

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC. and INSTAGRAM LLC,
Petitioner,

v.

SKKY, LLC,
Patent Owner.

Case IPR2017-00089
Patent 9,118,693 B2

Before JUSTIN T. ARBES, CARL M. DeFRANCO, and
ROBERT J. WEINSCHENK, *Administrative Patent Judges*.

ARBES, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a)

I. BACKGROUND

Facebook, Inc. and Instagram LLC (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–6 of U.S. Patent No. 9,118,693 B2 (Ex. 1001, “the ’693 patent”) pursuant to 35 U.S.C. § 311(a). On April 26, 2017, we instituted an *inter partes* review of claims 1–6. Paper 7 (“Dec. on Inst.”). Patent Owner Skky, LLC subsequently filed a Patent Owner Response (Paper 17, “PO Resp.”) and Petitioner filed a Reply (Paper 18, “Reply”). Petitioner also filed a Motion to Exclude (Paper 22, “Mot.”) certain evidence submitted by Patent Owner, to which Patent Owner filed an Opposition (Paper 23) and Petitioner filed a Reply (Paper 25). A combined oral hearing with Cases IPR2017-00088, IPR2017-00092, and IPR2017-00097 was held on January 11, 2018, and a transcript of the hearing is included in the record (Paper 26, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–6 are unpatentable.

A. The ’693 Patent¹

The ’693 patent discloses a “method of delivering an audio and/or visual media file . . . over the air wirelessly, from one or more servers to an electronic device,” such as a cell phone. Ex. 1001, Abstract. The electronic

¹ The petition in Case IPR2017-00690, involving the same parties and same patent, was denied. IPR2017-00690, Paper 11. Cases IPR2017-00088, IPR2017-00092, IPR2017-00097, IPR2017-00550, IPR2017-00602, IPR2017-00685, and IPR2017-00687 involve the same parties and related patents. See Pet. 1; Paper 4.

device can receive the file, in “compressed format,” and “playback said audio and/or visual content on demand by a user.” *Id.* The ’693 patent describes using an orthogonal frequency division multiplexing (OFDM) modulation scheme for transmitting the file. *Id.* at col. 16, l. 35–col. 17, l. 59, Fig. 5. The cell phone may include a digital signal processor (DSP), which “executes the device firmware, provides control for all other blocks and performs . . . computational tasks,” such as “reception of information from the computer through the computer digital interface, . . . reception of packed sound clips through the phone analogue or digital interface, [and] unpacking and then playing back sound clips through a built-in speaker.” *Id.* at col. 14, l. 53–col. 15, l. 3.

B. Illustrative Claim

Claim 1 of the ’693 patent recites:

1. A method of wirelessly delivering a compressed digital audio or audio-visual data file to a cell phone, the method comprising:

providing a website;

wherein the website provides a plurality of the compressed digital audio or audio-visual data files;

receiving a request from the cell phone for the compressed digital audio or audio-visual data file associated with the website, said cell phone including a receiver and digital signal processor configured for receiving and processing files transmitted by orthogonal frequency-division multiplex modulation; and

providing for the streaming of the requested compressed digital audio or audio-visual data file to the cell phone by orthogonal frequency-division multiplex modulation based on the received request.

C. Prior Art

The pending ground of unpatentability in the instant *inter partes* review is based on the following prior art:

U.S. Patent No. 5,726,978, issued Mar. 10, 1998 (Ex. 1006, “Frodigh”);

U.S. Patent No. 7,065,342 B1, filed Nov. 22, 2000, issued June 20, 2006 (Ex. 1003, “Rolf”);

Ben Forta et al., WAP DEVELOPMENT WITH WML AND WMLSCRIPT: THE AUTHORITATIVE SOLUTION (Matt Purcell et al. eds., 2000) (Ex. 1004, “Forta”); and

Alan Gatherer et al., *DSP-Based Architectures for Mobile Communications: Past, Present and Future*, 38:1 IEEE COMMUNICATIONS MAGAZINE 84–90 (Jan. 2000) (Ex. 1005, “Gatherer”).²

D. Pending Ground of Unpatentability

In the instant *inter partes* review, Petitioner challenges claims 1–6 as unpatentable over Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a).³

² When citing Forta and Gatherer, we refer to the original page numbers of the references.

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the challenged claims of the ’693 patent have an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

II. ANALYSIS

A. Claim Interpretation

The Board interprets claims in an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997); see *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382–83 (Fed. Cir. 2017) (“[The] broadest reasonable interpretation . . . is an interpretation that corresponds with what and how the inventor describes his invention in the specification.”). “Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.” *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016). Our interpretation “‘cannot be divorced from the specification and the record evidence,’ and ‘must be consistent with the one that those skilled in the art would reach.’ A construction that is ‘unreasonably broad’ and which does not ‘reasonably reflect the plain language and disclosure’ will not pass muster.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (citations omitted), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017).

The parties did not propose interpretations of any claim terms in their Petition and Preliminary Response (Paper 6), and we preliminarily

determined in the Decision on Institution, based on the record at the time, that no claim terms required interpretation. Dec. on Inst. 4–5.

In their papers during trial, the parties dispute the interpretation of “processing” in independent claims 1, 3, and 5. Patent Owner argues that the term “processing” means “preparing a digital audio and/or visual file for storage in memory and playback.” PO Resp. 12. According to Patent Owner, when “properly construed, processing does not include playing [a] file.” *Id.* at 30. Patent Owner argues that its proposed interpretation is supported by the Specification of the ’693 patent and certain extrinsic evidence. *Id.* at 12–13 (citing Ex. 1001, col. 18, ll. 44–49; Ex. 2001, 16, 46, 50, 68). Petitioner contends that Patent Owner’s proposed interpretation improperly limits the challenged claims based on a single passage in the Specification of the ’693 patent. Reply 13–14 (citing Ex. 1001, col. 18, ll. 43–49, col. 14, l. 58–col. 15, l. 3).

The portion of the ’693 patent cited by Patent Owner states that “[t]he sounds . . . are processed by the DSP (digital signal processor-‘demodulated’) 300 to the same digital data form initially stored on the database 212 (e.g., in MPEG audio format),” and, “[i]n this form, the sound clip data are written into the flash memory 302 of the device 204.” Ex. 1001, col. 18, ll. 43–49. This portion of the ’693 patent indicates that the term “processing” includes preparing a digital audio file for storage in memory. *Id.* The ’693 patent also states:

The processor 300 executes the device firmware, provides control for all other blocks and performs the computational tasks for the board 203. The tasks performed by the processor 300 include control of the board’s units, monitoring of keys pressed by the user and processing of key-press events, reception of information from the computer through the computer digital

interface, reception of caller ID information through the phone digital interface, reception of packed sound clips through the phone analogue or digital interface, unpacking and then playing back sound clips through a built-in speaker connected to the analogue interface of the accessory unit 204, support of a voice menu-driven user interface, and performance of other auxiliary functions.

Id. at col. 14, l. 58–col. 15, l. 3; *see also id.* at col. 14, ll. 26–32 (“a chip performing the same functions of the board may instead be embedded in the phone itself”). This portion of the ’693 patent indicates that the term “processing” also includes other functions, such as functions directed to playback of the file. *See id.*

Accordingly, applying the broadest reasonable interpretation of the claims in light of the Specification, and taking into account the parties’ arguments made during trial, we interpret the term “processing” to include preparing a digital audio and/or visual file for storage in memory and playback. We note that the term “processing” may include other functions. However, as discussed below, the asserted prior art teaches preparing a digital audio and/or visual file for storage in memory and playback. *See infra* Section II.E.5. Therefore, we determine that further interpretation of the term “processing” is not necessary to resolve the parties’ disputes regarding the asserted ground of unpatentability in this case. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

B. Constitutionality of Inter Partes Review

As an initial matter, Patent Owner argues that we should “vacate the institution decision” because this *inter partes* review proceeding is unconstitutional. PO Resp. 2–8. The Supreme Court of the United States held in *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*, -- S. Ct. --, 2018 WL 1914662, at *12 (Apr. 24, 2018), that “inter partes review does not violate Article III or the Seventh Amendment” of the Constitution.

C. Principles of Law

To prevail in challenging claims 1–6 of the ’693 patent, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is unpatentable for obviousness if, to one of ordinary skill in the pertinent art, “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). The question of obviousness is resolved on the basis of underlying factual determinations, including “the scope and content of the prior art”; “differences between the prior art and the claims at issue”; and “the level of ordinary skill in the pertinent art.”⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*,

⁴ Additionally, secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light

550 U.S. at 418. An obviousness determination requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’”

Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd., 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (citation omitted); *see KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”).

A motivation to combine the teachings of two references can be “found explicitly or implicitly in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (citation omitted). Further, an assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *In re Nuvasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (a finding of a motivation to combine “must be supported by a ‘reasoned explanation’” (citation omitted)).

to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18. Patent Owner, however, has not presented any such evidence.

D. Level of Ordinary Skill in the Art

Citing the testimony of its declarant, Tal Lavian, Ph.D., Petitioner argues that a person of ordinary skill in the art at the time of the '693 patent would have had “at least a bachelor’s degree in computer science, computer engineering, or electrical engineering (or equivalent degree or experience) with at least four years of experience with wireless communications systems and at least two years of experience with the communication of digital media.” Pet. 10 n.2 (citing Ex. 1002 ¶¶ 15–16). Patent Owner does not provide its own definition of the level of ordinary skill in the art or dispute Dr. Lavian’s definition. Based on the record developed during trial, including our review of the '693 patent and the types of problems and solutions described in the '693 patent and cited prior art, we agree with Dr. Lavian’s assessment of the level of ordinary skill in the art and apply it for purposes of this Decision.

*E. Obviousness Ground Based on Rolf, Forta, Gatherer, and Frodigh
(Claims 1–6)*

1. Rolf

Rolf discloses a “mobile cellular telephone . . . used to select a music recording from a remote source, such as [an] online music recording storage facility, and wirelessly receive the selected music recording.” Ex. 1003, Abstract. “The received music recording is stored in a memory of the cellular telephone where it is available for playback with an audio player in the cellular telephone.” *Id.* Rolf discloses wireless communications device 12 (e.g., a cell phone), which communicates with remote storage facility 14 over a communications network. *Id.* at col. 5, ll. 18–32. Wireless

communications device 12 includes processor 20, memory 26, and transceiver 40. *Id.* at col. 7, ll. 49–67, Fig. 4. Remote storage facility 14 “may, for example, be at an address on the world wide web, and includes a data base having a plurality of music recordings therein” that are categorized by user-selectable fields. *Id.* at col. 5, ll. 32–39. Rolf further discloses that “a music recording stored in central facility 14 . . . may be streamed to the wireless device 12 via an established communications link.” *Id.* at col. 6, ll. 23–26. “[D]ata packets are streamed through a buffer for play by a player each of which are in a memory 26, . . . such that, as one data packet is played within the buffer, and then exits the buffer, an additional data packet is streamed into the buffer.” *Id.* at col. 6, ll. 26–30.

2. Forta

Forta discloses the use of Wireless Application Protocol (WAP), “a communications protocol (based on HTTP [Hypertext Transfer Protocol]) designed specifically for wireless communication” that is “the transport used to communicate between devices (phones initially, but other devices eventually) and servers.” Ex. 1004, 1. “WAP does for wireless devices what HTTP does for Web browsers—it allows them to become clients in an Internet-based client/server world.” *Id.* at 10. Forta provides a number of examples of WAP being used to provide data to cell phone users, such as Amazon.com providing a menu of “Books,” “Music,” and “DVD & Video.” *Id.* at 315–317, Fig. 13.3.

3. *Gatherer*

Gatherer discloses that, by January 2000, “[p]rogrammable DSPs [were] pervasive in the wireless handset market for digital cellular telephony.” Ex. 1005, 84. Gatherer describes various advantages of programmable DSPs over other technologies of the time, such as “hard-wired application-specific integrated circuit (ASIC) techniques.” *Id.* at 84–85.

4. *Frodigh*

Frodigh describes a “method and system of adaptive channel allocation in a frequency division multiplexed system.” Ex. 1006, Abstract. Frodigh discloses that OFDM “is a particular method of FDM [frequency division multiplexing] that is particularly suited for cellular systems,” describes how OFDM works, and discloses various advantages of using OFDM in cellular systems. *Id.* at col. 1, l. 61–col. 2, l. 60.

5. *Claim 1*

a. Whether Rolf, Forta, Gatherer, and Frodigh Collectively Teach All of the Limitations of Claim 1

Petitioner explains in detail how Rolf, Forta, Gatherer, and Frodigh⁵ collectively teach every limitation of claim 1, relying on the testimony of Dr. Lavian as support. *See* Pet. 14–39; Ex. 1002 ¶¶ 65–113. Petitioner relies on Rolf for the majority of the limitations of claim 1, and relies on Forta, Gatherer, and Frodigh for certain limitations.

⁵ Patent Owner in its Response does not dispute that Rolf, Forta, Gatherer, and Frodigh are prior art under 35 U.S.C. § 102. *See* Pet. 4–10.

Claim 1 recites “[a] method of wirelessly delivering a compressed digital audio or audio-visual data file to a cell phone.” Rolf teaches wirelessly delivering music recording files that are encoded by a compression algorithm to a cell phone. *See* Pet. 14–15; Ex. 1003, col. 1, ll. 25–38, col. 5, ll. 21–24, 46–53. Patent Owner does not dispute that the combination of Rolf, Forta, Gatherer, and Frodigh teaches the preamble of claim 1.

Claim 1 further recites “providing a website” that “provides a plurality of the compressed digital audio or audio-visual data files.” Rolf teaches a remote storage facility with a database of compressed music recording files that “has a uniform resource locator (URL) on a global communications network (such as the world-wide web).” *See* Pet. 15–17, 21; Ex. 1003, col. 5, ll. 30–39, col. 9, ll. 4–6, col. 12, ll. 51–55. Rolf also teaches that a user can retrieve a compressed music recording file from the database to a wireless device, such as a cell phone, over the Internet. *See* Pet. 15–17, 21; Ex. 1003, col. 3, ll. 17–21, col. 5, ll. 30–39, 49–53.

Because “Rolf does not disclose specific details about the website provided by [the] facility,” however, Petitioner relies on Forta as teaching “providing a website.” Pet. 17–19, 22–23. Forta teaches WAP, which allows a cell phone to access information provided by a website. *See id.*; Ex. 1004, 10 (“WAP does for wireless devices what HTTP does for Web browsers—it allows them to become clients in an Internet-based client/server world.”), 316 (“This is the Amazon.com site that is written explicitly for phones with a WAP browser in them.” (emphasis omitted)), Fig. 13.3 (“Music”). In Petitioner’s asserted combination, Rolf’s cell phone

uses WAP, as taught by Forta, to access a compressed music recording file provided by a website. *See* Pet. 19, 23; Ex. 1002 ¶¶ 75, 82.

Patent Owner responds that Forta “does not disclose a website as contemplated by the [’693] patent” because it only teaches “simplified, menu based representations of a website viewable on cellular phones,” which “are not the same as a website viewed on a conventional computer.” PO Resp. 24–25 (citing Ex. 1004, 99–100). Further, according to Patent Owner, Forta’s WAP limits the amount of information that can be delivered to, and displayed on, the cell phone at one time. *Id.* (citing Ex. 1004, 107–108). We disagree. Claim 1 only recites “providing a website” that provides the recited files. Similarly, the Specification of the ’693 patent explains that “a website suitable for viewing and selecting . . . sound and/or image clips or entire files may be used.” Ex. 1001, col. 3, ll. 36–41. Neither the claim language nor the Specification requires that the recited website be displayed in the same manner as a website on a conventional computer, or that the recited website provide a certain amount of information. We are persuaded that the combination of Rolf and Forta teaches the “providing a website” step of claim 1.

Claim 1 further recites “receiving a request from the cell phone for the compressed digital audio or audio-visual data file associated with the website, said cell phone including a receiver and digital signal processor configured for receiving and processing files transmitted by orthogonal frequency-division multiplex modulation.” Rolf teaches requesting a music recording file from a database at a remote storage facility using a cell phone. *See* Pet. 24; Ex. 1003, col. 1, ll. 39–41, col. 5, ll. 49–53, col. 9, ll. 10–15. Rolf also teaches that the cell phone includes a receiver and processor

configured for receiving and playing music recording files. *See* Pet. 24–26; Ex. 1002 ¶¶ 84, 86; Ex. 1003, col. 1, ll. 17–21, 28–35, col. 5, ll. 18–21, 46–53, col. 6, ll. 20–26, col. 7, ll. 53–55, col. 10, ll. 43–47, Figs. 1, 4.

Further, Gatherer teaches a cell phone that includes a digital signal processor configured for receiving and processing files. *See* Pet. 26–27; Ex. 1002 ¶ 89; Ex. 1005, 84 (“Programmable digital signal processors (DSPs) are pervasive in the wireless handset market for digital cellular telephony.”), Fig. 1 (showing that “DSP functions” include a Global System for Mobile Communications (“GSM”) vocoder, a channel codec, interleaving/deinterleaving, ciphering/deciphering, burst formatting, a demodulator, and an equalizer). Frodigh teaches using OFDM to transmit data to and from a cell phone. *See* Pet. 29–30; Ex. 1002 ¶ 96; Ex. 1006, col. 1, l. 59–col. 2, l. 18, col. 7, l. 51–col. 8, l. 9. In Petitioner’s asserted combination, Rolf’s cell phone includes Gatherer’s digital signal processor to receive and process compressed music recording files, *see* Pet. 27; Ex. 1002 ¶ 90, transmitted from a remote storage facility using Frodigh’s OFDM, *see* Pet. 30; Ex. 1002 ¶ 97.

Patent Owner argues that Rolf does not teach a cell phone including a digital signal processor. PO Resp. 27–28 (citing Pet. 20, 26; Ex. 1002 ¶ 88). We disagree with Patent Owner’s argument because it addresses Rolf individually, not the combination of Rolf, Gatherer, and Frodigh proposed by Petitioner. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.”). As discussed above, Rolf teaches a cell phone with a processor and Gatherer teaches, more specifically, a cell phone with a processor that is a digital

signal processor configured for receiving and processing files. *See* Pet. 26–27; Ex. 1002 ¶¶ 89–94; Ex. 1005, 84, Fig. 1.

Patent Owner argues that the combination of Rolf, Gatherer, and Frodigh also does not teach a cell phone including a digital signal processor. PO Resp. 28–29. Specifically, Patent Owner contends that “Gatherer does not explain the relationship between a digital signal processor and the remaining parts of the cell phone, or how a digital signal processor would be integrated into the device disclosed by Rolf.” *Id.* at 28. We disagree.

Figure 1 of Gatherer is a functional block diagram of a cell phone that shows the relationship between the digital signal processor and the other components of the cell phone, and, thus, demonstrates how the digital signal processor would have been integrated into Rolf’s cell phone. *See* Reply 9–10; Ex. 1005, Fig. 1. Petitioner also provides sufficient reasoning as to why a person of ordinary skill in the art would have been motivated to do so. *See infra* Section II.E.5.b.

Patent Owner argues that Rolf does not teach a receiver and digital signal processor configured for receiving and processing files. PO Resp. 30–32. In particular, Patent Owner contends that “Petitioner[] rel[ies] only on Rolf’s ability to ‘play’ the music files it receives,” but when “properly construed, processing does not include playing the file.” *Id.* at 30. The combination of Rolf, Gatherer, and Frodigh asserted by Petitioner, however, teaches a receiver and digital signal processor configured for receiving and processing files. Specifically, Gatherer teaches a digital signal processor configured for receiving and processing files, *see* Pet. 24–27; Ex. 1002 ¶¶ 86, 88–94; Ex. 1005, 84, Fig. 1, and Frodigh teaches a receiver configured for receiving and processing files transmitted by OFDM, *see*

Pet. 29–30; Ex. 1002 ¶¶ 96–97; Ex. 1006, col. 7, l. 51–col. 8, l. 9, col. 8, ll. 33–63, Fig. 3C). Patent Owner does not dispute in its Response that Gatherer and Frodigh teach a receiver and digital signal processor configured for receiving and processing files. See PO Resp. 30–32; Tr. 37:11–16, 38:3–16.

Further, the portion of the '693 patent cited by Patent Owner in support of its proposed interpretation of the term “processing” indicates that a digital signal processor prepares a digital audio file for storage in memory and playback by performing demodulation. Ex. 1001, col. 18, ll. 43–49 (“[t]he sounds . . . are processed by the DSP (digital signal processor-‘demodulated’) 300 to the same digital data form initially stored on the database 212”). In that regard, Gatherer teaches a digital signal processor that includes a demodulator. Ex. 1005, Fig. 1. Similarly, Frodigh teaches a receiver that includes a demodulator. Ex. 1006, col. 8, ll. 33–38. Thus, the combination of Rolf, Gatherer, and Frodigh teaches a receiver and digital signal processor configured for preparing a digital audio file transmitted by OFDM for storage in memory and playback. See Pet. 24–36.

Patent Owner argues that “Frodigh does not teach a system for requesting and transmitting audio or audio-visual data files.” PO Resp. 32–33. According to Patent Owner, “[i]nstead, Frodigh teaches a method and system for allocating channels in an OFDM system to reduce the amount of interference between channels.” *Id.* (citing Ex. 1006, col. 4, ll. 26–31, col. 6, ll. 30–33). We disagree with Patent Owner’s argument because it addresses Frodigh individually, not the combination of Rolf, Gatherer, and Frodigh proposed by Petitioner. See *Keller*, 642 F.2d at 426. As discussed above, Rolf teaches requesting a music recording file from a

database in a remote storage facility using a cell phone, *see* Pet. 21, 24; Ex. 1003, col. 1, ll. 39–41, col. 5, ll. 49–53, col. 9, ll. 10–15, and Frodigh teaches using OFDM to transmit data to and from a cell phone, *see* Pet. 29–30; Ex. 1006, col. 1, l. 59–col. 2, l. 18, col. 7, l. 51–col. 8, l. 9. We are persuaded that the combination of Rolf, Gatherer, and Frodigh teaches the “receiving a request” step of claim 1.

Claim 1 further recites “providing for the streaming of the requested compressed digital audio or audio-visual data file to the cell phone by orthogonal frequency-division multiplex modulation based on the received request.” Rolf teaches streaming a compressed music recording file from a database to a cell phone using a cellular data channel based on a user’s request. *See* Pet. 38–39; Ex. 1003, col. 1, ll. 17–21, 25–28, 35–38, col. 3, ll. 17–21, col. 5, ll. 37–39, 46–53, col. 6, ll. 20–30, col. 8, l. 63–col. 9, l. 3. Frodigh teaches using OFDM to transmit data to and from a cell phone. *See* Pet. 29–30; Ex. 1006, col. 1, l. 59–col. 2, l. 18, col. 7, l. 51–col. 8, l. 9, col. 8, ll. 30–32. In Petitioner’s asserted combination, Rolf’s cell phone receives a compressed music recording file that is transmitted using Frodigh’s OFDM. *See* Pet. 29–30, 38–39; Ex. 1002 ¶¶ 97, 112–113. Patent Owner again argues that the references collectively do not teach transmission by OFDM. PO Resp. 35. We disagree for the reasons explained above, and are persuaded that the combination of Rolf and Frodigh teaches the “providing for the streaming” step of claim 1.

We are persuaded, and we find, that Rolf, Forta, Gatherer, and Frodigh collectively teach every limitation of claim 1.

b. Whether a Person of Ordinary Skill in the Art Would Have Been Motivated to Combine Rolf, Forta, Gatherer, and Frodigh, and Would Have Had a Reasonable Expectation of Success in Doing So

Petitioner explains in its Petition why a person of ordinary skill in the art would have been motivated to modify Rolf's system, based on the disclosures of Forta, Gatherer, and Frodigh, in each of the three respects explained above, with supporting testimony from Dr. Lavian. *See supra* Section II.E.5.a; Pet. 19–21, 23, 27–32, 39; Ex. 1002 ¶¶ 75–78, 82–83, 90–94, 97–111, 113. As explained herein, we agree with and adopt Petitioner's reasoning.

First, with respect to the step of “providing a website” that “provides a plurality of . . . compressed digital audio or audio-visual data files,” Petitioner argues that a person of ordinary skill in the art would have had reason to combine Forta's teachings regarding the use of WAP to access websites from a cell phone with the teachings of Rolf, such that the remote storage facility in Rolf would provide a website using WAP. Pet. 19–21, 23. Petitioner contends that Rolf and Forta both relate to “wireless communication and computing” and “recognize that cell phones can be used as instruments of e-commerce.” *Id.* at 20–21 (citing Ex. 1002 ¶ 78; Ex. 1003, col. 6, l. 53–col. 7, l. 23, col. 14, ll. 35–53; Ex. 1004, 462). According to Petitioner and Dr. Lavian, “the advantages of using a widely adopted and standard technology such as WAP, including its interoperability with devices by multiple vendors and its suitability for mobile devices,” would have motivated a person of ordinary skill in the art to use the protocol in the system of Rolf. *Id.* at 19–20 (citing Ex. 1002 ¶¶ 75–77). These motivations are supported by specific statements in Forta itself. *See id.* (citing Ex. 1004, 1 (disclosing that “WAP will succeed because it is being

supported by almost every major hardware, software, device, data carrier, and telecom vendor”), 20 (Wireless Markup Language (WML), a markup language that implemented WAP, similar to Hypertext Markup Language (HTML) and HTTP, “was created to address the display, bandwidth, and memory limitations of mobile and wireless devices, such as cellular phones”)). Petitioner argues that combining the teachings of Rolf and Forta in the manner asserted would have been “a largely trivial combination” for a person of ordinary skill in the art, given the disclosures of both references. *Id.* at 19 (citing Ex. 1002 ¶ 76).

Patent Owner responds that Petitioner has not explained sufficiently why a person of ordinary skill in the art would have combined the cited teachings in Rolf and Forta because Forta only teaches “a simplified representation of a website for viewing by way of WAP” that does not list “compressed audio or audio-visual data files.” PO Resp. 25–26. Patent Owner cites the image of the Amazon.com website in Forta in particular, noting that although it includes a listing for “Music,” “[a]t the time, Amazon sold books, music, DVDs, and other items,” not “audio or visual files.” *Id.* at 26. According to Patent Owner, “[n]either Forta nor Rolf explains how to overcome these limitations and modify the simplified representation to function with the device disclosed in Rolf.” *Id.*

Patent Owner’s arguments are directed to a purported deficiency in Forta, and do not account for the specific combination being asserted by Petitioner. Petitioner relies on Rolf as teaching a plurality of compressed digital audio or audio-visual data files being provided to a cell phone, and relies on Forta as teaching a particular *mechanism* for doing so, i.e., providing a website using WAP. Pet. 15–23. Petitioner and Dr. Lavian

describe multiple advantages that would have motivated a person of ordinary skill in the art to modify Rolf in that respect. *Id.* Patent Owner does not respond specifically to those advantages, explain why they are in any way incorrect, or provide any declarant testimony to the contrary. As such, Dr. Lavian’s testimony on these points is unrebutted, and, more importantly, we find that it is consistent with the disclosures of Rolf and Forta, as explained above. *See Idemitsu Kosan Co., Ltd. v. SFC Co. Ltd.*, 870 F.3d 1376, 1381 (Fed. Cir. 2017) (“[The petitioner] bears the ultimate burden of establishing unpatentability, but it is not required as a matter of law to rebut mere attorney argument with expert testimony in order to satisfy that burden.” (emphases omitted)).

Further, we disagree that a person of ordinary skill in the art would not have made the combination simply because Forta presents a “simplified” representation of a website. PO Resp. 25–26. Claim 1 merely recites a “website” and that the website “provides” a plurality of compressed digital audio or audio-visual data files, without any requirement as to the complexity of the website or the way in which the files are provided. Rolf teaches selecting and providing such files generally, and Forta teaches providing a website via WAP that presents a menu of options from which the user may select. *See* Pet. 16–19, 22–24; Ex. 1003, col. 9, ll. 10–15 (“the wireless communications device 12 can be utilized to select [a] recording via a menu or listing of recordings”), col. 5, ll. 49–53 (the selection is made “using a keypad and input on the wireless communications device”); Ex. 1004, 316–17. Listing at least two files on such a website, based on the teachings of Rolf and Forta, meets the language of the claim.

Second, with respect to the limitation of “said cell phone including a receiver and digital signal processor configured for receiving and processing files,” Petitioner argues that a person of ordinary skill in the art would have had reason to combine Gatherer’s teachings regarding digital signal processors with the teachings of Rolf, such that Rolf’s cell phone would operate using a digital signal processor. Pet. 27–29. Petitioner contends that Rolf and Gatherer both relate to features of cell phones. *Id.* at 27 (citing Ex. 1002 ¶ 90; Ex. 1005, 89). According to Petitioner and Dr. Lavian, “the advantages offered by DSPs in terms of flexibility and processing power would have motivated a person of ordinary skill in the art to implement the cell phone in Rolf using a digital signal processor.” *Id.* at 28 (citing Ex. 1002 ¶¶ 91–94). Again, the asserted motivations are supported by specific statements in the reference itself, i.e., Gatherer. *See id.* at 27–28 (citing Ex. 1005, 84 (disclosing that “[f]lexibility [was] becoming more of an issue, and therefore the programmability offered by DSPs [was] even more desirable,” given the applications used by new wireless personal assistants of the time), 85 (disclosing that “programmable DSPs [were] essential to provide a cost-effective, flexible upgrade path for the variety of evolving standards”)). Petitioner also points to the “widespread availability of off-the-shelf DSPs” as a reason why an ordinarily skilled artisan would have used one in the cell phone of Rolf. *Id.* at 26, 28–29 (citing Ex. 1002 ¶ 94; Ex. 1005, 84, 86); *see KSR*, 550 U.S. at 418 (to determine whether there would have been a reason to combine teachings, it is often necessary to look to “the effects of demands known to the design community or present in the marketplace”).

Patent Owner argues that a person of ordinary skill in the art would not have combined Rolf and Gatherer, with a reasonable expectation of success, because Rolf relates to a third generation (“3G”) network and Gatherer teaches a GSM, or second generation, system. PO Resp. 29–30. According to Patent Owner, Gatherer indicates that “the application of GSM principles to 3G technology [was] ‘debatable’ and [was] based on the assumption that 3G products will evolve similarly to GSM products,” such that “a person of ordinary skill, armed with the knowledge of Gatherer,” would not have been motivated to apply GSM teachings to a 3G system, “knowing that the technologies could evolve in very different ways.” *Id.* at 29 (citing Ex. 1005, 4).

We disagree. Although Rolf states that encoded music data is “preferably transmitted” by a 3G network, Rolf is not limited to a 3G network. Ex. 1003, col. 3, ll. 21–25 (“the encoded music and/or informational data is *preferably* transmitted via a packet switch network, . . . *such as* by a next- or third-generation wireless communications network” (emphases added)). Rolf “must be considered for everything that it teaches, not simply the . . . preferred embodiment” that operates in a 3G network. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012). Regardless, though, Gatherer teaches the use of digital signal processors in both GSM and 3G networks, as Petitioner correctly points out. *See* Reply 7–8 (citing Ex. 1005, 84–87, 89). Thus, we are persuaded that Gatherer’s stated advantages of digital signal processors would have motivated a person of ordinary skill in the art to use one in the cell phone of Rolf, regardless of which type of network Rolf used (i.e., GSM or 3G).

Patent Owner also argues that Petitioner has not provided sufficient evidence for the asserted combination because “Gatherer does not explain the relationship between a digital signal processor and the remaining parts of the cell phone, or how a digital signal processor would be integrated into the device disclosed by Rolf.” PO Resp. 28. As discussed above, Gatherer explains the various functions performed by digital signal processors in cell phones, and includes a functional block diagram (Figure 1) depicting the relationship between a digital signal processor and the other parts of a cell phone. *See supra* Section II.E.5.a; Ex. 1005, 84–85. Dr. Lavian also testifies that digital signal processors were widely available off-the-shelf components at the time, with functionality known to a person of ordinary skill in the art. *See* Ex. 1002 ¶¶ 28–30, 94.

Further, to the extent Patent Owner argues that Petitioner needed to explain specifically how Gatherer’s digital signal processor would be “integrated” into Rolf’s cell phone, *see* PO Resp. 28, the devices disclosed in the references need not be “physically combinable to render obvious” the method recited in claim 1. *See In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983). “It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements. . . . Rather, the test for obviousness is what the combined teachings of the references would have suggested to those having ordinary skill in the art.” *In re Mouttet*, 686 F.3d 1322, 1332–33 (Fed. Cir. 2012); *see also MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284, 1294 (Fed. Cir. 2015) (“[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference” (citation omitted)), *cert. denied*, 137 S. Ct. 292 (2016);

In re Etter, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (finding that “assertions that [one reference] cannot be incorporated in [another reference] are basically irrelevant, the criterion being not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole”).

Third, with respect to the limitations of “receiving and processing files transmitted by orthogonal frequency-division multiplex modulation” and “providing for the streaming of the requested compressed digital audio or audio-visual data file to the cell phone by orthogonal frequency-division multiplex modulation based on the received request,” Petitioner argues that a person of ordinary skill in the art would have had reason to combine Frodigh’s teaching of an OFDM cellular system with the teachings of Rolf, such that Rolf’s remote storage facility would stream music recordings via OFDM and Rolf’s cell phone (using a digital signal processor, as explained above) would process the files transmitted in that manner. Pet. 29–39 (citing Ex. 1006, col. 1, l. 59–col. 2, l. 18, col. 7, ll. 51–63, col. 8, ll. 10–14, 33–63). According to Petitioner and Dr. Lavian, the advantages of OFDM, such as efficiently using bandwidth and reducing interference, would have motivated a person of ordinary skill in the art “to use the OFDM modulation technique to transmit data files such as compressed music to cellular phones.” *Id.* at 30–32 (citing Ex. 1002 ¶¶ 97–99), 38–39. As with the previous two modifications, Petitioner’s cited motivations are supported by specific statements in the reference itself, i.e., Frodigh. *See id.* at 31–32 (citing Ex. 1006, col. 1, ll. 62–63 (stating that OFDM “is particularly suited for cellular systems”), col. 2, ll. 38–60 (disclosing that “OFDM offers several advantages that are desirable in a cellular system,” such as “efficient use of

the bandwidth available,” reduced “interference caused by multipath propagation effects,” and reduced “intersymbol interference”)).

Petitioner further explains that a known advantage to using digital signal processors was their “programmability” and the “growing number of functions” they could perform when used in cell phones, and a person of ordinary skill in the art would have understood that a digital signal processor would be “well-suited” for processing files transmitted by OFDM, as it could “efficiently implement the mathematical algorithms involved in the processing of OFDM signals as disclosed in Frodigh.” *Id.* at 35–37 (citing Ex. 1005, 84–86; Ex. 1006, col. 8, ll. 34–35; Ex. 1016, col. 3, ll. 38–41 (disclosing a “typical” OFDM receiver that has a digital signal processor), Fig. 3).

Patent Owner responds that it would not have been obvious to combine the cited teachings in Rolf and Frodigh because Rolf relates to a 3G network that uses Code Division Multiple Access (“CDMA”), not OFDM. PO Resp. 32–36. Patent Owner points out that the Special Mobile Group (“SMG”) of the European Telecommunications Standards Institute (“ETSI”) chose CDMA over OFDM for use in the 3G standard. *Id.* (citing Ex. 2003, 7, 23–25; Ex. 2004, 2, 4). According to Patent Owner, “[t]he group concluded that OFDM’s drawbacks kept it from final consideration,” and “OFDM did not receive a single vote to form the basis for 3G.” *Id.* at 34. Patent Owner contends that a person of ordinary skill in the art would have been aware of the SMG’s findings and would have made the same decision not to use OFDM. *Id.* at 35.

We disagree. As discussed above, although Rolf states that encoded music data is “preferably transmitted” by a 3G network, Rolf is not limited

to a 3G network. Ex. 1003, col. 3, ll. 21–25. Further, the evidence cited by Patent Owner regarding the SMG’s decision to use CDMA in the 3G standard indicates that there were advantages and drawbacks to both OFDM and CDMA. See Ex. 2004, 1–4. For example, OFDM was advantageous due to its “high flexibility in radio resource management,” “robustness of OFDM modulation in all environments,” and “maximal benefit from frequency hopping,” but had the drawbacks of “high constraints on power amplifier linearity,” “potential decrease of performance due to synchronisation impairments,” and “adjacent channel interference.” *Id.* at 1–2 (emphases omitted). The cited SMG document lists multiple advantages and drawbacks for CDMA and Time Division Multiple Access (TDMA) as well. *Id.* at 2–4.

“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). “Instead, the benefits, both lost and gained, should be weighed against one another.” *Id.* (quoting *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000)). Assessing all of the evidence presented, we are persuaded that a person of ordinary skill in the art would have been motivated to use OFDM in the system described in Rolf, as Petitioner contends. Frodigh lists numerous advantages of using OFDM, and Dr. Lavian explains in detail how OFDM was well-known for use in cellular systems at the time of the ’693 patent and had been in development for commercial use for over a decade beforehand, citing numerous contemporary documents in support of his opinions. See Ex. 1006, col. 1, ll. 61–63, col. 2, ll. 38–60; Ex. 1002 ¶¶ 35–40, 97–99. We credit

Dr. Lavian's testimony, as it is explained sufficiently, consistent with the cited references, and unrebutted by Patent Owner.

We also note that a similar conclusion was reached in a previous *inter partes* review, Case IPR2014-01236, where the petitioner asserted that a person of ordinary skill in the art would have been motivated to modify Rolf to use OFDM, and Patent Owner made similar arguments to those raised in this proceeding. See Reply 15–16 & n.4 (citing Exs. 1065–67); PO Resp. 33–36. The U.S. Court of Appeals for the Federal Circuit held that substantial evidence supported the Board's finding of a motivation to combine. *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1022 (Fed. Cir. 2017). Although the reference being combined with Rolf was different in Case IPR2014-01236, that reference and Frodigh both expressly indicate the desirability and advantages of OFDM. See *id.* (quoting the applied reference's statement that OFDM was “particularly attractive because it can be implemented simply and inexpensively by retrofitting existing [frequency modulation] communication systems”); Ex. 1006, col. 1, ll. 61–63, col. 2, ll. 38–60 (Frodigh stating that OFDM was “particularly suited” and “desirable” for cellular systems due to various advantages).

Having considered the parties' arguments and the evidence of record, Petitioner's assertions regarding motivation to combine are supported by the references themselves and the testimony of Dr. Lavian, and we find them persuasive. See Pet. 19–21, 23, 27–32, 39; Ex. 1002 ¶¶ 75–78, 82–83, 90–94, 97–111, 113. We also agree with Dr. Lavian that a person of ordinary skill in the art would have had a reasonable expectation of success in making the asserted combination, given the disclosures of the references

and the level of ordinary skill in the art set forth above. *See id.; supra* Section II.D.

We recognize that Petitioner’s asserted ground is based on the combination of four references. Claim 1, however, merely recites well-known technologies, and Petitioner has provided articulated reasoning with rational underpinnings as to why a person of ordinary skill in the art would have thought to use each one together in a combined system, with supporting testimony from Dr. Lavian. Each of the three additional references also readily complements what Rolf already discloses. For example, Rolf discloses a server having a URL on the World Wide Web that stores and provides music recordings to cell phones upon request, but does not describe specifically the *website* being provided to do so. *See* Ex. 1003, col. 5, ll. 30–39, col. 9, ll. 10–15, col. 12, ll. 51–55; Pet. 15–17. Forta shows, however, that WAP was a well-known protocol for providing such websites to cell phones. *See* Ex. 1004, 1, 10, 316–317; Pet. 17–23. Similarly, Rolf discloses a cell phone with a processor that performs various functions, including transmitting a request for a particular music recording, processing incoming data, and outputting information for display, but does not state specifically that the cell phone has a *digital signal processor*. *See* Ex. 1003, col. 10, ll. 43–47, col. 13, ll. 37–40; Pet. 24–26. Gatherer shows, however, that digital signal processors were “pervasive” in cell phones and used for performing basic phone functions. *See* Ex. 1005, 84–85; Pet. 26–29. Finally, Rolf discloses streaming music recordings as packets over a wireless communications network and processing of the received data by a cell phone, but does not disclose specifically the *modulation scheme* that is used. *See* Ex. 1003, col. 1, ll. 28–38, col. 5, ll. 46–53, col. 6, ll. 20–30;

Pet. 29, 38. Frodigh discloses, however, that OFDM was a well-known modulation scheme “particularly suited” to cellular systems of the type disclosed in Rolf. *See* Ex. 1006, col. 1, ll. 61–63; Pet. 29–32, 39.

c. Conclusion

For the reasons set forth by Petitioner and explained above, we are persuaded that Rolf, Forta, Gatherer, and Frodigh collectively teach all of the limitations of claim 1 and that a person of ordinary skill in the art would have had reason to combine those teachings to achieve the method of claim 1 and would have had a reasonable expectation of success in doing so. Petitioner has proven, by a preponderance of the evidence, that claim 1 would have been obvious based on Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a).

6. Claim 3

Independent claim 3 recites limitations similar to those of claim 1. Claim 3 recites the additional limitation of “providing for a selection of a stream of the compressed digital audio or audio-visual file based on information associated with the cell phone.” Petitioner argues that Rolf teaches providing a “menu or listing of recordings” to the user and allowing the user to select recordings “[u]sing an input of the cellular telephone.” Pet. 43–44 (quoting Ex. 1003, col. 1, ll. 39–41, col. 9, ll. 10–15; citing *id.* at col. 5, ll. 35–37, 49–53, 63–66) (emphasis omitted). Petitioner further explains that “[b]ecause the cell phone is used to make the selection, a person of ordinary skill in the art would have understood that the selection is

‘based on information associated with the cell phone.’” *Id.* at 44 (citing Ex. 1002 ¶ 120) (emphasis omitted).

Patent Owner argues that Petitioner’s arguments are conclusory and do not “explain the motivations of one of ordinary skill in the art.” PO Resp. 37–38. Patent Owner further contends that because the file that the user selects in Rolf is stored at the remote storage facility, “the selection is based on information associated with the database, not the cell phone.” *Id.* at 38 (citing Ex. 1003, col. 5, ll. 46–49). We disagree.⁶ Claim 3 does not preclude the selected file from being stored remotely from the cell phone. Indeed, the claim recites receiving a request from the cell phone for a compressed digital audio file or audio-visual file, providing for a selection of a stream of the file, and providing for the streaming of the file to the cell phone. Under Patent Owner’s view, however, a selection of a remotely-stored file to stream would be based on information associated with the remote location where the file is stored rather than the cell phone. We do not see why the mere fact that the file is stored remotely in Rolf means that the selection is not based on any information associated with the cell phone, as Patent Owner contends, when the cell phone is what is used to present the menu of choices, make the selection from the menu, and transmit the request to the remote storage facility.

As Petitioner and Dr. Lavian correctly point out, Rolf teaches a user pressing a keypad on the cell phone to select a particular music recording

⁶ We expressly encouraged the parties to address the interpretation of the phrase “based on information associated with the cell phone” during trial. Dec. on Inst. 16 n.5. Neither party provided a proposed interpretation, however, and Patent Owner repeated the same argument made in its Preliminary Response. *Compare* Paper 6, 26–27, *with* PO Resp. 37–38.

from a menu of such recordings, after which the remote storage facility retrieves the particular file to be streamed (based on the user's input) and streams the file to the user's cell phone. Ex. 1003, col. 1, ll. 39–41 (“Using an input of the cellular telephone, a user may select one or more recordings for transmission to the cellular telephone.”), col. 5, ll. 49–53 (“[U]sing a keypad and input on the wireless communications device, or by voice commands, one or more selected music recordings may be retrieved from the storage facility 14, for transmission, via wireless communications link, to the device 12.”), 63–66, col. 6, ll. 20–30, col. 9, ll. 10–15 (“[P]rocessor 50 invokes application software for providing a menu driven system to wireless communications device 12, such that the wireless communications device 12 can be utilized to select [a] recording via a menu or listing of recordings.”); see Pet. 24, 43–44; Ex. 1002 ¶¶ 84, 119–120. Doing so constitutes providing for a selection of a stream of a music recording “based on information associated with the cell phone” (i.e., based on data indicating what input on the cell phone keypad was pressed). Indeed, as Petitioner notes, Rolf's functionality is very similar to the exemplary embodiment described in the Specification of the '693 patent, where “the website serves as a usable guide for identifying various files according to . . . numerical codes to assist the user in downloading files using . . . keypad commands,” and the user “press[es] dial keys [on the cell phone] with letters corresponding to a *selection* in a given category which ultimately leads to the *selection* of a particular song” or uses “a screen display [on the cell phone showing] a text listing of the names of songs” to make a “final *selection*.” Ex. 1001, col. 10, l. 44–col. 11, l. 11 (emphases added); see Reply 21–22.

We also note that Patent Owner made a number of additional arguments at the oral hearing that we do not find persuasive. Patent Owner argued that claim 3 requires the “selection” to be determined and provided by the website, not the user operating the cell phone. Tr. 45:21–46:7. As Patent Owner acknowledged, however, the claim does not recite who or what provides for the selection. *Id.* at 46:8–16. Further, the portion of the Specification cited above describes a “selection” of a particular file to stream being made by the user (pressing a key on the cell phone), not the website. Ex. 1001, col. 10, l. 44–col. 11, l. 11; *see also id.* at col. 10, ll. 66–67 (“other methods allowing a user to *select* files from the holding unit are possible” (emphasis added)). Patent Owner also argued that the “selection” in claim 3 is, for example, a set of multiple songs that is chosen based on information stored on the user’s cell phone (e.g., the user’s phone number or “what songs you already have”). Tr. 45:8–20, 47:8–49:15. We disagree that the “selection” in claim 3 must be a set of multiple files. Claim 3 recites “providing for a selection of *a* stream of *the* compressed digital audio or audio-visual file” (emphases added), which is satisfied by at least one stream of at least one file. We also disagree that the claim is limited to particular information stored on the cell phone. Claim 3 recites that the selection is “based on information associated with the cell phone,” and does not further restrict the content or usage of the information beyond the fact that it is “associated with” the cell phone.

For reasons similar to those set forth regarding claim 1, and as further explained above with respect to the “providing for a selection” step, we are persuaded that Rolf, Forta, Gatherer, and Frodigh collectively teach all of the limitations of claim 3 and that a person of ordinary skill in the art would

have had reason to combine those teachings to achieve the method recited in claim 3 and would have had a reasonable expectation of success in doing so. Petitioner has proven, by a preponderance of the evidence, that claim 3 would have been obvious based on Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a).

7. Claim 5

Independent claim 5 also recites limitations similar to those of claim 1. Whereas claim 1 recites providing a website that “provides a plurality of the compressed digital audio or audio-visual data files,” claim 5 recites that the website “includes a representation of at least a portion of the compressed digital audio or audio-visual file for selection of the compressed digital audio or audio-visual file.” The remaining steps similarly recite a “compressed digital audio or audio-visual data file” (claim 1) or “compressed digital audio or audio-visual file” (claim 5). The parties argue claims 1 and 5 together, and Petitioner accounts for the different recitations in claim 5 in its analysis. *See* Pet. 45–47 (relying on Rolf’s “menu or listing of recordings”); PO Resp. 39. For reasons similar to those set forth above, we are persuaded that Rolf, Forta, Gatherer, and Frodigh collectively teach all of the limitations of claim 5 and that a person of ordinary skill in the art would have had reason to combine those teachings to achieve the method recited in claim 5 and would have had a reasonable expectation of success in doing so. Petitioner has proven, by a preponderance of the evidence, that claim 5 would have been obvious based on Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a).

8. Claims 2, 4, and 6

Claims 2, 4, and 6 depend from independent claims 1, 3, and 5, respectively. Claim 2 recites “storing at least a portion of the compressed digital audio or audio-video^[7] file on the cell phone.” Claims 4 and 6 recite similar “storing” steps. Petitioner explains sufficiently how the limitations of dependent claims 2, 4, and 6 are taught by the combination of Rolf, Forta, Gatherer, and Frodigh, with supporting testimony from Dr. Lavian. *See* Pet. 39–41, 44, 47; Ex. 1002 ¶¶ 114–116, 121–122, 127–128. Petitioner asserts that Rolf teaches streaming a music recording to the user’s cell phone as data packets, which are stored in a buffer in the cell phone’s memory. Pet. 39–41 (citing, *inter alia*, Ex. 1003, col. 6, ll. 20–30, Figs. 4, 7a). Therefore, “at least a portion” of the file is stored in memory on the cell phone. Patent Owner does not argue separately dependent claims 2, 4, and 6 in its Response, relying solely on its arguments regarding the corresponding independent claims. PO Resp. 37–39. We have reviewed Petitioner’s contentions and supporting evidence, including the testimony of Dr. Lavian, and are persuaded that Petitioner has proven, by a preponderance of the evidence, that dependent claims 2, 4, and 6 would have been obvious based on Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a), for the reasons stated by Petitioner.

⁷ We interpret “the compressed digital audio or audio-video file” in claim 2 to refer to “the requested compressed digital audio or audio-visual data file” of parent claim 1.

F. Petitioner's Motion to Exclude

The party moving to exclude evidence bears the burden of proof to establish that it is entitled to the relief requested—namely, that the material sought to be excluded is inadmissible under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.20(c), 42.62(a). Petitioner moves to exclude Exhibits 2003 and 2004 as allegedly inadmissible under Federal Rules of Evidence 901 and 902. Mot. 1–3. Petitioner's Motion is moot, as we do not rely on either exhibit in a manner adverse to Petitioner. Specifically, even considering Exhibits 2003 and 2004, we do not agree with Patent Owner's arguments that it would not have been obvious to combine the cited teachings in Rolf and Frodigh based on the SMG's choice of CDMA over OFDM, for the reasons explained above. *See* PO Resp. 32–35; *supra* Section II.E.5.b. Accordingly, Petitioner's Motion is dismissed as moot.

III. ORDER

Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–6 are unpatentable over Rolf, Forta, Gatherer, and Frodigh under 35 U.S.C. § 103(a).

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–6 of the '693 patent have been shown to be unpatentable; and

FURTHER ORDERED that Petitioner's Motion to Exclude (Paper 22) is *dismissed*.

This is a final decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2017-00089
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PETITIONER:

Heidi L. Keefe
Andrew C. Mace
Mark R. Weinstein
Yuan Liang
COOLEY LLP
hkeefe@cooley.com
amace@cooley.com

PATENT OWNER:

Ryan M. Schultz
Andrew J. Kabat
ROBINS KAPLAN LLP
rschultz@robinskaplan.com
akabat@robinskaplan.com