

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 IPR2017-00092
Patent 9,124,717 B2

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

DeFRANCO, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Skky, LLC is the owner of U.S. Patent No. 9,124,717 B2 (“the ’717 patent”). Facebook, Inc. and Instagram LLC (collectively “Facebook”) filed a Petition under 35 U.S.C. § 311(a), requesting *inter partes* review of claims 1–6 of the ’717 patent. Paper 1 (“Pet.”). In a preliminary proceeding, we instituted *inter partes* review of claims 1–6 pursuant to 35 U.S.C. § 314(a). Paper 7 (“Inst. Dec.”).

After institution, Skky filed a Patent Owner Response (Paper 17, “PO Resp.”), and Facebook followed with a Reply (Paper 18, “Pet. Reply”). Facebook also filed a Motion to Exclude certain of Skky’s exhibits (Paper 22, “Mot.”), to which Skky filed an Opposition (Paper 23) and Facebook filed a Reply (Paper 25). A combined oral hearing with Cases IPR2017-00088, IPR2017-00089, and IPR2017-00097 was held on January 11, 2018, and a transcript of the hearing is in the record (Paper 27, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6, and we issue this Final Written Decision pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Facebook has shown by a preponderance of the evidence that claims 1–6 of the ’717 patent are unpatentable.

II. BACKGROUND

A. Related Cases

The ’717 patent is the subject of an infringement action in *Skky, LLC v. Facebook, Inc.*, No. 16-cv-00094 (D. Minn.), filed January 15, 2016. Also related to this proceeding are three other *inter partes* review (“IPR”) proceedings involving the same parties and several related patents:

Case	Related U.S. Patent
IPR2017-00088	U.S. Patent No. 9,124,718 B2

Case	Related U.S. Patent
IPR2017-00089	U.S. Patent No. 9,118,693 B2
IPR2017-00097	U.S. Patent No. 8,892,465 B2

Pet. 1–2; Paper 4, 2.

Also noteworthy is an earlier proceeding, IPR2014-01236 (“the 1236 IPR”), which involved U.S. Patent No. 7,548,875 B2, a parent of the ’717 patent, and resulted in a final written decision holding certain claims unpatentable.¹ There are also IPR proceedings pending before the Board, but with a different panel, involving other related patents on which trial was instituted:

Case	Related U.S. Patent
IPR2017-00550	U.S. Patent No. 9,037,502 B2
IPR2017-00602	U.S. Patent No. 9,219,810 B2
IPR2017-00685	U.S. Patent No. 9,203,870 B2
IPR2017-00687	U.S. Patent No. 9,215,310 B2

Finally, the following covered business method (“CBM”) proceedings involving some of these patents, and yet another related patent, resulted in denials of review:

Case	Related U.S. Patent
CBM2016-00091	U.S. Patent No. 9,037,502 B2
CBM2017-00002	U.S. Patent No. 9,203,870 B2
CBM2017-00003	U.S. Patent No. 9,219,810 B2
CBM2017-00006	U.S. Patent No. 9,215,310 B2
CBM2017-00007	U.S. Patent No. 9,203,956 B2

¹ The Board’s final decision in the 1236 IPR was subsequently affirmed by the U.S. Court of Appeals for the Federal Circuit. *Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014 (Fed. Cir. 2017).

B. The '717 Patent

The '717 patent discloses a “method of delivering an audio and/or visual media file,” such as a song or movie, “over the air wirelessly, from one or more servers to an electronic device,” such as a cell phone. Ex. 1001, Abstract, 1:63–2:25. The audio and/or visual files are delivered to the cell phone in “compressed format” for “playback . . . on demand by a user.” *Id.*, Abstract. The compressed files are transmitted using orthogonal frequency division multiplexing (OFDM) modulation. *Id.* at 16:63–17:6. 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 14:53–15:3, Fig. 3.

C. The Challenged Claims

Of the six challenged claims, two are independent—claims 1 and 4. Claim 1 recites:

1. A method of wirelessly delivering at least one compressed digital audio and/or visual file to a cell phone over a cellular network, the method comprising:
 - providing a website to the cell phone;
 - wherein the website is associated with the at least one compressed digital audio and/or visual file, said compressed digital audio and/or visual files are stored on one or more servers;
 - wherein the website includes a plurality of visual images associated with at least one compressed digital audio and/or

visual file for selection of at least one compressed digital audio and/or visual file;

providing for the transmission of a representation of at least a portion of the compressed digital audio and/or visual files to the cell phone upon request, said cell phone having a digital signal processor and a receiver for receiving and processing compressed digital audio and/or visual files transmitted using orthogonal frequency division multiplex (OFDM) modulation;

receiving a request from the cell phone selecting the at least one compressed digital audio and/or visual file based on the visual image; and

providing for the streaming transmission of an encrypted copy of at least one compressed digital audio and/or visual file to the cell phone based on the received request using orthogonal frequency-division multiplex (OFDM) modulation over a cellular data connection.

Ex. 1001, 33:2–28.

D. The Instituted Grounds

We instituted *inter partes* review of all the challenged claims on two grounds: *first*, that claims 1, 2, 4, and 5 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Rolf,² Forta,³ Gatherer,⁴ Frodigh,⁵ and Gould,⁶ and, *second*, that claims 3 and 6 are unpatentable

² U.S. Patent No. 7,065,342 B1, iss. June 20, 2006 (Ex. 1003, “Rolf”).

³ Ben Forta et al., WAP DEVELOPMENT WITH WML AND WMLSCRIPT: THE AUTHORITATIVE SOLUTION (Matt Purcell et al. eds., 2000) (Ex. 1004, “Forta”).

⁴ 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”).

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

⁶ U.S. Patent No. 6,693,236 B1, iss. Feb. 17, 2004 (Ex. 1062, “Gould”).

under 35 U.S.C. § 103(a) as obvious over the combination asserted in the first ground, plus Hacker.⁷ Inst. Dec. 17–18.

III. ANALYSIS

A. *Constitutionality of Inter Partes Review*

As an initial matter, Skky argues that we should “vacate the institution decision” because *inter partes* review “unconstitutionally remove[s] adjudication of private patent rights from Article III courts” and eviscerates its Seventh Amendment right to a jury trial. PO Resp. 1–8. The United States Supreme Court recently held otherwise in *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*, -- S. Ct. --, 2018 WL 1914662, at *12 (Apr. 24, 2018). Thus, we reject Skky’s arguments challenging the constitutionality of this proceeding.

B. *Claim Construction*

We afford claim terms in an unexpired patent their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.200(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the Board’s use of the broadest reasonable interpretation standard). “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). Toward that end, our interpretation “‘cannot be divorced from the specification and the record evidence,’ and ‘must be consistent with the one that those skilled

⁷ Scot Hacker, MP3: THE DEFINITIVE GUIDE (Simon Hayes ed., 2000) (Ex. 1058, “Hacker”).

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).

Neither Facebook nor Skky proposed a construction of any claim terms in the preliminary proceeding, and we determined then that no claim terms required an express construction for purposes of institution. Inst. Dec. 5. Skky now requests, though, that we construe the term “processing” in claims 1 and 4 to mean “preparing a digital audio and/or visual file for storage in memory and playback.” PO Resp. 12. According to Skky, when properly construed, “processing” does not include “play back of the file” “because, according to the specification, it occurs after the file is processed.” *Id.* at 12–13 (citing Ex. 1001, 18:44–49). Facebook disputes Skky’s proposed construction as improperly limiting the challenged claims to a “single passage from the specification,” when “[o]ther portions of the specification make clear that the processing performed by the DSP (digital signal processor) 300 is not limited” to that sole passage. Reply 15–17 (citing Ex. 1001, 18:43–49, 14:58–15:3) (emphasis omitted).

The particular passage of the specification cited by Skky 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, 18:43–49 (emphases added). We agree with Skky that this passage supports a construction of “processing” that includes preparing, i.e.,

demodulating, a digital audio file for storage in memory. *Id.* But, as Facebook points out, that is not the only description of “processing” in the specification. Reply 15–17. Elsewhere the specification describes “processing” as performing other functions:

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 14:58–15:3; *see also id.* at 14:26–32 (“a chip performing the same functions of the board may instead be embedded in the phone itself”). This portion of the ’717 patent indicates that the term “processing” includes other functions, such as those directed to playback of the file. *See id.*

Accordingly, consistent with the specification, the broadest reasonable interpretation of “processing” includes “preparing a digital audio and/or visual file for storage in memory and playback,” as Skky argues. We note that “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.C.1.a. Therefore, no further construction is necessary in order to resolve the parties’ disputes regarding the asserted grounds 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.”).

C. Obviousness of Claims 1, 2, 4, and 5 Over Rolf, Forta, Gatherer, Frodigh, and Gould

Facebook asserts that the combination of Rolf, Forta, Gatherer, Frodigh, and Gould renders obvious claims 1, 2, 4, and 5 of the ’717 patent. Pet. 16–60. After considering the parties’ arguments and supporting evidence, we determine that Facebook has shown by a preponderance of the evidence that these claims are unpatentable as obvious over the asserted combination of references.

1. Claim 1

a. The Asserted References Collectively Teach All the Limitations of Claim 1

Facebook provides a detailed explanation of how Rolf, Forta, Gould, Gatherer, and Frodigh collectively teach each limitation of claim 1, relying on the testimony of Dr. Lavin for additional support. Pet. 16–51; Ex. 1002 ¶¶ 71–144. Facebook relies on Rolf for the majority of the limitations of claim 1, and on Forta, Gould, Gatherer, and Frodigh for certain other limitations.

Claim 1⁸ begins with the preamble “[a] method of wirelessly delivering at least one compressed digital audio and/or visual file to a cell phone over a cellular network.” Rolf teaches “wirelessly transmitting encoded music, via a wireless communications link, to a portable or mobile communications device . . . such as a cellular telephone.” Ex. 1003, 1:17–

⁸ Claim 1 was corrected in a certificate of correction dated March 15, 2016, to delete “said cell phone” in the preamble. Ex. 1001.

35; *see also* 5:18–25, 5:46–53. As described, the music is “transmitted in packets, and may particularly be encoded by a compression algorithm.” *Id.* at 1:35–38. Skky does not dispute Rolf’s disclosure of the preamble of claim 1.

The first step of claim 1 recites “*providing a website to the cell phone; wherein the website is associated with the at least one compressed digital audio and/or visual file, said compressed digital audio and/or visual files are stored on one or more servers.*” Rolf teaches a “remote storage facility” with a database of music recording files that “has a uniform resource locator (URL) on a global communications network (such as the world-wide web).” Ex. 1003, 12:52–55; *see also* 5:30–39 (facility is located “at an address on the world wide web [that] includes a data base having a plurality of music recordings therein”). According to Rolf, the music recording files are “stored within data base memory . . . in an encoded/compressed manner.” *Id.* at 9:4–6; *see also* 10:40–42 (“the data is preferably compressed and encrypted”). Rolf further provides that a user can retrieve a compressed music recording file from the database via an “Internet link” for playback on a cell phone. *Id.* at 3:10–21. Skky does not dispute that Rolf teaches a website having a database of compressed music recording files, and instead focuses its arguments on Forta. *See* PO Resp. 25–27.

With respect to the limitation that the music recording files be “*stored on one or more servers,*” Rolf discloses that a cell phone user requests the music recording files “via a server.” Ex. 1003, 12:49–55. Rolf further explains that “a server address [is] associated with the remote central facility” and that the music recording file is “downloaded from a remote

server.” *Id.* at 3:11–12, 17:63–65, respectively; *see also id.* at 6:65–66 (“informational data may be retained at the server which is sourcing the recording”). Skky does not address those express disclosures by Rolf (*see* PO Resp. 25–27), and we find that they demonstrate Rolf’s teaching of “providing a website” where “compressed digital audio and/or video file[s]” are “stored on one or more servers,” as required by claim 1.

Alternatively, in the event that Skky contends “Rolf does not disclose specific details about the website,” Facebook relies on Forta for teaching the use of Wireless Application Protocol (“WAP”) to facilitate wireless communication between a cell phone and website server. Pet. 19–21. Forta explains that “WAP is the transport used to communicate between devices (phones initially, but other devices eventually) and servers.” Ex. 1004, 1; *see also id.* at 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.”). In fact, Forta gives a specific example of how a cell phone may access a “Music” feature offered on “the Amazon.com site that is written explicitly for phones with a WAP browser in them.” *Id.* at 316, Fig. 13.3. In Facebook’s asserted combination, Rolf’s cell phone uses the WAP feature taught by Forta for accessing the music database on Rolf’s website. Pet. 21–22; Ex. 1002 ¶¶ 79–83.

Skky responds that Forta “does not disclose a website as contemplated by the [’717] 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. 25–26 (citing Ex. 1004, 99–100). Further, according to Skky, Forta’s disclosure of WAP limits the amount of information that can be delivered to, and

displayed on, the cell phone “at one time.” *Id.* at 26 (quoting Ex. 1004, 107–108). Skky’s argument is not persuasive because claim 1 recites only “providing a website” of digital audio and/or visual files “for selection” on the cell phone. Similarly, the specification of the ’717 patent explains that “a website suitable for viewing and selecting . . . sound and/or image clips or entire files may be used.” Ex. 1001, 3:36–41. 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. As such, we find that the combination of Rolf and Forta teaches the step of “providing a website” where “compressed digital audio and/or visual files are stored on one or more servers,” as required by claim 1.

Claim 1 further includes the limitation that “*the website includes a plurality of visual images associated with at least one compressed digital audio and/or visual file for selection of at least one compressed digital audio and/or visual file.*” In conjunction with this limitation, a later-recited step recites “*receiving a request from the cell phone selecting the at least one compressed digital audio and/or visual file based on the visual image.*”

Facebook relies on Rolf for teaching the association of a visual image with a music recording file on a website and the selection of that file by a cell phone using the visual image (Pet. 26, 48–49), and turns to Forta and Gould for teaching the use of a plurality of visual images for selection of a music recording file on a cell phone (*id.* at 27–29, 48–49). We agree that those references teach the claim limitations directed to the use of “visual images” to select a music recording file for playback on a cell phone.

To begin, Rolf discloses that the cell phone user selects a music recording for download via a “menu or listing of recordings” (Ex. 1003, 9:11–15) and that “data indicative of that recording may be displayed on the display, and, additionally, a selected key on the wireless communications device may be pressed . . . to purchase the music recording” (*id.* at 3:64–4:3). As for the menu displayed on the phone, Roth explains that “the music recordings are categorized by a plurality of *selectable fields*, such as ‘title,’ ‘artist,’ ‘album or CD type,’ ‘recording label,’ etc.” *Id.* at 5:35–53 (emphasis added). Indeed, those disclosures are similar to the ’717 patent’s disclosure of “allowing a user to select files” from “a screen display for providing a text listing of the names of songs or categories, according to hierarchical submenus.” Ex. 1001, 10:60–11:11.

Nonetheless, with respect to “a plurality of visual images” being associated with the music recording files, Facebook acknowledges that “Rolf does not appear to disclose this limitation.” Pet. 27. As such, Facebook relies on Forta (Ex. 1004) and Gould (Ex. 1062) for teaching that limitation of claim 1. Pet. 26–33. In particular, as discussed above, Forta teaches a cell phone that includes a user interface, or display, for selecting and downloading “Music” from a website such as “Amazon.com.” Ex. 1004, 316, Fig. 13.3. Forta further teaches associating each of a set of options with a visual “image,” or “icon,” that serves as a “selection mechanism” for conveying data from the website to the phone. *Id.* at 53, 128, 135–136, 316, Figs. 6.5, 13.3. Albeit somewhat redundant of Forta, Gould also teaches a user interface that includes a menu of icons, such as title, artist, album cover, and lyrics, for selecting and downloading a music recording. Ex. 1062, 5:4–60, Fig. 4. Those disclosures persuade us that the asserted combination of

Rolf, Forta, and Gould teaches associating “a plurality of visual images” with music recording files on a website and using those images to select one of the files from a cell phone, as required by claim 1. Skky does not dispute the teachings of Roth, Forta, and Gould, and instead faults Facebook for failing to provide a reason to combine their respective teachings (*see* PO Resp. 27–29), an argument that we address below. *See infra* Section III.C.1.b.

The next step of claim 1 recites “*providing for the transmission of a representation of at least a portion of the compressed digital audio and/or visual files to the cell phone upon request, said cell phone having a digital signal processor and a receiver for receiving and processing . . . [the] files transmitted using orthogonal frequency-division multiplex (OFDM) modulation.*” Facebook relies on the combination of Rolf, Gatherer, and Frodigh for teaching this step. Pet. 33–48.

We begin with the limitation that the cell phone have “a digital signal processor and a receiver.” Rolf teaches requesting a music recording file from a remote database using a cell phone equipped with a “processor” and a “transceiver.” Ex. 1003, 7:49–54, Fig. 4. Rolf further teaches that the cell phone’s receiver and processor are configured for downloading and playing music recording files. *Id.* at 1:28–35, 5:46–55. Although Rolf does not disclose the specific type of processor, Facebook relies on Gatherer for teaching it was well-known to use DSPs in cell phones for receiving and processing files. Pet. 35–36, 45–48.

Gatherer recognizes that “[p]rogrammable digital signal processors (DSPs) [were] *pervasive in the wireless handset market* for digital cellular telephony.” Ex. 1005, 84 (emphasis added); *see also id.*, Fig. 1 (depicting

“DSP functions” that include “Demodulator”). Indeed, Gatherer identifies specific DSPs already in use for wireless applications, such as the Lucent 16000 series and the ADI21xx series. *Id.* at 86. Those DSPs, according to Gatherer, offer various advantages for use in cellular phones, including programmable flexibility and processing performance. *Id.* at 84–85. Based on those teachings by Gatherer, we are persuaded that Gatherer teaches the DSP limitation and that a skilled artisan would have recognized the benefit of using a DSP as the specific type of processor in Rolf’s cell phone. Ex. 1002 ¶¶ 30–32, 114–118.

For teaching that transmission from the website to the cell phone is done using OFDM modulation, as further required by claim 1, Facebook relies on Frodigh, with supporting testimony from Dr. Lavian. Pet. 10–14, 39–40; Ex. 1002 ¶¶ 38–43, 121. As background, Dr. Lavian testifies that “OFDM dates back as far as 1966,” and, by 2001, “was well-known [to] those skilled in the art.” Ex. 1002 ¶ 38. Not only was it well-known, according to Dr. Lavian, OFDM was the standard modulation technique for “Wi-Fi” and other wireless applications, and its use in commercial cellular systems “was already underway.” *Id.* ¶¶ 40–43. We find Dr. Lavian’s testimony credible, as it is supported by numerous citations to contemporaneous documents. *See id.*

While Rolf may not describe the particular modulation technique underlying transmission of a music recording file to the cell phone, Frodigh recognizes that OFDM modulation “is particularly suited for cellular systems.” Ex. 1006, 1:59–2:18. Frodigh goes on to describe an OFDM cellular system that transmits voice and data between a “base station” and a “mobile station,” both downlink and uplink. *Id.* at 7:51–63, Fig. 2. The

mobile station, Frodigh explains, includes a “receiver” and “demodulator” for receiving data transmitted by OFDM modulation. *Id.* at 7:64–8:63. Those disclosures in Frodigh, as well as the testimony of Dr. Lavian, persuades us that the use of OFDM modulation in the transmission of digital information to cell phones was well-known at the relevant time. *See* Ex. 1002 ¶¶ 38–43, 121. Thus, in Facebook’s asserted combination, Rolf’s cell phone incorporates Gatherer’s digital signal processor for receiving and processing digital music recording files transmitted by the well-known method of OFDM modulation taught by Frodigh.

Skky responds that the cell phone in Rolf does not include a digital signal processor. PO Resp. 29–30 (citing Pet. 20, 26; Ex. 1002 ¶ 88). Skky’s argument is not persuasive because it focuses on Rolf individually, rather than the asserted combination of Rolf, Gatherer, and Frodigh proposed by Facebook. *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, Facebook relies on Rolf for teaching a cell phone equipped with a processor (Pet. 34–35), and Gatherer for teaching that a cell phone’s processor can be a digital signal processor (*id.* at 35–36, 45–48).

Skky further argues that Rolf’s receiver and digital signal processor are not configured for “receiving and processing” files, as required by claim 1. PO Resp. 32–34. In particular, Skky contends that Facebook “rel[ies] only on Rolf’s ability to ‘play’ the music files it receives,” but “the processing referenced by the claims takes place prior to storing and subsequent playback of the file.” *Id.* at 32. We disagree. Under Skky’s own construction of the term “processing,” the asserted combination of Rolf,

Gatherer, and Frodigh teaches that the digital signal processor is configured for receiving and processing files. Specifically, in support of its construction of the term “processing,” Skky points to the ’717 patent’s description that the digital signal processor performs demodulation—“[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.” Ex. 1001, 18:43–49 (emphasis added); *see also* PO Resp. 12 (citing same). In that regard, Gatherer teaches a digital signal processor that includes a demodulator. Ex. 1005, 84, Fig. 1. Similarly, Frodigh teaches a receiver that includes a demodulator. Ex. 1006, 8:33–38. Skky does not dispute that Gatherer and Frodigh teach a cell phone having a receiver and digital signal processor for receiving compressed digital files over a wireless network and processing them by demodulation. *See* Tr. 37:11–19, 38:3–16. Thus, the record supports that the asserted combination of Rolf, Gatherer, and Frodigh teaches a receiver and digital signal processor configured to receive and process digital audio files transmitted by OFDM modulation, thereby meeting the “transmission” and “receiving and processing” limitations of claim 1. *See* Pet. 34–48.

Skky also faults Facebook’s asserted combination because “Frodigh does not teach a system for requesting and transmitting audio and audio-visual data files.” PO Resp. 34. According to Skky, “[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, 4:26–31, 6:30–33). Skky’s argument, however, focuses on Frodigh alone, not Rolf, Gatherer, and Frodigh collectively. *See Keller*, 642 F.2d at 426. As discussed above, Rolf teaches requesting a music recording file from a

remote database using a cell phone (Ex. 1003, 1:39–41, 5:49–53, 9:10–15), and Frodigh teaches transmitting data to a cell phone using OFDM modulation (Ex. 1006, 1:59–2:18, 7:51–8:63). Thus, Skky’s argument focusing on Frodigh alone is unavailing. The evidence shows that the asserted combination of Rolf, Gatherer, and Frodigh teaches the step of “providing for the transmission” of a music recording file to a cell phone using OFDM modulation and “receiving a request from the cell phone” selecting the music recording file, as recited by claim 1.

As a final step, claim 1 requires “*providing for the streaming transmission of an encrypted copy of at least one compressed digital audio and/or visual files to the cell phone*” using “OFDM” for the cellular connection. Facebook relies on Rolf and Frodigh for this step. Pet. 49–51. Rolf teaches that, rather than being downloaded to the cell phone, “a music recording stored in [the] central facility [] . . . may be streamed” to the cell phone. Ex. 1003, 6:20–30; *see also id.* at 3:26–38 (“encoded music may be streamed directly from its source”). And, as discussed above, Frodigh teaches using OFDM for transmission of data files to a cell phone. As for the transmission being “encrypted,” Rolf teaches that the music recording file is “preferably compressed *and encrypted* such that subsequent decoding involves both decompression and de-encryption.” Ex. 1003, 10:40–42; *see also id.* at 8:63–9:6 (“encode the music, according to any preferred encryption and/or compression algorithm . . . for transmission of the encoded recording(s) to the wireless communications device”). Skky responds again that the references do not teach transmission by OFDM because Facebook “do[es] not allege that Frodigh teaches streaming, and appears to rely on Frodigh only for support for the use of OFDM.” PO

Resp. 37. Skky's argument is unpersuasive, for it again fails to address the references collectively. Though Frodigh alone may not teach streaming by OFDM modulation, Facebook relies on Rolf for teaching streaming a music recording file to a cell phone, and Frodigh for teaching transmitting a music recording file to a cell phone by OFDM modulation. Thus, we are persuaded that Rolf and Frodigh together teach the "streaming" step.

In sum, we find that Rolf, Forta, Gould, Gatherer, and Frodigh collectively teach each and every limitation of claim 1.

b. A Skilled Artisan Would Have Had a Reason to Combine Rolf, Forta, Gould, Gatherer, and Frodigh, and a Reasonable Expectation of Success in Doing So

Facebook explains, with supporting testimony from Dr. Lavian, why a skilled artisan would have been led to modify Rolf's system to incorporate the teachings of Forta, Gould, Gatherer, and Frodigh, in each of the respects explained above. Pet. 21–23, 25, 31–33, 36–38, 40–42; Ex. 1002 ¶¶ 83–86, 91–92, 100–104, 114–118, 122–124. After considering the parties' arguments and weighing the evidence of record, we find that the references themselves support a reason to combine their respective teachings. We also find that, given the teachings of the references and the level of skill in the art,⁹ a skilled artisan would have had a reasonable expectation of success in undertaking the asserted combination to achieve the claimed invention.

⁹ We note that Skky neither provides its own definition of the level of ordinary skill in the art nor disputes Dr. Lavian's definition. Based on our review of the '717 patent and the types of problems and solutions addressed in the '717 patent and the asserted prior art, we agree with Dr. Lavian's assessment of the level of ordinary skill in the art and apply it in our analysis. See Ex. 1002 ¶¶ 15–16.

Addressing first the step of “*providing a website*” of “*compressed digital audio and/or visual files*” for delivery to a cell phone, Facebook argues that a skilled artisan would have had reason to combine Forta’s teachings regarding the use of WAP for accessing websites from a cell phone with the teachings of Rolf, such that the central facility in Rolf would provide a website using WAP. Pet. 21–23, 25. We agree. In particular, Dr. Lavian testifies that Rolf and Forta are “in the same field of wireless communication and computing” and “both recognized that cell phones can be used as instruments of e-commerce.” Ex. 1002 ¶ 86 (citing Ex. 1003, 6:53–7:23, 14:35–53; Ex. 1004, 462). Moreover, noting Forta’s statement that WAP’s use in cell phones “promises to be one of the most important protocols and standards ever developed,” Dr. Lavian further explains that “the advantages of using such a widely adopted technology, including [its] interoperability with other existing systems and technologies,” would have motivated a skilled artisan to use this same protocol in Rolf’s system. Ex. 1002 ¶¶ 84–85 (citing Ex. 1004, 1). That motivation is further evidenced by Forta’s statement that “WAP will succeed because it is being supported by almost every major hardware, software, device, data carrier, and telecom vendor.” Ex. 1004, 1; *see also id.* at 20 (“Wireless Markup Language (WML) [used to implement WAP] . . . was created to address the display, bandwidth, and memory limitations of mobile and wireless devices, such as cellular phones”). We find that Forta’s disclosures support Dr. Lavian’s conclusion that a skilled artisan would have understood Rolf and Forta to be “readily combinable” and that their combination would have been “largely trivial.” Ex. 1002 ¶¶ 84, 86.

Skky responds that Facebook has not shown sufficiently why a skilled artisan 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 “is devoid of any compressed audio or audio-visual data files.” PO Resp. 26. Skky notes that, although Forta depicts a listing for “Music” on Amazon.com’s website, “[a]t the time, Amazon sold books, music, DVDs, and other items,” not “audio or visual files.” *Id.* at 26–27. According to Skky, “[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.* at 27.

Skky’s arguments are unpersuasive, for they focus on a purported deficiency in Forta, rather than the specific combination asserted by Facebook. In particular, Facebook relies on Rolf as teaching a website for providing a plurality of compressed digital audio and/or visual files to a cell phone (Pet. 18–19), and relies on Forta for teaching a particular *mechanism* for doing so, i.e., the use of WAP to facilitate communication between the cell phone and website (*id.* at 19–21). As discussed above, Dr. Lavian describes multiple advantages that would have led a skilled artisan to use WAP in Rolf’s system. Ex. 1002 ¶¶ 83–86. Skky does not respond specifically to those advantages, explain why they are in any way incorrect, or provide any expert testimony to the contrary. See PO Resp. 25–29. As such, Dr. Lavian’s testimony on these points stands unrebutted, and, more importantly, we find that it is consistent with the disclosures of Rolf and Forta. 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).

We also disagree with Skky’s argument that a skilled artisan would not have made the combination because Forta teaches a “simplified representation” of a website. PO Resp. 26–28. Claim 1 merely recites “providing a website” of digital audio and/or visual files “for selection” from the cell phone, without any specific requirement as to the complexity of the website. Rolf teaches providing a website from which a cell phone user may select and receive a music recording file using a menu, and Forta teaches providing a website that communicates with a cell phone via WAP to display a menu of options on a cell phone. Ex. 1003, 9:10–15 (“the wireless communications device 12 can be utilized to select [a] recording via a menu or listing of recordings”), 5:49–53 (the selection is made “using a keypad and input on the wireless communications device”); Ex. 1004, 316–317 (describing cell phones with a “menu” of options for accessing digital content, including “Music,” on a website server). Given that claim 1 does not address the complexity of the website, those teachings by Rolf and Forta, when combined, meet the “providing a website” and “for selection” limitations of claim 1.

Next, with respect to the limitations that “*the website includes a plurality of visual images associated with at least one compressed digital audio and/or visual file*” and “*selecting the at least one compressed digital audio and/or visual file based on the visual image,*” Facebook asserts that a skilled artisan would have known to enhance Rolf’s “menu or listing of recordings” with visual images, as taught by Forta and Gould. Pet. 29, 31–33 (citing Ex. 1002 ¶¶ 96, 100, 102). We agree. Forta itself provides

expressly a reason to associate interactive visual images, or icons, with music recording files on a website such as Rolf's by teaching that visual images not only "make a site more interesting" but they "convey messages and information much more efficiently than is possible with pure text." Ex. 1004, 128; *see also* Ex. 1002 ¶¶ 101–102. As a reason to combine Rolf and Gould, Dr. Lavian testifies that a skilled artisan would have viewed Gould as a "natural combination" for Rolf because both are concerned with using MP3 technology to download music files from the Internet and using a "menu or listing-based interface" to initiate the download. Ex. 1002 ¶ 103 (citing Ex. 1003, 3:17–21, 3:64–4:6, 6:53–59, 9:10–15; Ex. 1062, 3:23–30, 5:57–60, 6:1–3, Fig. 4). As such, Dr. Lavian concludes that a skilled artisan "would have been motivated to improve the interface of Rolf by incorporating the display of album cover graphics taught in Gould in order to provide a richer, more informative visual experience." *Id.*

In response to Facebook's reason to combine Rolf and Forta for teaching the "visual images" limitations of claim 1, Skky merely repeats *verbatim* the argument it made with respect to Forta disclosing only a "simplified representation" of a website. *Compare* PO Resp. 28 *with id.* at 26–27. We find that argument no more persuasive with respect to this "visual images" limitation than we did with the "providing a website" limitation discussed above. Skky presents no additional argument disputing Facebook's persuasive evidence of a reason to combine Rolf and Forta.

As for the combination of Rolf and Gould, Skky responds that they would not have been combined because Gould only contemplates the display of an interface on a conventional computer, not on a cellular phone. *Id.* at 28–29. Skky's argument is not persuasive because it addresses Gould

individually, not the asserted combination of Rolf and Gould. As discussed above, Rolf teaches a menu-driven display on a cell phone for facilitating the selection and download of music recordings, and Gould teaches a user interface display that includes a menu of icons for selecting a music recording. Ex. 1003, 1:39–41, 5:35–53, 9:10–15; Ex. 1062, 5:4–60, Fig. 4. Thus, Rolf and Gould together contemplate the use of “visual images” on the display of a cell phone for selecting a music recording.

Based on the express teachings in the references themselves, as well as the credible testimony of Dr. Lavian, we find that a skilled artisan would have had reason to improve the menu-based user interface on Rolf’s cell phone by incorporating visual images, as taught by Gould and Forta, in order to provide a more informative and efficient selection process. See Ex. 1002 ¶¶ 91–92, 100–104.

As for the limitation of “*said cell phone having a digital signal processor and a receiver for receiving and processing compressed digital audio and/or visual files,*” Facebook argues that a skilled artisan would have had reason to combine Gatherer’s teachings of DSPs for cell phones with Rolf’s teachings, such that the cell phone of Rolf’s system would operate using a DSP. Pet. 36–39. Facebook contends that Rolf and Gatherer both describe “features of cellular phones.” *Id.* at 36 (citing Ex. 1005, 89; Ex. 1002 ¶ 114). According to 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 [DSP].” Ex. 1002 ¶ 117. That motivation is supported by specific statements in Gatherer itself. See, e.g., Ex. 1005, 84 (“flexibility is becoming more of an issue, and therefore the programmability offered by

DSPs is even more desirable”), 85–86 (“programmable DSPs are essential to provide a cost-effective, flexible upgrade path for the variety of evolving standards”), 86 (“the collective wisdom of the marketplace has chosen to bet on a programmable DSP future for wireless technology”). We find that evidence persuasive, for in determining whether a skilled artisan would have had 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.” *KSR*, 550 U.S. at 418.

Skky responds that a skilled artisan would not have combined Rolf and Gatherer, with a reasonable expectation of success, “because they deal with two different systems.” PO Resp. 31. According to Skky, Rolf relates to a third generation (“3G”) network, while Gatherer relates to a Global System for Mobile Communications (“GSM”), or second generation (“2G”), system. *Id.* (citing Ex. 1003, 3:25, Ex. 1005, 4). As support, Skky points to a purported admission in Gatherer “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,” and from there, surmises that a skilled artisan, “armed with the knowledge of Gatherer, would not be motivated to apply GSM or 2G principles to 3G, knowing that the technologies could evolve in very different ways.” *Id.* (citing Ex. 1005, 4).

Skky’s argument is not persuasive for two reasons. First, although Rolf states that encoded music data is “preferably transmitted” by a 3G network, Rolf is not limited to a 3G network. Ex. 1003, 3:21–25 (“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. *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012). Second, as Facebook correctly points out, Gatherer itself teaches that digital signal processors would work in a 3G network, which is the preferred network in Rolf. *See, e.g.*, Ex. 1005, 87 (“In this section we discuss how coprocessors can complement the function of programmable DSPs in the implementation of a flexible 3G platform.”); *see also* Reply 12–13 (quoting other sections of Gatherer). Thus, we are persuaded that Gatherer’s stated advantages of digital signal processors in cell phones would have led a skilled artisan to use one in Rolf’s cell phone, whether operated in a 2G or 3G network.

To the extent Skky questions whether Gatherer’s digital signal processor “would work” in Rolf’s cell phone, we disagree. *See* PO Resp. 31. To begin, we note “[i]t 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). Here, Gatherer explains how a digital signal processor functions in a cell phone and provides a functional block diagram showing the relationship of the digital signal processor to various other parts of the cell phone. Ex. 1005, 85, Fig. 1. Furthermore, Dr. Lavian testifies that digital signal processors were widely available as “off-the-shelf” components, whose functionality was “well known” at the time. Ex. 1002 ¶¶ 30–32, 118; *see also* Ex. 1005, 86 (listing “several DSPs on the market . . . designed with wireless applications in mind”). We credit Dr. Lavian’s

testimony, which is consistent with Gatherer's teachings. Thus, we find that a skilled artisan would have had a reasonable expectation of success in integrating a digital signal processor into Rolf's cell phone.

Finally, with respect to the "*OFDM*" limitations, i.e., "*providing for the streaming transmission*" of the digital audio and/or visual files by OFDM modulation, and "*receiving and processing*" the OFDM-transmitted files, Facebook argues that a skilled artisan would have had reason to combine Frodigh's teaching of an OFDM cellular system with Rolf's teachings, such that Rolf's website would stream music recordings via OFDM and Rolf's cell phone (using a digital signal processor, as explained above) would receive and process the files transmitted in that manner. Pet. 39–45. In support, Facebook relies on Dr. Lavian's testimony that the multiple advantages of OFDM, such as increasing efficiency of bandwidth and reducing interference from propagation effects, would have led a skilled artisan "to use the OFDM modulation technique to transmit data files such as compressed music to cellular phones." *Id.* at 41–42 (citing Ex. 1002 ¶ 123). That testimony is supported by specific statements in Frodigh itself. *See* Ex. 1006, 1:59–63 (stating that OFDM "is particularly suited for cellular systems"), 2:38–60 (disclosing that "OFDM offers several advantages that are desirable in a cellular system," such as "efficient use of the bandwidth available to a system," "interference caused by multipath propagation effects is reduced," and "reducing symbol interference").

Skky responds that a skilled artisan would not have had a reason to combine Rolf and Frodigh because they "are premised on two entirely different systems of network communication." PO Resp. 35. According to Skky, Rolf relates to a 3G network that uses Code Division Multiple Access

(“CDMA”), not OFDM. *Id.* Skky points out that an industry standards group known as the “SMG”¹⁰ chose CDMA over OFDM as the 3G system standard. *Id.* at 35–36 (citing Ex. 2003, 7, 23–25; Ex. 2004, 2, 4). Skky explains that “[t]he group concluded that OFDM’s drawbacks kept it from final consideration,” and, as a result, “OFDM did not receive a single vote to form the basis for 3G.” *Id.* at 36. From those statements Skky surmises that a skilled artisan would have been “aware of the SMG[] group’s findings” and “discouraged from applying OFDM to cellular systems,” such as the one in Rolf. *Id.* at 37.

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, 3:21–25. Further, the evidence cited by Skky regarding the SMG’s decision to use CDMA as the 3G standard indicates that there were advantages and drawbacks to both OFDM and CDMA. *See* Ex. 2004, 1–4. For instance, the SMG explained that OFDM had the advantages of “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. Similarly, the SMG identified several advantages and drawbacks for CDMA as well. *Id.* at 3–4.

¹⁰ “SMG” stands for the Special Mobile Group of the European Telecommunications Standards Institute.

That there may have been disadvantages with OFDM at the time does not necessarily nullify its use with Rolf's cellular system. "[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 advantages, "both lost and gained, should be weighed against one another." *Id.* (citation omitted). Here, Frodigh teaches that OFDM is "particularly suited for cellular systems" and identifies multiple advantages of using OFDM in a cellular system, such as increased efficiency and reduced interference. Ex. 1006, 1:59–63, 2:38–3:2. Further, Dr. Lavian explains that the use of OFDM in cellular systems was well-known at the time. Ex. 1002 ¶¶ 39–43, 124. Dr. Lavian also explains, even more specifically, that the use of a digital signal processor in a cellular system for processing files transmitted by OFDM was well-known. *Id.* ¶¶ 132–133. We credit Dr. Lavian's testimony, which is consistent with the teachings of Frodigh. Weighing the evidence, we are persuaded that a skilled artisan reading the SMG documents would not have been discouraged from using OFDM with a cellular system, but instead would have seen the benefits of combining Frodigh's teaching of using OFDM in cellular systems with the transmission of the digital music recording files of Rolf's cellular system in order to improve efficiency and reduce interference of the transmission.¹¹

¹¹ We note that in the related 1236 IPR (*see supra* Section II.A), the Board determined that it would have been obvious to use OFDM with Rolf's cellular system. *MindGeek, s.a.r.l. v. Skky, Inc.*, Case IPR2014-01236, slip op. at 18–22 (PTAB Jan. 29, 2016) (Paper 45). The U.S. Court of Appeals for the Federal Circuit upheld that determination. *Skky, Inc. v. MindGeek*,

After considering the parties' arguments, we are persuaded that Facebook's reasoning for combining Rolf, Forta, Gould, Gatherer, and Frodigh is supported by the references themselves and the testimony of Dr. Lavian. See Pet. 21–23, 25, 31–33, 36–38, 40–42. We also agree with Dr. Lavian that a skilled artisan 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. Ex. 1002 ¶¶ 83–86, 91–92, 100–104, 114–118, 122–124.

2. Claim 4

Independent claim 4 is essentially similar to claim 1, except that claim 4 recites “storing a library” of files on “one or more servers,” whereas claim 1 recites “providing a website” of files “on one or more servers.” There is no material difference between the remaining steps of claims 1 and 4. In asserting that the combination of Rolf, Forta, Gould, Gatherer, and Frodigh teaches a “library,” Facebook points to Rolf's disclosure that its remote storage facility “includes a data base having a plurality of music recordings therein . . . categorized by a plurality of selectable fields.” Pet. 54 (citing Ex. 1003, 5:30–39) (emphasis omitted). Dr. Lavian testifies that Rolf's storage database is a library, as recited in claim 4. Ex. 1002 ¶ 162. We see no reason to doubt that testimony, and Skky does not dispute that Rolf meets the “library” limitation of claim 4. Instead, Skky relies on the “same reasons” it argued for claim 1 to dispute Facebook's challenge against claim 4. PO Resp. 39–40. For the reasons explained above, we are

s.a.r.l., 859 F.3d 1014, 1022 (Fed. Cir. 2017). Although that case involved a different reference to teach OFDM, that reference, like Frodigh, taught expressly the desirability and advantages of OFDM. *Id.*

persuaded that Rolf, Forta, Gould, Gatherer, and Frodigh collectively teach all the limitations of claim 4 and that a skilled artisan would have had a reason to combine those teachings, with a reasonable expectation of success to achieve the method of claim 4.

3. Claims 2 and 5

Claims 2 and 5 depend from claims 1 and 4, respectively. Claim 2 recites “storing at least a portion of the at least one compressed digital audio and/or visual file on the cell phone,” and claim 5 recites a similar “storing” limitation. From the combination of references, Facebook asserts that Rolf teaches the “storing” limitation of claims 2 and 5. *See* Pet. 51–52, 60 (citing Ex. 1002 ¶¶ 145–146). We agree. 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. *Id.* (citing Ex. 1003, 6:20–30, Figs. 4, 7a).

Consequently, “at least a portion” of the file is stored in memory on the cell phone. Skky does not argue dependent claims 2 and 5 separately, except to rely on its prior arguments with respect to base claims 1 and 4. PO Resp. 38–40. For the reasons explained in the Petition, we find that Rolf, Forta, Gould, Gatherer, and Frodigh collectively teach all the limitations of claims 2 and 5 and that a skilled artisan would have had a reason to combine their teachings, with a reasonable expectation of success to achieve the methods of claims 2 and 5. *See* Pet. 51–52, 60.

4. Conclusion of Obviousness Based on the Asserted Combination

For the reasons explained above, we find that Rolf, Forta, Gould, Gatherer, and Frodigh collectively teach all the limitations of claim 1 and that a skilled artisan would have had a reason to combine those teachings, with a reasonable expectation of success in achieving the methods of

claims 1, 2, 4, and 5. Thus, Facebook has proven, by a preponderance of the evidence, that claims 1, 2, 4, and 5 would have been obvious over the combination of Rolf, Forta, Gould, Gatherer, and Frodigh.

D. Obviousness of Claims 3 and 6 over Rolf, Forta, Gould, Gatherer, Frodigh, and Hacker

Claims 3 and 6 depend from claims 1 and 4, respectively, and recite the additional step of “optimizing the digital audio and/or visual file according to an optimization scheme.” Facebook challenges claims 3 and 6 as obvious over the same combination of references asserted against base claims 1 and 4, with the addition of Hacker to teach “optimization” of Rolf’s music recording files. Pet. 60–65. As explained above for claims 1 and 4, Rolf discloses that the compressed music recording files are encoded and stored in MP3 format. Ex. 1003, 1:35–38, 5:32–45, 8:63–9:6, 16:37–38, 17:6–7.

Although Rolf’s MP3 encoding process effectively amounts to an optimization scheme,¹² Facebook nonetheless turns to Hacker’s disclosure of several schemes for optimizing sound quality and storage of MP3 files, such as those in Rolf. Pet. 62–64 (citing Ex. 1058, 26, 161–163); *see also* Ex. 1002 ¶¶ 149–155. Dr. Lavian testifies that a skilled artisan would have “naturally consulted Hacker to provide further details into the very MP3 compression technique that Rolf uses for storage of compressed audio files” and would have been motivated to optimize Rolf’s music recording files

¹² MP3 is an “audio compression technique” for achieving “optimal balance between file size and quality” of audio recordings. Ex. 1058, 2. Thus, Rolf’s disclosure of an MP3 encoding process is an optimization scheme, thereby negating the need for Hacker. *See* Pet. 64–65.

according to Hacker’s optimization schemes “to increase storage efficiency while maintaining good audio quality.” Ex. 1002 ¶¶ 157–158. Dr. Lavian also confirms that a skilled artisan would have expected Hacker’s optimization scheme to work with Rolf’s MP3 files. *Id.* ¶ 156. We find that testimony persuasive, as it is consistent with the teachings of Rolf and Hacker.

Skky does not argue dependent claims 3 and 6 separately, except to rely on its prior arguments made regarding corresponding base claims 1 and 4. PO Resp. 40–41. After reviewing Facebook’s arguments and supporting evidence, we are persuaded that Facebook has proven, by a preponderance of the evidence, that dependent claims 3 and 6 would have been obvious over Rolf, Forta, Gould, Gatherer, Frodigh, and Hacker for the reasons explained in the Petition. *See* Pet. 51–52, 60.

E. Facebook’s Motion to Exclude

Facebook moves to exclude Exhibits 2003 and 2004 as inadmissible under Federal Rules of Evidence 901 and 902. Mot. 1–3. We note, however, that neither exhibit is relied on in this Final Written Decision in a manner adverse to Facebook. Specifically, even considering Exhibits 2003 and 2004, we do not agree with Skky’s arguments that SMG’s choice of CDMA over OFDM would have precluded a skilled artisan from combining the teachings of Rolf and Frodigh, as we explain above. *See supra* Section III.C.1.b. Accordingly, we dismiss Facebook’s motion as moot.

IV. CONCLUSION

After considering the parties’ arguments and evidence, we determine that Facebook has proven, by a preponderance of the evidence, that claims 1–6 are unpatentable as obvious under 35 U.S.C. § 103(a).

V. ORDER

Accordingly, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 318(a), claims 1–6 of the '717 patent are determined to be *unpatentable*;

FURTHER ORDERED that Facebook's Motion to Exclude is *dismissed*; and

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

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