and 56. Pet. 4, 36–47. Petitioner already has demonstrated a reasonable likelihood of success in proving that at least one claim of the ’322 patent is unpatentable. In order to provide guidance to the parties, we

address Patent Owner’s arguments regarding Knight not being prior art for challenged claims 32, 35, and 56. CTPG 6.

The parties dispute whether Knight—of which the ’322 patent is a continuation—is prior art to claims 32, 35, and 56 of the ’322 patent. Pet. 36–40; Prelim. Resp. 26–42. More specifically, the parties dispute whether a PCT application,¹⁷ to which the ’322 patent claims priority, provides written description support for claims 32, 35, and 56 of the ’322 patent. *Id.* We address the parties’ arguments below.

A. Law on Written Description Support

“It is elementary patent law that a patent application is entitled to the benefit of the filing date of an earlier filed application only if the disclosure of the earlier application provides support for the claims of the later application, as required by 35 U.S.C. § 112.” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008) (quoting *In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995)). “To satisfy the written description requirement [in § 112,] the disclosure of the prior application must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention.’” *Id.* (second alteration in original) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991)).

¹⁷ WO 2007/129081 A1, published Nov. 15, 2007 (“PCT application,” Ex. 1008). The version of the PCT application filed as Exhibit 1008 includes typographical errors in the image that may have occurred during a character recognition operation, or otherwise. *E.g.*, compare Ex. 1008, 148:2 (“*Uneup*”), with Ex. 3001, 148:2 (“*Lineup*”). Accordingly, we have added Exhibit 3001 to the record, and when there is a discrepancy, we have relied on the contents of Exhibit 3001. However, for convenience, we consistently cite to Exhibit 1008. The parties should confirm that each of their exhibits do not suffer from this issue.

B. Claims 32 and 56

Claim 32 requires that “the software application using the multitasking architecture to balance the computational demands of one or both of: a DRM program; media operations.” Ex. 1002, 90:52–55. Claim 56 similarly requires that “the software application using a multithreaded architecture to balance the computational demands of network access; and the computational demands of one or more of: a user interface of the software application; a DRM program; media operations.” *Id.* at 92:51–55.

Petitioner argues that “[t]here is no disclosure in the . . . PCT application . . . of using a multitasking or multithreaded architecture to balance the computational demands of a DRM (digital rights management) program.” Pet. 38 (citing Ex. 1025 ¶ 82).

Patent Owner responds that the PCT application “describes in-depth the use of a multitasking / multithreading architecture to perform the tasks of the claimed invention.” Prelim. Resp. 29–32 (citing Ex. 1008, 18:1–15, 19:5–27, 20:18–21, 21:11–12, 27:5–8, 27:10–15, Figs. 2, 3). Patent Owner argues that the PCT application also describes use of this architecture to handle tasks including digital rights management (DRM). *Id.* at 32–35 (citing Ex. 1008, 4:14–16, 104:10–31, 105:10–28, 105:30–106:10, 118:4–6).

On this record, Patent Owner’s arguments are persuasive. The PCT application states that its mobile device software has a multithreaded architecture, which is “[a] key aspect” of its invention. Ex. 1008, 18:1–8; *see also id.* at 18:5–24:16 (section labeled “*1.1 Multi-threading*”). For example, it describes a Scheduler, which “is a facility for threads to schedule tasks for immediate or future execution in a background thread.” *Id.* at 19:5–6, Fig. 2.

The PCT application also states that its software performs DRM “to control and facilitate the legitimate distribution and use of digital media.” Ex. 1008, 104:12–19; *see also id.* at 4:14–16 (noting that DRM “enables . . . tracks stored on the device to be played so long as a subscription service has not terminated”), 104:10–123:3 (detailed description of DRM). In particular, the software includes a DRM Agent that is “responsible for enforcing permissions and constraints for DRM Content on the device, controlling access to DRM Content on the device, and so on.” *Id.* at 105:21–23.

Petitioner does not address these aspects of the PCT application. *See* Pet. 38. Instead, Petitioner relies on Dr. Shamos, who testifies that “[he] can see no disclosure of multithreading or multitasking to balance the computational demands of a DRM program” in the PCT application. Ex. 1025 ¶ 82. However, we assign little weight to that conclusion because it is not sufficiently explained or substantiated. 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). For example, Dr. Shamos agrees that the PCT application describes a multithreaded architecture and identifies DRM as one of the processes performed by that architecture, but fails to explain why this discussion is insufficient to disclose the limitation. *See* Ex. 1025 ¶ 82.

For the above reasons, at this stage of the proceeding, we are persuaded that the PCT application discloses the limitation, which requires the software application to use a multithreaded architecture to balance the computational demands of a DRM program. Accordingly, at this stage of the proceeding, we are not persuaded that Knight is prior art to claims 32 and 56 of the ’322 patent.

C. Claim 35

Claim 35 requires that “the software application is a music application wherein the software application uses track meta-data that is formed as a separate meta-data layer and defines attributes of tracks, the meta-data being external to a music track to make sharing and browsing of track information possible without needing to distribute the related music track files.”

Ex. 1002, 91:1–7.

Petitioner argues that “[t]here is no disclosure in the . . . PCT application of anything that could reasonably be characterized as ‘track meta-data that is formed as a separate meta-data layer.’” Pet. 38 (citing Ex. 1025 ¶ 81).

Patent Owner responds that the PCT application discloses the limitation. Prelim. Resp. 36–42. According to Patent Owner, the PCT application describes a mobile device receiving and displaying “descriptive information” about a track (such as the song title, artist, and duration) without downloading the track itself, and this “descriptive information” discloses the “track meta-data” recited in the claim. *Id.* at 37–40 (citing Ex. 1008, 4:27–5:9, 11:6–16, 13:14–21, 51:7–13, 91:7–10, 105:16–18, 116:1–10, 133:2–3, 134:10–15, 149:21–23, 149:25–150:3, 150:12–26, 152:1–9, 153, 156). In support, Patent Owner notes that the PCT application describes “[m]etadata” as “[i]ndividual items of data or collections of data, potentially hierarchically related, which describe the attributes or behavior of,” among other things, mobile content such as “full music downloads.” *Id.* at 37 (citing Ex. 1008, 13:14–21) (emphases omitted). Patent Owner further argues that “[t]he fact that the track metadata is provided as a search result, but not the music file itself, demonstrates” disclosure of track meta-data that is formed as a separate meta-data layer. *Id.* at 38.

On this record, we are persuaded that the PCT application discloses “track meta-data that is formed as a separate meta-data layer,” which (for purposes of this Decision) requires a showing of a software application that uses “track meta-data” that (1) exists separately from the music track, (2) exists separately in any way from other forms of metadata, and (3) is stored in a separate database.¹⁸

In particular, at this stage of the proceeding, we find that the PCT application discloses a software application that uses “track meta-data” (e.g., attributes of music tracks, such as the song’s title, artist, and duration) stored on the mobile device while the corresponding track and its metadata remain separately stored on a remote server. For example, the PCT application states that a user’s mobile device displays a “Lineup,” which “is the current playlist of tracks a user has queued for listening.” Ex. 1008, 148:1–4; *see also id.* at 127:11–16, Figs. 157–159. The Lineup lists the song title and artist for each upcoming track, including for tracks that have not yet not been downloaded. *E.g., id.* at 148:14–20, Fig. 159; *see also id.* at 150:1 (“Tracks, which have not been downloaded, are added to the Lineup before they are downloaded.”), 152:1–9 (describing option that allows user to insert a track “which **has not** been downloaded into the Lineup”). On the Lineup, “[t]racks which are currently downloading or waiting to download are shown in a grey font” to differentiate from downloaded tracks. *Id.* at 148:14–16.

¹⁸ Petitioner argues that the phrase “track meta-data that is formed as a separate meta-data layer” is indefinite. *See* Pet. 38 n.3 (citing Ex. 1025 ¶¶ 67–75). Petitioner, however, also sets forth the potential interpretations for the phrase. *See id.* at 48. We address these interpretations for purposes of this institution decision. *See Samsung Electronics America v. Prisia Eng’g*, 948 F.3d 1342, 1355 (Fed. Cir. 2020).

As another example, the PCT application states that the user's mobile device provides an interface that allows the user to search for music on the remote server. *E.g.*, Ex. 1008, 4:27–5:9, 136:8–11; *see also id.* at 4:27–5:1 (search function allows users to select new music for download), 45:6–51:26 (describing search function in detail). The search results from the server consist of information about music tracks, but not the tracks themselves. *See, e.g., id.* at 51:8–10 (search for a track returns “Track Name – Artist Name (Track Length)”), 136:8–11, 152:2–4, Fig. 123. The user may add a result to the Lineup, in which case the corresponding music track will be scheduled for download. *See, e.g., id.* at 136:11, 149:21–26, 150:1–3, 152:1–9, 156 (identifying options for a track “in search results” (emphasis omitted)).

We are persuaded that, for purposes of this Decision, these aspects of the PCT application disclose “track meta-data that is formed as a separate meta-data layer.” In particular, the Lineup and search interface both display data describing the attributes of tracks (e.g., the song title and artist name), and this data qualifies as “track meta-data.” *See, e.g.*, Ex. 1008, 13:19–21 (stating that metadata includes data that describes the attributes of mobile content, e.g., music tracks); Ex. 1025 ¶ 68 (testifying that “track meta-data is simply data about one or more tracks”). The PCT application states also that this data is stored on the mobile device (e.g., Ex. 1008, 91:8–9), and it exists separately from other forms of metadata (e.g., *id.* at 108:13–18 (identifying metadata relating to the mobile phone)). As a result, this track meta-data exists separately from the music track, exists separately from other forms of metadata, and is stored in a separate database.

As noted above, Petitioner does not address specifically the disclosure of the PCT application. *See* Pet. 38. Instead, Petitioner simply relies on

Dr. Shamos' testimony that the PCT application includes no relevant disclosure, but Dr. Shamos does not provide any analysis or evidence to explain his conclusion. *See* Ex. 1025 ¶ 81. Accordingly, we assign little weight to that testimony. *See* 37 C.F.R. § 42.65(a).

In light of the above, at this stage of the proceeding, we are not persuaded that Knight is prior art to claim 35 of the '322 patent.

D. Summary

At this stage of the proceeding, and based on the current record, we find that Petitioner does not show that Knight is prior art to challenged claims 32, 35, and 56.

X. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail in proving the unpatentability of at least one of the challenged claims of the '322 patent. We thus institute an *inter partes* review of all of the challenged claims of the '322 patent on all grounds asserted in the Petition. *See* 37 C.F.R. § 42.108(a).

Any findings or conclusions in this Decision are made only for the purposes of institution and are not dispositive of any issue. We have not made a final determination with respect to the construction of any term, or the patentability of any challenged claim. Our final determination will be based on the record as fully developed during trial, including any evidence or argument timely presented by the parties under our Rules.

XI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the '322 patent is instituted on all of the challenged claims and all grounds asserted in the Petition; and

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

IPR2022-00180
Patent 9,992,322 B2

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