

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

WILDSEED MOBILE, LLC,
Patent Owner.

IPR2023-00248
Patent 7,376,414 B2

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

McMILLIN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

Google LLC (“Petitioner”)¹ filed a Petition for *inter partes* review (“IPR”) of claims 1–7 and 9–14 (the “challenged claims”) of U.S. Patent No. 7,376,414 B2 (Ex. 1001, “the ’414 patent”). Paper 2 (“Pet.”). 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) and Patent Owner filed a Sur-reply in Support of its Preliminary Response (Paper 8) to address the issue of discretionary denial under 35 U.S.C. § 314. Taking into account the arguments and evidence presented in these papers, we determined that the information presented in the Petition established that there was a reasonable likelihood that Petitioner would prevail with respect to challenging at least one of claims 1–7 and 9–14 of the ’128 patent as unpatentable. Pursuant to 35 U.S.C. § 314, we instituted this IPR on June 6, 2023, as to all challenged claims and all grounds raised in the Petition. Paper 10 (“Institution Decision” or “Inst. Dec.”).

During trial, Patent Owner filed a Response (Paper 19, “PO Resp.”), Petitioner filed a Reply to the Response (Paper 22, “Pet. Reply”), and Patent Owner filed a Sur-reply to the Reply (Paper 25, “PO Sur-reply”). An oral argument was held on March 7, 2024, and a transcript of the hearing is included in the record. Paper 31 (“Tr.”).

¹ Petitioner identifies “Google LLC and YouTube, LLC” as the real parties-in-interest to this proceeding. Pet. 76.

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

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–7 and 9–14 of the ’414 patent. For the reasons we identify below, we hold that Petitioner has demonstrated by a preponderance of the evidence that all of the challenged claims are unpatentable.

B. Related Proceedings

The parties identify the following district court matters related to the ’414 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*, No. 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. 76; Paper 5, 1.

Patent Owner also identifies *inter partes* reviews IPR2023-00244, IPR2023-00245, IPR2023-00246, and IPR2023-00247, each filed by Petitioner, as involving patents in the district court litigation between the parties. Paper 5, 1.

C. The ’414 Patent (Ex. 1001)

The ’414 patent is titled “Method and System for Inserting Advertisements into Broadcast Content.” Ex. 1001, code (54). The ’414 patent explains that “[t]he functionality of cellular telephones has continued to increase and incorporate many of the features originally provided for in handheld electronic devices” and “more advanced features are becoming more widely available such as playing streamed content and broadcasts.” *Id.* at 1:33–41. However, “providers of streamed content/broadcasts have not been able to differentiate advertisements for cellular telephone users versus

other types of users” and the ’414 patent purports to resolve this problem.
Id. at 1:41–2:27.

Figure 5, reproduced below, “illustrates a schematic diagram of an exemplary embodiment of a mobile media player that is operative to play streamed content and broadcasts and receive advertisements for playback at predetermined intervals” in accordance with the ’414 patent. *Id.* at 2:40–43.

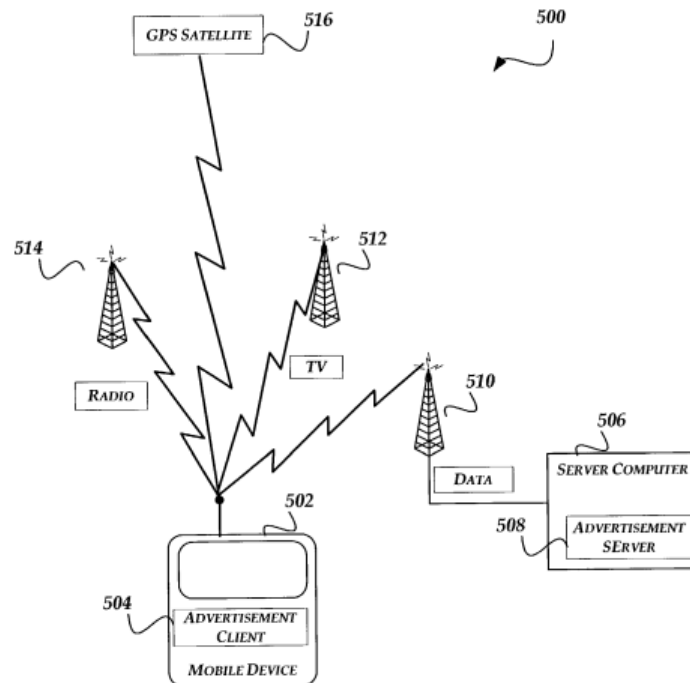


Fig.5

Figure 5 depicts “system 500 for inserting advertisements provided by advertisement server 50[8] into streamed or broadcast content playing on mobile device 50[2].” *Id.* at 9:12–15. “Mobile device 50[2] is in communication with several different wireless sources of data, information and content, including, but not limited to, radio 514, television 512, data 510

and GPS satellite 516.” *Id.* at 9:20–23. “Advertisement client 504 is located on mobile device 502 and determines the information about the user for that particular mobile device and provides this information to advertisement server 508 located on server computer 506.” *Id.* at 9:24–27. “The user’s information may include any combination of physical location, preference, user behavior and demographic information.” *Id.* at 9:28–30.

Figure 6, reproduced below, “shows a functional block diagram that generally illustrates one embodiment of a client advertisement application for a mobile device.” *Id.* at 2:44–46.

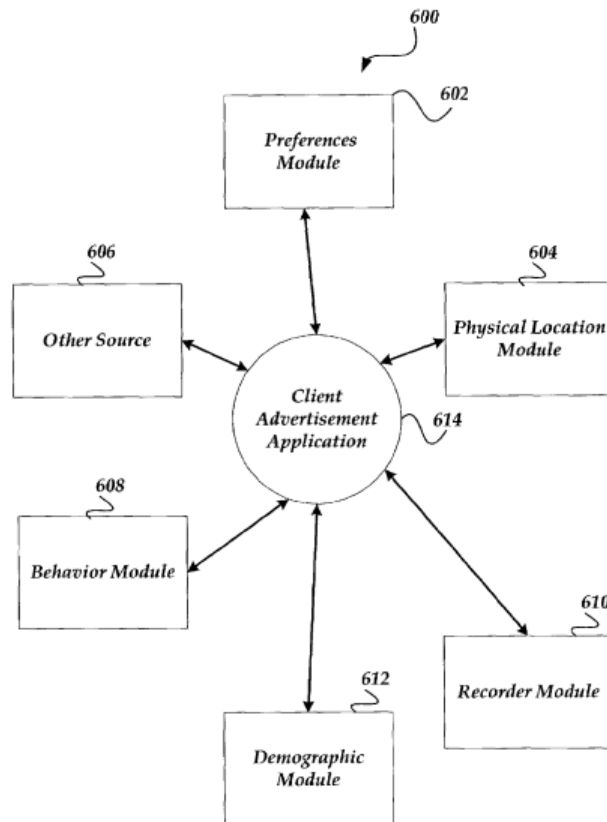


Fig.6

Figure 6 depicts client advertisement application 614 which functions “as a client in a client-server architecture . . . where clients are on mobile devices and a server is remotely located for determining advertisements to be played on the mobile devices.” *Id.* at 9:42–47. “Client advertisement application 614 is in communication with several other modules that provide different types of information, which in total are employed to generate information regarding a user of the mobile device.” *Id.* at 9:48–51. The modules include preference module 602 that “enables manual entry through a user interface of preferences for a user,” recorder module 610 that “enables an advertisement to be recorded and stored prior to playing on the mobile device” or is “used to record content while an advertisement is playing and subsequently resuming the playing of the content from the point where the advertisement started playing,” behavior module 608 that “enables the user’s behavior in using the mobile device to be determined,” and other source module 606 that “enables other sources to be used to provide information regarding the user, e.g., a message from another user of another mobile device that identifies characteristics of the current user of the mobile device.” *Id.* at 9:51–10:22.

D. Challenged Claims

Petitioner challenges claims 1–7 and 9–14 of the ’414 patent.³ Pet. 7, 22. Of the challenged claims, claim 1 is an independent method claim, claim 9 is an independent product claim, and claims 12 and 14 are independent article of manufacture claims. Ex. 1001, 12:18–44, 13:10–38, 13:53–14:21, 14:28–59. Claim 1 recites:

³ The ’414 patent has 14 claims. Ex. 1001, 12:18–14:59. .

1. A method for playing content and advertisements on a cellular device, comprising:
 - (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the ***information taken by the cellular device from a message*** sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device;
 - (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;
 - (c) if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising:
recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing; and
when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

Id. at 12:18–44 (emphasis added to disputed limitations). Challenged independent claims 9, 12, and 14 similarly recite the disputed limitations. *Id.* at 13:10–38, 13:53–14:21, 14:28–59. The challenged dependent claims depend directly or indirectly from the challenged independent claims (*id.* at 12:45–13:6, 13:39–44, 14:22–27) and, by virtue of their dependency, incorporate the disputed limitations.⁴ See U.S.C. § 112 ¶ 4 (2006); 35

⁴ There are additional disputed limitations in some of the challenged dependent claims. See *infra* Section II.D.4.b.

U.S.C. §112 (d) (2018) (“A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”).

E. The Asserted Ground

Petitioner challenges claims 1–7 and 9–14 of the ’414 patent based on the ground set forth in the table below.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–7, 9–14	103 ⁵	Frerichs, ⁶ Kawasaki, ⁷ Kauffman ⁸

Pet. 22.

II. ANALYSIS

A. Claim Construction

We construe claims using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as articulated by the Federal Circuit in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*), and subsequent cases. *See* 37 C.F.R. § 42.100(b). Under the

⁵ 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. The application for the ’414 patent was filed on May 10, 2002, and claims priority to the filing date of a provisional application filed on May 11, 2001. Ex. 1001 codes (22), 60), 1:8–11. Because the filing date and the date of the priority claim are before the effective date of the applicable AIA amendment, the pre-AIA version of § 103 applies to the ’414 patent. However, our decision would not be different under the AIA version of § 103. *See* PO Resp. 3 n.1 (“[N]one of the arguments depend on or would be affected by the priority date of the ’414 patent.”).

⁶ US 6,684,249 B1, issued Jan. 27, 2004; filed May 26, 2000 (Ex. 1004).

⁷ US 6,539,375 B2, issued Mar. 25, 2003; filed August 4, 1999 (Ex. 1005).

⁸ US 2007/0083886 A1, published Apr. 12, 2007; filed December 11, 2006; continuation of application No. 09/734,220, filed on December 11, 2000 (Ex. 1006).

standard set forth in *Phillips*, claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *See Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

“Absent lexicography or disavowal, we do not depart from the plain meaning of the claims.” *Luminara Worldwide, LLC v. Liown Elecs. Co. Ltd.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016). In order for a patentee to act as its own lexicographer, it must “clearly set forth a definition of the disputed claim term” and “clearly express an intent to redefine the term.” *Thorner*, 669 F.3d at 1365 (internal quotation marks and citations omitted). Likewise, disavowal occurs only when there is a clear and unmistakable intent to limit the invention or exclude a particular feature from the claimed invention. *Luminara*, 814 F.3d at 1353. And, there is a “heavy presumption,” that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (citation omitted).

In the Petition, Petitioner asserts that no claim construction is necessary. Pet. 16 (“Petitioner submits that for the purposes of this proceeding, all terms of the Challenged Claims should be given their plain and ordinary meaning, and no term requires specific construction.”). In the Preliminary Response, “[l]ike Petitioner, Patent Owner submits that the terms should be given their plain and ordinary meaning.” Prelim. Resp. 9. Accordingly, in our Institution Decision, we determined that, “[a]t this stage, no need exists to construe any claim terms expressly to resolve the parties’ disputes.” Inst. Dec. 10 (citing *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining that

construction is needed only for terms that are in dispute, and only as necessary to resolve the controversy)). Nonetheless, as explained below, claim construction and the meaning of a disputed limitation (“information **taken** by the cellular device from a message”) has become an issue in this proceeding.

In its Response, Patent Owner raises the issue of claim construction. *See* PO Resp. 3–15. Patent Owner argues that “[t]he plain meaning of the claim term ‘taken,’ when interpreted in light of the specification and file history, requires using information that was in a message, not merely data ‘derived’ from a message, as Petitioner alleges.” *Id.* at 3–4; *see also* PO Sur-reply 2 (“[T]he ordinary meaning of ‘taken’ is extracting, rather than generating, data from a message.”).⁹

Patent Owner does not argue either lexicography or disavowal. *See* PO Resp. 3–15; PO Sur-reply 2–6; *see also* Tr. 114:21–115:13. Petitioner also does not argue either lexicography or disavowal. *See* Pet. 16; Pet. Reply 1–6. We do not find either (1) lexicography or (2) disavowal, because (1) there is no clearly set forth definition of “information **taken** by the

⁹ Patent Owner acknowledges that “[t]he ’414 patent discloses using various sources to **generate** information about a user for targeted ads” and “[t]he server employs the user information, **generated** from the various sources, to determine which advertisements might be suitable for the mobile device user.” PO Resp. 2 (emphasis added) (citing Ex. 1001, 3:58–60, 9:24–27, 9:48–10:24, 11:34–37). The Specification of ’414 patent supports finding that the sources of information about the user are used to “generate” information about the user. *See especially* Ex. 1001, 9:48–51 (“Client advertisement application 614 [on the mobile device] is in communication with several other modules that provide different types of information, which in total are employed to **generate** information regarding a user of the mobile device.”); Fig. 8 ref. no. 822 (“**Generate** Information About User of Mobile Device For Server”) (emphasis added).

cellular device from a message” in the ’414 patent or (2) evidence of a clear and unmistakable intent to disavow the ordinary and customary meaning of “information **taken** by the cellular device from a message.” Accordingly, we apply the ordinary and customary meaning of “information **taken** by the cellular device from a message” in light of the language of the claims, specification, and file history (the intrinsic evidence). *Thorner*, 669 F.3d at 1365. In the Response, Reply, and Sur-reply, the parties argue different interpretations of the ordinary and customary meaning of “information **taken** by the cellular device from a message” as recited in the independent claims of the ’414 patent. *See* PO Resp. 3–15; Pet. Reply 1–6; PO Sur-reply 2–6.

In the Response, Patent Owner argues the Specification of the ’414 patent supports its argument that the ordinary and customary meaning of “information **taken** by the cellular device from a message” as recited in the independent claims requires using information that is expressly stated or exists in a message and does not include information that is derived or generated based on the message. *See* PO Resp. 4 (“The specification teaches directly using information that is in a message, as opposed to indirectly deriving information from a message where the derived information may or may not exist in the message.”), 8 (“The specification expressly teaches that taking the data from a message means using the actual data that was in a message. It does not refer to data as ‘taken’ from a message if that data is merely derived from a message.”). However, Patent Owner fails to identify any teachings in the Specification of the ’414 patent that support this argument.

First and foremost, the Specification does not teach (1) “directly using information that is in a message” or (2) “that taking the data from a message

means using the actual data that was in a message.” The only discussion in the Specification of the ’414 patent that directly addresses using information in a message is a single sentence that says “other source module 606 enables other sources to be used to provide information regarding the user, e.g., a message from another user of another mobile device that identifies characteristics of the current user of the mobile device.” Ex. 1001: 10:18–22. This sentence provides that a message may “be used to provide information regarding the user,” but that description fits either (1) directly or indirectly using information about the user that is in a message; or (2) using actual data that was in a message or using data derived or generated from data that was in a message. Thus, the most pertinent passage in the Specification does not support limiting the meaning of “information *taken* by the cellular device from a message” to actual data in a message.

Patent Owner relies on Figure 8 and the related description in the ’414 patent to support its interpretation of “information *taken* by the cellular device from a message.” *Id.* at 4–9. Figure 8 of the ’414 patent is reproduced below.

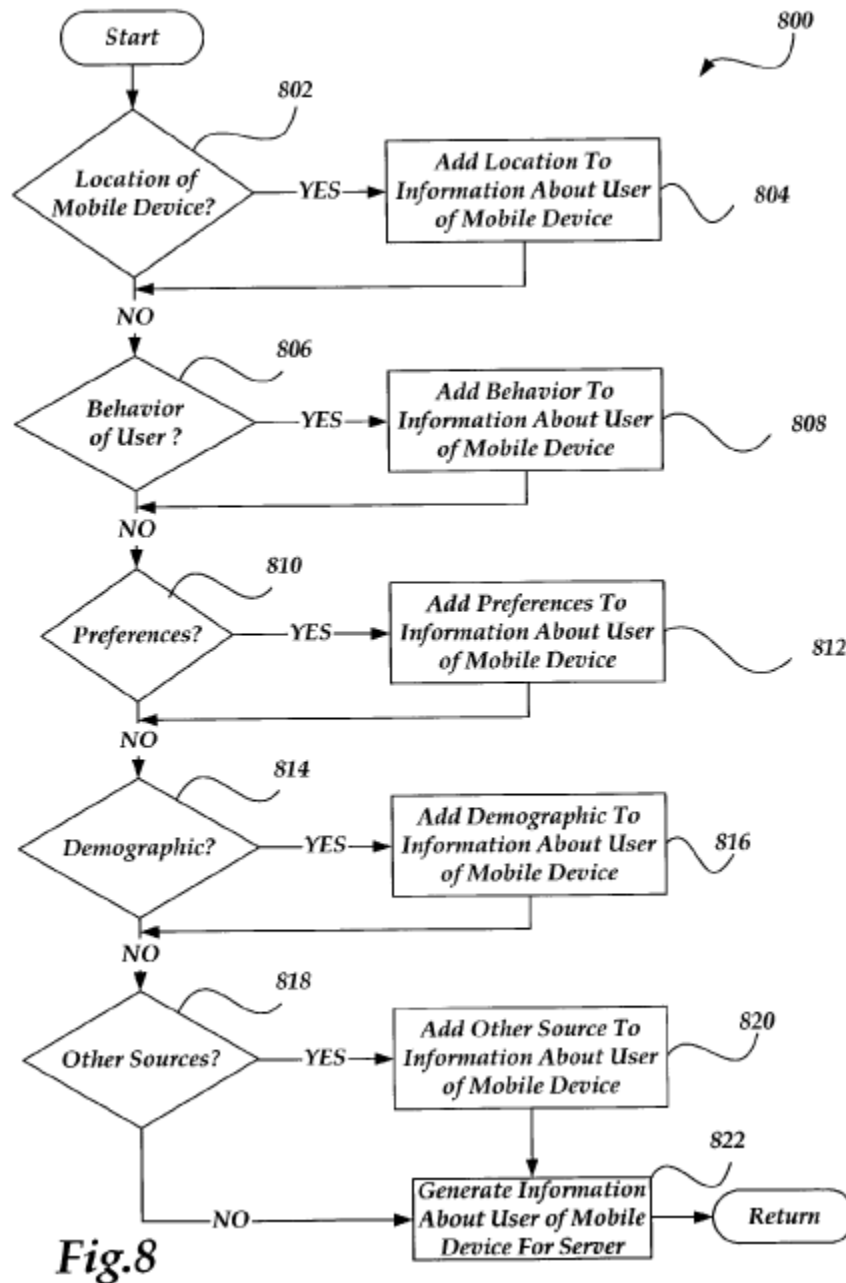


Figure 8 depicts “a flow chart that shows the actions for generating information regarding the user of a mobile device.” Ex. 1001, 2:49–51; *see also id.* at 10:45–47 (“FIG. 8 is a flow chart that illustrates an overview 800 of the process for generating information regarding the user of a mobile device.”). Step 822 of the Figure 8 flowchart process is “Generate

Information About User of Mobile Device for Server” based upon “Other Sources” and the example of “other sources” in the Specification is “a message from another user of another mobile device.” *See id.* at 10:18–22. Figure 8 contradicts Patent Owner’s contention that “the ordinary meaning of ‘taken’ is extracting, rather than generating, data from a message” (*see* PO Sur-reply 2).

Patent Owner next cites the discussion of location data in the Specification as supporting its argument. The Response states, “[l]ocation data is the first type of data described; if location data exists, then it is added to information about the user. . . [I]f location data exists, that exact data—*e.g.*, the location data entered by the user or provided from GPS—is added to information about the user.” PO Resp. 4–5 (citing Ex. 1001, 10:48–55). The cited passage states:

Moving from a start block, the process advances to decision block 802 where a determination is made if the location of the mobile device is available. If true, the process advances to block 804 where the location is added to information about the user of the mobile device. The location may be manually entered by the user and/or provided from a GPS, assisted GPS, wireless signal triangulation, and the like, to determine the location of the user of the mobile device.

Ex. 1001, 10:48–55. However, the Specification also contains a passage that contradicts this contention. The Specification of the ’414 patent provides, “GPS, Assisted GPS and/or triangulation of wireless signals *may be analyzed by physical location module 604 to determine* the physical location of the user’s mobile device, *e.g.*, at a sports stadium, theatre, restaurant, home, school, and the like.” *Id.* at 9:58–64 (emphasis added). Thus, the Specification teaches that it is not required that the exact GPS data

be used. Rather, in this example, the “exact data” is “analyzed . . . to determine the physical location[,] . . . a sports stadium, theatre, restaurant, home, school, and the like.” *Id.* To the extent these passages in the Specification relating to location relate to “information ***taken*** by the cellular device from a message,” they contradict Patent Owner’s interpretation.

Patent Owner also contends that “if demographic data exists, that exact data is added.” PO Resp. 5 (citing Ex. 1001, 11:5–9). The cited passage states:

Next, the process flows to decision block 814 where a determination is made as to whether at least one demographic piece of information regarding the user is provided. If true, the process steps to block 816 where the demographic information is added to other information regarding the mobile device user.

Ex. 1001:4–9. With further regard to demographics, the Specification provides, “[d]emographic module 612 enables the demographics of a user to be determined. For example, a user’s age, income and spending habits may be manually entered by the user or determined by the user’s answers to various questionnaires or surveys presented by demographic module 612.” *Id.* at 10:7–11. For demographics, the Specification teaches that the data can be “manually entered” or “determined by the user’s answers,” but these are “examples” and, in its broadest aspects, the Specification states that “the demographics of a user [are] determined.” At best, this establishes that exact data can be used as information about the user, but to the extent demographics relate to “information ***taken*** by the cellular device from a message,” these passages do not establish that is required that exact data be used. Patent Owner’s argument that the Specification of the ’414 patent supports its alleged meaning of “information

taken by the cellular device from a message” as requiring that the information be exact data from a message lacks merit.

Patent Owner also argues that Petitioner’s expert declarant’s testimony that “information *taken* by the cellular device from a message” does not require taking actual data from a message is contradicted by the Specification of the ’414 patent. PO Resp. 6–8. Patent Owner contends:

Dr. Houh’s opinion regarding the meaning of information “taken” from a message is based on his misreading of the ’414 patent specification. Specifically, he mistakenly believed the ’414 patent specification did not refer to taking actual data from a message, and therefore concluded that a POSITA would not understand the claim term “taken” to be limited to information that is actually in a message.

. . . .

Dr. Houh therefore reached the incorrect conclusion that merely deriving data from messages is in the scope of the claims, pointing to the ’414 specification’s discussion of user preferences. EX2011, 173:9-19 (alleging that “deriving a profile from a message” is “an example of how to take information from something else.”); EX2009, ¶64.

Id. at 6–7. To begin, we agree with Dr. Houh that the ’414 patent Specification does not refer to taking actual data from a message. Patent Owner has not pointed out any such disclosure and our independent review of the ’414 patent establishes that no such disclosure is present in the ’414 patent.

Patent Owner cites the following testimony from Dr. Houh as “mistaken” and “incorrect” (*see* PO Resp. 6–7):

[T]hus, in the context of the spec, I’m not seeing how a POSITA would understand the claim phrase to be limited to information must be in the message because the claim says

what it says and provides an example of user preferences information.

....

I recall nothing from the spec that discussed that the user preference or other information autonomously provided to the server has to be literally data that's literally in the message itself.

....

Even if it's required that it has to be a word literally in the message, which I don't see in the ['414] spec anywhere that that's the requirement of the information taken from a message.

....

I saw no such description like that about how to take information from a message in -- from the '414 specification.

Ex. 2011, 44:3–16, 46:1–5, 46:19–47:10, 175:22–176:8. Patent Owner cites two passages from the Specification that it argues contradict Dr. Houh's testimony. *Id.* at 7 (citing Ex. 1001, 10:7–18, 11:31–37). These passages state:

Demographic module 612 enables the demographics of a user to be determined. For example, a user's age, income and spending habits may be manually entered by the user or determined by the user's answers to various questionnaires or surveys presented by demographic module 612.

Behavior module 608 enables the user's behavior in using the mobile device to be determined such as, but not limited to, playing video games, listening to radio station, viewing television channels, participating in chat rooms, and communicating SMS messages. The type and frequency of behaviors can be determined by behavior module 608.

....

Moving from a start block, the process steps to block 902 where information about the user of the mobile device

is provided. This process is expressed in the discussion accompanying FIG. 8 and other parts of the specification above. The process flows to block 904 where the provided mobile device user's information is asynchronously employed to determine at least one advertisement that could be of interest to the user of the mobile device.

Ex. 1001, 10:7–18, 11:30–37. But, these two passages do not contradict Dr. Houh's testimony that the Specification of the '414 patent does not refer to taking actual data from a message. At bottom, with this argument, Patent Owner shows nothing more than it disagrees with Dr. Houh's testimony.¹⁰ Dr. Houh's testimony is evidence that contradicts Patent Owner's argument that the Specification supports its claim interpretation. This argument is meritless.

Patent Owner also argues that the file history supports its limiting interpretation of “information *taken* by the cellular device from a message.” PO Resp. 9–14. The Response states:

The file history reinforces that information “taken” from a message means information that was actually in the message. *Id.*, ¶¶67. The Examiner understood the claim limitation to require data that was in a message—not merely data “derived” from a message. . . . The Examiner rejected pending claims based on art that disclosed selecting ads using a profile that was derived from messages. After the requirement to “take” information from messages was added to the claims—and no other limitations were added—the Examiner allowed the claims.

¹⁰ We credit the testimony of Dr. Houh cited in the Petition as to “information *taken* by the cellular device from a message.” *See* Pet. 39 (citing Ex. 1003 ¶¶ 112–118). In contrast, we do not find Patent Owner's criticism of Dr. Houh's testimony to be supported by the Specification or otherwise warranted.

Id. at 9. Patent Owner’s contention that “no other limitations were added” to the claims other than “the requirement to ‘take’ information from messages” is incorrect. An important additional limitation added was that the source of the information was “a message sent to the cellular device from another user of another cellular device.” *See* Ex. 1002, 50. This mischaracterization undermines Patent Owner’s argument based on the file history.

The amendment to the claims on which Patent Owner focuses its analysis (*see* PO Resp. 13) was the substitution of

autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the cellular device;

(Ex. 1002, 50) for

autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information **including at least one of the group consisting of a preference of a user of the cellular device, a demographic data of a user of the cellular device, a user behavior of the cellular device, and content played on the cellular device;**

(*id.* (emphasis added)). Prior to this amendment, the claims recited that the sources of information were related to the user, or the use made, of the cellular device. After the amendment, the claims were limited to a single source, “a message sent to the cellular device from another user of another cellular device” that was previously not recited in the claims.

The Examiner did not identify any disclosure, teaching, or suggestion in the cited art of taking, determining, deriving, or generating any information from a message from another user. *See* Ex. 1002, 33–39. The Examiner did not focus on the meaning of the word “taken” or the phrase

“information *taken* by the cellular device from a message.” *See id.* The “[E]xaminer’s statement of reasons for allowance” states:

U.S. Pat. No. 6,823,225 by Sass discloses a method for playing content and advertisements on a cellular device (Fig. 1, 10) (col. 4, line 19 - col. 5, line 36; col. 8, lines 7-18), comprising:

(a) autonomously providing information associated with a user of the cellular device, the information including at least one of the group consisting of a preference of a user of the cellular device, a demographic data of a user of the cellular device, a user behavior of the cellular device, and content played on the cellular device (col. 11, lines 6-30).

....

However, Sass does not disclose: 1) providing to a server, by a cellular device, information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device, 2) determining, by the server, an advertisement, and 3) recording the stopped content while the inserted advertisement is playing.

U.S. Pat. No. 6,647,257 by Owensby discloses a method for playing content and advertisements on a cellular device (Fig. 1, 12), comprising:

(a) autonomously providing to a server (i.e. call management system; Fig. 1, 20), by the cellular device (Fig. 1, 12), information associated with a user of the cellular device (i.e. call signal with the subscriber identification code identifying a subsidized subscriber and wireless mobile location data), the information including at least one of the group consisting of a preference of a user of the cellular device, a demographic data of a user of the cellular device, a user behavior of the cellular device, and content played on the cellular device (col. 12, lines 4-37; col. 15, lines 32-47; col. 18, lines 33-57).

....

Owensby discloses the server determines a specific advertisement to play based on the user information from the cellular device in order to address the user's interest.

However, Sass in view of Owensby do not disclose: providing to a server, by a cellular device, information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device; and recording the stopped content while the inserted advertisement is playing.

....

However, the prior art in combination do not meet the requirements of the claimed invention. which requires: 'providing information associated with a user of the cellular device to a server, the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device; and receiving from the server an advertisement to the cellular device based on the provided informaiton' [sic], as cited in claims 1, 10, 15, and 19.

Id. at 34–37. The Examiner's remarks do not support the distinction that Patent Owner urges. The file history shows that the withdrawal of the rejection and allowance of the application for the '414 patent was the newly-added limitation directed to the source of the information about the user (i.e., "information . . . from a message sent to the cellular device from another user of another cellular device") in combination with other limitations, including the addition of "information **taken** by the cellular device from a message" to the independent claims as argued by Patent Owner. The Examiner's remarks do not address what "taken" means and nothing in the remarks limits its plain meaning. During oral argument, Patent Owner admitted that the Examiner's remarks did not clearly state that the reason for allowance was that information was taken from a message, but that it

required an “inference” based on the whole file history. Tr. 98:10–99:20. To the contrary, the prosecution history shows that the Examiner found prior art to teach other types of information (user preference, demographic data, user behavior, content, geographic location of the cellular device), but not message data information. Ex. 1002, 57, 67–71, 109, 112, 261 (“automobile-related data”). The new language clearly narrows the source of the information to a “message,” which the Examiner had not previously cited as being taught by the applied prior art prior to the amendment. It does not clearly provide a new limit on how the information was obtained (i.e., whether it was verbatim or derived information). In fact, the Applicant argued that amended claim 1 should be allowable over Owensby because Owensby was “based on information that originates from an affirmative act of the subscriber,” not “from another source, in particular a message from another user of another cellular device.” *Id.* at 58. Thus, the prosecution history highlights the fact that the amendment requires the information to be from a message, but is silent as to whether that information must be taken verbatim or in a derived form. We consider Patent Owner’s explanation as to the Examiner’s reasoning to be little more than unwarranted speculation.¹¹

Neither the claim language, Specification, nor the file history of the ’414 patent support the narrow reading of “information ***taken*** by the cellular device from a message” that Patent Owner argues. We find Patent Owner’s argument that the ordinary and customary meaning of this claim language requires that the information be limited to data actually in a message as

¹¹ The Examiner’s views as to the interpretation and scope of the claims are important to consider, but an examiner cannot disavow or disclaim scope on behalf of an applicant.

distinguished from also meaning information derived or generated from a message lacks merit.

In the Reply, Petitioner argues that Patent Owner’s interpretation of “information **taken** by the cellular device from a message” is “overly narrow and unsupported.” Pet. Reply 1–6. Petitioner contends that “[t]he phrase ‘*information...taken from a message*’ should thus be provided its plain-and-ordinary meaning as confirmed by a dictionary and the record to include deriving or generating information.” *Id.* at 3.

Petitioner correctly points out that “[t]he ’414 patent offers little detail about” the meaning of “information **taken** by the cellular device from a message.” Pet. Reply 1. Petitioner points to the single sentence in the description of the “**exemplary** client advertisement application 614” (Ex. 1001, 9:43 (emphasis added); *see also id.*, Fig. 6) that provides “other source module 606 enables other sources to be used to provide information regarding the user, e.g., a message from another user of another mobile device that identifies characteristics of the current user of the mobile device” (*id.* at 10:18–22). Petitioner argues,

[t]hat is the extent of the [’414] patent’s discussion of a message used to provide information regarding the user. And Figure 6’s discussion does not suggest a restriction that identical/exact data from a source be added to ‘information regarding a user of the mobile device’ as [Patent Owner] advocates.

....

But this passage doesn’t use the word “taken” and doesn’t detail what’s sent to a server; moreover, it is unclear whether the entire message, a subset thereof, the characteristic, or something else is added to the “user’s information.” Thus, the specification doesn’t limit “*information taken...from a*

message” that is added to information about the user, and [Patent Owner]’s narrow interpretation cannot be sustained.

Pet. Reply 2–3, 5. As noted above, we agree with Petitioner that the most pertinent passage in the Specification relating to “information *taken* by the cellular device from a message” does not require that the information provided to the server by the cellular device must be exact data or information from a message.

Petitioner points out that “[t]he specification does not define ‘*taken*’ or suggest its meaning excludes dictionary definitions.” Pet. Reply 3. And, Petitioner argues that the “dictionary definitions . . . include ‘to get or obtain from a source; **derive**.’” *Id.* (citing Ex. 1030 (Webster’s Unabridged Dictionary of the English Language), 4 no. 15).^{12, 13}

Petitioner also relies on the descriptions in the ’414 patent of generating, not just extracting, information about the user. *See* Pet. Reply 3–4 (citing Ex. 1001, 9:48–51, Fig. 8 ref. no. 822 (“Generate Information About User of Mobile Device For Server”)). The descriptions of Figures 6 and 8 of the ’414 patent provide:

Client advertisement application 614 is in communication with several other modules that provide different types of information, which in total are employed to **generate** information regarding a user of the mobile device.

¹² Ex. 1030, Webster’s Unabridged Dictionary of the English Language, offers, at least, 124 different definitions of “take, took, taken, [and] taking.” We say “at least” because, although there are 124 numbered definitions, many of the definitions (such as the definition quoted by Petitioner) have plural parts. The ordinary and customary meaning of “taken” as set forth in this dictionary is rather broad.

¹³ Patent Owner points out that this same dictionary also provides “to extract or quote” as an alternative definition. PO Sur-reply 6 (citing Ex. 1030, 4 no. 16).

....

FIG. 8 is a flow chart that illustrates an overview 800 of the process for **generating** information regarding the user of a mobile device.

Ex. 1001, 9:48–51, 10:45–47 (emphasis added).

Because the '414 patent does not indicate that a narrower meaning is appropriate, we conclude that the ordinary and customary meaning of “information **taken** by the cellular device from a message” is broad enough to encompass both information derived or generated from a message (as argued by Petitioner) and information extracted from a message (as argued by Patent Owner). The most pertinent passage in the Specification (Ex. 1001, 10:18–22), states that “information regarding the user, e.g., a message . . . that identifies characteristics of the current user” “enables other sources to be used,” but does not specify that only exact or verbatim data or information from a message is used. And, this interpretation of the phrase is in accordance with the dictionary definitions for “taken” quoted by both Petitioner (Pet. Reply 3 (“to get or obtain from a source; derive”)) and Patent Owner (PO Sur-reply 6 (“to extract or quote”)).

B. Legal Standards

A patent claim is unpatentable as obvious if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary

skill in the art; and (4) when presented, objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Technology, Inc.*, 815 F.3d 1356, 1363 Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). Petitioners cannot satisfy their burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

C. Level of Ordinary Skill in the Art

With regard to the level of ordinary skill in the art, Petitioner contends that

[a] POSITA [Person of Ordinary Skill in The Art] on and before May 10, 2002 (or May 11, 2001) would have had a working knowledge of computer networking and distributed systems generally, and multimedia streaming specifically. Such a POSITA would have had a bachelor’s degree in computer science, computer engineering, or an equivalent, and two years of professional experience working with distributed multimedia systems. Lack of professional experience can be remedied by additional education, and vice versa.

Pet. 15–16 (citing Ex. 1003 ¶¶ 19–21). Patent Owner does not dispute Petitioner’s assessment of the level of ordinary skill. PO Resp. 3 (“Patent Owner applies Petitioner’s definition of a POSITA and level of ordinary skill for purposes of the Patent Owner Response.”).

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). We adopt the assessment offered by Petitioner as it is not disputed by the Patent Owner and is consistent with the ’414 patent and the asserted prior art.

D. Analysis of Patentability Challenge

Petitioner asserts that claims 1–7 and 9–14 would have been obvious under 35 U.S.C. § 103 based on Frerichs, Kawasaki, and Kauffman. Pet. 22–75. Patent Owner disagrees. PO Resp. 15–64.

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

1. Frerichs (Ex. 1004)

Frerichs is titled “Method and System for Adding Advertisements Over Streaming Audio Based Upon a User Profile Over a World Wide Area Network of Computers.” Ex. 1004, code (54). Specifically, Frerichs discloses “transmitting audio data from a first server location to a client location” in which “[t]he audio data include a flag and audio content data,” “monitoring the audio data and identifying the flag on the audio data,” “inserting an advertisement, which is based upon a user profile, into the audio data based upon the flag,” and “output[ting audio] content data [which comprises] the advertisement.” *Id.*, code (57). Targeted advertisement is inserted “into streaming audio at a client location such as a personal computer.” *Id.* at 2:15–17. However, Frerichs discloses that its disclosure

“can be applied to other computing devices, such as cellular phones, internet appliances, personal digital assistants, laptop computers, set top boxes, television, and the like.” *Id.* at 1:15–19.

2. *Kawasaki (Ex. 1005)*

Kawasaki is titled “Method and System for Generating and Using a Computer User’s Personal Interest Profile.” Ex. 1005, code (54). The method and system “provide[] for profiling a user of the Internet according to predefined categories of interest” by “scanning content information of an Internet user to generate unknown data and processing unknown data to determine its relevance to predefined categories of interest.” *Id.*, code (57). A match of the unknown data with the predefined categories is generated “to form a profile of the user that may ultimately be used to target offers to users based upon the profile.” *Id.* Thus, over time, a “profile” of interests of the user is accumulated, “which can be used to subsequently direct [o]ffers.” *Id.* at 3:23–24. Kawasaki discloses that the system uses e-mail client and server systems to analyze and build profiles from e-mail information so that the e-mail systems can “generate revenue through Offers by analyzing sent and received e-mail information and building Profiles based upon its content.” *Id.* at 5:59–65.

3. *Kauffman (Ex. 1006)*

Kauffman is titled “Seamless Arbitrary Data Insertion for Streaming Media.” Ex. 1006, code (54). Kauffman discloses “[a]n arrangement for inserting advertisement media into a streaming multimedia file destined for an end-user” that uses a caching inserter having “a first cache for storing a loaded advertisement file and a second cache for holding the streaming multimedia file that needs to be buffered as the advertisement file is sent to

the end-user.” *Id.*, code (57). “[T]he streaming multimedia file can merely be appended to the end of the advertisement, allowing the playing of the requested file to recommence in a seamless manner without further action required by [the] caching inserter.” *Id.* ¶ 20.

4. *Discussion of Arguments and Evidence*

The Petition includes a detailed element-by-element mapping of the limitations in the challenged claims to teachings in the cited art and articulates reasons for combining the relevant teachings of the cited references. Pet. 23–75. Patent Owner argues that “Petitioner’s asserted combination fails to disclose or render obvious several limitations of the independent claims. Further, Petitioner ignores significant technical limitations of its proposed combination. A POSITA simply would not be motivated to make the proposed combination to arrive at the claimed invention.” PO Resp. 1.

In our Institution Decision, we considered Petitioner’s showing that the combination of Frerichs, Kawasaki, and Kauffman teaches all the limitations of the challenged claims of the ’414 patent and Petitioner’s articulated reasons for combining the relevant teachings of the cited references. *See* Inst. Dec. 12–30. We also considered the contrary arguments in the Patent Owner’s Preliminary Response. *See id.* Based on our analysis of the Petition, the Preliminary Response, and the cited evidence, we determined that the information presented showed that Petitioner had a reasonable likelihood of establishing the unpatentability of the challenged claims. *See id.* at 29–30, 37. We have reconsidered Petitioner’s showing in view of the preponderance of evidence standard and the full record applicable to this Final Written Decision. *See* 35 U.S.C. §

316(e). We find based upon Petitioner's showing and the evidence cited (*see* Pet. 22–75) and based on our analysis as set forth in the Institution Decision further in consideration of Patent Owner's Response, Sur-reply and evidence of record, that Petitioner shows by a preponderance of evidence that the limitations of the challenged claims are taught by the combination of Frerichs, Kawasaki, and Kauffman.

*a. Independent Claims 1, 9, 12, and 14*¹⁴

Petitioner asserts that the combined teachings of Frerichs, Kawasaki, and Kauffman would have rendered independent claim 1 obvious. *See* Pet. 23–53. Although Petitioner addresses the differences in the independent claims in the Petition, Petitioner largely relies on its showing for independent claim 1 for its showing as to challenged independent claims 9, 12, and 14. *See id.* at 60–64 (claim 9), 65–69 (claim 12), 69–75 (claim 14). Patent Owner argues all the challenged independent claims as a group and does not argue that any difference in the independent claims requires separate analysis. *See* PO Resp. 15–57. Our analysis of the arguments and evidence presented by the parties relating to the challenged independent claims is set forth below.

i. Claim 1

A method for playing content and advertisements on a cellular device comprising:

¹⁴ We adopt the Petitioner's parsing of claim 1 in order to follow the presentation in the Petition.

Petitioner relies on Frerichs for teaching the preamble of claim 1.¹⁵ Pet. 34–35 (citing Ex. 1003 ¶¶ 88–90; Ex. 1004, 1:15–19, 2:13–19, 3:52–54, 4:37–38, 7:23–25, 11:10–13.). Petitioner contends that “Frerichs teaches a ‘*method for playing content and advertisements on a cellular device*’ because it describes a method that ‘outputs the audio content data comprising the advertisement’ and describes that its invention can be applied to devices ‘such as cellular phones.’” *Id.* at 34–35 (quoting Ex. 1004, code (57) (Abstract), 1:14–15). Petitioner also contends that “Frerichs also teaches that its client device receives streaming audio data ‘to then play the audio content.’” *Id.* at 35 (quoting Ex. 1004, 4:38).

Patent Owner does not address Petitioner’s showing with regard to the preamble with particularity. *See generally* PO Resp. However, Patent Owner acknowledges that “Frerichs relates to ‘inserting a targeted advertisement based upon a user profile through streaming audio’” (PO Resp. 15 (citing Ex. 1004, 1:10–12) and “the concepts of showing ads seamlessly and inserting ads at arbitrary locations are benefits that Frerichs achieved” (*id.* at 46).

We need not determine whether the preamble is limiting as we find based on the undisputed showing in the Petition that Frerichs teaches the preamble.

autonomously providing to a server, by the cellular device, information associated with a user of the cellular device

Petitioner relies on a combination of the teachings of Frerichs and Kawasaki for this limitation. Pet. 35–37 (citing Ex. 1003 ¶¶ 69–75, 91–124;

¹⁵ Neither party takes a position as to whether the preamble is limiting. Pet. 34 (“To the extent the preamble is limiting, Frerichs teaches” it.); *see generally* PO Resp.

Ex. 1004, 9:39–54, 14:40–53, 15:40–52; Ex. 1005, 2:63–66, 3:10–17, 4:1–5, 4:42–55). With regard to Frerichs teaching this limitation, the Petition states:

Frerichs teaches to a POSITA a process of data collection without user involvement. For example, a POSITA would have viewed “monitoring of user listening patterns” as indicating that the user’s listening patterns (“information associated with a user”) would be detected or monitored, and such information sent to a server (e.g., in Frerichs, “advertisement server 114”), without the user explicitly or manually providing his or her listening patterns (“autonomously providing to a server”). This is clear from the context of the sentence, as the disclosed monitoring is contrasted with “volunteered information” which would be provided manually.

Id. at 36 (citing Ex. 1003 ¶¶ 91–99; Ex. 1004, 9:39–54).

Alternatively, Petitioner relies on Kawasaki. Pet. 36 (“To the extent Frerichs is considered to not explicitly teach ‘autonomously providing’ information, Kawasaki does.”). With regard to this limitation and Kawasaki, the Petition states:

Kawasaki teaches providing a profile associated with a user (“information associated with a user”) from the user’s device (“providing ..., by the [] device”) to an offer manager (depicted as a server) (“to a server”). For example, Kawasaki discloses a “Profiler” which “tracks and builds an aggregate statistical model, ‘Profile,’ of the User” which is “a prioritized and rated set of interest categories that is automatically generated for each User.” Ex.1005, 4:42-55. As detailed below, the profile in Kawasaki is generated by scanning and analyzing a user’s digital content, such as the user’s e-mail messages. *Id.*, 4:1-5; Ex.1003, ¶¶111-124. Kawasaki’s Profile “is the output from the system and can subsequently be used to make highly targeted Offers.” Ex.1005, 4:42-55. . . .

In another example, Kawasaki teaches that “content information of an Internet User” (e.g., e-mail content, *see*

Ex.1005, 4:1-5) “is scanned to generate unknown data.”
Ex.1005, 2:63-66. This scanning may take place at “the client’s computer.” *Id.*, 2:63-66. Subsequently, as discussed above, the information is provided to the Recognizer and Profiler, and Kawasaki discloses that the profiling “may occur...remotely, for example, on a server installation.” *Id.*, 3:10-17. Thus, in this example as well, Kawasaki teaches that the “unknown data” scanned from the user’s content information (“information associated with a user”) is provided “to a server” (the server performing the profiling). Ex.1003, ¶105.

Id. at 36–37.

Patent Owner does not directly address Petitioner’s showing with regard to this limitation.¹⁶

We find that the cited art teaches this limitation.

the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device

Petitioner relies on a combination of the teachings of Frerichs and Kawasaki for this limitation. *See* Pet. 38–43 (citing Ex. 1003 ¶¶ 111–124; Ex. 1005, 2:63–3:1, 3:7–9, 3:14–17, 5:61–67, 6:4–5). With regard to Frerichs, Petitioner relies upon “its teachings of a cellular phone.” *Id.* at 39. With regard to Kawasaki, Petitioner relies on its generation of a user “profile [that] is derived from messages received by the user of the device from a

¹⁶ In the Petition, this limitation is labelled as limitation 1.1.1. Pet. 35. Although in the Response, Patent Owner argues that “Kawasaki does not disclose transmitting the required information to servers” (PO Resp. 24), this argument is directed to the next limitation “the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device” that is labelled as 1.1.2 in the Petition (Pet. 38). Accordingly, we discuss Patent Owner’s argument in the context in which it is presented, the next limitation in claim 1. Petitioner’s showing that Frerichs teaches this limitation is undisputed. *See generally* PO Resp.

user of another device.” *Id.* at 38. As shown in the passages from Kawasaki cited by Petitioner, Kawasaki teaches “[a]nalyzing and building Profiles from e-mail information” and, even more specifically, “by analyzing sent and **received** e-mail information and building Profiles based upon its content.” Ex. 1005, 5:61–65 (emphasis added). Petitioner contends that

[i]n combination with Frerichs and its teaching of a cellular phone, Kawasaki’s e-mail messages render obvious ‘a message sent to the **cellular** device from another user of another **cellular** device’ because a POSITA, at the time of the ’414 Patent, would have recognized that cellular devices (e.g., the cellular phones of Frerichs) were commonly used to send and receive e-mail, and that using a cellular device to send and receive e-mail would have been consistent with the disclosure of Kawasaki.

Id. at 39–40 (citing Ex. 1003 ¶¶ 119–121).

Patent Owner disputes Petitioner’s showing for this limitation. *See* PO Resp. 20–28. Patent Owner argues that “Kawasaki does not disclose clients that send information taken from messages at all, let alone taken from messages that meet the claimed requirements.” PO Resp. 21. However, Patent Owner bases this contention on its interpretation of “taken” as discussed above with regard to claim construction. *See supra* Section II.A. Patent Owner argues “[t]he plain meaning of the claim term ‘taken,’ when interpreted in light of the specification and file history, requires using information that was actually in a message, not merely data ‘derived’ from a message.” PO Resp. 21. As discussed above, we find that the plain meaning of “taken” is broad enough to include information derived from one or more messages. Therefore, Kawasaki may not be distinguished from claim 1 on the basis that Kawasaki does not take information from a message.

Patent Owner acknowledges that Petitioner relies on Kawasaki's profiles for teaching "information associated with a user" as recited (PO Resp. 22) but contends that "the profile does not have information 'taken' from a message (e.g., an email) in Kawasaki" (*id.* at 26). This contention is contradicted by the evidence from Kawasaki in the Petition (Pet. 36–37) that is quoted above and by Patent Owner's description of Kawasaki. In describing Kawasaki, the Response acknowledges that "Kawaskai describes '[a]nalyzing and building Profiles from e-mail information . . . by analyzing sent and received e-mail information and building profiles based upon its content.'" *Id.* at 17 (citing Ex. 1005, 5:61–65) (brackets and ellipsis in original). And, in the Preliminary Response, Patent Owner acknowledges that "Kawasaki discloses analyzing messages and other types of data in bulk and over a period of time to create aggregated results that indicate a 'strong interest' 'over time' (i.e., similar to Owensby's^[17] subscriber personality profile)." Prelim. Resp. 15.

Patent Owner argues that "Kawasaki does not disclose transmitting the required information to servers." PO Resp. 24. As shown above with regard to the preceding limitation, Petitioner relies on a combination of the teachings of Frerichs and Kawasaki for "autonomously providing to a server, by the cellular device, information associated with a user of the cellular device." *See* Pet. 35–37. Patent Owner disregards Frerichs and Petitioner's contentions and evidence from Frerichs in this argument regarding the transmission of information to the server. *See* PO Resp. 24–26. As such, Petitioner's showing that Frerichs teaches the transmission or "providing"

¹⁷ U.S. Patent No. 6,647,257 that was cited during prosecution. *See, e.g.,* Ex. 1002, 35.

limitation is undisputed. Based on the undisputed showing in the Petition, we find Frerichs teaches “autonomously providing to a server, by the cellular device, information associated with a user of the cellular device.”

Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has shown by a preponderance of the evidence that the cited art teaches this limitation.

the message identifying characteristics of the user of the cellular device

Petitioner relies on a combination of the teachings of Frerichs and Kawasaki as teaching all the elements of this limitation. *See* Pet. 41–43 (citing Ex. 1003 ¶¶ 125–128; Ex. 1005, 4:34–42). With regard to the combination of Frerichs and Kawasaki, the Petition states, “[a]s discussed above [with regard to the immediately preceding limitation], the combined Frerichs-Kawasaki system renders obvious ‘a message sent to the cellular device.’” *Id.* at 41. And, with regard to Kawasaki, the Petition provides, “Kawasaki teaches that received messages that are scanned include a “*message identifying characteristics of the user of the cellular device*” as it explains one example in which “**the User views golf-related Web Pages 13a, E-mail 12a.**” *Id.* (citing Ex. 1005, 4:34–42). Based on these teachings, the Petitioner asserts, “[a] POSITA would have recognized that, because the user views golf-related e-mail, one identifying characteristic of the user is that she is interested in golf.” *Id.* at 41–42 (footnote and cite omitted).

Patent Owner argues that “Petitioner has not identified anything in Kawasaki that suggests taking information from at least one message that [1] is ‘from another user of another cellular device’ . . . and [2] ‘identif[ies] characteristics of the user of the cellular device.’” PO Resp. 27 (bracketed

material in original). However, this argument is not developed or explained and is contradicted by the showing in the Petition as to this limitation as discussed above in the immediately preceding paragraph. And, in the Response, Patent Owner acknowledges that Kawasaki builds profiles identifying interests of a user by analyzing e-mail content. *Id.* at 16–17. And, in the Preliminary Response, Patent Owner acknowledges that Kawasaki discloses analyzing messages and other types of data that indicate the user’s interests. Prelim. Resp. 15.

Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has shown by a preponderance of the evidence that the cited art teaches this limitation.

receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;

Petitioner relies on a combination of the teachings of Frerichs and Kawasaki as teaching all the elements of this limitation. *See* Pet. 43–45 (citing Ex. 1003 ¶¶ 129–134; Ex. 1004, 1:15–19, 4:44–57, 6:18–42, 14:48–52; Ex. 1005, 3:34–38, 4:54–56). With regard to Frerichs, the Petition cites to passages teaching that “advertisements can be inserted into the streaming audio from an advertisement server 114” and “a specific advertisement can be sent to a specific client.” *Id.* at 43–44 (citing Ex. 1004, 4:44–57). And, Frerichs teaches “select[ing the] advertisement from a user profile.” *Id.* at 44 (citing Ex. 1004, 6:18–42). And, Frerichs teaches that the user profile contains “information which can be used to provide a more desirable advertisement or information to the user.” Ex. 1004, 14:48–51.

With regard to Kawasaki, Figure 4 of Kawasaki is reproduced below.

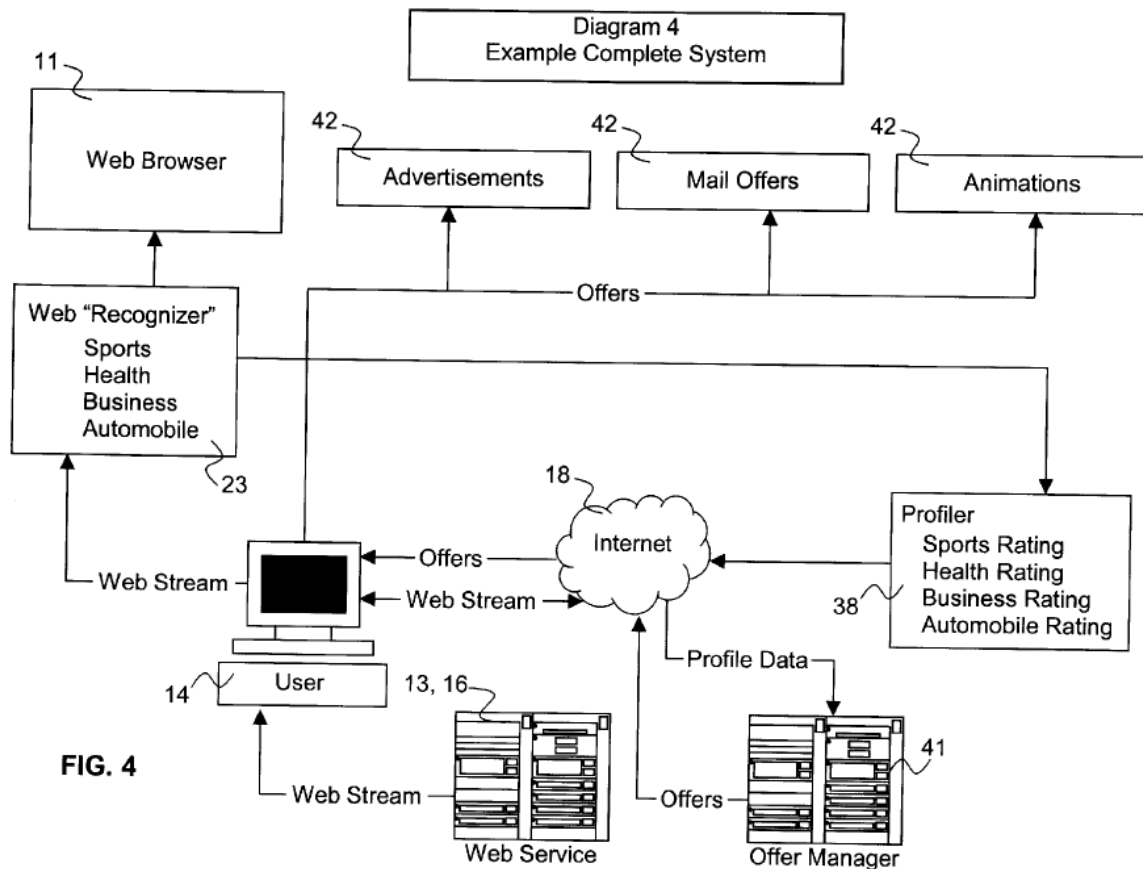


Figure 4 depicts, “the relationship between the Recognizers, the User, the Profiler and other components of the system and method.” Ex. 1005, 3:54–56. With regard to how Kawasaki works, the Petition includes the following summary:

Kawasaki describes an “invention that provides for profiling a user of the Internet.” Ex.1005, Abstract. Kawasaki’s technique “includes scanning content information of an Internet user to generate unknown data and processing unknown data to determine its relevance to predefined categories of interest” to “form a profile of the user that may ultimately be used to target offers” including advertisements “to users based upon the profile.” *Id.*, Abstract.

Kawasaki describes “content information of an Internet user” as including sent and received e-mail messages. *Id.*, 4:1-5. To form a profile in Kawasaki, first, “content information of an Internet User is scanned to generate unknown data.” *Id.* at 2:63-66. Subsequently, “unknown data are processed to

determine their relevance to predefined categories of interest” using what Kawasaki calls “Recognizers.” *Id.* at 2:66-3:1. In one example of Kawasaki, “if a golfing Recognizer 23 is loaded and the User views golf-related . . . E-mail 12a . . . the golfing Recognizer 23 returns a positive match for that Data Set 21.” *Id.*, 4:37-41. Once a positive match is returned, Kawasaki explains “[a]nother element” of the invention, the “Profiler 26,” which “builds an aggregate statistical model, ‘Profile,’ of the User including quantitative analysis of the match, frequency, duration, age and other factors between unknown content reviewed by the User and the set of installed Recognizers 23.” *Id.*, 4:42-48. The Profile is output from the system and sent to an Offer Manager (e.g., an advertising server). *See id.*, Fig. 4.

Pet. 24–25.

Patent Owner incorrectly argues that Petitioner relies entirely on Kawasaki for this limitation and that Frerichs is not relevant. PO Resp. 28 (“Petitioner relies on Kawasaki for this limitation. Kauffman and Frerichs are not relevant.”). As noted above, Petitioner relies on and cites Frerichs for this limitation. *Id.* at 43 (“The combined teachings of Frerichs and Kawasaki render this limitation obvious.”), 44 (“The combined teachings of Frerichs and Kawaski also render obvious that the advertisement is ‘*determined by the server based at least in part on the provided information.*’”) Patent Owner fails to address the showing in the Petition based on the combined teachings of Frerichs and Kawasaki and provides no reason as to why the relevant teachings of Frerichs as to this limitation are not relevant and should be disregarded. In addition, Patent Owner acknowledges that “Frerichs relates to ‘inserting a targeted advertisement based upon a user profile through streaming audio.’” PO Resp. 15.

Patent Owner also argues that the Kawasaki’s profiles “do[] not contain information taken from a message.” PO Resp. 29. This argument is

contradicted by the evidence and Patent Owner’s description of Kawasaki in the Response. In describing Kawasaki, the Patent Owner’s Response acknowledges that “Kawaskai describes ‘[a]nalyzing and building Profiles from e-mail information . . . by analyzing sent and received e-mail information and building profiles based upon its content.’” *Id.* at 17 (citing Ex. 1005, 5:61–65) (brackets and ellipsis in original).

Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has shown by a preponderance of the evidence that the cited art teaches this limitation.

if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising:

Petitioner relies on a combination of the teachings of Frerichs and Kauffman as teaching all the elements of this limitation. *See* Pet. 45–49 (citing Ex. 1003 ¶¶ 135–146; Ex. 1004, 6:57–7:5, 13:22–14:3, 15:66–16:23, Fig. 3; Ex. 1006 ¶ 20).

With regard to Frerichs, the Petition provides the following description of the method taught for inserting advertisements into streaming content:

In discussing the output of streaming audio and advertisement, Frerichs teaches that the streaming audio includes a “flag...that indicates where an advertisement is to be inserted.” Ex.1004, 6:57-7:5. In more detail, Frerichs explains that “FIG. 3 is a simplified diagram of a data insertion method 300 according to an embodiment of the present invention. . . . As shown, the method also provides a flag comprising advertisement indication and delay at the server location. The **flag is data that indicates where an advertisement is to be inserted.** The flag often has other information such as the

length of the advertisement, current content type (e.g. music/talk), and current ad frequency on this stream (e.g. 2 per hour).” Ex.1004, 6:57-7:5; Ex.1003, ¶¶135-136.

In Frerichs, the “flag is data that indicates where an advertisement is to be inserted” and “often has other information such as the length of the advertisement.” Ex.1004, 7:1-5; *see also* 13:22-14:3. In the context of Frerichs, therefore, the flag indicates the time at which to locate, within streaming audio, the start of an advertisement, along with the length of the advertisement (e.g., 30 seconds). Ex.1003, ¶135. Frerichs also explains that the “method monitors the streaming audio for the flag. Once the flag has been found, the method inserts the advertisement between the first audio data and the second audio data.” Ex.1004, 15:66-16:9.

....

A POSITA would have recognized Frerichs’ “flag” that indicates where an advertisement is to be inserted, and its teaching of finding the flag, to disclose, or at least render obvious, that a “*determined time interval occurs*”, because locating Frerichs’ flag determines when to play an advertisement, consistent with the examples disclosed in the ’414 Patent. Ex.1003, ¶¶135-138.

Frerichs then teaches playing the advertisement, as it states: “the streaming audio, which is **output**, includes first song 301, **advertisement 309**, and second song 305, which is output in a continuous manner.” Ex.1004, 16:10-23; Ex.1003, ¶139.

Pet. 46–47.

Petitioner relies on Kauffman for “explicitly teach[ing] that, . . . play-out of an advertisement at a client device, content is stopped by the client device.” Pet. 48. The Petition states, “[s]pecifically, Kauffman teaches that, when an advertisement file is available, the multimedia file (i.e., ‘*content*’) is cached at the client device, and in its place the advertisement file (‘*the determined advertisement*’) is streamed (‘*play[ed]*’) to the end-user.” *Id.* at

48–49 (citing Ex. 1006 ¶ 20 (“[O]nce caching inserter 30 has an advertisement file available . . . the incoming (requested) multimedia file destined for end-user 10 can be cached, and the advertisement multimedia file streamed in its place to end-user 10 in a seamless manner”)). Frerichs and Kauffman teach all the elements of this limitation.

recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing;

Petitioner relies on a combination of the teachings of Frerichs and Kauffman as teaching all the elements of this limitation. *See* Pet. 50–51 (citing Ex. 1003 ¶¶ 147–153; Ex. 1006 ¶¶ 7, 9, 20, 24). Petitioner relies on “Frerichs’ teachings of a cellular phone.” *Id.* at 51. In the cited passages, Kauffman states:

[A] “caching inserter” system is disposed at a local point of presence (POP) which intercepts a video stream destined for an end user. When insertion of advertising . . . is desired, the video stream is stored/buffered at the local POP and the advertisement is played.

. . . .

[O]nce caching inserter 30 has an advertisement file available (either stored, or available as a stream from the advertisement server), the incoming (requested) multimedia file destined for end-user 10 can be cached, and the advertisement multimedia file streamed in its place to end-user 10 in a seamless manner.

. . . .

A second cache 62 is used to store the incoming multimedia stream, designated as stream MM, where as discussed above, cache 62 is used to store incoming stream MM once advertisement stream A has begun to be “played out” toward end-user 10.

Ex. 1006 ¶¶ 7, 20, 24. Kauffman teaches recording the multimedia stream while an advertisement is played.

when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

Petitioner relies on a combination of the teachings of Frerichs and Kauffman as teaching all the elements of this limitation. *See* Pet. 51–53 (citing Ex. 1003 ¶¶ 154–156; Ex. 1006 ¶¶ 20, 24). Frerichs is again relied upon for “teaching of a cellular phone for playing content and advertisements.” *Id.* at 53. The cited paragraphs of Kauffman provide:

In accordance with the present invention, once caching inserter 30 has an advertisement file available (either stored, or available as a stream from the advertisement server), the incoming (requested) multimedia file destined for end-user 10 can be cached, and the advertisement multimedia file streamed in its place to end-user 10 in a seamless manner. The multimedia file itself is not stopped at any point, but is continuously cached by caching inserter 30 as it is received from streaming media server 26. At the end of the advertisement file, the stored multimedia stream is played out and, for the duration of the stream, will continue to pass through a cache, since there will continue to be a time delay between the incoming stream to caching inserter 30 and the outgoing stream to end-user 10 (the “delay” being the length of the inserted advertisement). Since the end time of the advertisement is known by caching inserter 30. The streaming multimedia file can merely be appended to the end of the advertisement, allowing the playing of the requested file to recommence in a seamless manner without further action required by caching inserter 30.

....

FIG. 3 illustrates an exemplary caching inserter 30 that may be used in the system of the present invention as described

above in association with FIG. 1. Included within caching inserter 30 is a first cache 60 used to store an incoming specific advertisement file, designated as stream A, from advertisement content server 60. A second cache 62 is used to store the incoming multimedia stream, designated as stream MM, where as discussed above, cache 62 is used to store incoming stream MM once advertisement stream A has begun to be “played out” toward end-user 10. . . . For example, unless and until a full advertisement file is loaded in first cache 60, multimedia stream MM can be played coupled in real time to end-user 10, indicated as position (1) of switch 67 of inserter 30. When control unit 66 receives a particular indication from first cache 60 (such as “EOF” received), it knows that advertisement stream A is ready to be played out and multimedia stream MM can be held. A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10. Once this process begins, multimedia stream MM will begin to be stored in second cache 62. When timing and control unit 66 receives a command that the end of the advertisement has been reached, a signal to move switch 67 to position (3) will be sent, allowing the cached multimedia stream to be sent to end-user 10. If the advertisement is inserted at the beginning of or during the multimedia stream, the received multimedia stream will need to be stored in, then played out of, second cache 62 for the duration of the multimedia file.

Ex. 1006 ¶¶ 20, 24. These passages in Kauffman teach that, when the playing of an advertisement has ended, playing of the interrupted multimedia content will resume from the point where it was interrupted.

With regard to this limitation and the preceding two limitations, Patent Owner argues that the cited art does not disclose playing content on an end user device while caching content. PO Resp. 29–34. Patent Owner’s argument is based on a contention that, in Kauffman, the devices that display the content (the TV and the computer terminal) are the “playing” devices

and these devices “playing” the content are not the devices “recording” or caching the content. *See id.* at 16 (“Kauffman relates to inserting advertising into streaming multimedia. . . . Although Kauffman caches content while inserting an ad, the device that caches the content is not the device that plays the content.”); *see also at id.* at 30 (“Although Kauffman caches content while inserting an ad, the device that caches content is not the device that plays the content.”). Patent Owner argues, “[i]nstead, Kauffman caches content at “caching inserter 30” within the “local point of presence 32,” which is upstream of devices that play content: TV 12 and computer terminal 16, each of which show content on a display.” *Id.*

Petitioner responds to this argument as follows:

[T]his narrow view is contrary to a POSITA’s understanding. Kauffman explicitly teaches locating a caching inserter at any “communication [] device at an end-user location.” Ex.1006, cl.17. Dr. Malek [Patent Owner’s expert declarant] concedes that computers, such as Kauffman’s computer 16, are communication devices, and a cellular device would have been recognized as a computer (one which is, per the patent’s admissions, capable of “advanced features”, *see* Ex.1001, 1:33-44). Thus, Kauffman teaches, to a POSITA, caching streaming media at a cellular device. Ex.1029, ¶¶39-43.

Even without this disclosure of Kauffman, the remainder still teaches caching at a cellular device. For example, Kauffman’s TV is a media output device, akin to a cellular device’s speaker; thus, accompanying hardware (e.g., a set-top box) would be needed to receive playback content (including caching as Kauffman teaches). Ex.1029, ¶¶44-48. This combined set-top box and TV is analogous to a cellular device that receives and plays content using a speaker. Likewise, Kauffman’s computer 16 is analogous to the claims’ cellular device, having hardware for caching (e.g., memory and processor) and an output device (e.g., the monitor in Fig. 1).

Reply 17–18.

And, here again, with this argument, Patent Owner ignores Frerichs and the identified teachings in Frerichs related to these limitations because Frerichs does not explicitly teach recording or caching. *See* PO Resp. 30 (“Kawasaki and Frerichs are irrelevant . . . Petitioner admits that Frerichs does not cache as required by the claims.”). Patent Owner is not justified in ignoring the other relevant and cited teachings of Frerichs because Frerichs fails to teach one element of these limitations. Patent Owner’s argument relating to these limitations fails to address the combination of the teachings of Frerichs and Kauffman set forth in the Petition.

Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has shown by a preponderance of the evidence that the cited art teaches the last three limitations of claim 1. In sum, based on our limitation-by-limitation analysis, we find that the cited art teaches all the limitations of claim 1.

ii. Motivation to Combine the Cited References

(a) Frerichs and Kawasaki

Petitioner contends, “a POSITA would have been motivated to combine the teachings of Frerichs and Kawasaki.” Pet. 37 (citing Ex. 1003 ¶¶ 69–79), *see also id.* at 27–30. Petitioner asserts that “it would have been obvious, beneficial, and predictable to apply to Kawasaki’s teachings of profiling users based on scanning their received content information into Frerichs’ selection of an advertisement for a user” and “the combination of Kawasaki’s teachings with Frerichs would improve the targeted advertising in Frerichs.” *Id.* at 27–28.

Petitioner contends that both Frerichs and Kawasaki are analogous art to the '414 patent. Pet. 28 (citing Ex. 1003 ¶¶ 70–71). In support, Petitioner argues:

Both Frerichs and Kawasaki relate to targeted advertising techniques. The field of endeavor of the '414 Patent is “inserting advertisements into broadcast content played on a mobile device.” Ex.1001, 1:15-17. Frerichs is analogous art at least because it relates to “inserting a targeted advertisement based upon a user profile through streaming audio.” Ex.1004, 1:10-13. Kawasaki is analogous art because it relates to targeting offers and “advertisements.” Ex.1005, 2:55-57, 1:25-29.

Id.

Petitioner points to specific teachings in both Frerichs and Kawasaki that would have motivated a skilled artisan (“the references provide an express teaching, suggestion, or motivation to combine the teachings”) to combine their teachings. *See* Pet. 27–30. For example, Petitioner argues that “[t]his combination would, for example, achieve the benefits expressly stated by Kawasaki of ‘provid[ing] a higher User response rate’ for advertisements by improving ‘the match between User interests and Advertisers’ messages’” and “the combination would provide for the inclusion of ‘other information which can be used to provide a more desirable advertisement or information to the user’ in Frerichs’ user profile, as Frerichs states.” *Id.* at 27–28 (citing Ex.1004, 15:48–50; Ex.1005, 2:48–51, 2:58–59). Petitioner contends that “a POSITA would have been motivated to combine the teachings of Frerichs and Kawasaki to generate user profile information for use in providing an advertisement, as taught by Frerichs, by scanning data received by a user, as taught by Kawasaki.” *Id.* at 29 (citing Ex.1003 ¶ 73).

Petitioner also provides a showing that “[a] POSITA would have had a reasonable expectation of success in combining the teachings of Frerichs and Kawasaki, and more specifically, in using Kawasaki’s techniques of scanning content received by a user to develop a user profile. Kawasaki contemplates applicability to a wide variety of client devices.” *Id.* at 29. The Petition states:

[W]ith respect to the e-mail scanning example, Kawasaki notes that “Clients refers to any software loaded on desktop PCS, set top boxes and end-user display devices that display e-mail.” Ex.1005, 6:4-5. A POSITA would have recognized that cellular phones, like those in Frerichs, were “end-user display devices that display e-mail.” Kawasaki also notes that “commercially available” software is available to implement its techniques, and the Recognizers used to build profiles are “very small and compact.” *Id.*, 4:21-32. Kawasaki further describes that its invention “employs methods for scanning, analyzing and handling digital information content” as described in a related patent (U.S. Patent No. 6,266,664) which refers to “source code files” for implementing its techniques. *Id.*, 4:62-67. Thus, a POSITA would have recognized a reasonable expectation of success in applying Kawasaki’s teachings to the devices described in Frerichs. Ex.1003, ¶74.

Id. at 30. Petitioner has provided a robust and well-supported articulation of reasons why a skilled artisan would have been motivated to combine the relevant teachings of Frerichs and Kawasaki with a reasonable expectation of success.

Patent Owner argues that “[a] POSITA would not have been motivated to combine Kawasaki’s artificial intelligence neural networks with a cell phone, which was not technologically feasible at the time of the ’414 patent.” PO Resp. 35. Patent Owner contends that “Kawasaki requires running artificial intelligence neural networks” and “Petitioner and Dr. Houh

do not allege that a 2001-era cell phone could run a neural network, or that a POSITA would be motivated to combine the cell phone of Frerichs with a neural network.” *Id.* (“Petitioner and Dr. Houh offer no evidence, or even argument, that in 2001 a cell phone had ever run a neural network, or that such a feat was possible.”).

In the Reply, Petitioner argues:

[W]hile Kawasaki uses neural networks, incorporating Kawasaki’s teachings does not require running neural networks on client devices (e.g., cellular devices), and thus the proposed combination **does not require** a 2001-era cellular device to run or develop a neural network. Thus, analyzing whether such a device had ever run neural networks is immaterial to the Petition’s combination. [Patent Owner] offers nothing to contend that “small and compact” “data sets” and “algorithms and rules,” i.e., Kawasaki’s “recognizers” could not be executed on a cell phone, as the Petition proposed and as Dr. Houh confirms. Ex.1029, ¶¶30-38. . . . because [Patent Owner] is wrong that Kawasaki’s teachings would require cellular devices to execute neural networks, none of these counterarguments impact whether a POSITA would have combined the teachings of Frerichs and Kawasaki as argued.

Reply 18–19. We agree with Petitioner that Patent Owner’s attack on Petitioner’s articulated (and largely uncontested) motivations to combine and showing of reasonable expectation of success lacks merit.

Petitioner proposes to combine the relevant teachings of the combination and shows that a skilled artisan would have been motivated to combine these relevant teachings with a reasonable expectation of success, such as, by combining Frerichs’s teachings of a cellular device that presents targeted advertisements to a user with Kawasaki’s teachings of profiling users based on scanning their received content information. *Omega Patents*,

LLC. v. BMW of North America, LLC, No. 2022-2012, 2024 WL 22780, at *3 (Fed. Cir. January 22, 2024) (“Obviousness is determined based on ‘what the combined *teachings* of the references would have suggested to those having ordinary skill in the art’ and ‘does not require an actual, physical substitution of elements.’”) (quoting *In re Mouttet*, 686 F.3d 1322, 13332–33 (Fed. Cir. 2012)).

During oral argument, Patent Owner pointed particularly to the declaration of Dr. Malek (Ex. 2009) at paragraphs 129 and 131, and 134. Tr. 113–114. Those paragraphs discuss training sets for neural networks, which are distinguishable from Kawasaki’s recognizers, which are the end product of the neural networks and not the data used to train it. *See* Ex. 2009 ¶ 161. The recognizers that Petitioner proposes to combine with Frerichs’ cell phone are “algorithms and rules.” *See id.*; Ex. 1005, 4:17–24.

Kawasaki’s recognizers are targeted to specific topics; e.g., “golfing Recognizer 23.” Ex. 1005, 4:37–41. Although Dr. Malek argues that such recognizers would need “possibly thousands of words” (Ex. 2009 ¶ 130), Dr. Malek does not attest that a “golfing” recognizer would need a thousand word vocabulary. Dr. Malek’s testimony is instead based on characteristics of a “neural network system” purposed for “analyzing content of a web page.” *Id.* at ¶ 54. More particularly, Dr. Malek discusses “running Kawasaki’s neural network model,” but not Kawasaki’s recognizers upon which Petitioner relies for its combination. *Id.* at 56.

Petitioner’s declarant, Dr. Houh, discusses this mismatch of Dr. Malek’s testimony to the asserted combination. *See* Ex. 1029 ¶¶ 29–37. Dr. Houh opines that the types of algorithms and rules pertinent to Kawasaki’s recognizer “is not beyond the capability of a 2001-era cellular device.” *Id.*

at ¶ 33. Dr. Houh further states that “only a single recognizer” is necessary to teach the claim language, and accordingly, “would require only one list of natural language words and weights, which is not an unreasonable amount of data to store on a cellular device.” *Id.*

Furthermore, Dr. Malek, in his deposition testimony, described the way a recognizer works as “receive a feature vector’s input [i.e.,] . . . a bunch of numbers, basically, and then produce a number as output.” Ex. 1028, 80:9–17. The evidence relating to the proposed recognizer-cell phone combination provides a reasonable expectation of success in that combination.

Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has articulated a basis for combining the relevant teachings of Frerichs and Kawasaki with a reasonable expectation of success that is well-supported and rational.

(b) Frerichs and Kauffman

With regard to combining the relevant teachings of Frerichs and Kauffman, the Petition states:

At the time of the ’414 Patent, it would have been obvious, beneficial, and predictable to apply Kauffman’s teachings of recording streaming content while outputting an advertisement in place of the streaming content with Frerichs’ teachings of providing streaming media content and advertisement content to a customer—for example, because it was well-known and desirable to store streaming content in a buffer while presenting an advertisement to provide for “advertisements . . . to be inserted in streaming multimedia in a seamless fashion.”

Pet. 30–31 (citing Ex. 1006 ¶ 18). Petitioner also asserts that “Kauffman is analogous art to the ’414 [p]atent as it is within the field of endeavor of inserting targeted advertisements into streamed or broadcast content.” *Id.* at

31 (citing Ex. 1001, 1:51–60, 3:52–55; Ex. 1003 ¶ 77, Ex. 1006, code (57) (Abstract), ¶ 16).

Petitioner alleges that the combination of the relevant applied teachings of Frerichs and Kauffman would have been the combination of known elements according to known methods and substitution of one known technique for another. Pet. 31. In this regard, the Petition provides:

A POSITA would have been specifically motivated to incorporate Kauffman’s technique of pausing multimedia content and storing that paused multimedia content in a cache, while outputting an advertisement, because doing so would have been no more than the combination of known prior art elements according to known methods with a reasonable expectation of success. Ex.1003, ¶78. Additionally, combining Kauffman’s teachings with Frerichs’ methods would have been no more than the simple substitution of one known technique for another, and would have thus been obvious to a POSITA.
Id.

Id.; *see also id.* at 34 (citing Ex. 1003 ¶¶ 76–87) (“[A] POSITA would have found it obvious to apply Kauffman’s teachings to Frerichs’ system because the combination merely amounts to combining prior art elements according to known methods to yield predictable results, or simply substituting one known technique for another, and would have thus been obvious.”).

With regard to the specific relevant teachings from Frerichs and Kauffman and the motivation to combine these teachings, the Petition provides:

Frerichs suggests that advertisements are played in the process of outputting requested streaming media content, and that such advertisements are output between streaming media content. For example, Frerichs discloses a “method according to an embodiment” which includes steps of “10. Output first song through audio output device; 11. Output advertisement

through audio output device; 12. Output second song through audio output device.” Ex.1004, 6:18-42. Frerichs also explicitly contemplates buffering an advertisement to “provide it for insertion into the streaming audio.” Ex.1004, 7:45-47; *see also* 14:54-15:6 (describing a technique for playing an advertisement while buffering content data). Kauffman explicitly discloses outputting advertisements in place of streaming media content, and augments Frerichs by specifically disclosing implementation details for how advertisements may be played in place of streaming media content. Specifically, Kauffman teaches caching streaming media content during the playback of an advertisement, so that the streaming media content can then be resumed after completion of the advertisement content, which is not explicitly taught by Frerichs. *See* Ex.1006, ¶ 24; Ex.1003, ¶79. Indeed, a POSITA would have recognized that Frerichs contemplates a wide variety of insertion techniques: “the method uses an insertion technique such as the one noted above, but can be others.” Ex.1004, 12:3-5. For example, Frerichs explains that in one example, an advertisement may be output at a desired time, and Kauffman teaches one technique for doing so. Ex.1003, ¶79.

Additionally, a POSITA would have recognized that caching paused streaming media content during the playback of an advertisement, as taught by Kauffman, would have been advantageous. Ex.1003, ¶80. Implementing the teachings of Kauffman would allow the paused content to be immediately resumed after the end of the advertisement’s playback by playing the content from the cache, without further delay caused by network retrieval of the streaming media content. This would have been consistent with a POSITA’s knowledge of similar caching and pre-loading techniques known in the relevant art, which explicitly touted advantages of improving response time to a user, and thus would have motivated a POSITA to incorporate Kauffman’s teachings. Ex.1003, ¶80; *see Zup v. Nash Mfg.*, 896 F.3d 1365, 1371 (Fed. Cir. 2018) (motivation to combine teachings may be found in “background knowledge, creativity, and common sense of the person of ordinary skill.”).

A POSITA would have also recognized that Kauffman's techniques were applicable to Frerichs, given Kauffman's acknowledgement that its techniques may be implemented at a client-side (e.g., in Frerichs' cellular phone), and Kauffman's teachings of providing a method for inserting advertisements "at arbitrary locations," (Ex.1006, ¶1) consistent with Frerichs' insertion of advertisements at a flagged location within streaming audio data. Ex.1003, ¶81.

Pet. 31–33.

Petitioner also asserts that "[a] POSITA would have also recognized a reasonable expectation of success in combining the teachings." Pet. 33–34 (citing Ex. 1003 ¶¶ 82–86). In support, the Petition provides:

Kauffman provides sufficient detail to instruct a POSITA regarding how to implement its teachings. Additionally, a POSITA would have recognized that Kauffman's techniques were applicable to many types of computing devices, including those disclosed by Frerichs. For example, a cellular phone would have included sufficient processing power and memory to be able to cache advertisements and portions of streaming media content and selectively output the advertisements or streaming media content according to Kauffman's teachings.

Id. at 34. Petitioner has presented a robust and well-supported articulation of reasons as to why a skilled artisan would have been motivated to combine the relevant teachings of Frerichs and Kauffman with a reasonable expectation of success.

Patent Owner (incorrectly) argues that "Petitioner does not provide any reason to combine Kauffman with Frerichs, let alone the cell phone of Frerichs." PO Resp. 46. As such, in large part, Patent Owner fails to specifically address, or rebut, Petitioner's showing as to motivation to combine. *See id.* at 46–57. Nonetheless, the Response contains a somewhat

lengthy discussion of motivation to combine Frerichs and Kauffman (*see id.*) that we discuss below.

Patent Owner argues that “Petitioner cites only one alleged benefit of combining Kauffman and Frerichs: caching ‘would allow the paused content to be immediately resumed ... without further delay caused by network retrieval of the streaming media content.’” PO Resp. 46 (quoting Pet. 33). Patent Owner does not explain, and we do not discern, why this benefit alone does not provide sufficient motivation to combine the teachings of Frerichs and Kauffman. And, Patent Owner acknowledges that “Kauffman caches content while inserting an ad.” *Id.* at 16. As noted above, we find that all the limitations of claim 1 are taught by the cited art. Patent Owner fails to address Petitioner’s argument that the combination merely amounts to combining prior art elements according to known methods to yield predictable results.

Patent Owner argues that Kauffman causes the problem of network delay by intercepting and caching the stream of content (PO Resp. 46–50). However, caching as taught by Kauffman solves the problem of delay by allowing the playing of the content to resume immediately after the playing of the advertisement ceases. We agree with Petitioner that “[i]mplementing the teachings of Kauffman would allow the paused content to be immediately resumed after the end of the advertisement’s playback by playing the content from the cache, without further delay caused by network retrieval of the streaming media content” (Pet. 33) and we agree that this is a benefit that a skilled artisan would recognize and motivate the combination of the teachings.

Patent Owner also argues that the specific architecture disclosed in Kauffman increases the risk of network delay by caching the content (*see* PO Resp. 48–52) but does not dispute that Kauffman teaches caching (*id.* at 16). Patent Owner further argues that Kauffman does not teach that a cell phone could cache incoming streaming video for later playback (*see id.* at 52–55) but, as noted above, Petitioner relies on Frerichs for teaching the use of a cell phone in the combination (*see, e.g.,* Pet. 35). We have considered Patent Owner’s arguments and do not find they have merit.

We find that a skilled artisan would be motivated to apply Kauffman’s teachings of recording streaming content while outputting an advertisement in place of the streaming content with Frerichs’s teachings of providing streaming media content and advertisement content to a customer using a cell phone as alleged by Petitioner. Considering the arguments of the parties and weighing the evidence presented, we find that Petitioner has articulated a basis for combining the relevant teachings of Frerichs and Kauffman with a reasonable expectation of success that is well-supported and rational.

Summary for Claim 1

Based on the foregoing analysis of the arguments and evidence submitted by the parties, we find that Petitioner shows by a preponderance of evidence that the combination of Frerichs, Kawasaki, and Kauffman teaches all the limitations of claim 1, a motivation to combine the relevant teachings of these references existed, and conclude that claim 1 of the ’414 patent is unpatentable as obvious.

ii. Claims 9, 12, and 14

Claims 9, 12, and 14 are independent and are similar to independent claim 1. Ex. 1001, 12:18–44 (claim 1), 13:10–38 (claim 9), 13:53–14:21

(claim 12), 14:28–59 (claim 14). As noted above, claim 1 is an independent method claim, claim 9 is an independent product claim, and claims 12 and 14 are independent article of manufacture claims. *Id.* Although Petitioner addresses the differences in the independent claims in the Petition, Petitioner largely relies on its showing for independent claim 1 for its showing as to challenged independent claims 9, 12, and 14. *See id.* at 60–64 (claim 9), 65–69 (claim 12), 69–75 (claim 14). Patent Owner argues all the challenged independent claims as a group and does not argue that any differences in the independent claims requires separate analysis. *See* PO Resp. 15–57. Indeed, in its argument, Patent Owner’s Response repeatedly states that the limitations of all the independent claims are substantially the same. *See id.* at 20, 28, 29.

We agree with the parties that the arguments and evidence as to the disputed issues relating to claim 1 apply with equal force to claims 9, 12, and 14 and that there are no differences in the challenged independent claims that dictate separate analysis and discussion beyond that relating to claim 1. On this record, all the independent claims are equivalent and require the same outcome.

In consideration of the foregoing and our analysis relating to claim 1, we find that Petitioner shows by a preponderance of evidence that the combination of Frerichs, Kawasaki, and Kauffman teaches all the limitations of claims 9, 12, and 14, a motivation to combine the relevant teachings of these references existed, and conclude that claims 9, 12, and 14 of the ’414 patent are unpatentable as obvious.

b. Dependent Claims 2–7, 10, 11, and 13

Challenged claims 2–7, 10, 11, and 13 depend directly or indirectly from independent claims 1, 9, or 12. Ex. 1001, 12:45–13:6, 13:39–52, 14:23–27. The Petition provides an element-by-element analysis relating to the additional limitations set forth in the challenged dependent claims. Pet. 53–60, 64, 69. Patent Owner challenges Petitioner’s showing as to claims 2–4, 7, 10, and 11. PO Resp. 57–63. We analyze the arguments and evidence of the parties relating to the challenged dependent claims below.

i. Claims 2, 10, and 13

Claim 2 recites:

The method of claim 1, wherein the provided information additionally includes at least one of the group consisting of a preference of a user of the cellular device, a demographic data of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

Ex. 1001, 12:45–50. Claims 10 and 13 are very similar and present the same issues. Ex. 1001, 13:39–44, 14:23–27; *see also* Pet. 64, 69; PO Resp. 57.

With regard to claim 2, the Petition states:

As detailed above in the analysis of limitation [1.1.1],^[18] Frerichs teaches that information is provided for inclusion in the user profile, and that the information is provided from the cellular phone and may be “derived from the stations being selected as well as **use of such stations during the time of day.**” Ex.1004, 15:40-52 (footnote added).

The “use of such stations during the time of day” as disclosed by Frerichs corresponds to the recited “*preference of a user of the cellular device*”, for example, because such information would indicate that the user prefers to listen to a

¹⁸ Limitation [1.1.1] is: “(a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device.” Pet. 35.

given station at a certain time of day. Ex.1003, ¶¶157-158. Alternatively, this disclosure of Frerichs also corresponds to the recited “*content played on the cellular device*”, for example, the particular radio station played on the cellular phone. Ex.1003, ¶¶157-158. Thus, Frerichs’ teaching of information in the profile that is derived from the use of stations at a certain time of day renders obvious “*the provided information additionally includes at least one of the group consisting of a preference of a user of the cellular device...[or] content played on the cellular device.*” Ex.1003, ¶¶157-159. Claim 2 is thus obvious over the combination of Frerichs, Kawasaki, and Kauffman. *See Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1298 (Fed. Cir. 2009) (claim written in Markush form is disclosed by prior art if one alternative in the group is found in the prior art).

Pet. 53–54 (footnote added) (bracketed material, except footnote, in original).

Patent Owner argues that the showing for claims 2, 10, and 13 is deficient because the radio station information that Petitioner relies on is not taken from a message. PO Resp. 57–58. The Response states:

The radio stations that a user listens to are not taken from a message as claim 1 requires. Petitioner does not allege otherwise, and does not even cite anything in Frerichs for the claim limitation “[1.1.2] the information taken by the cellular device from a message ...” Pet., 38-45; EX2009, ¶113.

Id. at 58.

Petitioner argues that Patent Owner’s interpretation of claims 2, 10, and 13 that recite that “the provided information additionally includes . . . a preference of a user” is wrong because this does not require that the preference be “taken” from a message. Reply 24–25. The Reply states:

While claim 1 requires “*information associated with a user of the cellular device*” be provided, and claim 1’s information is “*taken by the cellular device from a message*,” claim 2 states “*provided information **additionally includes***” preferences and other data; thus, the dependent claims’ additionally provided information is not limited to information obtained from a message. That is, in claim 1, “*information taken by the cellular device*” is the “*information associated with a user of the cellular device*” provided to a server, and in claim 2, “*a preference*” or the other information categories recited in claim 2 are additionally provided.

This is consistent with the specification: preferences, demographic data, and location data are provided by modules that are **not** “other source module 606” (the only module that provides information from a message). *See* Ex.1001, 9:42-10:24. Thus, while preferences, demographic data, and geographic location data are provided to a server, those information categories are not disclosed as being within a “*message*.”

Id. at 24–25. We agree with Petitioner and reject Patent Owner’s argument as not supported by the claim language.

We find that Petitioner shows by a preponderance of evidence that the additional limitations of claims 2, 10, and 13 are taught by Frerichs and conclude that these claims are unpatentable as obvious.

ii. Claim 3

Claim 3 depends from claim 2. Ex. 1001, 12:51–55. Claim 3 recites:

The method of claim 2 wherein the provided information additionally includes at least one selected from the group consisting of a game played on the cellular device, a radio station broadcast received by the cellular device, or a television station broadcast received by the cellular device.

Id. Petitioner relies on the “radio station broadcast” element of the Markush group as being taught by Frerichs. Pet. 54–55. The Petition states:

As detailed above, Frerichs teaches that the information provided from the cellular device and included within the profile may be “**derived from the stations being selected** as well as use of such stations during the time of day.” Ex.1004, 15:40-52. In Frerichs, the “stations being selected” are radio stations: “a plurality of content servers 105, each corresponding to a **radio station** with call letter, e.g., BBC, WKRZ, KQED, KGO.” *Id.*, 4:19-22. Further, Frerichs “generally relates to techniques for broadcasting information through a wide area network of computers.” *Id.*, 1:9-11; Ex.1003, ¶¶160-161.

Thus, Frerichs’ teaching of obtaining information on the stations being selected, which stations are radio stations broadcasting information, renders obvious “*the provided information additionally includes...a radio station broadcast received by the cellular device.*” Ex.1003, ¶¶160-162. Claim 3 is thus obvious over the combination of Frerichs, Kawasaki, and Kauffman. *See Fresenius*, 582 F.3d at 1298.

Id.

Patent Owner groups claim 3 with claims 2, 10, and 13, and relies on its arguments for those claims in disputing the Petition’s showing with regard to claim 3. *See* PO Resp. 58. We reject these arguments for the reasons stated above in discussing claims 2, 10, and 13.

Petitioner responds to Patent Owner’s argument on claim 3 with:

For claim 3, “*a game played..., a radio station broadcast..., or a television station broadcast...*” are information which the “behavior module 608” is responsible for. The patent does not contemplate providing such information by “other source module 606” acting on a “*message sent to the cellular device*” nor would such an interpretation make sense—it is unclear how “*a game played*” by the user would be information included in a message **received** by that user. The Petition’s showing that claim 3 is obvious remains correct.

Pet. Reply 25–26.

We find that Petitioner shows by a preponderance of evidence that Frerichs teaches the additional limitation recited in claim 3 and conclude that claim 3 is unpatentable as obvious.

iii. Claims 4 and 11

Claim 4 recites:

The method of claim 1, wherein the playing of at least one determined advertisement further comprises:

- (a) receiving from the server, by the cellular device, the at least one determined advertisement prior to the playing of the at least one determined advertisement; and
- (b) recording, by the cellular device, at least one of the at least one determined advertisement on the cellular device for play back when the determined time interval occurs.

Ex. 1001, 12:56–64. Although worded a bit differently, claim 11 (*id.* at 13:45–52) is similar to claim 4 and the differences do not require separate analysis or dictate a different outcome. The parties rely on the same arguments for claims 4 and 11. *See* Pet. 64; PO Resp. 58–59.

The Petition provides:

Frerichs describes one “method according to an embodiment of the present invention” that includes 13 steps. Ex.1004, 6:18-42. Step 6 of Frerichs’ method includes “Transfer advertisement for insertion” and a subsequent step, step 11, is “Output advertisement through audio output device.” *Id.*

In the context of this method, to “transfer” means to send from the server to the client, as indicated by step 4 of the method (“from server location to client location”), such that the client receives the advertisement (“*receiving, from the server, by the cellular device, the at least one determined advertisement*”). Ex.1003, ¶¶164-165. Further, the transferring step, step 6, occurs before step 11, which is to output or play the advertisement transferred from the server to the client

(“prior to the playing of the at least one determined advertisement”). Id.

....

Frerichs teaches that, before the advertisement is played, the method “retrieves an advertisement 309 from storage. Here, the advertisement can be retrieved from location storage 313, which can be at the client location.” Ex.1004, 7:41-43. A POSITA would have recognized that, for the advertisement to be retrieved from storage at the client location (the cellular phone), the advertisement was stored at the client location (*“recording, by the cellular device, at least one of the at least one determined advertisement on the cellular device”*). Ex.1003, ¶¶167-168. Further, because in step 11 the advertisement is output, Frerichs teaches that the advertisement is recorded *“for play back when the determined time interval occurs.” Id.*

To the extent this is not an explicit teaching of “recording...at least one of the at least one determined advertisement,” Kauffman explicitly teaches that its caching inserter 30, which is located at a client device, includes “a first cache 60 used to **store an incoming specific advertisement file**” (Ex.1006, ¶24) and thus teaches *“recording”* as recited. Ex.1003, ¶169.

Pet. 55–57.

Patent Owner relies on its arguments relating to claim 1 that the ads need to be determined based on information “taken” or extracted from a message and not derived or generated from a message. *See* PO Resp. 58 (“Those ads are not determined using information taken from a message as claim 1 requires.”). We reject this argument for the reasons discussed above.

We find that Petitioner shows by a preponderance of evidence that the additional limitation of claims 4 and 11 are taught by Frerichs and Kauffman and conclude that these claims are unpatentable as obvious.

iv. Claim 5

Claim 5 recites:

The method of claim 1, further comprising employing the cellular device to receive the content as a stream of content.

Ex. 1001:12:65–67.

The Petition states:

Frerichs teaches that audio information “is converted into a **digital streaming format** for transmission through the wide area network of computers.” Ex.1004, 7:15-17. Frerichs further teaches that the “audio data...is provided through streaming media software” and the “streaming media software provides the audio data to clients which request a connection to the audio data” and does so by sending “the encoded audio to the client as a **sequence of data packets**. The client receives the packets and can decode the packets to then play the audio content.” *Id.*, 7:17-25; *see also* Abstract (“streaming audio”), 2:12-13 (“streaming audio output”), 2:21-23. A POSITA would have recognized Frerichs’ description of sending audio as a sequence of data packets to teach that the cellular device receives “*a stream of content*” as recited, based on dictionary definitions of the term “stream” and “streaming.” Ex.1003, ¶172. Thus, Frerichs’ teaching of a digital streaming format for transmission and the client’s receipt of a sequence of data packets renders obvious “*employing the cellular device to receive the content as a stream of content.*” Ex.1003, ¶¶171-173.

Pet. 57–58.

Patent Owner does not dispute Petitioner’s showing as to the additional limitation in claim 5. *See generally* PO Resp.

We find that Petitioner shows by a preponderance of evidence that Frerichs teaches the additional limitation recited in claim 5 and conclude that claim 5 is unpatentable as obvious.

v. Claim 6

Claim 6 recites:

The method of claim 1, further comprising receiving the content as a broadcast of content for playing on the cellular device.

Ex. 1001, 13:1–3.

The Petition states:

The '414 Patent explains that the “term ‘broadcast’ includes but is not limited to commercial and non-commercial radio and television stations, Internet radio and the like.” Ex.1001, 3:11-14. Consistent with this definition, Frerichs teaches that its invention “generally relates to techniques for broadcasting information through a wide area network of computers” and Frerichs also explicitly discloses broadcasting radio stations: “the network is also coupled to a plurality of content server 105, each corresponding to a radio station with call letter, e.g., BBC, WKRZ, KQED, KGO.” Ex.1004, 1:8-10, 7:6-8; Ex.1003, ¶¶174-175.

Pet. 58–59.

Patent Owner does not dispute Petitioner’s showing as to the additional limitation in claim 6. *See generally* PO Resp.

We find that Petitioner shows by a preponderance of evidence that Frerichs teaches the additional limitation recited in claim 6 and conclude that claim 6 is unpatentable as obvious.

vi. Claim 7

Claim 7 recites:

The method of claim 1, further comprising employing the cellular device to receive a stream for the at least one determined advertisement.

Ex. 1001, 13:4–6.

The Petition states:

Frerichs teaches that “a specific advertisement can be sent to a specific client, where the **advertisement is carried by the streaming media.**” Ex.1004, 4:54-56. Frerichs also teaches that “information such as advertisements can be inserted into the streaming audio.” *Id.*, 4:44-46. Thus, Frerichs’ cellular phone receives “*a stream for the at least one determined advertisement.*” Ex.1003, ¶177.

To the extent this is not considered an explicit teaching of a cellular phone receiving a “*stream for the at least one determined advertisement,*” Kauffman discloses that its first cache, at the client device, is “used to store an incoming specific advertisement file, **designated as stream A**, from advertisement content server 60” and thus teaches that the advertisement is received as a “stream.” Ex.1006, ¶24, *see also* ¶20 (“advertisement file...available as a stream from the advertisement server”); Ex.1003, ¶178.

Pet. 59–60.

Patent Owner reiterates arguments that it made in relation to claim 1 in arguing claim 7. PO Resp. 59 (“Dependent claim 7 requires that the cellular device of independent claim 1 receives a stream for ‘the at least one determined advertisement,’ *i.e.*, the ad that is played on the cellular device of claim 1 while the cellular device pauses and records other streaming content.”). In doing so, Patent Owner argues “Frerichs does not cache as required by the limitations” in claim 1. *Id.* However, Patent Owner acknowledges that Petitioner cites passages in Frerichs that “refer to a single stream that already includes an ad (EX 1004, 4:54-56), or that has an ad inserted into it without the use of caching (EX 1004, 4:44-46).” *Id.* at 60 (citing Pet. 59).

Patent Owner also acknowledges that “Petitioner . . . cites Kauffman for the notion of caching a streamed ad.” PO Resp. 60 (citing Pet. 59–60).

Patent Owner reasserts its argument made in relation to claim 1 that, in Kauffman, the devices that display the content (the TV and the computer terminal) are the “playing” devices and these devices “playing” the content are not the devices “recording” or caching the content. The Response states: “[I]n Kauffman, all caching is handled upstream of the device that plays content. Content is played on a device that simply displays whatever is in the single stream it receives, including any ad that happens to be in that single stream, without caching a second streaming ad as claim 7 requires.” *Id.* at 63.

As shown above in discussing claim 1, we have already considered and rejected these Patent Owner arguments. Attacking the references individually for not including teachings that, in the asserted combination, are provided by another reference is not an effective way to distinguish the claimed invention.

We find that Petitioner shows by a preponderance of evidence that Frerichs and Kauffman teach the additional limitation recited in claim 7 and conclude that claim 7 is unpatentable as obvious.

III. CONCLUSION¹⁹

Petitioner has demonstrated by a preponderance of the evidence that claims 1–7 and 9–14 of the '414 patent are unpatentable. A summary of our conclusions is set forth in the table below.

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–7 and 9–14	103	Frerichs, Kawasaki, Kauffman	1–7 and 9–14	
Overall Outcome			1–7 and 9–14	

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1–7 and 9–14 of U.S. Patent No. 7,376,414 B2 are held to be unpatentable; and

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

¹⁹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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