

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

WILDSEED MOBILE LLC,
Patent Owner.

IPR2023-00244
U.S. Patent No. 10,251,021

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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PETITIONER'S EXHIBIT LIST

Ex.1001	U.S. Patent No. 10,251,021
Ex.1002	Prosecution History of U.S. Patent No. 10,251,021
Ex.1003	Declaration of Dr. Henry Houh under 37 C.F.R. § 1.68
Ex.1004	U.S. Published Application US2006/0250994 to Sasaki et al.
Ex.1005	U.S. Published Application US2005/0020223 to Ellis et al.
Ex.1006	U.S. Published Application US2006/0195362 to Jacobi et al.
Ex.1007	U.S. Published Application US2006/0143214 to Teicher et al.
Ex.1008	U.S. Patent No. 6,169,899 to Havinis et al.
Ex.1009	U.S. Published Application US2006/0268667 to Jellison et al.
Ex.1010	U.S. Published Application US 2007/0100787 to Lim et. al.
Ex.1011	U.S. Published Application US 2006/0258289 to Dua
Ex.1012	December 1, 2021 Complaint in the Western District of Texas
Ex.1013	February 28, 2022 Amended Complaint in the Western District of Texas
Ex.1014	April 4, 2022 Notice of Voluntary Dismissal
Ex.1015	April 4, 2022 Complaint in the Western District of Texas
Ex.1016	May 9, 2022 Amended Complaint in the Western District of Texas
Ex.1017	Order Transferring to the Northern District of California
Ex.1018	Federal Court Statistics
Ex.1019	CV of Dr. Henry Houh

Ex.1020	Joint Case Management Statement, <i>Wildseed Mobile, LLC v. Google LLC et al.</i> , 3:22-cv-04928 (N.D. Cal. Nov. 29, 2022)
Ex.1021	Civil Minutes, <i>Wildseed Mobile, LLC v. Google LLC et al.</i> , 3:22-cv-04928 (N.D. Cal. Nov. 29, 2022)
Ex.1022 (NEW)	Apple.com – iPhone – High Technology – Tech. Specs. (February 2, 2007)
Ex.1023 (NEW)	Deposition Transcript of Dr. Stillerman
Ex.1024 (NEW)	Apple.com – Hot News (January 10, 2007)

I. Introduction

Patent Owner's Response ("Response," Paper 19) fails to refute the Petition's obviousness analysis of the challenged claims. Patent Owner (PO) presents a variety of arguments predicated on misinterpretations of the Petition and the prior art, and as a result, PO's arguments fail.

II. Sasaki and Ellis render obvious "infer" one or more entertainment preferences of a user.

Limitation [1.1.2] recites "infer one or more entertainment preferences of a user." PO argues that **Sasaki** does not teach inferring a user's preferences. Petitioner relies, however, on **Sasaki in combination with Ellis** to teach this limitation. Accordingly, the bulk of PO's arguments do not address the proposed combination.

A. The combination of Sasaki and Ellis renders obvious that the server "infer[s]" one or more entertainment preferences of a user.

First, Sasaki's server stores "preference information" provided by members (e.g., *users*). Ex.1004, [0126] ("[I]n the member database formed in the HDD 4 of the server...preference information of the members are stored beforehand."); Pet., 31-34. The preference information stored in the server can be updated "by transmitting user's latest preference information from a terminal device to the server" such that the server can "provid[e] content recommendation information corresponding to the latest preference information." Ex.1004, [0130].

Accordingly, Sasaki teaches that it was known to store user preference information in a server, update those preferences, and provide content recommendation information according to the preferences.

Second, Ellis teaches techniques for inferring the entertainment preferences of a user based on her usage information (*e.g.*, the media content the user listens to on her portable media player device). Ex.1005, [0212], [0185], [0221]; Pet., 34-36. Ellis explains that the system may “automatically determine” (*infer*[]) the likes and dislikes of the user (*preferences of a user*):

The system may also monitor the content listened to by the user, and automatically determine the groups liked and disliked by the user.

Ex.1005, [0212]. Similarly, Ellis describes “automatically” “determin[ing]” (*inferring*) the content that the user may like (*preferences of the user*) based on the content consumed:

In step 1350, the system may monitor favorite stations (*e.g.*, preset stations and recently tuned stations) for content of interest, *i.e.*, content that matches the user's preferences.... **The system may also determine user preferences automatically by monitoring what content the user listens to.**

Ex.1005, [0185].

In these examples, Ellis teaches monitoring media content that the user consumes and “automatically determine[s]” (*infer*[s]) the user's preferences.

Ex.1005, [0212], [0185], [0221]. While PO has suggested a specific definition for the plain and ordinary meaning of “infer” (Response 18-19), Ellis renders obvious “infer” as suggested in the '021 patent and in accordance with PO's definition. Since PO's definition is not needed to resolve the controversy, there is no need to adopt a specific construction of infer.

Thus, as explained in the Petition, Sasaki teaches a server that stores and updates preference information about media on a mobile device while Ellis discloses techniques for inferring the entertainment preferences of a user of a portable media player device based on media usage information. Pet., 36; Ex.1003, ¶95. Thus, the combination of Sasaki's server with Ellis's inferring techniques renders obvious “inferring, by the server, ... one or more entertainment preferences of a user” (limitation [1.1.2]).

B. PO's arguments do not address Sasaki in combination with Ellis.

PO asserts that the prior art does not teach “inferring, by the server, ... one or more entertainment preferences of a user” by arguing that “Sasaki does not disclose or suggest *inferring* a user's entertainment preferences at all.” Response, 31-35.

Non-obviousness, however, cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, (Fed. Cir. 1986) (citing *In re*

Keller, 642 F.2d 413, 425 (CCPA 1981)). Here, Petitioner does not rely on Sasaki alone for teaching *inferring* a user's entertainment preferences—instead, Petitioner uses the combination of Sasaki and Ellis to teach this limitation.¹

Rather than addressing the combined teachings of Sasaki and Ellis, PO argues that the Institution Decision suggests that Sasaki teaches a system that infers user preferences. Response, 32-35. PO asserts that '021 patent's claim language and prosecution history require the server infer the entertainment preferences of the user rather than a user entering her preferences. Response, 32-35. But, PO's arguments about Sasaki do not address Ellis's disclosure of automatically determining (*infer[ring]*) the user's preferences based on the content consumed, much less **the combination** of Sasaki with Ellis relied upon in the Petition.

Further, because PO did not address the combination of Sasaki and Ellis with respect to this part of limitation [1.1.2], PO has waived its ability to argue about the combination of Sasaki and Ellis. *In re Nuvasive, Inc.*, 842 F.3d 1376,

¹ PO acknowledges that Petitioner relies on Ellis for *inferring* a user's entertainment preferences and not Sasaki alone. Response, 32 (“At the outset, Patent Owner notes that Petitioner does not allege that Sasaki discloses inferring a user's entertainment preferences, instead relying on Ellis to teach this element.”).

1381 (Fed. Cir. 2016).

III. Sasaki in view of Ellis teaches that the server “infer[s]” based on “textual media, image media, audio media, and video media.”

As described in the Petition, Sasaki and Ellis render obvious “infer one or more entertainment preferences of a user of the portable media player device based at least in part on the retrieved media, the retrieved information about the media, and a plurality of media content types of the media stored on or accessed by the portable media player device, wherein the plurality of media content types comprises textual media, image media, audio media, and video media” (limitation [1.1.2]). Pet., 34-36. PO first argues for a claim construction that has no impact on the analysis of the claims against the prior art, and then PO seeks to differentiate over the prior art while ignoring the prior art’s actual teachings.

A. PO’s Proposed Construction is Not Needed Because the Prior Art Discloses a Plurality of Media.

The Board only construes the claims to the extent necessary to resolve the underlying controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”). Here, the claim term is “wherein the plurality of media content types comprises textual media, image media, audio media, and video media” and

PO's proposed construction requires the inference be based on at least one of each content type of media listed. Response, 15-18. But, PO's proposed construction is not needed to resolve the controversy – Sasaki and Ellis already render obvious inferring preferences based on “textual media, image media, audio media, and video media.”

First, Ellis describes collecting information about the content consumed by a user, including “information on particular songs, commercials, shows, and other content” as part of its content recommendation process. Ex.1005, [0263]. Ellis also teaches gathering information of a plurality of media, “for example if the user likes listening to different **types of content** on different days of the week or at different times of the day.” Ex.1005, [0230]. Additionally, Ellis's content recommendation process may include grouping content, which “may be based on **type of content**.” Ex.1005, [0214].

Accordingly, Ellis teaches inferring user preferences using *audio media* as well as “different types of content”:

- “songs”. Ex.1005, [0263];
- “commercials”. Ex.1005, [0263];
- “different types of content”. Ex.1005, [0214], [0230].

Second, Sasaki explains that its content recommendation information includes various types of information about content, including “CD music, still

pictures such as electroph[o]tographs and CG (computer graphics) images, DVD video, and text data such as novels.” Ex.1004, [0074]; *see also* [0049].

Additionally, various types of media may be stored and played back on the terminal device, including “audio data such as music, and image data such as still images and video.” Ex.1004, [0045]-[0046]; *see also* [0047] (“[I]n a place such as a location where the user is out, **various types of content, such as music and images, can be played back for use.**”).

Accordingly, Sasaki teaches using *textual media*, *image media*, *audio media*, and *video media* in connection with its recommendation system:

- *Textual media*:
 - “text data such as novels”. Ex.1004, [0074];
- *Image media*:
 - “still images”. Ex.1004, [0045]-[0046];
 - “pictures”. Ex.1004, [0074];
- *Audio media*:
 - “CD music”. Ex.1004, [0074];
 - “audio data such as music”. Ex.1004, [0045]-[0046];
- *Video media*:
 - “video”. Ex.1004, [0045]-[0046];
 - “DVD video”. Ex.1004, [0074].

Thus, Sasaki describes a system using *textual media, image media, audio media, and video media* for content recommendation and for storage and playback. Ex.1004, [0039], [0045]-[0046], [0074].

B. Sasaki in view of Ellis teaches “infer one or more entertainment preferences of a user based at least in part on...a plurality of media content types..., wherein the plurality of media content types comprises textual media, image media, audio media, and video media.”

As described above in Section II.A, Ellis's techniques for automatically determining (*infer[ring]*) the user's preferences based on the content consumed can be combined with Sasaki's server, rendering obvious a server that can *infer one or more entertainment preferences of a user*.

Ellis describes using content recommendation techniques to monitor the songs and commercials (*audio media*) the user listens to on the user's portable device (Sasaki's terminal device) and, based on what the user listens to, automatically determine the user's preferences using Sasaki's server. Ex.1003, ¶90. Additionally, Ellis's techniques are applied, using Sasaki's server, to the textual data, image data, audio data, and video data stored and played on Sasaki's terminal device. *See* Ex.1003, ¶¶94-95. Thus, the textual data, image data, audio data, and video data stored and accessed on Sasaki's terminal device are monitored and the user's preferences are automatically determined therefrom, according to Ellis's techniques. *See* Ex.1003, ¶¶94-95.

C. PO's arguments that the combination of Sasaki and Ellis do not teach all the listed plurality of media content types are unavailing.

PO asserts that Sasaki and Ellis do not teach *infer[ring]* user preferences based on a *plurality of media content types* at all nor do they describe *infer[ring]* user preferences based on each of the listed media content types in limitation [1.1.2]. PO argues that "Petitioner provides no explanation of how a POSITA would implement Ellis's method of determining preferences based only on what a user has listened to in Sasaki's system." Response, 38.

First, the Petition explains how Ellis's content monitoring and recommendation techniques can be applied to monitoring all media content types stored on or consumed by the user on Sasaki's portable media player device. Petition, 34-36; Ex.1003, ¶¶87-95.

Ellis describes "determin[ing]" (*infer[ring]*) user preferences by "monitoring" the content the user consumes on a portable media device (Ellis's content recommendation system) (see Section IIA above). Ex.1005, [0212], [0185], [0221]. This content may include audio media such as songs and commercials (see Section IIIA above). Ex.1005, [0263]. Sasaki explains that the content recommendation system uses textual media ("text data such as novels"), image media ("still images" and "pictures"), audio media ("CD music" and "audio data such as music"), and video media ("video" and "DVD video"). Ex.1004, [0045]-[0046], [0074]. For example, Sasaki explains that the terminal device "can

receive audio data such as music, and image data such as still images and video”

and “can record and store the audio data and the image data.” Ex.1004, [0045].

Then the received and stored “audio data is played back by using the audio output processor 8 and the speaker 9, while the image data is played back by using the LCD driver 10 and the LCD 11.” Ex.1004, [0046]. The LCD of the terminal device can also display “text-based information.” Ex.1004, [0039].

Although Ellis specifically discusses monitoring audio media, a POSITA would understand that Ellis's content recommendation techniques can be applied to other types of media. Ex.1003, ¶¶94-95; *see* Ex.1005, [0212] (content recommendations may be based on “type of content”). For example, a POSITA would understand that the textual, image, audio, and video content stored or consumed on Sasaki's terminal device may be monitored and the user's preferences may be determined (*infer[red]*) based on the monitored content according to Ellis's techniques. Ex.1003, ¶¶94-95. Thus, in combination, Sasaki's server monitors the textual, image, audio, and video media (“plurality of media content types...wherein the plurality of media content types comprises textual media, image media, audio media, and video media”) stored and consumed on Sasaki's terminal device (*portable media player device*) and determine (*infer*) the user's preferences therefrom according to Ellis's content recommendation techniques. Ex.1003, ¶¶94-95.

Further, to the extent PO argues that a particular preference must be inferred from collectively all four media types, such a reading of the claims contradicts multiple embodiments disclosed in the '021 patent, where preferences are inferred using only a single media content type:

- “For example, the server may determine that the user has a **preference for a jazz music genre** if the portable media player device stores or has been used to access **a substantial amount of music by famous jazz artists** such as Ella Fitzgerald or Louis Armstrong.” Ex.1001, 5:44-48.
- “The server may also determine that the user has a **preference for film genres related to science fiction** if **a significant number of science fiction movies** such as Close Encounters of the Third Kind or Star Wars are stored as video media in or accessed using the portable media player device.” Ex.1001, 5:52-57.

In each of these examples, only a single media content type is analyzed to infer a particular preference (“substantial amount of music by famous jazz artists” indicates a “preference for a jazz music genre” and “a significant number of science fiction movies” indicates a preference for the science fiction film genre). Additionally, PO’s expert Dr. Stillerman testified as to his understanding of the claim:

If we look at the claim in its entirety, as long as the player can

handle all four media content types, then inferring a user's entertainment preferences based on one of those types, the audio type is fine. Ex.1023, 46.

Accordingly, Sasaki's media player can handle all four media types and Ellis's technique teaches how to infer a user's preferences by monitoring the content that the user consumes.

IV. Sasaki in view of Ellis teaches the *current location* limitations.

A. Sasaki and Ellis render obvious that the portable media player device “control[s] transmission, to the server, of location information associated with the portable media player device to facilitate the server in inferring a current location of the user.”

Claim 10 recites that the portable media player device “control[s] transmission, to the server, of location information associated with the portable media player device to facilitate the server in inferring a current location of the user.” The combination of Sasaki and Ellis render obvious this limitation. For example, Sasaki describes several scenarios in which the location of the terminal device (or terminal) is determined and transmitted to another device. Sasaki explains that “the terminal has a built-in GPS (global positioning system), the GPS information may be used to specify the place of transmission” which may then be used for content recommendations. Ex.1004, [0069]; *see also* [0069], [0080]-[0081].

Although determining and transmitting the location of the terminal to another device is described in relation to the embodiment in which both devices are terminals (terminal-to-terminal embodiment) (*see* Ex.1004, heading above [0029]), the same teachings are applied to the embodiment in which one device is a terminal and the other is a server (server-to-terminal embodiment) (*see* Ex.1004, heading above [0112]). Sasaki explains:

[I]n 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....

Specifically, **the second embodiment is realized such that, in the above-described first embodiment, one terminal device (e.g., terminal device A) is replaced by a server at a service spot, and communication is performed between the server and terminal device B.** Since, in this case, the server does not need to have audio and video playback systems, the server has a configuration without the audio output processor 8, speaker 9, LCD driver 10, and LCD 11 of the terminal device shown in FIG. 1. **Terminal device B used in the second embodiment is similar in configuration to the terminal device whose configuration is shown in FIG. 1, and has similar functions.**

Ex.1004, [0112]-[0113]. These statements indicate that the server-to-terminal embodiment *is* the terminal-to-terminal embodiment. Notably, the terminal retains the GPS and other location technology in the server-to-terminal embodiment.

Accordingly, Sasaki teaches a mobile terminal device with GPS functionality for transmitting location information to another device (such as a server) and Ellis teaches a technique of using the location of the user to recommend events. Thus, Sasaki in combination with Ellis renders obvious a *portable media player device* providing a *current location* to the *server*, as required by claim 10.

B. Sasaki in combination with Ellis render obvious “access one or more sources of information about venues or events proximal to a current location of the user”.

Claim 1 recites that the server “access[es] one or more sources of information about venues or events proximal to a current location of the user.” The combination of Sasaki and Ellis render obvious this limitation. For example, Ellis teaches using a “global positioning system monitor 160 to determine the user’s location” and using “geographic position information” to “acquire information about local events.” Ex.1005, [0225], [0233]-[0234]. Ellis also describes “download[ing] information about local events and facilities” from a “web site,” where “local events and facilities” are local to a current location of the user. Ex.1005, [0236]. Therefore, Ellis’s technique of accessing information about venues or events proximal to the current location of the user in combination with Sasaki’s server renders obvious this limitation. Patent Owner’s argument attacks Sasaki individually, arguing that Sasaki does not transmit the location.

Moreover, claim 1 does not recite a limitation requiring that the mobile device transmit the location to a server.

C. Sasaki in view of Ellis renders obvious that the server “infer[s] a current location of the user of the portable media player device based on obtained location information associated with the portable media player device”

Claim 16 (similar to claim 4) recites a server that “infer[s] a current location of the user of the portable media player device based on obtained location information associated with the portable media player device.” Notably, there is no requirement that the location information be transmitted *directly from* the portable media player device to the server. As discussed above, Sasaki teaches that the mobile terminal can provide GPS information to the server. And, Ellis’s technique uses a “global positioning system monitor 160 to determine the user’s location,” then using the “geographic position information” to “acquire information about local events.” Ex.1005, [0225], [0233]-[0234]. Sasaki also teaches that the location information can be “converted into map information ... or a building name or the like.” Ex.1004, [0080]. Thus, Sasaki’s server that receives location information of the portable media player device associated with the user and then converts that information into map information renders obvious this limitation.

D. PO’s arguments incorrectly interpret Sasaki and Ellis.

PO asserts that the Petition relies on the terminal-to-terminal embodiment to disclose transmitting the location of a terminal device to the server while relying

on the server-to-terminal embodiment for other limitations. Response, 41-44.

However, as explained above, the server-to-terminal embodiment is the terminal-to-terminal embodiment, except that “one terminal device (e.g., terminal device A) is replaced by a server at a service spot.” Ex.1004, [0113]. Sasaki's description of the server-to-terminal embodiment describes the differences of the server-to-terminal embodiment, noting which components are not needed in the server-to-terminal embodiment. Ex.1004, [0113]-[0130].

Therefore, Sasaki does not disclose embodiments that are wholly distinct. Instead, Sasaki's disclosure of the server-to-terminal system *is* the “above described first embodiment,” along with explanations of the differences. Ex.1004, [0113].

Second, PO attacks the Institution Decision for stating that “Sasaki's server at least implicitly determines the location of the user's portable media device” arguing that this is insufficient to meet the language of claim 10. However, the language cited by the PO was language used by the Board to address claim 1. Decision, 28-29. Claim 1 does not recite the *current location* is transmitted from a *portable media player device* to a *server*, whereas claim 10 recites that the *server* receives the location from the *portable media player device*. Thus, PO's arguments are irrelevant.

Third, PO argues that, although Ellis teaches using the location of the

Enhanced Radio System (ERS) to recommend events or venues close to the user, it does not teach that the location information is transmitted to a *server*. Response, 47-50. However, the Petition sets forth that “Sasaki’s server in communication with a portable media player device that directly transmits location information **in view of** Ellis’s technique of using the user’s geographic location to access information about events and facilities that are local to the user render obvious this limitation.” Pet., 37; Ex.1003, ¶101. Thus, PO’s arguments do not address the Petition’s obviousness analysis.

For these reasons, Sasaki in view of Ellis render obvious a *server* receiving a *current location* from a *portable media player device*.

V. The Petition establishes a motivation to combine Sasaki and Ellis.

A. A POSITA would have been motivated to combine Sasaki with Ellis.

A POSITA would have been motivated to combine Sasaki’s content recommendation system with Ellis’s content recommendation techniques. Pet. 25-27. Sasaki and Ellis both describe recommending content to a user of a portable media player device (Sasaki’s terminal device and Ellis’s ERS) and acquiring and saving user preferences and location. Pet., 26; Ex.1004, [0115], [0141]; Ex.1005, [0212], [0042], [0230], [0233]-[0234]; Ex.1003, ¶60. Ellis’s techniques are designed to work in a “wireless network” and “multiple environments” and can be implemented in a “network component” and/or a “central facility.” Pet., 27;

Ex.1005, [0162], [0160], [0236]; Ex.1003, ¶61. Thus, a POSITA would have found the combination predictable and would have a reasonable expectation of success. Pet. 26-27; Ex.1003, ¶61.

By implementing Ellis's techniques, Sasaki's server would be able to monitor the content played on the portable terminal device and automatically determine the user's preferences, rather than requesting the user provide her own preferences as Sasaki describes. Pet., 26; Ex.1003, ¶60. This allows the user's preferences to be automatically captured in near real-time and captures the change in a user's preferences over time. Pet., 26; Ex.1003, ¶60. Thus, a POSITA would have been motivated to implement Ellis's techniques using Sasaki's server to improve its content recommendation capabilities. Pet., 27; Ex.1003, ¶60.

Therefore, a POSITA would have found it obvious to apply Ellis's content recommendation techniques to Sasaki's content recommendation system because the combination would use known techniques (Ellis's content recommendation techniques) to improve a similar system (Sasaki's content recommendation system) in the same way (providing content recommendations to a portable media player device). Pet., 25-27; Ex.1003, ¶62.

B. PO's arguments do not undermine the Petition's motivation to combine Sasaki with Ellis.

First, PO asserts that Ellis and Sasaki address distinct problems because Ellis purportedly applies to radio content while Sasaki purportedly applies to non-radio

content. Response, 50.

First, PO's description of the content of Ellis and Sasaki is inaccurate. Ellis describes its content as "songs, commercials, shows, and other content." Ex.1005, [0263]. Sasaki's content includes "CD music, still pictures such as electroph[o]tographs and CG (computer graphics) images, DVD video, and text data such as novels." Ex.1004, [0074]; *see also* [0049]. Accordingly, there is at least overlap with respect to music (e.g., "songs" from Ellis and "music" from Sasaki). Further, more generally, Sasaki and Ellis both pertain to digital content. Ex.1004, [00140], [0045]-[0046]; Ex.1005, [0002], [0027], [0143]. Additionally, both Sasaki and Ellis describe providing recommendations based on content consumed using the same technology, e.g., portable media player devices (Sasaki's terminal device and Ellis's ERS). Ex.1004, [0017], [0021]; Ex.1005, [0042], [0212], [0156]. Accordingly, Sasaki and Ellis are addressing the same problem: analyzing a user's preferences with respect to content consumed on a portable media player device. *See* Ex.1003, ¶61.

Thus, a POSITA would have been motivated to combine Sasaki with Ellis to solve the common problem of recommending content to users that consume digital content using portable media player devices.

Second, PO asserts that Sasaki and Ellis receive content in different manners. Response, 51. Specifically, PO argues that Ellis teaches receiving

content wirelessly whereas Sasaki describes purchasing content that is uploaded to the terminal device. Response, 51. However, the proposed combination relies on Ellis's techniques for automatically determining the user's preferences by monitoring as the content is *consumed* by the user—PO's argument about the manner in which content is *delivered* to the mobile device is therefore irrelevant.

Third, PO argues that there is a technological barrier to combining Sasaki and Ellis because “[t]he device of Ellis would require a number of antennas and related components that would not be feasible to include in a device with the extended storage and display requirements of Sasaki's terminal.” Response, 51; Ex.2007, ¶137. PO's expert, Dr. Stillerman, asserts that, at the time of the invention, there was a tradeoff between the amount of storage a portable device could handle and the number of ways that a portable device could receive media content. Ex.2007, ¶134. Dr. Stillerman argues that Ellis's ERS needs less storage for audio content, and therefore it could include multiple antennas for receiving audio content in a variety of ways (*e.g.* AM, FM, Internet, cable, and satellite). Ex.2007, ¶133. Dr. Stillerman then argues that Sasaki's terminal device needs more storage for audio and video content, which limits the number of ways it can receive media content. Ex.2007, ¶134.

Essentially, PO argues that Ellis's *system* could not be incorporated into Sasaki's system, which is an attempt to bodily incorporate the physical system of

Ellis into the system of Sasaki. That is not the proper test. *See, In re Keller*, 642

F.2d 413. Moreover, the arguments do not address that actual combination. Pet., 26 (“Sasaki’s system would benefit from incorporating Ellis’s techniques”).

Further, contrary to Dr. Stillerman’s arguments, portable devices with storage sufficient for both audio and video content that were also capable of receiving media content in a variety of ways were well-known. For example, Sasaki itself teaches that its terminal already includes “a hard disk drive (HDD) 4,” a “liquid crystal display,” and an “antenna.” [0029]. The antenna “can be configured to use various wireless communication standards.” Ex.1005, [0041]. PO’s expert Dr. Stillerman confirmed that the device described in Sasaki received audio and video via its antenna. Ex.1023, 52-55. Further, the iPhone by Apple, Inc.² included storage and playback of audio, video, and text data and antennas for communicating via a cellular connection or Wi-Fi. Ex.1022.

For these reasons, the technical challenges PO and Dr. Stillerman suggest are in direct conflict with the state of the art. Further, the evidence of record shows that the proposed combination is not purely hypothetical but is instead grounded in what POSITAs were implementing at the time.

² The iPhone was publicly announced on January 9, 2007, which is six months before June 22, 2007, the earliest priority date of the ’021 patent. *See*, Ex.1024.

Fourth, PO asserts that Ellis's description of the differences between radio and television content teach away from a combination with Sasaki. Response, 51-53. However, Sasaki is not limited to television content. Ex.1004, [0045]-[0046] (describing receiving and playing back "audio data such as music, and image data such as still images and video"), [0074] (describing recommending content such as "CD music," "still pictures," "DVD video," and "text data"); *see also* [0049]. Instead, both Sasaki and Ellis relate to digital content. Ex.1004, [0140], [0045]-[0046]; Ex.1005, [0002], [0027], [0143]. Thus, the discussion of radio and television content in Ellis is irrelevant to the Sasaki-Ellis combination. *See I.D.*, 21.

VI. Sasaki in view of Ellis renders obvious claim 2.

As explained in the Petition, Sasaki and Ellis disclose *wherein the audio media comprises music media and podcast media*. Pet., 41-42.

Ellis describes determining a user's preferences based on "a specific radio show." Ex.1005, [0214], [0221]. One source of content in Ellis is from an "Internet ... broadcast." Ex.1005, [0274]. Further, Ellis teaches that the user can "be allowed to download audio content." Ex.1005, [0179]. A POSITA would recognize that Ellis's radio show that is broadcast over the Internet and can be downloaded is a podcast. *See* Ex.1010, [0002] ("A podcast is a digital recording of

a radio broadcast or similar programme, made available on the Internet in a number of separate files for downloading to a personal audio player.”).

PO argues that Sasaki and Ellis do not disclose podcast media because neither reference describes downloading a radio show. Response, 54-55.³ First, the claim does not require *downloading* – in fact, the claim merely requires that media content be “accessed.” Second, Ellis describes downloading audio content. Ex.1005, [0179]. Sasaki describes downloading and storing a wide variety of audio data. Ex.1004, [0045]-[0046]. Given that podcasts were well-known in the art, a POSITA would have found it obvious that the content monitored on Sasaki’s terminal device could include downloaded audio content such as talk radio shows (*i.e.*, podcasts). Ex.1003, ¶¶114-116; *see* Ex.1010, [0002].

Therefore, Sasaki in combination with Ellis render obvious claim 2.

VII. Sasaki in view of Ellis renders obvious claim 9.

PO argues that Sasaki describes storing content recommendation information in the server but does not describe storing *information about the*

³ The exhibits relied upon by Dr. Stillerman are not evidence of a POSITA at the time of the invention (Ex. 2011 is dated 6/10/2023, Ex.2012 is undated, Ex.2013 is dated 2/21/2023, Ex.2015 is dated 12/9/2016, Ex.2017 is undated, Ex.2018 is undated, and Ex.2019 is undated).

media. Response, 56-58. PO asserts that *information about the media* is

“information about the media that the server uses to infer the user’s entertainment preferences.” Response, 57.

The antecedent basis for “the information about the media” of claim 9 is found in limitation [1.1.1]. The Petition explains that Ellis’s technique “collect[s]...usage data,” which can include a variety of information, including “information on particular songs, commercials, shows, and other content.” Pet., 33; Ex.1005, [0263]; Ex.1003, ¶¶78-79. Ellis explains that a “central facility” may be used for gathering a user’s usage data. Pet., 33; Ex.1005, [0236]; Ex.1003, ¶80. Moreover, Sasaki’s server stores “preference information.” Pet. 33; Ex.1004, [0126]; Ex.1003, ¶78.

Then, with respect to claim 9, Sasaki teaches that its “server performs processing based on preference information...stored in the HDD 4 of the server.” Ex.1004, [0119]; *see also* [0115]. The HDD 4 is storage within the server. Ex.1004, [0033], *see* [0113]. Thus, Sasaki describes a server that “obtain[s] ...information about the media from a storage within the computer server.”

Thus, in combination, Sasaki’s server collects and stores the usage data from Sasaki’s terminal device, as collected using Ellis’s content recommendation techniques. Pet. 34, Ex.1003, ¶86. The usage information collected according to

Ellis's techniques is stored on, and retrieved from, the HDD of Sasaki's server.

Ex.1004, [0119].

Therefore, Sasaki in view of Ellis renders obvious claim 9.

VIII. Dr. Houh's testimony is properly based on evidence.

Dr. Houh's statements in his declaration (Ex.1003) are not conclusory—they are based on evidence and technical reasoning.

Statements that rely on evidence or technical reasoning to provide a rational underpinning are not conclusory. *Intellectual Ventures I LLC v. EMC Corp.*, 786 Fed. Appx. 1021, 1034 (Fed. Cir. 2019) (“[Patent owner] argues that the Board relied on [the expert's] conclusory assertions to reach its finding. **But [the expert's] declaration is not conclusory: it cites to several portions of [the prior art reference] to support his statements.**”)

PO argues that, because Dr. Houh's declaration includes statements that are found in the Petition, Dr. Houh's testimony is conclusory and should not be credited. However, Dr. Houh's statements are entirely based on either a citation to evidence (*e.g.* the prior art) or technical reasoning informed by his expertise. For example, when discussing the motivation to combine Sasaki and Ellis, Dr. Houh consistently cites to Sasaki and Ellis and analyzes their teachings based on his technical expertise. Ex.1003, ¶¶58-62. Dr. Houh also cites to additional references such as Jellison (Ex.1009), Lim (Ex.1010), and Dua (Ex.1011). *E.g.* Ex.1003,

¶¶115, 195.

Thus, Dr. Houh's statements should be given their full weight. *See* I.D., 9-10.

IX. Conclusion

Patent Owner's Response arguments should be rejected, and the Challenged Claims should be found unpatentable.

Respectfully submitted,

Dated: November 16, 2023

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, the undersigned attorney for the Petitioner, Google LLC, declares that this Reply (Sections I-IX) has a total of 5,396 words, according to the word count tool in Microsoft Word™.

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CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. § 42.6(e), that
service was made on the Patent Owner as detailed below.

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