

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

WILDSEED MOBILE, LLC,
Patent Owner.

IPR2023-00245
Patent 10,959,040 B2

Before KARL D. EASTHOM, TERRENCE W. McMILLIN, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Google LLC (“Petitioner”)¹ filed a Petition for *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 10,959,040 B2 (Ex. 1001, “the ’040 patent”). Paper 2 (“Pet.”) at 8, 84. Wildseed Mobile LLC (“Patent Owner”)² filed a Preliminary Response. Paper 6 (“Preliminary Response” or “Prelim. Resp.”). With our authorization (Ex. 3001), Petitioner thereafter filed a Reply to Patent Owner’s Preliminary Response (Paper 7, “Reply”) and Patent Owner filed a Sur-reply in Support of its Preliminary Response (Paper 8, “Sur-reply”) to address the issue of discretionary denial under 35 U.S.C. § 314.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020) (“The Board institutes the trial on behalf of the Director.”). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition, the Preliminary Response, the Reply, the Sur-reply, and the evidence of record, we institute an *inter partes* review as to the challenged claims of the ’040 patent on the grounds presented.

¹ Petitioner identifies “Google LLC and YouTube, LLC” as the real parties-in-interest to this proceeding. Pet. 82.

² Patent Owner identifies “Wildseed Mobile LLC” as the real party-in-interest to this proceeding. Paper 5 at 1.

B. Related Proceedings

The parties identify the following district court matters related to the '040 patent: *Wildseed Mobile LLC v. Google LLC*, No. 3-22-cv-04928 (N.D. CA, filed Aug. 29, 2022) (the “California litigation”); *Wildseed Mobile LLC v. Google LLC*, 6-22-cv-00357 (W.D. TX, filed Apr. 4, 2022) (transferred to N.D. CA—i.e., the California litigation); *Wildseed Mobile LLC v. Google LLC*, No. 6-21-cv-01245 (W.D. TX, filed Oct. 8, 2021) (voluntarily dismissed, Apr. 4, 2022). Pet. 81; Paper 5, 1.

Patent Owner asserts that *inter partes* reviews IPR2023-00244, IPR2023-00246, IPR2023-00247, and IPR2023-00248, each filed by Petitioner, involve patents related to the '040 patent. Paper 5, 1.

C. The '040 Patent (Ex. 1001)

The '040 patent “relates to venue or event recommendations for a user of a portable media player device.” *Id.* at 1:21–22.

“[T]he venue and/or event recommendations are for venues and/or events of potential interest to the user at locations proximally located to an inferred current location of the user, based at least in part on an inferred entertainment interest of the user.” *Id.* at 2:47–52. “[T]he current location of the user is inferred based at least in part on current and/or recent geographic locations of the portable media player device, and the entertainment interest is inferred based at least in part on the media files or content stored in and/or accessed using the portable media player device.” *Id.* at 2:52–58; *see also id.* at 4:29–40. “[T]he recommendations are provided to the . . . portable media player devices.” *Id.* at 2:58–59.

“Thus, . . . a user of a portable media player device having media of a particular genre stored on or accessed using the portable media player device

may receive a recommendation for a venue or event that is related to that particular genre and is proximally located to the inferred current location of the user of the portable media player device.” *Id.* at 2:60–66. “For example, a server may generate a recommendation for a nearby concert by an alternative rock band for a user of a portable media player device that has inferred interest in alter[n]ative rock, inferred based at least in part on media of an alternative rock or like genre stored on and/or accessed via his portable media player device.” *Id.* at 2:66–3:4.

Figure 2 of the '040 patent is reproduced below.

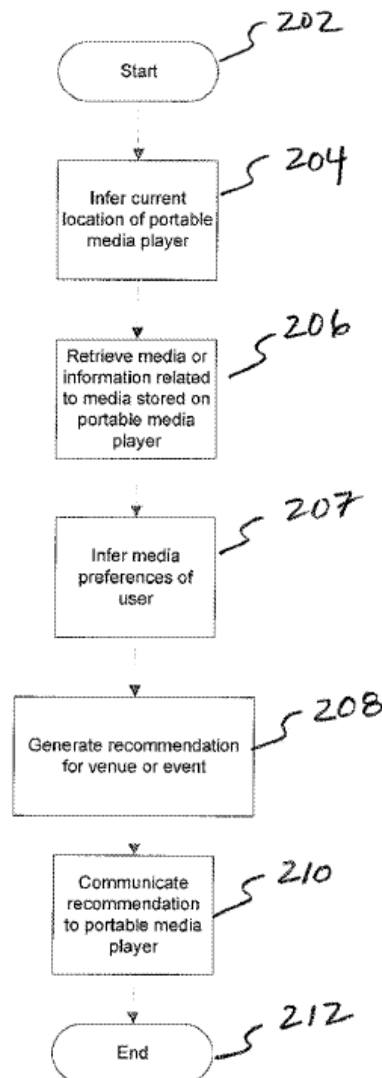


Figure 2 of the '040 patent depicts “a flow chart 200 that illustrates a method of generating by a server a recommendation for a venue or event of interest proximally located to (or information about) a current location of a user of the portable media player device in accordance with various embodiments of the invention.” *Id.* at 4:20–25.

At block 204, “a server . . . infers a current location of the user.” *Id.* at 2:41–43. For example, with regard to inferring the location, the '040 patent states:

The server may estimate the current location of the portable media player device based on a location of a wireless access point through which the portable media player device establishes a network connection to the server[,] . . . estimate the current location of the portable media player device based upon the results of triangulating signals from various signal towers or based upon the server's communication with other portable media player devices having known current locations[,] . . . receive the current location of the portable media player device from a global positioning system (GPS) module located within the portable media player device,

or receive “the current location [as] manually entered by the user into the portable media player device or other communication devices (such as a mobile phone) for transmission to the server.” *Id.* at 4:48–64.

At next blocks 206 and 207, “the server may infer an entertainment interest of the user.” *Id.* at 5:10–11. With regard to inferring an entertainment interest, the '040 patent states:

For example, . . . the server may have such information stored at the server (or in other storage accessible to the server) as a result of previous syncing of media between the portable media player device and the server or as a result of previous browsing of media on the server by the user of the portable media player device.

Id. at 5:21–26. “The information may be gathered and retrieved in real time, or continuously over a usage period.” *Id.* at 5:27–28.

At next block 207, “the server may determine one or more media preferences or interest for the user based in part upon the media and/or information about the media stored on or accessed using the portable media player device.” *Id.* at 5:29–32. For example, “the server may analyze . . . the meta data associated with a wide variety of media stored on or accessed using the portable media player device[,] such as . . . meta data . . . about the media title, media type, artist, subject matter, and so forth.” *Id.* at 5:37–44.

At next block 208, “the server may make a recommendation for a venue or event (or provide information) based at least in part in the inferred current location of the user and the determined media preference of the user of the portable media player device.” *Id.* at 5:60–64. “For example, the server may compare a user's preference for a particular genre of music to a database that includes citywide events or venues that are hosting or typically host bands which play music of that particular genre.” *Id.* at 6:9–13. “The server may collect the venue and/or event information in real time or the server may gather the information periodically.” *Id.* at 6:13–15.

At block 210, “the server may communicate the recommendation to the user.” *Id.* at 6:33–34. For example, the server may “transmit[] the recommendation (or information) to . . . the portable media player device.” *Id.* at 6:34–36. “[T]his may include transmitting the recommendation (or information) by sending either a short message service (SMS) message, an email message, a pager message 40 or a facsimile message to the user or by placing a call to the user.” *Id.* at 6:37–41.

“The process may end at block 212.” *Id.* at 5:44–45. “[T]he method 200 may [also] be repeated. *Id.* at 6:46. “For example, . . . automatic recommendations (or information) may be pushed to the user on a periodic basis, or when the portable media player device detects that the user has changed a current geographic location.” *Id.* at 6:46–50.

D. Challenged Claims

Petitioner challenges claims 1–20 (all) of the ’040 patent. Pet. 1. The ’040 patent has three independent claims: claim 1 directed to a “server;” claim 10 directed to a “mobile device;” and claim 17 is directed to a “method of operating a mobile device.” Ex. 1001, 8:20, 9:27, 10:39. Claim 1 recites:

A server comprising:
processor circuitry arranged to:
*infer one or more entertainment preferences of a user of
a mobile device based on retrieved information about
media accessed by the mobile device and a plurality
of media content types of the media, the plurality of
media content types including textual media, image
media, audio media, and video media;*
*access one or more sources of information about venues
or events proximal to a current location of the
user or the mobile device;*
identify at least one of the venues or events as being of
interest to the user based at least in part on the
inferred one or more entertainment preferences and
the current location;
generate a recommendation message indicating the
identified venue or event; and
network interface circuitry communicatively coupled to
the processor circuitry, the network interface circuitry
arranged to receive the information about the media,
and send the recommendation message to the mobile
device.

Id. at 8:20–41 (emphasis added to disputed limitations).

E. The Asserted Grounds

Petitioner challenges claims 1–20 of the '040 patent based on the grounds set forth in the table below.

Claim(s) Challenged	35 U.S.C. §	References
1–4, 7–10, 12, 13, 15–19	103 ³	Sasaki ⁴ , Ellis, ⁵ Jacobi ⁶
5, 6, 14, 20	103	Sasaki, Ellis, Jacobi, Havinis ⁷
3, 11	103	Sasaki, Ellis, Jacobi, Teicher ⁸

Pet. 20. Petitioner also relies on the Declaration of Dr. Henry Houh (Ex. 1003, “Houh Decl.”), which provides evidence in support of the contentions in the Petition. Patent Owner has not submitted a declaration or other testimonial evidence of an expert so, at least at this stage, there is no testimony contrary to that of Dr. Houh to consider.

II. OBVIOUSNESS ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends as follows:

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103, was effective on March 16, 2013. Petitioner asserts that “[t]he '040 patent was filed on February 13, 2019, and through a chain of continuations, claims priority to U.S. Provisional Patent Application No. 60/945,677, filed June 22, 2007.” Pet. 12. Because the date of the priority claim is before the effective date of the applicable AIA amendment, we apply the pre-AIA version of § 103 for purposes of institution.

⁴ US 2006/0250994 A1, published Nov. 9, 2006 (Ex. 1004).

⁵ US 2005/0020223 A1, published Jan. 27, 2005 (Ex. 1005).

⁶ US 2006/0195362 A1, published Aug. 31, 2006 (Ex. 1006).

⁷ US 6,169,899 B1, issued Jan. 2, 2001 (Ex. 1008).

⁸ US 2006/0143214 A1, published June 29, 2006 (Ex. 1007).

A Person of Ordinary Skill in The Art (“POSITA”) on or before June 22, 2007 would have been knowledgeable with the field of portable devices and venue or event recommendations for a user of the portable device that are pertinent to the ’040 patent. That person would have a bachelor’s degree in electrical engineering, or equivalent training, and approximately two years of experience working in the field of portable devices. Lack of work experience can be remedied by additional education, and vice versa.

Pet. 13 (citing Ex. 1003 ¶¶ 19–21).

Patent Owner does not dispute Petitioner’s assessment of the level of ordinary skill. Prelim. Resp. 13 (“at this stage of the proceeding, Patent Owner applies Petitioner’s definition of a POSITA”). Determining the level of ordinary skill in the art involves various factors, 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) (citation omitted). The prior art of record also reflects the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Institution Decision, we adopt the assessment offered by Petitioner, as it is consistent with the ’040 patent and the asserted prior art.

B. Weight of Dr. Houh’s Testimony

Patent Owner argues that

The Board should not credit the declaration testimony of Petitioner’s proffered expert, Dr. Houh, because (1) Dr. Houh does not meet Petitioner’s own definition of a POSITA—his declaration and CV confirm that he lacks the specific experience required under Petitioner’s definition; and (2) key portions of his declaration—such as the proffered motivations to combine the references in Petitioner’s three- and four-

reference combinations—repeat, often *verbatim*, the arguments in the Petition.

Prelim. Resp. 16–17.

Regarding the first argument, Patent Owner explains that “[a]lthough Dr. Houh’s educational background includes degrees in electrical engineering and computer science, there is no indication that he obtained specific experience with portable devices and with venue or event recommendations during his education.” Prelim. Resp. 19 (citing Ex. 1003 ¶ 8; Ex. 1019, 1). Contrary to this explanation, as Patent Owner recognizes, Dr. Houh describes his doctoral research as “including design of network components, device drivers, setting up a web server, maintaining networking devices, and study of Ethernet specifications.” *Id.* He also “helped to maintain, install, and upgrade the networking devices used within the [Telemedia Network Systems] group [at the Laboratory for Computer Science at MIT], along with other graduate students.” Ex. 1003 ¶ 11. Dr. Houh also studied the prior art of record in forming his opinions. *Id.* ¶¶ 4–5. Dr. Houh’s experience also includes “starting a company that provided website design services and targeted advertising opportunities,” as Patent Owner also recognizes. Prelim. Resp. 19. This experience involved “building college recruiting web sites and [selling] advertisements to companies wishing to target students to recruit at specific colleges,” and also, “develop[ing] technology that utilized the web user’s college affiliation to customize advertisements targeted to students at that college.” Ex. 1003 ¶ 14.

As Dr. Houh testifies, “[l]ack of work experience can be remedied by additional education, and vice versa.” Ex. 1003 ¶ 20. As indicated above

(§ II.A), Patent Owner does not dispute this. And although Patent Owner characterizes Dr. Houh’s educational background as merely “includ[ing] degrees in electrical engineering and computer science,” this characterization understates his “degrees.” In particular, Dr. Houh testifies that he “received a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (“MIT”) in 1998,” “a Master of Science degree in Electrical Engineering and Computer Science in 1991, a Bachelor of Science degree in Electrical Engineering and Computer Science in 1989, and a Bachelor of Science degree in Physics in 1990, all from MIT.” Ex. 1003 ¶ 8.

The field of network components, device drivers, web servers, and network devices, upgrading network devices, as supplemented by Dr. Houh’s other experiences, education, and study of the prior art, is sufficient on this preliminary record to at least include the requisite skill in the area of portable devices. In addition, Dr. Houh’s background in targeted advertising and website design implicitly embraces reaching students with portable or other computer devices who accessed the website. Patent Owner fails to explain how computer recommendation systems differ materially from computer advertisement systems. *See, e.g.*, Ex. 1004 ¶¶ 5–7 (describing prior art Internet based recommendation systems to foster selling and purchasing of goods). On this preliminary record, Dr. Houh’s experience, education, and study of the prior art, is sufficient to satisfy the requisite level of ordinary skill in the area of portable devices and venue or event recommendations.

With respect to Patent Owner’s second argument about Dr. Houh’s copying of statements in the Petition, Patent Owner directs attention to

Petition pages 24–29 and the Houh Declaration at paragraphs 58–72.

Prelim. Resp. 21–22. These cited paragraphs involve reasons to combine Sasaki with Ellis, and Sasaki and Ellis with Jacobi. Ex. 1003 ¶¶ 58–72.

Throughout the paragraphs, Dr. Houh provides support for the testimony by citing to Sasaki, Ellis, and Jacobi. *Id.* Therefore, even if some copying occurred, it is not clear how this undermines Dr. Houh’s testimony.

Based on the foregoing discussion, on this preliminary record, Patent Owner fails to provide a sufficient reason to discount the weight of Dr. Houh’s testimony.

C. 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).

Petitioner contends that “the terms of the Challenged Claims should be given their plain and ordinary meaning, and no terms require specific construction.” Pet. 14. Patent Owner “agrees with Petitioner that the terms

of the challenged claims should be given their plain and ordinary meaning.” Prelim. Resp. 13. Nevertheless, Patent Owner also asserts that “[f]urther discussion regarding the plain meaning of certain claim limitations is relevant to resolving the parties’ dispute.” *Id.* We address Patent Owner’s claim construction discussion in addressing Petitioner’s challenge to claim 1. *See infra* § II.E.6.

At this stage, no need exists to construe any claim terms expressly to resolve the parties’ disputes. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Principles of Law

Under 35 U.S.C. § 103(a), “[a] patent claim is unpatentable 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.” *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (similar language). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness involves resolving 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 when presented (4) objective evidence of non-obviousness (not presented here). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

E. Detailed Discussion of the Grounds

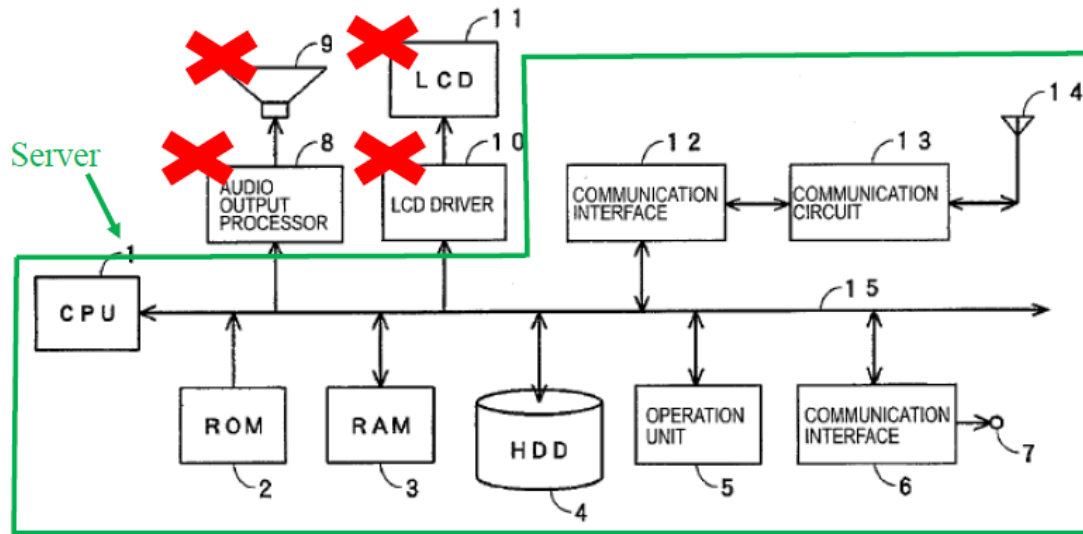
Petitioner asserts that claims 1–4, 7–10, 12, 13, and 15–19 would have been obvious under 35 U.S.C. § 103 based on Sasaki, Ellis, and Jacobi; claims 5, 6, 14, and 20 would have been obvious based on Sasaki, Ellis, Jacobi, and Havinis; and claims 3 and 11 would have been obvious based on Sasaki, Ellis, Jacobi, and Teicher. Pet. 20–80. Patent Owner disagrees. Prelim. Resp. 22–39.

We provide a summary of the asserted references and then consider the contentions of the parties as to the asserted grounds in relation to the challenged claims.

I. Sasaki (Ex. 1004)

In a first embodiment, Sasaki relates to “[a] content recommendation system includ[ing] first and second communication devices which are connected to each other and in which content recommendation information is transmitted and received between both devices.” Ex. 1004, code (57). In a second embodiment, “content recommendation information is transmitted and received between a server at a service spot and a terminal device.” *Id.* ¶ 112. In both embodiments, terminal devices connect to a server. *Id.* ¶¶ 41, 47, 112. In general, “*the content recommendation system according to the [first] embodiment is applicable to a server (first communication device) and a communication device (second communication device)*”). *Id.* ¶ 17 (emphasis added).

Sasaki’s Figure 1, as annotated by Petitioner, follows:



As annotated by Petitioner, Figure 1 above depicts Sasaki’s server (green box). *See* Pet. 30. Sasaki’s server includes CPU (central processing unit) 1, ROM (read-only memory) 2, RAM (random access memory) 3, HDD (hard disk drive) 4, operation unit 5, communication interfaces 6, 12, communication circuit 13, and antenna 14. *See* Ex. 1004 ¶¶ 29, 112–113.

2. *Ellis* (Ex. 1005)

Ellis relates to “[a]n enhanced radio system . . . that provides for the capture and playback of one or more radio stations.” Ex. 1005, code (57). The system recommends content by “monitor[ing] the content listened to by the user, and automatically determin[ing] the groups liked and disliked by the user.” *Id.* ¶ 212. “Groups may be created by the user, programmer, or advertiser, based on a number of criteria.” *Id.*

“[A] group may be based on type of content, such as grouping all commercials, all songs, etc.” *Id.* ¶ 214. “[A] group may be based on a category of content, such as bluegrass music, alternative rock, or other music genre.” *Id.* “[A] group may be based on a specific performing artist, and may contain all songs performed by that artist.” *Id.* “[A] group may be

based a particular radio station, and may contain all content broadcast by that station.” *Id.*

Ellis describes collecting information about a user’s listening habits, e.g., “usage data.” Ex.1005 ¶ 263. Ellis’s system uses a “central facility” for gathering data. *Id.* ¶ 236. Basically, the system acquires information about the user’s preferences and selects one or more stations to recommend to a user. *Id.* ¶ 220. “This may be done, for example, correlating the play list from each station to the list of songs, artists, and genres selected as likes and dislikes by the user, and choosing the closest match or matches.” *Id.* The system may create scores by weighting matches for likes and dislikes:

[A] score may be created for each station by adding a value for each match to a like and subtracting a value for each match to a dislike, with each value weighted by the level of like or dislike specified by the user. A higher value may be added for a music genre match, a lower value for an artist match, and a still lower value may be added for a song match.

Id.

3. *Jacobi (Ex. 1007)*

Jacobi relates to recommendation systems for books, compact discs, videos, authors, artists, etc. Ex. 1007 ¶ 11. The system conveys the recommendations to the users on web pages, emails, or facsimile. *Id.*

Jacobi describes a “General Process for Generating Recommendations” (*id.*, p. 6 (heading “III”)). The process determines an item of known interest and retrieves a corresponding similar items list 64. *Id.* ¶ 69. A similar items list 64 is optionally weighted based on information about the user’s affinity for the corresponding item of known interest; e.g., the list may be weighted heavily if the user gave the corresponding item a rating of “5” on a scale or 1–5. *Id.* ¶ 70.

“If multiple similar items lists 64 are retrieved . . . , the lists are appropriately combined . . . , such as by merging the lists while summing the scores of like items.” *Id.* ¶ 72. “The resulting list is then sorted . . . in order of highest-to-lowest score.” *Id.* “[T]he sorted list is filtered to remove unwanted items,” e.g., “items that have already been purchased or . . . fall outside any product group (such as music or books), product category . . . , or content rating . . . designated by the user.” *Id.*

“[O]ne or more additional items are optionally added to the recommendations list.” *Id.* ¶ 73. “In one embodiment, the items added in step 92 are selected from the set of items (if any) in the user’s “recent shopping cart contents’ list.” *Id.* “[T]he recommendations include one or more items that the user previously considered purchasing but did not purchase.” *Id.*

“[A] list of the top M (e.g., 15) items of the recommendations list are returned to the Web server 32 (FIG. 1).” *Id.* ¶ 74. The Web server incorporates this list into one or more Web pages that are returned to the user, with each recommended item being presented as a hypertextual link to the items product information page.” *Id.*

4. *Havinis (Ex. 1008)*

Havinis “relates generally to telecommunications systems and methods for positioning a mobile terminal within a cellular network, and specifically to providing historical data for location Services.” Ex.

1008, 1:9–12. Havinis discloses triangulation of a user device:

positioning of an M[obile] S[tation] 200 can be performed by several B[ase] T[ransceiver] S[tation]'s (210, 220 and 230) generating positioning data, which can then be delivered, via the M[obile] S[witching] C[enter]/V[isitor] L[ocation] R[egister]

260, to a Mobile Location Center (MLC) 270 for calculation of the geographical location of the MS200.”

Id. at 2:7–13; Fig. 2. “In order to accurately determine the location of the MS 200, positioning data from three or more separate BTS's (210, 220, and 230) is required.” *Id.* at 2:19–21. “This positioning data for GSM Systems can include, for example, a Timing Advance (TA) value, which corresponds to the amount of time in advance that the MS 200 must send a message in order for the BTS 220 to receive it in the time slot allocated to that MS 200.” *Id.* at 2:21–26. “When a message is sent from the MS 200 to the BTS 220, there is a propagation delay, which depends upon the distance between the MS 200 and the BTS 220.” *Id.* at 2:26–28. “Using a triangulation algorithm, with knowledge of the three TA values and site location data associated with each BTS (210, 220, and 230), the position of the MS200 can be determined (with certain accuracy) by the MLC 270.” *Id.* at 2:42–46.

With regard to determining location of a mobile station, Havinis also states:

[W]hen a Location Application (LA) 380 sends a request for location Services for a particular mobile Subscriber to a Gateway Mobile Location Center (GMLC) 390 serving the Public Land Mobile Network (PLMN) 385 that the LA 380 is located in, the GMLC 390 can return to the LA380 either real-time location data or historical location data (in case that mobile Subscriber is absent or not reachable at the time the positioning request is received).

Id. at 3:64–4:5. “Real-time data consists of data returned to the LA 380 after the mobile subscriber was successfully positioned as a result of the request for location information sent by the LA380.” *Id.* at 4:5–8. “Historical data,

on the other hand, consists of the last available location information along with the age of that location information.” *Id.* at 4:8–10.

The historical data or real-time data can be obtained using various positioning methods.” *Id.* at 4:31–32. As an example, Havinis provides:

[W]ithin a GSM system, positioning of a particular MS 300 can be performed by collecting positioning data, e.g., Timing Advance (TA) values TA1, TA2 and TA3 from several Base Transceiver Stations (BTS's) (310, 320 and 330) from which the geo graphical location, e.g., x, y coordinates, of the MS 300 can be calculated.

Id. at 4:32–38. “The TA values (TA2 and TA3) measured by the target BTS's (310 and 330), together with the TA value TA1 obtained from the serving BTS 320, are then transmitted by the serving BSC 340 to the serving MLC 370 via the MSC/VLR 360 (step 480) to determine the location of the MS 300 using a triangulation algorithm (step 485).” *Id.* at 6:19–24. “This location information can then be sent to the serving MSC/VLR 360 to be stored as historical data 364 in the subscriber record 362 associated with the MS 300 within the MSC/VLR 360 (step 490).” *Id.* at 6:24–28.

5. *Teicher (Ex. 1007)*

Teicher “relates to computerized methods and systems for facilitating face-to-face social meetings, and, in particular, to such methods and systems operating over public data networks.” *Id.* ¶ 3. Teicher’s “invention offers a computer-assisted solution for facilitating the arrangement of social meetings.” *Id.* ¶ 8. “Users of the present invention enter wish-lists, which specify and prioritize what attractions they want to visit, with whom they prefer to go out, and their preferred schedule for outings.” *Id.* “A computerized encounter generator then scans the wish-lists for generating encounters.” *Id.* “An encounter specifies an ensemble of two or more users,

an attraction assigned for them, and a schedule for getting together there. The ensemble members are then presented with the encounter details.” *Id.*

6. *Claim 1*

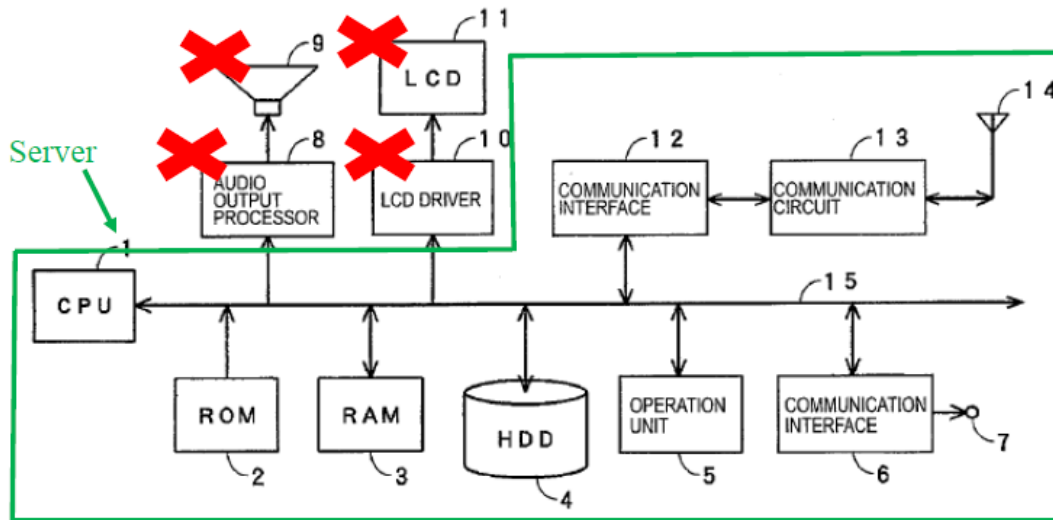
Petitioner asserts that the combined teachings of Sasaki, Ellis, and Jacobi would have rendered independent claim 1 obvious. *See* Pet. 20–39. Patent Owner disputes Petitioner’s showing and focuses on the inferring and location limitations of claim 1 and the reasons for combining Sasaki and Ellis. *See* Prelim. Resp. 22–39. Our detailed analysis of the contentions of the parties is provided below.

A server comprising:

Petitioner relies on Sasaki for teaching a server as recited⁹ in the preamble of claim 1. Pet. 29 (citing Ex. 1003 ¶ 73–75; Ex. 1004 ¶¶ 41, 113, Fig. 1). Petitioner contends that “Sasaki discloses an embodiment with a ‘server . . . and terminal device B,’ wherein “[t]he *server* ‘has a configuration without the audio processor 8, speaker 9, LCD driver 10 and LCD 11 of the terminal device shown in Fig. 1.’” *Id.* at 30 (quoting Ex. 1004 ¶ 113).

To illustrate Sasaki’s server, Petitioner annotates Sasaki’s Figure 1, as follows:

⁹ Claim 1 of the ’040 patent recites “[a] server comprising: processing circuitry arranged to” complete four steps and “network interface circuitry.” Ex. 1001, 8:20–41. The recited “processing circuitry” and “network interface circuitry” and their recited sub-parts and elements are discussed in detail in this section of this decision. We determine that the showing in the Petition for these limitations and their sub-parts and elements is sufficient for institution.



As annotated by Petitioner, Sasaki's Figure 1 depicts Sasaki's server outlined in a green box with red Xs outside the green box to indicate the portions of Sasaki's Figure 1 that are part of Sasaki's terminal but not part of Sasaki's server. Pet. 29 (arguing that "The server communicate communicates [sic] using a 'communication interface 12, the communication circuit 13, and the transmitting/receiving antenna 14' using 'wireless communications standards.'" (quoting Ex. 1004 ¶ 41)).

Patent Owner does not address Petitioner's showing with regard to the preamble with particularity. *See generally* Prelim. Resp.

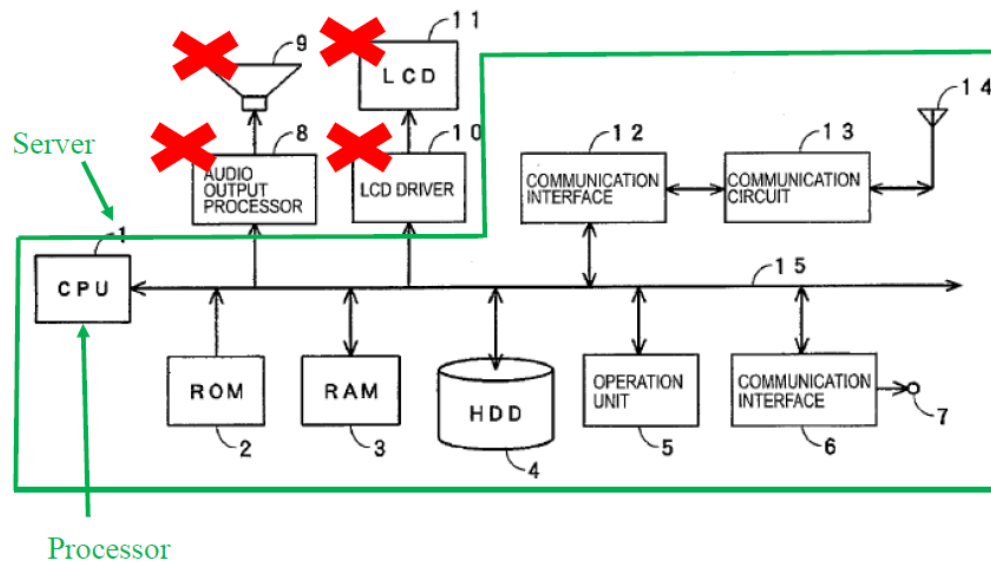
Petitioner's showing for the preamble (even if it is limiting) is sufficient for purposes of institution.

processor circuitry arranged to:

Petitioner relies on Sasaki for teaching "processor circuitry" as recited¹⁰ in claim 1. Pet. 30 (citing Ex. 1003 ¶¶ 76–77; Ex. 1004 ¶ 30, Fig.

¹⁰ Claim 1 of the '040 patent recites "processing circuitry arranged to" complete four steps. Ex. 1001, 8:21–36. The recited four steps and their elements are discussed in detail in this section of this decision. We

1). For this limitation, Petitioner provides another annotated Figure 1, reproduced below.



In this annotated version of Figure 1, Petitioner identifies the CPU 1 as a processor (lower left corner in green). *Id.* The Petition states, “Sasaki’s server is controlled by ‘CPU 1’ that executes ‘programs’ stored in ROM.” *Id.*

Patent Owner does not address Petitioner’s showing with regard to this limitation with particularity. *See generally* Prelim. Resp.

Petitioner’s showing for this limitation is sufficient for purposes of institution.

infer one or more entertainment preferences of a user of a mobile device based on retrieved information about media accessed by the mobile device and a plurality of media content types of the media, the plurality of media content types including textual media, image media, audio media, and video media;

determine that the showing in the Petition for these limitations and their elements is sufficient for institution.

Petitioner asserts that a combination of the teachings of Sasaki and Ellis teaches all the elements of this limitation. Pet. 31–33 (citing Ex. 1003 ¶¶ 78–92; Ex. 1004 ¶¶ 21, 98, 113, 126; Ex. 1005 ¶¶ 136, 137, 185, 212, 214, 221, 263–265, 274). To support this assertion, Petitioner contends that “Sasaki’s server stores ‘preference information’ provided by the members (e.g., *users*)” and “Sasaki discloses that the server is in ‘communication’ with a ‘terminal device.’” *Id.* at 33 (quoting Ex. 1004 ¶¶ 113, 126). And, “Sasaki discloses that a ‘terminal device’ is a *mobile device* because it teaches that the terminal device is ‘portable’ for playing ‘various types of content, such as music and images.’” *Id.* (quoting Ex. 1004 ¶ 21).

Petitioner relies on Ellis’s disclosure of a similar recommendation system in which an individual network component and/or a “central facility,” “collect[s] . . . usage data,” rather than merely relying on the user to provide information. *See id.* (quoting Ex. 1005 ¶¶ 263, 265. Petitioner states, “Ellis further discloses accessing music and other content on [a] mobile device (e.g., ‘download songs’) or over the ‘Internet and radio frequency broadcasts.’” *Id.* (quoting Ex. 1005 ¶¶ 136, 137, 274). According to Petitioner, the collected usage data includes “information on radio stations that the user listens to,’ ‘the days and times’ of listening, ‘information on particular songs, commercials, shows, and other content’ that the user heard, and ‘content the user may have skipped over,’ as well as ‘information on enhanced radio features accessed by the user.’” *Id.* (quoting Ex. 1005 ¶¶ 263–264). Petitioner also relies on Ellis’s disclosure of “determining user’s preferences [for] a ‘specific group of content’ that ‘may be based on type of content’” wherein “[g]roups of content can include

songs, commercials, genre, artist or other criteria.” *Id.* at 33 (quoting Ex. 1005 ¶ 214; citing *id.* ¶ 212).

Petitioner points to a specific example as showing that Ellis’s system implements an automatic inferring system by automatically determining groups liked and disliked by the user:

In step 1820, a user may be allowed to rate a group. The user may specify a like or dislike, or a level of like or dislike, for a specific group of content. **The system may also monitor the content listened to by the user, and automatically determine the groups liked and disliked by the user.**

Id. at 32 (quoting Ex. 1005 ¶ 212). Petitioner refers to another example in which “Ellis teaches a technique to ‘determine user preferences automatically’ (*inferring*) by ‘monitoring what content the user listens to’ in order to find ‘content of interest, i.e., content that matches the user’s preferences.’” *Id.* (quoting Ex. 1005 ¶ 185).

Petitioner provides another example in Ellis, asserting that

Ellis teaches “monitoring the content the user listens to” so it can “determine user information automatically,” such as the user’s preference for a genre or grouping: “In step 2220, **the system may determine user information automatically by monitoring the content the user listens to.** For example, **the system may add points to a** specific song, artist, **genre**, or other type of item or **grouping**, based on the user listening to an entire item.”

Pet. 32–33 (quoting Ex. 1005 ¶ 221).

Petitioner also relies on Sasaki’s “disclosu[re] that its recommendation system collects information about different media content types, such as ‘music,’ ‘still pictures,’ ‘video,’ and ‘text.’” Pet. 33 (quoting Ex. 1004 ¶ 74). And Petitioner relies on Ellis’s system of determining user preferences for specific content groups “based on type of content,” wherein

“[g]roups of content can include songs, commercials, genre, artist or other criteria.” *Id.* (quoting Ex. 1005 ¶ 214; citing *id.* ¶ 212).

Petitioner summarizes as follows:

Thus, Sasaki’s server that stores user preferences about a user of a mobile device with respect to music, pictures, video, and text, in view of Ellis’s technique of automatically determining a user’s preferences about types of content, songs, commercials, shows, where the automatic determination is based [on] monitoring a mobile device user’s usage information renders obvious this limitation.

Pet. 33 (citing Ex. 1003 ¶¶ 78–92).

To further support this summary, Petitioner asserts that Ellis’s recommendation system would have enhanced Sasaki’s similar recommendation system by monitoring content the user consumes in near real-time to determine preferences and automatically update recommendation rather than waiting for a user to manually enter preferences. Pet. 25 (citing Ex. 1003 ¶ 62; Ex. 1005 ¶ 212). Petitioner also asserts that an artisan of ordinary skill would have found the combination predictable and would have had a reasonable expectation of success based on the similar network recommendation systems where Ellis’s system provides implementation details for Sasaki’s recommendation system. *See id.* at 25–26 (citing Ex. 1004 ¶ 141; Ex. 1005 ¶¶ 160, 162, 236).

Patent Owner argues that “Ellis discloses a device that pertains only to audio content and teaches away from applying its teachings to other content types, such as video.” Prelim. Resp. 22. Patent Owner also asserts that “Petitioner fails to establish sufficient motivation to combine Sasaki and Ellis.” *Id.* at 37. Patent Owner explains that Ellis and Sasaki address distinct problems: “Ellis applies to radio content only,” and “Sasaki relates to content recommendations regarding various types of non-radio data.” *Id.*

According further to Patent Owner, “Ellis discusses certain advancements in television viewing functionality.” *Id.* (citing Ex. 1005 ¶ 5 (“Personal video recorders, such as those manufactured by TiVo, allow a user to easily record a television program, and also provide VCR-like controls for television programs.”)). Patent Owner also points to Ellis’s teaching that “[r]adio listeners typically have different needs than television viewers.” *Id.* (quoting Ex. 1005 ¶ 6). Patent Owner contends that “Ellis also identifies technological reasons why improving video and radio consumption requires different approaches,” including less memory storage requirements and cost for the latter. *Id.* at 38 (citing Ex. 1005 ¶¶ 10).

On this preliminary record, Patent Owner’s arguments do not show a teaching away from the claimed invention or a lack of motivation to combine the references’ teachings. Even if Ellis teaches away from television systems, neither the invention nor Sasaki relates to a television system, and the challenged claims do not require storing large amounts of video data allegedly required by a television system.

And even if the systems include differences in types of media content, this does not amount to a teaching away. Both recommendation systems handle different media in digital format. For example, as summarized above, Petitioner sufficiently shows that Sasaki and Ellis address similar problems associated with providing recommendations to users of digital media for all types of events. *See, e.g.*, Ex. 1004 ¶¶ 74, 114 (disclosing a recommendation system that collects information about different media content types, such as music, still pictures, video, and text to provide recommendations to guide purchases at facilities such as CD/DVD shops and bookstores, sightseeing areas, attraction places, art museums, museums,

movie theaters, coffee shops, hotel lobbies, and other public facilities); Ex. 1005 ¶¶ 7, 15–17, 57, 162 (describing a system for controlling audio or other digital content data or software (including from radio stations or the Internet) and providing recommendations for music, shopping for music, concert venues, radio station events, etc.).

Patent Owner’s arguments also do not address Petitioner’s showing of a reason to combine the references (i.e., motivation). As summarized above, Petitioner’s reasons for combining the references (e.g., providing automatic recommendations based on determined preferences and digital consumption in real time and addressing similar problems) are sufficient for purposes of institution. *See* Pet. 24–26.

Patent Owner also asserts that “neither Sasaki nor Ellis discloses, teaches, or suggests relying on all of the claimed types of media to infer a user’s preference.” Prelim. Resp. 30–31. Contrary to this argument, this limitation does not require relying on each of “textual media, image media, audio media, and video media” to infer a user’s preference. Rather, this limitation recites inferring user’s preferences based on “*a plurality of media content types of the media, the plurality of media content types including textual media, image media, audio media, and video media.*” Ex. 1001, 8:22–27. A plurality is at least *two* media types so that claim 1 only requires basing the inference (in part) *on two or more* media types, instead of basing the inference *on all four* types listed. Patent Owner essentially agrees by arguing that it “disavowed any construction of claim 1 whereby the inference of the user’s entertainment preferences *is based on only one type of media.*” Prelim. Resp. 14 (emphasis added). In any event, Petitioner relies on basing the inference (in part) on Sasaki’s four different media

types: “music,” “still pictures,” “video,” and “text.” Pet. 33 (citing Ex. 1004 ¶ 74). Patent Owner does not address this specific disclosure of Sasaki.

Patent Owner also argues that “Sasaki discloses a system where user preferences are *explicitly* provided.” Prelim. Resp. 31 (emphasis added). According to Patent Owner, “explicitly providing user preference information, as disclosed in Sasaki, was disavowed during prosecution of the grandparent ’960 patent [i.e., U.S. Pat. No. 9,141,660 B2,] with respect to similar claim language.” *Id.* (citing Prelim. Resp. §§ II.B.3, II.D; Ex. 2001, 131).

Patent Owner explains that in Sasaki’s first embodiment (terminal/terminal), a user enters “*preference information including content types and preference keywords* of the user of the terminal device,” and then “using the preference information to selectively use pieces of content recommendation information, only a piece of content recommendation information that matches user’s preferences can be obtained.” Prelim. Resp. 31 (quoting Ex. 1004 ¶ 73; citing *id.* ¶ 85). Patent Owner explains that in Sasaki’s second embodiment (terminal/server), “users update the preference information stored by the server by using a ‘personal computer at a home to access a service site through a network such as the Internet’ or by using ‘a terminal device such as a cellular phone.’” *Id.* (quoting Ex. 1004 ¶ 128; citing *id.* ¶ 126). According to Patent Owner, these examples amount to “explicitly providing user preference information,” which “was disavowed during prosecution of the grandparent ’960 patent with respect to similar claim language.” *Id.* Based on these disclosures in Sasaki, Patent Owner argues that “Sasaki does not disclose *inferring* a user’s preferences at all,” because “Sasaki discloses a system where user preferences are explicitly

provided,” which “was disavowed during prosecution of the grandparent ’960 patent with respect to similar claim language.” *Id.*

Assuming for the sake of argument that Patent Owner disavowed “explicitly providing user preference information” during prosecution of the related ’960 patent (*see, e.g.*, Prelim. Resp. 15–16 (citing Ex. 2001, 131), 31 (similar)) and it applies to the ’040 patent claims, Petitioner sufficiently shows that the combination of Sasaki and Ellis teaches “inferring one or more entertainment preferences of a user.”¹¹ For example, as Patent Owner recognizes, Petitioner relies on Ellis’s teaching that “[t]he system may also determine user preferences automatically by monitoring what content the user listens to,” by “[f]or example, . . . add[ing] points to a specific song, artist, genre, or other type of item or grouping, based on the user listening to

¹¹ The preliminary record does not support a clear claim disavowal for inferring user preference information entered by a user. During prosecution, in *Ex parte Feldman*, No. 2012-010686 (PTAB Mar. 16, 2015) (reversing the Examiner’s decision rejecting claims of the application leading to the ’960 patent), the Board distinguished a prior art reference (Ng) based on a claim construction interpretation advanced by Patent Owner, which does not appear to support Patent Owner’s claim disavowal theory on this preliminary record, where the prosecution history further indicates that Patent Owner did not argue to the Board that inferring excludes forming inferences based on known or stored preferences. *See* Ex. 2001, 229–26, 296–299; Prelim. Resp. 12 (arguing that “the Board agreed with Applicant’s claim interpretation” (citing Ex. 2001, 223–224)). Patent Owner’s citations to other portions of the record (portions the Board did not consider in *Ex parte Feldman*) also do not support a clear disavowal as argued on this preliminary record. *See* Prelim. Resp. 16 (citing Ex. 2001, 131). Rather, the Applicant appears to have distinguished Ng because Ng did not clearly base the inference on “retrieved media or the retrieved information about the media.” *See id.* (quoting Ex. 2001, 131); Ex. 2001, 131–132. This distinction over Ng is in line with Appellant’s arguments and the Board’s holding in *Ex parte Feldman*. *See* Ex. 2001, 229–26, 296–299.

an entire item.” *See* Prelim. Resp. 32 (quoting Ex. 1005 ¶¶ 185, 221); Pet. 32–33 (quoting same).

Moreover, contrary to Patent Owner’s arguments, even if a user of Sasaki’s system enters preferences into a terminal device and/or server, and even if Patent Owner disavowed claim scope during prosecution to exclude inferences based on explicit preferences, Sasaki’s system relies on inferences. Specifically, Patent Owner reproduces Sasaki’s Figure 3C, which includes generic preference key words entered by a user and stored by a server such as, for example, “ROCK” and “LOVE” for a music content type, and also includes generic preference key words such as “LANDSCAPE,” “SEA” for image content type. *See* Prelim. Resp. 26 (reproducing Ex. 1004, Fig. 3C), 27–29 (describing Sasaki’s system further). Contrary to Patent Owner’s arguments, however, it is not clear on this preliminary record how recommending specific music or photographs based on matching *generic key words* entered by different users to describe an entertainment preference or a recommendation for entertainment amounts to a disavowed inference of a user entertainment preference. Different users for example, may have different (subjective) opinions of what “entertainment preference” arises from generic key words such as ROCK and LOVE, so that a match by the server of such a generic word provided by different users is an inference of an entertainment preference.¹² On this

¹² On this preliminary record, it appears that Sasaki’s server collects “pieces of content recommendation information from many terminal devices” and stores that as recommendation information for other users and then matches key words associated therewith to stored user preference key words “so that a massive effect of word-of-mouth sales promotion can be expected.” *See* Ex. 1004 ¶¶ 131–134.

preliminary record, Patent Owner does not explain sufficiently that it disavowed this type of an inference during prosecution, but Patent Owner will have an opportunity to clarify the issue during trial.¹³ *See supra* note 12.

Patent Owner also argues that “[n]owhere does Ellis disclose, teach, or suggest relying on video, image, or textual content to determine user preferences, let alone relying on all of them *in addition* to audio content.” Prelim. Resp. 32 (emphasis added). Patent Owner’s argument does not undermine Petitioner’s showing, because Petitioner does not rely on Ellis to teach video, image or textual content. *See* Pet. 30–33. Rather, as discussed above, Petitioner relies on Sasaki for its disclosure of the four media types listed in claim 1 and relies on the combined teachings of Sasaki and Ellis to infer preferences. Pet. 33 (citing Ex. 1004 ¶ 74). *See Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (arguments individually attacking the references in an obviousness combination are not persuasive) (citing *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references

¹³ Patent Owner does not specifically challenge whether the claimed “retrieved information about media,” and “a plurality of media content types of the media” reads on the media and information disclosed in Sasaki, including “music,” “still pictures,” “video,” and “text” and the preference information as discussed herein related to Figures 3A–3C, and further including the media and information as suggested by Ellis. In any event, on this preliminary record, the Petition sufficiently shows that the combined teachings of Sasaki and Ellis render the limitation obvious. *See, e.g.*, Pet. 24–26 (relying on Sasaki’s recommendation system (citing Ex. 1004 ¶¶ 7, 115, 141) as combined with Ellis’s system (citing Ex. 1005 ¶¶ 22, 160, 162, 212, 236), 33 (citing Ex. 1004 ¶ 74; Ex. 1005 ¶¶ 212, 214).

individually where the rejection is based upon the teachings of a combination of references.”)).

Based on the foregoing discussion, Petitioner’s showing for this limitation is sufficient for purposes of institution.

*access one or more sources of information about venues
or events proximal to a current location of the
user or the mobile device;*

Petitioner contends that Sasaki teaches transmitting location information (GPS or radio wave positional information) from its mobile device. Pet. 34 (citing Ex. 1004 ¶¶ 69, 81). Petitioner contends that this information is “necessary information” and part of the “content recommendation information.” *Id.* (quoting Ex. 1004 ¶ 68).

Petitioner also relies on Ellis’s “technique that uses ‘geographic position information’ to ‘acquire information about local events.’” Pet. 34 (quoting Ex. 1005 ¶¶ 233–234; citing *id.* ¶ 225 (“use global positioning system monitor 160 to determine the user’s location”)). Petitioner Owner also asserts that Ellis teaches that it “download[s] information about local events and facilities” from a “web site.” *Id.* (quoting Ex. 1005 ¶ 236).

Petitioner explains that it would have been obvious to modify Sasaki’s portable media device and server communication system to include Ellis’s technique of using the user’s geographic location to access information about events and facilities local to the user in order to obtain local recommendation information automatically. *See* Pet. 25–26 (citing Ex. 1003 ¶¶ 58–65), 35 (citing Ex. 1003 ¶¶ 93–98).

Patent Owner argues that Petitioner combines features from two embodiments of Sasaki without “explain[ing] why or how a person of ordinary skill in the art would have been motivated to make the

combination.” Prelim. Resp. 34. Patent Owner explains that in Sasaki’s first embodiment, a “portable terminal device transmit[s] location information to another portable terminal device,” but this is part of the recommendation information that the first terminal device sends. *Id.* at 35 (citing Ex. 1004 ¶¶ 68, 69, 80, 81). Patent Owner also argues that “this teaching is unrelated to the second embodiment where the portable device is *receiving* the recommendations from the server.” *Id.* at 36 (citing ¶¶ 112–130). Therefore, according to Patent Owner, “Sasaki does not teach a server that determines the current location of a user or that receives location information from a user.” *Id.* Patent Owner also argues that “Ellis does not disclose a server that determines the current location of a user or that receives location information from the [Enhanced Radio System (ERS)],” where an ERS is “a portable device that knows its own location.” *Id.*

These arguments are beyond the scope of claim 1 or attack the references’ teachings individually. This limitation recites “[a] server comprising: processor circuitry arranged to . . . access one or more sources of information about venues or events proximal to a current location of the user or the mobile device.” Ex. 1001, 8:20–30. This limitation requires the server to access sources of information about venues or events local to the user or the mobile device. Patent Owner recognizes that “the location of the service spot is already known and communication happens only when the terminal device is close enough to receive an identifying signal from the server [at the service spot].” Prelim. Resp. 35 (citing Ex. 1004 ¶¶ 54, 113–114). Therefore, Patent Owner’s argument shows that Sasaki’s server at least implicitly determines the location of the user’s portable terminal device

by communicating with it (i.e., determines that a specific user is local to, or in the vicinity of, the server).

In addition, Petitioner contends that Sasaki teaches converting location information into map location. Pet. 41, 55 (citing Ex. 1004 ¶ 80). Sasaki supports Petitioner by describing that its system uses either terminal A or B with GPS functionality to record the position of either terminal device in the memory of either device. Ex. 1004 ¶ 80. In other words, Sasaki generally discloses or teaches storing position GPS or location information of one terminal device in another device. *See id.* ¶¶ 80–81. As Petitioner shows in connection with the preamble as discussed above, a server includes all the components of a terminal with the exception of audio and LCD display components. Pet. 29 (citing Ex. 1004 ¶ 113). On this preliminary record, therefore, Sasaki’s server includes the capability to store, receive, and process the same or similar data (e.g., GPS or location data) as Sasaki’s terminals (except for data associated with the excluded audio and visual components that the terminal includes).¹⁴ *See* Ex. 1004 ¶ 113.

Moreover, Petitioner relies on Ellis to suggest downloading information about local events from a website based on GPS or other location information to improve Sasaki’s server system by automatically providing real time event recommendations to users from a server based on media types and locations of the user’s devices. *See* Pet. 25, 34 (citing Ex. 1005 ¶¶ 225, 233–234, 236). Patent Owner recognizes that “Petitioner relies on Ellis for *using* the geographic information to make local

¹⁴ At the cited passages, Sasaki discloses that storing position and location data related to a recommendation is for the convenience of the user and several location methods can be used. Ex. 1004 ¶¶ 80–81.

recommendations.” Prelim. Resp. 36 (citing Pet. 34). Toward that end, Petitioner contends that “Ellis specifically teaches that its techniques can be implemented in a ‘network component’ and/or a ‘central facility,’” with Ellis providing implementation details that an artisan of ordinary skill would have considered employing in Sasaki’s server system in a predictable manner using known techniques. *See* Pet. 26 (quoting Ex.1005 ¶¶ 162, 236). Petitioner also points to Ellis’s disclosure of a similar recommendation system in which an individual network component and/or a “central facility,” automatically “‘collect[s] . . . usage data,’ rather than merely relying on the user to provide information.” *See id.* at 22, 31 (quoting Ex.1005 ¶¶ 236, 263 (describing Fig. 37)). At Figure 37, step 3740 indicates that a central facility receives user information and analyzes it (i.e., like a server).

In summary, Petitioner relies on Sasaki as disclosing processing preference information and other user-related information to provide recommendations in a server and Ellis as teaching the processing of similar information at a central facility, thereby rendering obvious processing at a server different forms of related information including location information to provide updated recommendations based on real time preferences obvious.

With respect to Patent Owner’s argument that Petitioner improperly combines aspects of Sasaki’s terminal/terminal and terminal/server embodiments by not providing a reason to combine them, Sasaki generally indicates that aspects of its content recommendation system apply to both embodiments. *See* Ex. 1004 ¶ 17 (“[T]he content recommendation system according to the [first] embodiment is applicable to a server (first

communication device) and a communication device (second communication device)”), ¶ 112 (“Differently from the above-described first [terminal/terminal] embodiment . . . in a second embodiment of the present invention, content recommendation information is transmitted and received between a server at a service spot and a terminal device”). In addition, as Petitioner notes, similar to the terminal/server embodiment, Sasaki explicitly discloses that each terminal in the terminal/terminal embodiment connects to a server. Pet. 51–52 (citing Ex. 1004 ¶ 41 (“[W]ireless communication can establish connection with a terminal device of the same model, or connection between the terminal device and an external device such as a server through a predetermined network.”)). As indicated above, central differences between Sasaki’s two embodiments are that in the terminal/server embodiment, the server stores user preference information, and the server does not include certain audio and video components that the terminals include, as Petitioner argues. *See* Pet. 29 (annotating Ex. 1004, Fig. 1, ¶¶ 41, 113), 31 (citing Ex. 1004 ¶ 126). Otherwise, on this preliminary record, Sasaki’s terminals and its servers each process, receive, and transmit the same or similar information and are similar in functionality and structure.

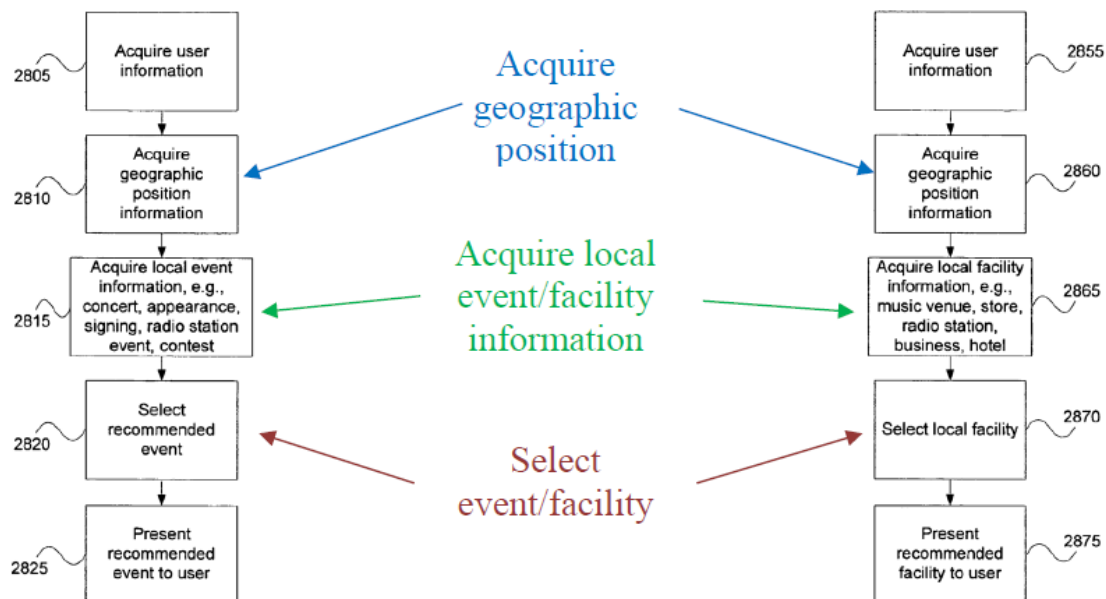
Absent a more specific argument about what aspects of Sasaki’s content recommendation system the Petition improperly combines from the two embodiments and how that relates to a claim limitation, Patent Owner’s arguments do not undermine the Petition. During trial, the parties will have the opportunity to explore this issue further.

Based on the foregoing discussion, Petitioner’s showing for this limitation is sufficient for purposes of institution.

identify at least one of the venues or events as being of interest to the user based at least in part on the inferred one or more entertainment preferences and the current location;

Petitioner largely relies on its showing with respect to the preceding limitations of claim 1. *See* Pet. 35. Petitioner further contends that, “Ellis discloses that, after acquiring information about local events and facilities, it identifies an event or facility that closely matches the user’s preferences.” *Id.* Petitioner relies on the following disclosure in Ellis to support this showing: “In step 2820, the system may select one or more recommended events. Events may be selected by comparing information about each event with user information, and selecting events that most closely match user preferences.” *Id.* (quoting Ex. 1005 ¶ 233) (citing similar disclosure in Ex. 1005 ¶ 234 regarding “recommended facilities”).

Petitioner also relies on the following annotated version of Ellis’s Figures 28A and 28B (Pet. 36):



As illustrated above, Petitioner annotates Ellis’s Figures 28A (left flow chart) and 28B (right flow chart) to show how the system acquires geographic position information (blue text, steps 2810, 2880), acquires local event/facility information (green text, steps 2815, 2865), and selects a local event/facility (red text steps 2820, 2870). With further respect to step 2870, Ellis teaches that “[f]acilities may be selected by comparing information about each facility with user information, and selecting facilities that most closely match user preferences.” Ex. 1005 ¶ 234. Also, “[f]acility information may be acquired using communications device 155” of the ERS to communicate with another device or component. *See id.* at ¶ 234, Fig. 1.

Therefore, according to Petitioner, “Sasaki’s server that provides recommendations to the mobile device in view of Ellis’s technique of identifying events and facilities that are local to the user and that closely match the user’s preferences (as determined by the server) render obvious this limitation.” Pet. 36 (citing Ex. 1003 ¶¶ 99–102). Similar to its showing with respect to immediately previous limitation, Petitioner contends that implementing Ellis’s teachings to modify the functionality of Sasaki’s server to include location-based recommendations in real time would have improved Sasaki’s system. *See id.* at 24–26 (citing Ex. 1003 ¶¶ 58–65).

Petitioner’s showing for this limitation is sufficient for purposes of institution. Other than addressing Petitioner’s reasons for combining the teachings of Sasaki and Ellis and immediately preceding “infer” limitation as discussed above, Patent Owner does not address Petitioner’s showing as to this limitation with particularity. *See generally* Prelim. Resp.

*generate a recommendation message indicating the
identified venue or event; and*

Building on its showing with respect to preceding limitations of claim 1 as summarized above, Petitioner contends that it would have been obvious in view of Jacobi to generate the venue or event recommendation of Sasaki and Ellis. *See* Pet. 36–37 (citing Ex.1003 ¶¶ 103–107; Ex. 1004 ¶ 115; Ex. 1006 ¶¶ 72, 74).

Petitioner contends that Jacobi teaches generating a recommendation message by creating “one or more Web pages that are returned to the user, with each recommended item being presented as a hypertextual link to the item’s product information page.” Pet. 37 (quoting Ex.1006 ¶ 74). Other examples for a generated recommendation message include use of an “email” or “facsimile.” *Id.* (quoting Ex.1006 ¶ 74).

Petitioner summarizes by explaining that

Sasaki’s server that provides recommendations to the mobile device in view of Ellis’s technique of identifying events and facilities that closely match a user’s preferences, further in view of Jacobi’s generating a recommendation message (such as creating a web page with links) render obvious this limitation.

Pet. 37 (citing Ex.1003 ¶¶ 103–107).

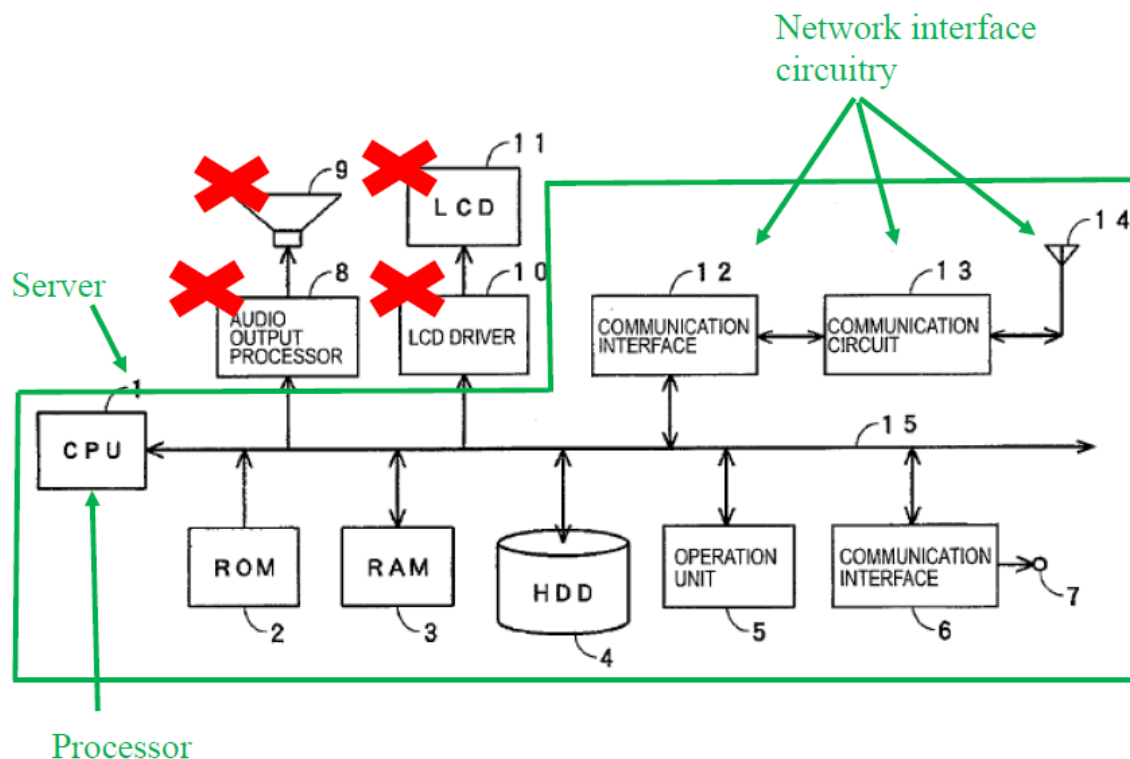
Petitioner contends that applying Jacobi’s known techniques for generating web pages, emails, and facsimiles to display recommendations to a user would have improved the similar Sasaki-Ellis recommendation system by expanding its communication capabilities and providing details for implementing Sasaki’s display system with a reasonable expectation of success. *See* Pet. 26–29 (citing Ex. 1003 ¶¶ 66–72).

Petitioner’s showing for this limitation is sufficient for purposes of institution. Other than addressing Petitioner’s reasons for combining the teachings of Sasaki and Ellis and the preceding “infer” limitation as

discussed above, Patent Owner does not address Petitioner’s showing as to this limitation with particularity. *See generally* Prelim. Resp.

network interface circuitry communicatively coupled to the processor circuitry, the network interface circuitry arranged to receive the information about the media, and send the recommendation message to the mobile device.

Petitioner relies on Sasaki as teaching all the elements of this limitation. *See* Pet. 37–39 (citing Ex. 1003 ¶¶ 108–113; Ex. 1004 ¶¶ 30, 32, 40, 41, 113, Fig. 1). With regard to “network interface circuitry communicatively coupled to the processor circuitry,” the Petition includes an annotated Figure 1, reproduced below, illustrating these elements.



Pet. 38. As depicted in annotated Figure 1 of Sasaki in the Petition, “the network interface circuitry (comprising one or more of the communication interface 12, communication circuit 13, and antenna 14) are

communicatively coupled to the CPU 1 by ‘CPU bus 15.’” *Id.* With regard to “the network interface circuitry arranged to receive the information about the media, and send the recommendation message to the mobile device,” the Petitioner cites paragraph 40 of Sasaki which states that the “communication interface 12 performs processing such as converting received data into data having a format capable of being processed by the terminal device, and converting data to be transmitted from the terminal device into data having a format for transmission.” *Id.* at 39 (citing Ex. 1004 ¶ 40). And, as shown above, Sasaki teaches “the server receives information about the media and . . . the server generates a recommendation message for transmission to the mobile device.” *Id.*

Patent Owner does not address Petitioner’s showing with regard to this limitation with particularity. *See generally* Prelim. Resp.

Petitioner’s showing for this limitation is sufficient for purposes of institution.

Summary for Claim 1

We determine that Petitioner has shown a reasonable likelihood of establishing the unpatentability of claim 1 as obvious in view of Sasaki, Ellis, and Jacobi. On that basis, we determine that the information presented in the Petition demonstrates a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable and that *inter partes* review should be instituted.¹⁵

¹⁵ Thus, we have determined that there is a reasonable likelihood that the Petitioner will prevail with respect to at least one of the claims challenged in the Petition pursuant to 35 U.S.C. § 314 and that *inter partes* review should be instituted. Accordingly, we institute as to all the challenged claims and all the challenges raised in the Petition. 37 C.F.R. §42.108(a)(“When

7. *Claims 2–4, 7–10, 12, 13, and 15–19*

Claims 10 and 17 are independent and are similar to independent claim 1. Claims 2–4, 7–9, 12, 13, 15, 16, 18, and 19 depend directly or indirectly from independent claims 1, 10, or 17. Petitioner contends that these claims would have been obvious over the combined teachings of Sasaki, Ellis, and Jacobi. Pet. 20, 39–60. Petitioner relies partly on its showing with respect to claim 1, and provides citations to Sasaki, Ellis, and Jacobi supported by the testimony of Dr. Houh. *See id.*

Patent Owner groups claims 1, 10, and 17 together and does not separately address claims 2–4, 7–10, 12, 13, and 15–19. *See* Prelim. Resp. 22–39. As indicated above, Patent Owner’s arguments regarding claim 1 do not undermine the Petition for purposes of institution. On this preliminary record, Petitioner’s mapping of claims 2–4, 7–10, 12, 13, and 15–19 to Sasaki, Ellis, and Jacobi, coupled with its reasons to modify Sasaki’s teachings, and its showing of a reasonable expectation of success, are sufficient for purposes of institution.

8. *Claims 5, 6, 14, and 20*

Claims 5, 6, 14, and 20 depend directly from dependent claim 4 or independent claims 10 or 17. Petitioner contends that claims 5, 6, 14, and 20 would have been obvious over the combined teachings of Sasaki, Ellis, Jacobi, and Havinis. Pet. 20, 61–70. Petitioner relies partly on its showing with respect to claim 1, and provides citations to Sasaki, Ellis, Jacobi, and Havinis, supported by the testimony of Dr. Houh. *See id.*

instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

Patent Owner groups claims 1, 10, and 17 together and does not separately address claims 5, 6, 14, and 20. *See* Prelim. Resp. 22–39. As indicated above, Patent Owner’s arguments regarding claim 1 do not undermine the Petition for purposes of institution. On this preliminary record, Petitioner’s mapping of claims 5, 6, 14, and 20 to Sasaki, Ellis, Jacobi, and Havinis, coupled with its reasons to modify Sasaki’s teachings, and its showing of a reasonable expectation of success, are sufficient for purposes of institution.

9. *Claims 3 and 11*

Petitioner asserts that claims 3 and 11, which depend from claims 2 and 10, respectively, would have been obvious over the combined teachings of Sasaki, Ellis, Jacobi, and Teicher. Pet. 20, 70–80. In support, Petitioner relies on the testimony of Dr. Houh, and provides citations to teachings in Sasaki, Ellis, Jacobi, and Teicher. *Id.* Patent Owner relies on its arguments with respect to claims 1, 10, and 17. *See* Prelim. Resp. 22–39. As indicated above, Patent Owner’s arguments regarding claim 1 do not undermine the Petition for purposes of institution. On this preliminary record, Petitioner’s mapping of claims 3 and 11 to Sasaki, Ellis, Jacobi, and Teicher, coupled with its reasons to modify Sasaki’s teachings and its showing of a reasonable expectation of success, are sufficient for purposes of institution.

III. DISCRETIONARY INSTITUTION, 35 U.S.C. § 314(A)

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an inter partes review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent

Office’s discretion.”); *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).¹⁶

Patent Owner urges the Board to exercise discretion to deny institution of *inter partes* review under § 314(a) based on the factors established in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, 2020 WL 2126495, at 2–3 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Prelim. Resp. 39–43.

An advanced state of a parallel district court proceeding is a “factor that weighs in favor of denying the Petition under § 314(a).” *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”). Specifically, an early trial date is part of a “balanced assessment of all relevant circumstances in the case, including the merits.” Consolidated Trial Practice Guide November 2019 (“TPG”) 58.¹⁷

This balanced assessment involves consideration of the following factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;

¹⁶ On June 21, 2022, the USPTO issued an Interim Procedure for Discretionary Denials in AIA Postgrant Proceedings with Parallel District Court Litigation, available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf (the “Interim Procedure”).

¹⁷ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv, Paper 11 at 5–6.

Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

The parties agree that neither party has moved for a stay and this factor is neutral. Pet. Reply 1; PO Sur-reply 1.

Accordingly, this factor is neutral in exercising discretion to deny institution.

Factor 2: proximity of the court's trial date to the Board's projected statutory deadline for a final written decision

On August 22, 2022, the Western District of Texas transferred the California litigation to the Northern District of California after an agreement to transfer by the parties. See Pet. 15 (citing Ex. 1017); *supra* § I.B. The parties agree that the Northern District of California has not set a trial date. See Pet. 16 (citing Ex. 1021); Pet. Reply 2; Prelim. Resp. 39. Petitioner provides evidence that “the median time-to-trial in the Northern District of California is 34.7 months.” Pet. 16 (citing Ex. 1018, 9). According to Petitioner, “[b]ased on these statistics, trial would occur approximately in June 2025 (as calculated from the case opening in the Northern District of

California),” about a year after any final written decision in the instant case.
See id.

As Petitioner argues, this timing favors not exercising discretion to deny institution. Pet. Reply 1 (citing *Meta Platforms Inc. v. Thales Visionix, Inc.*, IPR2022-01301, Paper 11 at 11 (PTAB Mar. 13, 2023); *Google LLC v. Ikorongo Tech. LLC*, IPR2021-00204, Paper 16 at 8–9 (PTAB Jan. 25, 2022) (“factor[] 2 . . . favor[s] not exercising our discretion because there is no trial date”).

Accordingly, this factor weighs against exercising discretion to deny institution.

*Factor 3: investment in the parallel proceeding by the court
and the parties*

“This investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Fintiv*, Paper 11 at 10. If, at the time of the institution decision, a district court has issued substantive orders related to the challenged patent, such as a claim construction order, this circumstance weighs in favor of denial. *See id.* at 9–10. On the other hand, if the district court has not issued such orders, this circumstance weighs against discretionary denial. *Id.* at 10. Moreover, in evaluating this factor, “[i]f the evidence shows that the petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted, this fact has weighed against exercising the authority to deny institution under *NHK*.” *Id.* at 11.

Petitioner contends that “the claim construction hearing will occur on July 12, 2023 (Ex.1020, p. 11), while the institution decision will issue no later than June 14, 2023 (*see* 35 U.S.C. § 314(b)(1)).” Pet. Reply 2.

Patent Owner argues that “the parallel litigation proceeded for twelve months prior to the filing of the Petition on November 30, 2022, one day before the § 315(b) deadline.” Prelim. Resp. 40. Patent Owner also contends as follows:

The parties served infringement contentions and invalidity contentions prior to the case’s transfer to the Northern District of California. Since the transfer, Patent Owner has served infringement contentions, Petitioner served invalidity contentions on March 3, 2023, and the parties have served and responded to written discovery requests. By the institution decision due date, the parties will have exchanged proposed terms for construction and will have completed claim construction discovery.

Id.

Patent Owner does not point to any substantive orders related to claim construction or the validity of the ’040 patent prior to, or after, the transfer. The record shows some investment in the District Court in terms of actions by parties toward the patentability issues presented here but “much work remains.” *See Sand Revolution II, LLC v. Cont’l Intermodal Grp.—Trucking LLC*, IPR2019-01393, Paper 24 at 11 (PTAB June 16, 2020) (informative) (“[W]e recognize that much work remains in the district court case as it relates to invalidity: fact discovery is still ongoing, expert reports are not yet due, and substantive motion practice is yet to come.”) (“*Sand Revolution*”); Prelim. Resp. 40 (indicating discovery is ongoing).

As to the timing of the Petition’s filing, according to Petitioner, after filing its first complaint in the Western District of Texas on December 1,

2021, Patent Owner filed an amended complaint on February 28, 2022, and then voluntarily dismissed the suit on April 4, 2022. *See* Pet. 14–15 (citing Ex. 1012; Ex. 1013; Ex. 1014). On the same day, April 4, 2022, Patent Owner filed another complaint in the Western District of Texas and then filed an amended complaint on May 9, 2022. *Id.* at 15 (citing Ex. 1015; Ex. 1016). After Petitioner filed its answer, the parties agreed to transfer the case to the Northern District of California and the court ordered the transfer on August 29, 2022. *Id.* (citing Ex. 1017). Patent Owner does not dispute these facts as asserted by Petitioner. *See generally* Prelim. Resp.

It appears that after the parties agreed to transfer the case, Petitioner filed the Petition on November 30, 2022, no more than three months after Patent Owner filed its infringement contentions (which Patent Owner filed sometime after the August 29, 2022 transfer), and about three months prior to the service of Petitioner’s final invalidity contentions in the Northern District of California on March 3, 2023. *See* Pet. 17; Prelim. Resp. 40.

This timing, spurred at least in part by the voluntary dismissal by Patent Owner, the subsequent complaint, and the subsequent agreement to transfer, combined with the lack of substantive orders, tilts against exercising discretion to deny institution.

Therefore, this factor weighs against exercising discretion to deny institution.

Factor 4: overlap between issues raised in the petition and in the parallel proceeding

Petitioner stipulates that “it will not pursue in the parallel [California] litigation the grounds raised in the Petition.” Pet. Reply 2–3. Patent Owner argues that “[a]s in *Sand Revolution*, this factor *at best* “weighs *marginally*

in favor of not exercising discretion to deny institution.” PO Sur-reply 3 (quoting *Sand Revolution*, Paper 24 at 11–12).

As indicated above, the Western District of Texas recently granted the parties’ transfer motion, there is no trial date set yet, and any trial for the California litigation likely will occur about a year after any final written decision is due here (i.e., June 2024). Therefore, under 35 U.S.C. 315(e)(2), Petitioner likely will be estopped from raising an invalidity defense in the California litigation based on a “ground that the petitioner raised or reasonably could have raised” here, thereby precluding any overlapping and conflicting findings with respect to the instant proceeding.

Under a holistic analysis, not only does Petitioner’s stipulation “mitigate[] to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions,” *see Sand Revolution*, Paper 24 at 12, Patent Owner does not show that duplicative efforts or conflicting District Court findings related to substantive invalidity issues are likely to occur due to the estoppel effects of 35 U.S.C. § 315(e)(2).

Therefore, this factor weighs against exercising discretion to deny institution.

Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party

The parties agree that Petitioner is a defendant in the parallel proceeding. Pet. Reply 3; PO Sur-reply 4. Petitioner contends that “multiple panels have recognized that, even when the petitioner is the defendant in the parallel litigation, ‘this factor favors denial if trial precedes the Board’s Final Written Decision and favors institution if the opposite is true.’” Pet. Reply 3 (quoting *Huawei Tech Co. v. WSOU Inv., LLC*, IPR2021-

00225, Paper 11 at 14 (PTAB June 14, 2021); citing *Google LLC v. Parus Holdings, Inc.*, IPR2020-00846, Paper 9 at 21 (PTAB Oct. 21, 2020) (“Petitioner is the defendant in the parallel proceeding. This fact could weigh either in favor of, or **against, exercising discretion** to deny institution, depending on which tribunal was likely to address the challenged patent first.”).

Patent Owner does not address the timing of the final written decision relative to the trial date in the California litigation as raised by Petitioner. See PO Sur-reply 4 (arguing this factor favors exercising discretion to deny without addressing the timing).

Accordingly, because our Final Written Decision is likely to occur before the District Court’s judgment, this factor weighs against exercising discretion to deny institution.

Factor 6: other circumstances that impact the Board’s exercise of discretion, including the merits

The factors typically considered in the exercise of discretion are part of a balanced assessment of all the relevant circumstances in the case, including the merits. *Fintiv*, Paper 11 at 14. For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution. *Id.* at 14–15. By contrast, if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present. *Id.* at 15. As indicated above, Petitioner shows a reasonable likelihood of prevailing in its showing of obviousness.

Therefore, this factor is neutral in exercising discretion to deny institution.

Conclusion

The Board “holistic[ally] view[s] . . . whether efficiency and integrity of the system are best served by denying or instituting review” when evaluating the *Fintiv* factors under § 314(a). *Fintiv*, Paper 11 at 6. As shown above, we determine that factors 1 and 6 are neutral and that factors 2–5 weigh against exercising discretion to deny institution. Evaluating all of the factors on this record, we decline to exercise discretion under § 314(a) to deny institution of *inter partes* review.

IV. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail in showing at least one of claims 1–20 of the ’040 patent is unpatentable under 35 U.S.C. § 103.

V. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–20 of U.S. Patent No. 10,959,040 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 10,959,040 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2023-00245
Patent 10,959,040 B2

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